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Supplement to the Management of Distal Radius Fractures Evidence-Based Clinical Practice Guideline

e-Appendix 2

- Quality Appraisal
- Data Summary
- Detailed Data Table

This supplementary material has been provided by the authors to give readers additional information about their work

Table of Contents

Contents

Table of Contents 2

Strength of Recommendations 7

Quality Appraisal 8

Table 1a. Quality Evaluation - Intervention – Randomized 8
Table 1b. Quality Evaluation - Intervention - Observational ROBINS 1 10

PICO 1: Arthroscopic Assistance 11

Table 2: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- summary of findings table (part 1: PROs, complications and grip strength) 11
Table 3: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- summary of findings table (part 2: Range of Motion and Radiographic outcomes) 12
Table 4: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Complications 13
Table 5: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Composite 14
Table 6: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Other 17
Table 7: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Pain 18
Table 8: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Radiographic Outcomes 19
Table 9: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Radiographic outcome 25
Table 10: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Range of Motion 30
Table 11: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- composite 40
Table 12: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- pain 44

PICO 2: Home Exercise Program 46

Table 13: PICO 2.1- post-op supervised therapy- summary of findings table 46
Table 14: PICO 2.1- post-op supervised therapy- summary of findings table for outcomes with MIDs 47
Table 15: PICO 2.2- Non-operative supervised therapy- summary of findings table 48
Table 16: PICO 2.2- Non-operative supervised therapy- summary of findings table for outcomes with MIDs 49
Table 17: PICO 2.1- post-op supervised therapy- Complications 50
Table 18: PICO 2.1- post-op supervised therapy- Composite 52
Table 19: PICO 2.1- post-op supervised therapy- Function 55
Table 20: PICO 2.1- post-op supervised therapy- Other 57
Table 21: PICO 2.1- post-op supervised therapy- Radiographic Outcomes 61
Table 22: PICO 2.1- post-op supervised therapy- Range of Motion 62
Table 23: PICO 2.1- post-op supervised therapy- composite 81
Table 24: PICO 2.1- post-op supervised therapy- Pain 85
Table 25: PICO 2.2- Non-operative supervised therapy- Complications 89
Table 26: PICO 2.2- Non-operative supervised therapy- Composite 90
Table 27: PICO 2.2- Non-operative supervised therapy- Other 91
Table 28: PICO 2.2- Non-operative supervised therapy- Range of Motion 94
Table 29: PICO 2.2- Non-operative supervised therapy- composite 100

Table 30: PICO 2.2- Non-operative supervised therapy- pain 102
PICO 3: Opioid Use....105
Table 31: PICO 3.1- Summary of Findings - Celecoxib vs Buprenorphine Transdermal Patch....105
Figure 1: PICO 3.1- Summary of Findings for outcomes with MIDs- Celecoxib vs Buprenorphine Transdermal Patch....106
Table 32: PICO 3.2- Summary of Findings - Ibuprofen+Codeine vs Buprenorphine Transdermal Patch....107
Figure 2: PICO 3.2- Summary of Findings for outcomes with MIDs- Ibuprofen+Codeine vs Buprenorphine Transdermal Patch....108
Table 33: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- Composite 109
Table 34: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- Other....110
Table 35: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- Range of Motion....113
Table 36: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- composite 118
Table 37: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- pain....119
Table 38: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- Composite....125
Table 39: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- Other....126
Table 40: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- Range of Motion....129
Table 41: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- composite 134
Table 42: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- pain....135
PICO 4.1: Indications for Fixation (Non-Geriatric Patients)....141
Table 43: PICO 4- Summary of Findings - Operative vs Non-operative Treatment (young population) 141
Table 44: PICO 4- Summary of Findings - Operative vs Non-operative Treatment (young population) Continued....142
Table 45: PICO 4- Summary of Findings - Operative vs Non-operative Treatment (older population)....143
Table 46: PICO 4- Summary of Findings - Operative vs Non-operative Treatment (older population) Continued 144
Figure 3: Operative vs. Nonoperative Summary of Findings for outcome with MIDs 145
Table 47: PICO 4.1- operative vs non-operative treatment (younger)- Adverse events 146
Table 48: PICO 4.1- operative vs non-operative treatment (younger)- Complications....147
Table 49: PICO 4.1- operative vs non-operative treatment (younger)- Composite....149
Table 50: PICO 4.1- operative vs non-operative treatment (younger)- Function....159
Table 51: PICO 4.1- operative vs non-operative treatment (younger)- Other....169
Table 52: PICO 4.1- operative vs non-operative treatment (younger)- Pain....215
Table 53: PICO 4.1- operative vs non-operative treatment (younger)- ROM....217
Table 54: PICO 4.1- operative vs non-operative treatment (younger)- Radiographic Outcome....223
Table 55: PICO 4.1- operative vs non-operative treatment (younger)- Return to activity 225
PICO 4.2: Indications for Fixation (Geriatric Patients)....226
Table 56: PICO 4.2- operative vs non-operative treatment (older)- Adverse events 226
Table 57: PICO 4.2- operative vs non-operative treatment (older)- Complications....227
Table 58: PICO 4.2- operative vs non-operative treatment (older)- Composite 230
Table 59: PICO 4.2- operative vs non-operative treatment (older)- Function....236
Table 60: PICO 4.2- operative vs non-operative treatment (older)- Other....244
Table 61: PICO 4.2- operative vs non-operative treatment (older)- Pain....249
Table 62: PICO 4.2- operative vs non-operative treatment (older)- ROM....255
Table 63: PICO 4.2- operative vs non-operative treatment (older)- Radiographic Outcome....268
PICO 5: Serial Radiography 285

Table 64: PICO 5 Frequent vs. Infrequent Radiographs 285
Table 65: PICO 5- frequent vs infrequent radiographs- Complications 286
Table 66: PICO 5- frequent vs infrequent radiographs- Function 287
Table 67: PICO 5- frequent vs infrequent radiographs- Other 289
Table 68: PICO 5- frequent vs infrequent radiographs- Pain 290
Table 69: PICO 5- frequent vs infrequent radiographs- Range of Motion 292
Table 70: PICO 5- frequent vs infrequent radiographs- composite 295
PICO 6: Fixation Technique (Complete Articular Fractures) 297
Table 71: PICO 6.01- Summary of Findings - Volar locking plate vs dorsal plating 297
Table 72: PICO 6.02- Summary of Findings - Volar locking plate vs External Fixation *Complete articular* 298
Table 73: PICO 6.02- Summary of Findings - Volar locking plate vs External Fixation 299
Figure 4: PICO 6.02- Summary of Findings for outcomes with MIDs- Volar locking plate vs External Fixation 300
Table 74: PICO 6.03- Summary of Findings - Volar locking plate vs Intramedullary fixation 301
Figure 5: PICO 6.03- Summary of Findings for outcomes with MIDs - Volar locking plate vs Intramedullary fixation 302
Table 75: PICO 6.04- Summary of Findings - Volar locking plate vs Percutaneous Pinning 303
Table 76: PICO 6.04- Summary of Findings - Volar plating vs percutaneous fixation 304
Figure 6: PICO 6.04- Summary of Findings for outcomes with MIDs - Volar locking plate vs Percutaneous Pinning 305
Figure 7: PICO 6.04- Summary of Findings for outcomes with MIDs- Volar plating vs percutaneous fixation 306
Table 77: PICO 6.05- Summary of Findings - Locking Plate vs Volar Non-Locking Plate 307
Table 78: PICO 6.06- Summary of Findings - External Fixation vs Intramedullary Fixation 308
Figure 8: PICO 6.06- Summary of Findings for outcomes with MIDs- External Fixation vs Intramedullary Fixation 309
Table 79: PICO 6.07- Summary of Findings - External Fixation vs Percutaneous Fixation *Complete articular* 310
Table 80: PICO 6.07- Summary of Findings - External Fixation vs Percutaneous Fixation 311
Figure 9: PICO 6.07- Summary of Findings for outcomes with MIDs- External Fixation vs Percutaneous Fixation 312
Table 81: PICO 6.08- Summary of Findings - Fragment Specific Plating vs Volar Plating 313
Figure 10: PICO 6.08- Summary of Findings for outcomes with MIDs - Fragment Specific Plating vs Volar Plating 314
Table 82: PICO 6.09- Summary of Findings - Fragment Specific Plating vs External Fixation 315
Table 83: PICO 6.10- Summary of Findings- Volar plating vs dorsal plating *Complete articular* 316
Table 84: PICO 6.10- Summary of Findings- Volar plating vs dorsal plating 317
Table 85: PICO 6.11- Summary of Findings - Volar Plating vs External Fixation 318
Figure 11: PICO 6.11- Summary of Findings for outcomes with MIDs- Volar Plating vs External Fixation 319
Table 86: PICO 6.01- Volar locking plate vs dorsal plating- Complication 320
Table 87: PICO 6.01- Volar locking plate vs dorsal plating - Other 321
Table 88: PICO 6.01- Volar locking plate vs dorsal plating - Radiographic Outcome 322
Table 89: PICO 6.01- Volar locking plate vs dorsal plating - Range of Motion 323
Table 90: PICO 6.02- Volar locking plate vs External Fixation - Complication 324
Table 91: PICO 6.02- Volar locking plate vs External Fixation - Composite 325
Table 92: PICO 6.02- Volar locking plate vs External Fixation - Other 326
Table 93: PICO 6.02- Volar locking plate vs External Fixation - Radiographic Outcome 329

Table 94: PICO 6.02- Volar locking plate vs External Fixation - Range of Motion....339
Table 95: PICO 6.02- Volar locking plate vs External Fixation - composite....350
Table 96: PICO 6.02- Volar locking plate vs External Fixation - pain....353
Table 97: PICO 6.02- Volar locking plate vs External Fixation - quality of life....355
Table 98: PICO 6.03- Volar locking plate vs intramedullary fixation- Complication....356
Table 99: PICO 6.03- Volar locking plate vs intramedullary fixation - Composite....358
Table 100: PICO 6.03- Volar locking plate vs intramedullary fixation - Radiographic Outcome....359
Table 101: PICO 6.03- Volar locking plate vs intramedullary fixation - Range of Motion....362
Table 102: PICO 6.03- Volar locking plate vs intramedullary fixation - composite....366
Table 103: PICO 6.03- Volar locking plate vs intramedullary fixation - pain....367
Table 104: PICO 6.04- Volar plating vs percutaneous fixation- Complication....368
Table 105: PICO 6.04- Volar plating vs percutaneous fixation- Composite....369
Table 106: PICO 6.04- Volar plating vs percutaneous fixation- Function....370
Table 107: PICO 6.04- Volar plating vs percutaneous fixation- Other....371
Table 108: PICO 6.04- Volar plating vs percutaneous fixation- Radiographic Outcome....375
Table 109: PICO 6.04- Volar plating vs percutaneous fixation- Range of Motion....378
Table 110: PICO 6.04- Volar plating vs percutaneous fixation- composite....391
Table 111: PICO 6.04- Volar plating vs percutaneous fixation- pain....393
Table 112: PICO 6.04- Volar locking plate vs percutaneous pinning- Complications....394
Table 113: PICO 6.04- Volar locking plate vs percutaneous pinning - Composite....396
Table 114: PICO 6.04- Volar locking plate vs percutaneous pinning - Other....397
Table 115: PICO 6.04- Volar locking plate vs percutaneous pinning - composite....398
Table 116: PICO 6.04- Volar locking plate vs percutaneous pinning - quality of life....400
Table 117: PICO 6.05- Locking plate vs volar non-locking plate- Radiographic Outcome....401
Table 118: PICO 6.05- Locking plate vs volar non-locking plate- Range of Motion....402
Table 119: PICO 6.05- Locking plate vs volar non-locking plate- composite....404
Table 120: PICO 6.06- External fixation vs intramedullary fixation- Complication....405
Table 121: PICO 6.06- External fixation vs intramedullary fixation- Composite....406
Table 122: PICO 6.06- External fixation vs intramedullary fixation- Other....407
Table 123: PICO 6.06- External fixation vs intramedullary fixation- Radiographic Outcome....408
Table 124: PICO 6.06- External fixation vs intramedullary fixation- composite....410
Table 125: PICO 6.07- External fixation vs percutaneous fixation- Complications....411
Table 126: PICO 6.07- External fixation vs percutaneous fixation- Function....412
Table 127: PICO 6.07- External fixation vs percutaneous fixation- Other....413
Table 128: PICO 6.07- External fixation vs percutaneous fixation- Radiographic Outcomes....415
Table 129: PICO 6.07- External fixation vs percutaneous fixation- Range of Motion....420
Table 130: PICO 6.07- External fixation vs percutaneous fixation- composite....427
Table 131: PICO 6.07- External fixation vs percutaneous fixation- pain....430
Table 132: PICO 6.08- Fragment specific plating vs volar locking plate- Complication....431
Table 133: PICO 6.08- Fragment specific plating vs volar locking plate - Function....432
Table 134: PICO 6.08- Fragment specific plating vs volar locking plate - Other....433
Table 135: PICO 6.08- Fragment specific plating vs volar locking plate - Radiographic Outcome....434
Table 136: PICO 6.08- Fragment specific plating vs volar locking plate - Range of Motion....436
Table 137: PICO 6.08- Fragment specific plating vs volar locking plate - composite....439
Table 138: PICO 6.08- Fragment specific plating vs volar locking plate - pain....440

Table 139: PICO 6.09- Fragment specific plating vs external fixation- Complication 441
Table 140: PICO 6.09- Fragment specific plating vs external fixation- Function 442
Table 141: PICO 6.09- Fragment specific plating vs external fixation- Other....443
Table 142: PICO 6.09- Fragment specific plating vs external fixation- Radiographic Outcome....444
Table 143: PICO 6.09- Fragment specific plating vs external fixation- Range of Motion 445
Table 144: PICO 6.09- Fragment specific plating vs external fixation- composite 446
Table 145: PICO 6.09- Fragment specific plating vs external fixation- pain....447
Table 146: PICO 6.09- Fragment specific plating vs external fixation- quality of life....448
Table 147: PICO 6.10- Volar plating vs dorsal plating- Complication....449
Table 148: PICO 6.10- Volar plating vs dorsal plating- Other 450
Table 149: PICO 6.10- Volar plating vs dorsal plating- Radiographic Outcome....452
Table 150: PICO 6.10- Volar plating vs dorsal plating- Range of Motion 455
Table 151: PICO 6.10- Volar plating vs dorsal plating- composite 459
Table 152: PICO 6.10- Volar plating vs dorsal plating- pain....460
Table 153: PICO 6.11- Volar plating vs external fixation- Complications....462
Table 154: PICO 6.11- Volar plating vs external fixation- Other 463
Table 155: PICO 6.11- Volar plating vs external fixation- Range of Motion....464
Table 156: PICO 6.11- Volar plating vs external fixation- composite....468
Table 157: PICO 6.11- Volar plating vs external fixation- pain 469

Strength of Recommendations

Strength Of Recommendation	Overall Strength Of Evidence	Description Of Evidence Quality
Strong	**Strong**	**Evidence from two or more "High" quality studies with consistent findings for recommending for or against the intervention. Also requires no reasons to downgrade from the EtD framework**
Moderate	**Moderate or Strong**	**Evidence from two or more "Moderate" quality studies with consistent findings, or evidence from a single "High" quality study for recommending for or against the intervention. Also requires no or only minor concerns addressed in the EtD framework.**
Limited	**Limited, Moderate or Strong**	**Evidence from one or more "Low" quality studies with consistent findings or evidence from a single "Moderate" quality study recommending for or against the intervention. Also, higher strength evidence can be downgraded to limited due to major concerns addressed in the EtD Framework.**
Consensus	**No Reliable Evidence**	**There is no supporting evidence, or higher quality evidence was downgraded due to major concerns addressed in the EtD framework. In the absence of reliable evidence, the guideline work group is making a recommendation based on their clinical opinion.**

Quality Appraisal

Table 1a. Quality Evaluation - Intervention – Randomized

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Inclusion	Strength
Belloti, J. C., 2010	●	●	○	●	◑	●	Include	High Quality
Chappuis, J., 2011	●	●	●	●	◑	●	Include	High Quality
Clementsen, S. O., 2019	●	●	●	●	◑	◑	Include	High Quality
Costa, M. L., 2014	●	●	◑	●	◑	◑	Include	High Quality
Costa, M. L., 2019	●	◑	◑	○	◑	◑	Include	Moderate Quality
Mishra, A. K., 2019	◑	◑	○	◑	◑	●	Include	Moderate Quality
Egol, K., 2008	●	●	◑	●	◑	◑	Include	High Quality
Goehre, F., 2014	●	●	◑	●	◑	◑	Include	High Quality
Gutierrez-Espinoza, H., 2017	●	●	●	●	◑	○	Include	High Quality
Hammer, O. L., 2019	●	●	○	●	●	◑	Include	High Quality
Harley, B. J., 2004	●	●	◑	●	◑	◑	Include	High Quality
Jakubietz, M. G., 2012	●	●	◑	◑	◑	●	Include	High Quality
Jakubietz, R. G., 2008	◑	◑	◑	●	◑	◑	Include	Moderate Quality
Koshimune, M., 2005	◑	●	◑	○	◑	◑	Include	Moderate Quality
Krischak, G. D., 2009	◑	◑	○	●	◑	◑	Include	Moderate Quality
Landgren, M., 2011	◑	●	◑	◑	◑	●	Include	Moderate Quality
Landgren, M., 2017	●	●	◑	●	◑	●	Include	High Quality
Maciel, J. S., 2005	◑	●	◑	●	◑	○	Include	Moderate Quality
Marcheix, P. S., 2010	●	◑	◑	●	◑	●	Include	High Quality
Mellstrand Navarro, C., 2016	◑	●	○	●	●	●	Include	High Quality
Oken, O., 2011	●	◑	◑	●	◑	○	Include	Moderate Quality
Roh, Y. H., 2015	●	◑	◑	●	◑	●	Include	High Quality
Rozental, T. D., 2009	●	●	◑	●	◑	◑	Include	High Quality
Safi, A., 2013	●	◑	●	●	◑	●	Include	High Quality
Saving, J., 2019	◑	●	○	●	●	●	Include	High Quality
Schonnemann, J. O., 2011	◑	●	◑	●	◑	◑	Include	Moderate Quality
Selles, C. A., 2019	●	◑	○	●	◑	◑	Include	Moderate Quality
Souer, J. S., 2011	●	◑	○	●	◑	◑	Include	Moderate Quality
ur Rahman, O., 2012	●	◑	◑	●	◑	●	Include	High Quality
Valdes, K., 2015	●	◑	○	●	◑	○	Include	Moderate Quality
van Gerven, P., 2019	◑	◑	○	●	◑	●	Include	Moderate Quality
Varitimidis, S. E., 2008	●	●	◑	◑	◑	◑	Include	Moderate Quality
Wakefield, A. E., 2000	●	◑	●	●	◑	○	Include	Moderate Quality
Wollstein, R., 2019	◑	◑	◑	●	◑	○	Include	Moderate Quality
Wong, T. C., 2010	◑	●	●	●	◑	◑	Include	High Quality
Yamazaki, H., 2015	●	●	●	●	◑	●	Include	High Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Inclusion	Strength
Yazdanshenas, Hamed, 2019	◑	◑	◑	●	◑	●	Include	Moderate Quality
Zehir, S., 2014	●	◑	◑	●	◑	●	Include	High Quality

Table 1b. Quality Evaluation - Intervention - Observational ROBINS 1

Study	Is this an observational study? (If no, exit form)	Participant Recruitment	Treatment recording	Confounding Variables	Outcome measurement bias	Incomplete Outcome Data	Adequate Reporting	Inclusion	Strength
Burnier, M., 2018	○	●	●	●	◑	◑	●	Include	Low Quality
Christiaens, N., 2017	○	●	●	◑	○	●	◑	Include	Low Quality
Kordasiewicz, B., 2011	○	●	●	◑	○	◑	●	Include	Low Quality
Luo, P., 2018	○	◑	●	◑	○	●	●	Include	Low Quality
Ruch, D. S., 2004	○	●	●	●	◑	◑	◑	Include	Low Quality
Saab, M., 2019	○	●	●	◑	◑	◑	●	Include	Low Quality

PICO 1: Arthroscopic Assistance

Table 2: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- summary of findings table (part 1: PROs, complications and grip strength)

	High Quality	Moderate Quality		Low Quality				
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Yamazaki, H., 2015**	**Varitimidis, S. E., 2008**	**Selles, C. A., 2019**	**Kordasiewicz, B., 2011**	**Ruch, D. S., 2004**	**Saab, M., 2019**	**Christiaens, N., 2017**	**Burnier, M., 2018**
Complications								
Total complications						●		
Complications (major)	●							
Complications (# of patients): Hardware related complaints, Superficial wound infection, ECU tendonitis, and/or FPL rupture			●					
Composite								
DASH				●	●			
DASH: Disabilities of the Arm Shoulder and Hand score	●	↑						
Modified Mayo wrist score (Modified)		↑						
Mayo Clinic						●		
QuickDASH						●		
DASH: Disabilities of the Arm Shoulder and Hand score (Scores expressed as median (IQR))			↓					
PRWE: Patient Rated Wrist Evaluation (Scores expressed as median (IQR))			↓					
Other								
Grip strength (% of contralateral side)				●				
Grip strength: Reported as percentage of contralateral side	●							
Pain								
VAS: Medians given for B1 and C1 type fractures				●				
VAS						●		
Pain (VAS): Postoperative pain as indicated on the visual analogue scale (VAS),			↑					

Table 3: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- summary of findings table (part 2: Range of Motion and Radiographic outcomes)

	High Quality	Moderate Quality		Low Quality				
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Yamazaki, H., 2015	Varitimidis, S. E., 2008	Selles, C. A., 2019	Kordasiewicz, B., 2011	Ruch, D. S., 2004	Saab, M., 2019	Christiaens, N., 2017	Burnier, M., 2018
Radiographic Outcomes								
Degree of reduction- Very Good (Lindstroem's classification as modified by Sarmiento)				●				
Radiographic outcome: Lunotriquetral ligament interval (mm)		●						
Radiographic outcome: Radial inclination (°) (normal range 15°-25°)		↑						
Radiographic outcome: Scapholunate ligament interval (mm)		●						
Radiographic outcome: Step-off (mm)		↑						
Radiographic outcome: Ulnar negative variance (mm)		↑						
Radiographic outcome: Ulnar styloid nonunion (%)		●						
Radiographic outcome: Volar tilt (°)		●						
Radiographic outcome: Capitolunate angle					●			
Radiographic outcome: Knirk and Jupiter articular congruity score					●			
Radiographic outcome: LT interval (mm)					●			
Radiographic outcome: Maximum gap (mm)					●			
Radiographic outcome: Maximum step-off (mm)					●			
Radiographic outcome: Palmar inclination					●			
Radiographic outcome: Radial inclination					●			
Radiographic outcome: SL interval (mm)					●			
Radiographic outcome: Scapholunate angle					●			
Radiographic outcome: Styloid nonunion					●			
Radiographic outcome: Ulnar variance					●			
Interfragmentary gap CT (mm)						●		
Radiographic outcome: Interfragmentary step CT (mm)						●		
Radiographic outcome: Gap between fragments (mm)							●	
Radiographic outcome: Radial slope (A/P view) (°)							●	
Radiographic outcome: Radial slope (lateral view) (°)							●	
Radiographic outcome: Radiographic index (mm)							●	
Radiographic outcome: Step-off height (mm)							↑	
Radiographic outcome: Radio-carpal gap (mm)								↑
Radiographic outcome: Radio-carpal step-off (mm)								↑
Radiographic outcome: Gap (mm)	●							
Radiographic outcome: Radial inclination (°)	●							
Radiographic outcome: Step (mm)	●							
Radiographic outcome: Ulnar variance (mm)	●							
Radiographic outcome: Volar angle (°)	●							
Range of Motion								
Range of motion: Extension				●	↑	↑		
Range of motion: Flexion				●	↑	●		
Range of motion: Pronation				●	●	●		
Range of motion: Radial deviation				●	●			
Range of motion: Supination	●			●	↑	●		
Range of motion: Ulnar deviation				●	●			
Range of motion: Extension (°)		↑						
Range of motion: Flexion (°)		↑						
Range of motion: Pronation (°)		●						
Range of motion: Radial deviation (°)		↑						
Range of motion: Supination (°)		↑						
Range of motion: Ulnar deviation (°)		↑						
Range of motion: Extension (Reported as percentage of the uninjured contralateral side)	●							
Range of motion: Flexion (Reported as percentage of the uninjured contralateral side)	●							
Range of motion: Pronation (Reported as percentage of the uninjured contralateral side)	●							

Table 4: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saab, M., 2019	Low Quality	Total complications	Post-Op	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	0.00%	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	0.00%	RD	0.00(0.00,0.00)	Not Significant (P-value>.05)
Selles, C. A., 2019	Moderate Quality	Complications (# of patients): Hardware related complaints, Superficial wound infection, ECU tendonitis, and/or FPL rupture	12 months	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	0.24	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	0.2	RR	1.2(0.42,3.43)	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Complications (major)	48 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	0	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	0	RD	0(-10.15,9.64)	Not Significant (P-value>.05)

Table 5: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kordasiewicz, B., 2011	Low Quality	DASH	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	13.1(.)	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	22.5(.)	MeanDif	-9.4(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	DASH	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	11(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	19(.)	MeanDif	-8(.,.)	Not Significant (P-value>.05)
Saab, M., 2019	Low Quality	Mayo Clinic	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	86(16.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	90(9.00)	MeanDif	-4(-12.26,4.26)	Not Significant (P-value>.05)
Saab, M., 2019	Low Quality	QuickDASH	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	9.7(22.04)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	3.6(4.75)	MeanDif	6.1(-4.27,16.47)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Selles, C. A., 2019	Moderate Quality	PRWE: Patient Rated Wrist Evaluation (Scores expressed as median (IQR))	3 weeks	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=48 ; trt2=58	Not Significant (P-value>.05)
Selles, C. A., 2019	Moderate Quality	PRWE: Patient Rated Wrist Evaluation (Scores expressed as median (IQR))	6 weeks	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=37 ; trt2=39	Not Significant (P-value>.05)
Selles, C. A., 2019	Moderate Quality	PRWE: Patient Rated Wrist Evaluation (Scores expressed as median (IQR))	3 months	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=23 ; trt2=13	**G2 (Open reduction internal fixation)**
Selles, C. A., 2019	Moderate Quality	PRWE: Patient Rated Wrist Evaluation (Scores expressed as median (IQR))	6 months	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=10 ; trt2=10	**G2 (Open reduction internal fixation)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Selles, C. A., 2019	Moderate Quality	PRWE: Patient Rated Wrist Evaluation (Scores expressed as median (IQR))	12 months	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=7; trt2=7	Not Significant (P-value>.05)

Table 6: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kordasiewicz, B., 2011	Low Quality	Grip strength (% of contralateral side)	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	76.52(.)	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	75.18(.)	MeanDif	1.34(.,.)	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Grip strength: Reported as percentage of contralateral side	6 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Grip strength: Reported as percentage of contralateral side	48 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 7: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kordasiewicz, B., 2011	Low Quality	VAS: Medians given for B1 and C1 type fractures	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	.	. %	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	.	. %	Author Reported	NA	Not Significant (P-value>.05)
Saab, M., 2019	Low Quality	VAS	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	0.6(1.90)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	1.05(1.40)	MeanDif	-0.45(-1.50,0.60)	Not Significant (P-value>.05)

Table 8: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Radiographic Outcomes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Lunotriquetral ligament interval (mm)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	1.55(0.90)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	1.76(0.80)	MeanDif	-0.21(-0.76,0.34)	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Radial inclination (°) (normal range 15°-25°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	21(3.20)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	25(3.00)	MeanDif	-4(-5.99,-2.01)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Scapholunate ligament interval (mm)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	1.67(0.70)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	1.75(0.50)	MeanDif	-0.08(-0.47,0.31)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Step-off (mm)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	0.3(0.20)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	0.78(0.20)	MeanDif	-0.48(-0.61,-0.35)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Ulnar negative variance (mm)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	1.04(0.18)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	0.64(0.12)	MeanDif	0.4(0.3, 0.5)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Ulnar styloid nonunion (%)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	0.15	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	0.25	RR	0.6(0.17,2.18)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Volar tilt (°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	8(.)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	7(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Lunotriquetral ligament interval (mm)	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	1.6(0.50)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	1.78(0.15)	MeanDif	-0.18(-0.42,0.06)	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Radial inclination (°) (normal range 15°-25°)	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	21(1.96)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	24(2.00)	MeanDif	-3(-4.27,-1.73)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Scapholunate ligament interval (mm)	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	1.65(0.34)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	1.77(0.30)	MeanDif	-0.12(-0.33,0.09)	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Step-off (mm)	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	0.3(0.28)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	0.8(0.30)	MeanDif	-0.5(-0.69,-0.31)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Ulnar negative variance (mm)	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	1.08(0.22)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	0.64(0.16)	MeanDif	0.44(0.32,0.56)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Ulnar styloid nonunion (%)	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	0.15	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	0.25	RR	0.6(0.17,2.18)	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	Radiographic outcome: Volar tilt (°)	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	7(.)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	7(.)	MeanDif	0(.,.)	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Radiographic outcome: Gap (mm)	12 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	0.7(0.70)	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	0.9(0.70)	MeanDif	-0.2(-0.53,0.13)	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Radiographic outcome: Step (mm)	12 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	0.4(0.50)	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	0.6(0.60)	MeanDif	-0.2(-0.46,0.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yamazaki, H., 2015	High Quality	Radiographic outcome: Ulnar variance (mm)	12 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	1.2(2.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	0.8(1.90)	MeanDif	0.4(-0.53,1.33)	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Radiographic outcome: Volar angle (°)	12 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	9(6.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	9(5.00)	MeanDif	0(-2.63,2.63)	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Radiographic outcome: Radial inclination (°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	26(4.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	27(3.00)	MeanDif	-1(-2.68,0.68)	Not Significant (P-value>.05)

Table 9: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Radiographic outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Burnier, M., 2018	Low Quality	Radiographic outcome: Radio-carpal gap (mm)	1 years	PICO 1: Surgery with arthroscopy (Patients treated with volar plate fixation + arthroscopy)	20	0.7(.)	PICO 1: Surgery without arthroscopy (Patients treated with volar plate fixation + floursocopy)	20	1.9(.)	MeanDif	-1.2(.,.)	Not Significant (P-value>.05)
Burnier, M., 2018	Low Quality	Radiographic outcome: Radio-carpal step-off (mm)	1 years	PICO 1: Surgery with arthroscopy (Patients treated with volar plate fixation + arthroscopy)	20	0.2(.)	PICO 1: Surgery without arthroscopy (Patients treated with volar plate fixation + floursocopy)	20	2.2(.)	MeanDif	-2(.,.)	Not Significant (P-value>.05)
Christiaens, N., 2017	Low Quality	Radiographic outcome: Gap between fragments (mm)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted fixation with volar locking plate)	20	. %	PICO 1: Surgery without arthroscopy (Fixation with volar locking plate with fluoroscopy only)	.	. %	medians	trt1=2.3; trt2=2.4	Not Significant (P-value>.05)
Christiaens, N., 2017	Low Quality	Radiographic outcome: Radial slope (A/P view) (°)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted fixation with volar locking plate)	20	. %	PICO 1: Surgery without arthroscopy (Fixation with volar locking plate with fluoroscopy only)	20	. %	medians	trt1=20.5; trt2=21.5	Not Significant (P-value>.05)
Christiaens, N., 2017	Low Quality	Radiographic outcome: Radial slope (lateral view) (°)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted fixation with volar locking plate)	20	. %	PICO 1: Surgery without arthroscopy (Fixation with volar locking plate with fluoroscopy only)	20	. %	medians	trt1=4.5; trt2=6	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiaens, N., 2017	Low Quality	Radiographic outcome: Radiographic index (mm)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted fixation with volar locking plate)	20	. %	PICO 1: Surgery without arthroscopy (Fixation with volar locking plate with fluoroscopy only)	20	. %	medians	trt1=0; trt2=0	Not Significant (P-value>.05)
Christiaens, N., 2017	Low Quality	Radiographic outcome: Step-off height (mm)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted fixation with volar locking plate)	20	. %	PICO 1: Surgery without arthroscopy (Fixation with volar locking plate with fluoroscopy only)	20	. %	medians	trt1=0.8; trt2=1.9	**G1 (Arthroscopy) Significant (P-value<.05)**
Kordasiewicz, B., 2011	Low Quality	Degree of reduction-Very Good (Lindstroem's classification as modified by Sarmiento)	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	76.92%	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	66.67%	RR	1.15(0.82,1.62)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Capitolunate angle	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	14(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	5(.)	MeanDif	9(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Knirk and Jupiter articular congruity score	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	0.23(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	0.18(.)	MeanDif	0.05(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ruch, D. S., 2004	Low Quality	Radiographic outcome: LT interval (mm)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	1.77	. %	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	1.55	. %	Author Reported	NA	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Maximum gap (mm)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	0.29(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	0.05(.)	MeanDif	0.24(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Maximum step-off (mm)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	0.31(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	0.18(.)	MeanDif	0.13(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Palmar inclination	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	-0.87(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	1.3(.)	MeanDif	-2.17(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Radial inclination	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	21(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	25(.)	MeanDif	-4(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Scapholunate angle	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	41(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	47(.)	MeanDif	-6(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: SL interval (mm)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	1.75(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	1.64(.)	MeanDif	0.11(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Styloid nonunion	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	15.00%	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	26.67%	RR	0.56(0.13,2.44)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Radiographic outcome: Ulnar variance	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	1.04(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	0.64(.)	MeanDif	0.4(.,.)	Not Significant (P-value>.05)
Saab, M., 2019	Low Quality	Interfragmentary gap CT (mm)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	0.55(1.04)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	0.82(1.84)	MeanDif	-0.27(-1.16,0.62)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saab, M., 2019	Low Quality	Radiographic outcome: Interfragmentary step CT (mm)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	0.91(1.25)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	1.41(1.68)	MeanDif	-0.5(-1.40,0.40)	Not Significant (P-value>.05)

Table 10: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kordasiewicz, B., 2011	Low Quality	Range of motion: Extension	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	54.26(.)	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	45.93(.)	MeanDif	8.33(.,.)	Not Significant (P-value>.05)
Kordasiewicz, B., 2011	Low Quality	Range of motion: Flexion	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	50.37(.)	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	51.11(.)	MeanDif	-0.74(.,.)	Not Significant (P-value>.05)
Kordasiewicz, B., 2011	Low Quality	Range of motion: Pronation	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	68.89(.)	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	71.85(.)	MeanDif	-2.96(.,.)	Not Significant (P-value>.05)
Kordasiewicz, B., 2011	Low Quality	Range of motion: Radial deviation	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	15(.)	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	16.11(.)	MeanDif	-1.11(.,.)	Not Significant (P-value>.05)
Kordasiewicz, B., 2011	Low Quality	Range of motion: Supination	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	67.59(.)	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	65.74(.)	MeanDif	1.85(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kordasiewicz, B., 2011	Low Quality	Range of motion: Ulnar deviation	22 months	PICO 1: Surgery with arthroscopy (Arthroscopic procedures with additional fluoroscopic guidance)	26	20.63(.)	PICO 1: Surgery without arthroscopy (Non-arthroscopic procedures with fluoroscopic guidance)	27	18.89(.)	MeanDif	1.74(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Range of motion: Extension	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	77(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	69(.)	MeanDif	8(.,.)	**G1 (Arthoscopically-assisted) Significant (P-value<.05)**
Ruch, D. S., 2004	Low Quality	Range of motion: Flexion	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	78(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	59(.)	MeanDif	19(.,.)	**G1 (Arthoscopically-assisted) Significant (P-value<.05)**
Ruch, D. S., 2004	Low Quality	Range of motion: Pronation	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	83(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	84(.)	MeanDif	-1(.,.)	Not Significant (P-value>.05)
Ruch, D. S., 2004	Low Quality	Range of motion: Radial deviation	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	18(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	15(.)	MeanDif	3(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ruch, D. S., 2004	Low Quality	Range of motion: Supination	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	88(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	73(.)	MeanDif	15(.,.)	**G1 (Arthoscopically-assisted) Significant (P-value<.05)**
Ruch, D. S., 2004	Low Quality	Range of motion: Ulnar deviation	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted external fixation with pinning)	15	25(.)	PICO 1: Surgery without arthroscopy (External fixation with fluoroscopically-assisted reduction and pinning)	15	22(.)	MeanDif	3(.,.)	Not Significant (P-value>.05)
Saab, M., 2019	Low Quality	Range of motion: Extension	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	80(6.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	74(9.00)	MeanDif	6(1.39, 10.61)	**Treatment 1 Significant (P-value<.05)**
Saab, M., 2019	Low Quality	Range of motion: Flexion	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	74(5.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	70(11.00)	MeanDif	4(-1.05,9.05)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saab, M., 2019	Low Quality	Range of motion: Pronation	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	86(6.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	86(7.00)	MeanDif	0(-3.98,3.98)	Not Significant (P-value>.05)
Saab, M., 2019	Low Quality	Range of motion: Supination	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	18	83(9.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted osteosynthesis with Variax anterior locking plate with standard Henry's approach)	23	83(10.00)	MeanDif	0(-5.83,5.83)	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Range of motion: Supination	6 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Range of motion: Supination	48 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Extension (°)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	73(5.80)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	61(6.10)	MeanDif	12(8.19,15.81)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Flexion (°)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	64(7.30)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	53(3.60)	MeanDif	11(7.27,14.73)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Pronation (°)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	79(3.70)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	80(3.50)	MeanDif	-1(-3.31,1.31)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Radial deviation (°)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	9(1.80)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	9(3.90)	MeanDif	0(-1.97,1.97)	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Supination (°)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	72(7.20)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	62(5.90)	MeanDif	10(5.78,14.22)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Ulnar deviation (°)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	23(3.50)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	21(3.80)	MeanDif	2(-0.34,4.34)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Extension (°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	76(5.00)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	65(2.60)	MeanDif	11(8.42,13.58)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Flexion (°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	76(5.20)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	63(5.10)	MeanDif	13(9.7, 16.3)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Pronation (°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	83(5.80)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	82(2.70)	MeanDif	1(-1.94,3.94)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Radial deviation (°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	15(0.10)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	12(2.50)	MeanDif	3(1.83, 4.17)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Supination (°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	80(5.80)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	73(2.30)	MeanDif	7(4.13, 9.87)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	Range of motion: Ulnar deviation (°)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	25(2.20)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	22(3.00)	MeanDif	3(1.31, 4.69)	**Treatment 1 Significant (P-value<.05)**
Yamazaki, H., 2015	High Quality	Range of motion: Extension (Reported as percentage of the uninjured contralateral side)	6 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yamazaki, H., 2015	High Quality	Range of motion: Flexion (Reported as percentage of the uninjured contralateral side)	6 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	36	. %	Author Reported	NA	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Range of motion: Pronation (Reported as percentage of the uninjured contralateral side)	6 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Range of motion: Extension (Reported as percentage of the uninjured contralateral side)	48 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	Range of motion: Flexion (Reported as percentage of the uninjured contralateral side)	48 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	36	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yamazaki, H., 2015	High Quality	Range of motion: Pronation (Reported as percentage of the uninjured contralateral side)	48 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 11: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yamazaki, H., 2015	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)
Yamazaki, H., 2015	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	48 weeks	PICO 1: Surgery with arthroscopy (Arthroscopically-aided reduction (in addition to fluoroscopy) following volar locking plate fixation)	36	. %	PICO 1: Surgery without arthroscopy (Fluoroscopically-aided reduction (no arthroscopy) following volar locking plate fixation)	34	. %	Author Reported	NA	Not Significant (P-value>.05)
Selles, C. A., 2019	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score (Scores expressed as median (IQR))	3 weeks	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=34 ; trt2=45	**G1 (Open reduction internal fixation)**
Selles, C. A., 2019	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score (Scores expressed as median (IQR))	6 weeks	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=27 ; trt2=23	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Selles, C. A., 2019	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score (Scores expressed as median (IQR))	3 months	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=19; trt2=9	**G2 (Open reduction internal fixation)**
Selles, C. A., 2019	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score (Scores expressed as median (IQR))	6 months	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=6; trt2=8	Not Significant (P-value>.05)
Selles, C. A., 2019	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score (Scores expressed as median (IQR))	12 months	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=8; trt2=6	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	12(4.10)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	25(8.50)	MeanDif	-13(-17.33,-8.67)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	Modified Mayo wrist score (Modified)	3 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	81(0.20)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	75.3(2.10)	MeanDif	5.7(4.71,6.69)	**Treatment 1 Significant (P-value<.05)**
Varitimidis, S. E., 2008	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	4.7(4.40)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	7.9(8.40)	MeanDif	-3.2(-7.54,1.14)	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	Modified Mayo wrist score (Modified)	12 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	90.9(2.50)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	85.3(4.10)	MeanDif	5.6(3.41,7.79)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Varitimidis, S. E., 2008	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	4.8(4.20)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	8.3(7.40)	MeanDif	-3.5(-7.39,0.39)	Not Significant (P-value>.05)
Varitimidis, S. E., 2008	Moderate Quality	Modified Mayo wrist score (Modified)	24 months	PICO 1: Surgery with arthroscopy (Arthroscopically- and fluoroscopically-assisted reduction and external fixation plus percutaneous pinning)	20	91.2(2.20)	PICO 1: Surgery without arthroscopy (Fluoroscopically-assisted reduction alone and external fixation plus percutaneous pinnin)	20	86.7(3.00)	MeanDif	4.5(2.81,6.19)	**Treatment 1 Significant (P-value<.05)**

Table 12: PICO 1- Surgery with arthroscopy vs Surgery without arthroscopy- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Selles, C. A., 2019	Moderate Quality	Pain (VAS): Postoperative pain as indicated on the visual analogue scale (VAS),	1 day	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=5; trt2=7	**G1 (Open reduction internal fixation)**
Selles, C. A., 2019	Moderate Quality	Pain (VAS): Postoperative pain as indicated on the visual analogue scale (VAS),	1 week	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=3; trt2=4	Not Significant (P-value>.05)
Selles, C. A., 2019	Moderate Quality	Pain (VAS): Postoperative pain as indicated on the visual analogue scale (VAS),	3 weeks	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=2; trt2=3	**G1 (Open reduction internal fixation)**
Selles, C. A., 2019	Moderate Quality	Pain (VAS): Postoperative pain as indicated on the visual analogue scale (VAS),	6 weeks	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=1; trt2=2	Not Significant (P-value>.05)

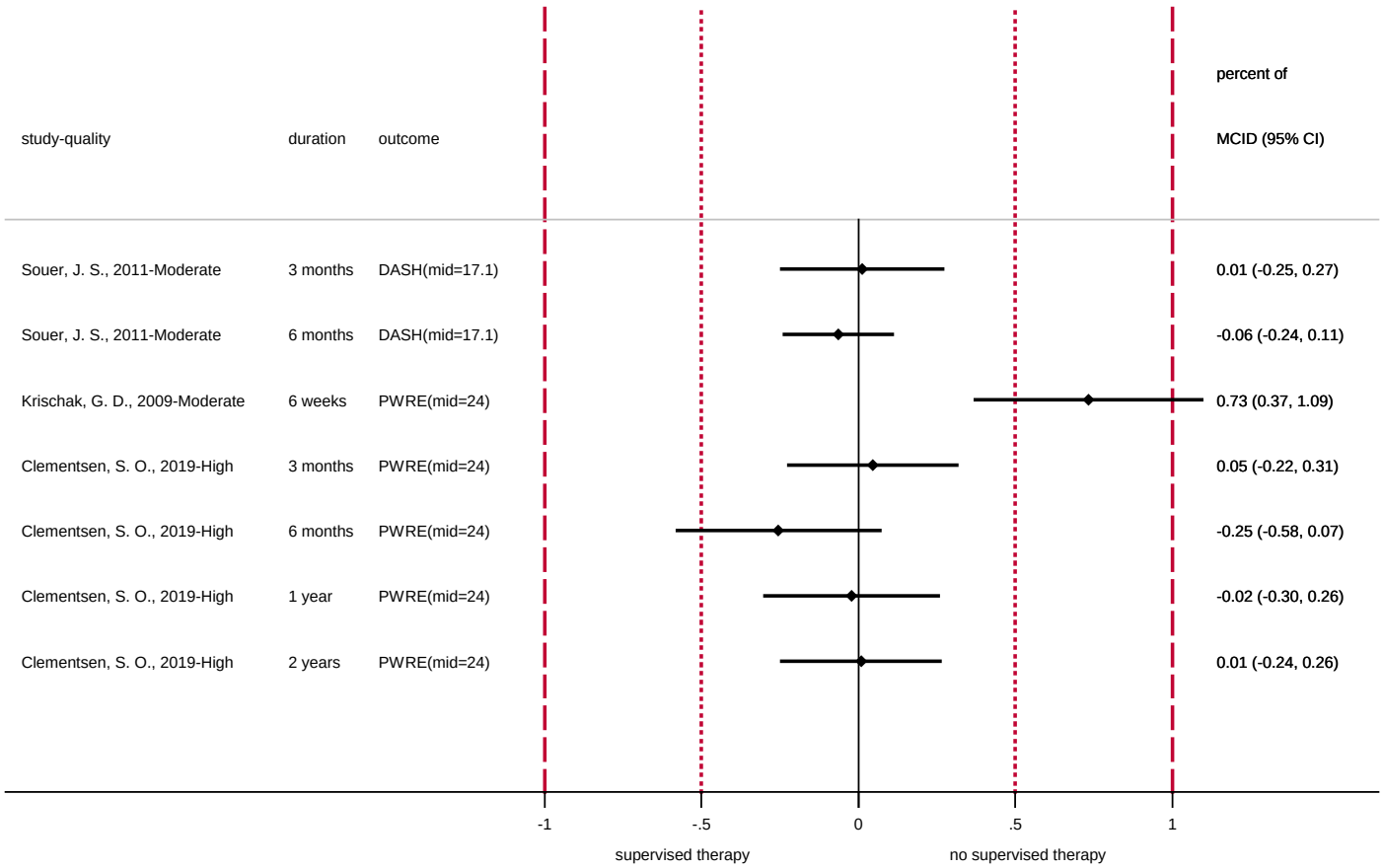
Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Selles, C. A., 2019	Moderate Quality	Pain (VAS): Postoperative pain as indicated on the visual analogue scale (VAS),	3 months	PICO 1: Surgery with arthroscopy (ORIF with wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	PICO 1: Surgery without arthroscopy (ORIF without wrist arthroscopy to remove fracture hematoma and debris (intervention group))	25	. %	medians	trt1=0; trt2=2	Not Significant (P-value>.05)

PICO 2: Home Exercise Program

Table 13: PICO 2.1- post-op supervised therapy- summary of findings table

	High Quality	Moderate Quality				Low Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Clementsen, S. O., 2019	Souer, J. S., 2011	Krischak, G. D., 2009	Wollstein, R., 2019	Valdes, K., 2015	Oskarsson, G.V., 1997
Complications						
Complications (major)	●					
Complications (minor)	●					
Secondary surgery: Peripheral nerve decompression (median and ulnar), Plate removal, Secondary osteosynthesis	●					
composite						
DASH		●				
Gartland and Werley		●				
Mayo wrist score		●				
PRWE			↓		●	
DASH (QuickDASH)	↑					
PRWE: Patient-rated wrist evaluation	●					
Function						
Grip strength (% of contralateral side)						↓
Grip Strength (matched pair sample; % of contralateral side)						●
Wrist movement (% of contralateral side)						↓
Wrist movement (matched pair sample; % of contralteral side)						●
MAM-36: Manual Ability Measure-36 (MAM-36)						
Other						
Grip strength		↓	↓			
Pinch strength		●				
Grip strength (kg)					●	
Finger dexterity (assembly): Via the Purdue Pegboard Test						
Finger dexterity (both hands): Via the Purdue Pegboard Test						
Finger dexterity (single hand): Via the Purdue Pegboard Test						
Grip strength: Hand strength (Grasp power of Injured side)						
Grip strength: Hand strength (Three-jaw chuck pinch of Injured side)						
Grip strength: Hand strength (lateral pinch of Injured side)						
Grip strength: Measured using hand dynamometer (kg)	●					
Pain						
Pain						↓
Pain (VAS): Visual Analog Pain scale	●	●			●	
Range of Motion						
Range of motion: Extension	●	↓				
Range of motion: Flexion	●	●				
Range of motion: Flexion-extension arc		↓				
Range of motion: Pronation	↑	●				
Range of motion: Radial deviation	●	●				
Range of motion: Supination	●	↓				
Range of motion: Ulnar deviation	●	↓				
Range of motion: Extension and flexion (% of uninjured side)			↓			
Range of motion: Ulnar and radial abduction (% of healthy side)			↓			
Range of motion: Extension (involved/uninvolved)				●		
Range of motion: Flexion (involved/uninvolved)				●		
Range of motion: Pronation (involved/uninvolved)				●		
Range of motion: Radial deviation (involved/uninvolved)				●		
Range of motion: Supination (involved/uninvolved)				●		
Range of motion: Ulnar deviation (involved/uninvolved)				●		
Range of motion: Forearm ROM					●	
Range of motion: Wrist ROM					●	
Radiographic Outcomes						
Radiographic outcome: Alignment, lateral (°)			●			
Radiographic outcome: Radial inclination, AP (°)			●			
Radiographic outcome: Radial length, AP (mm)			●			

Table 14: PICO 2.1- post-op supervised therapy- summary of findings table for outcomes with MIDs



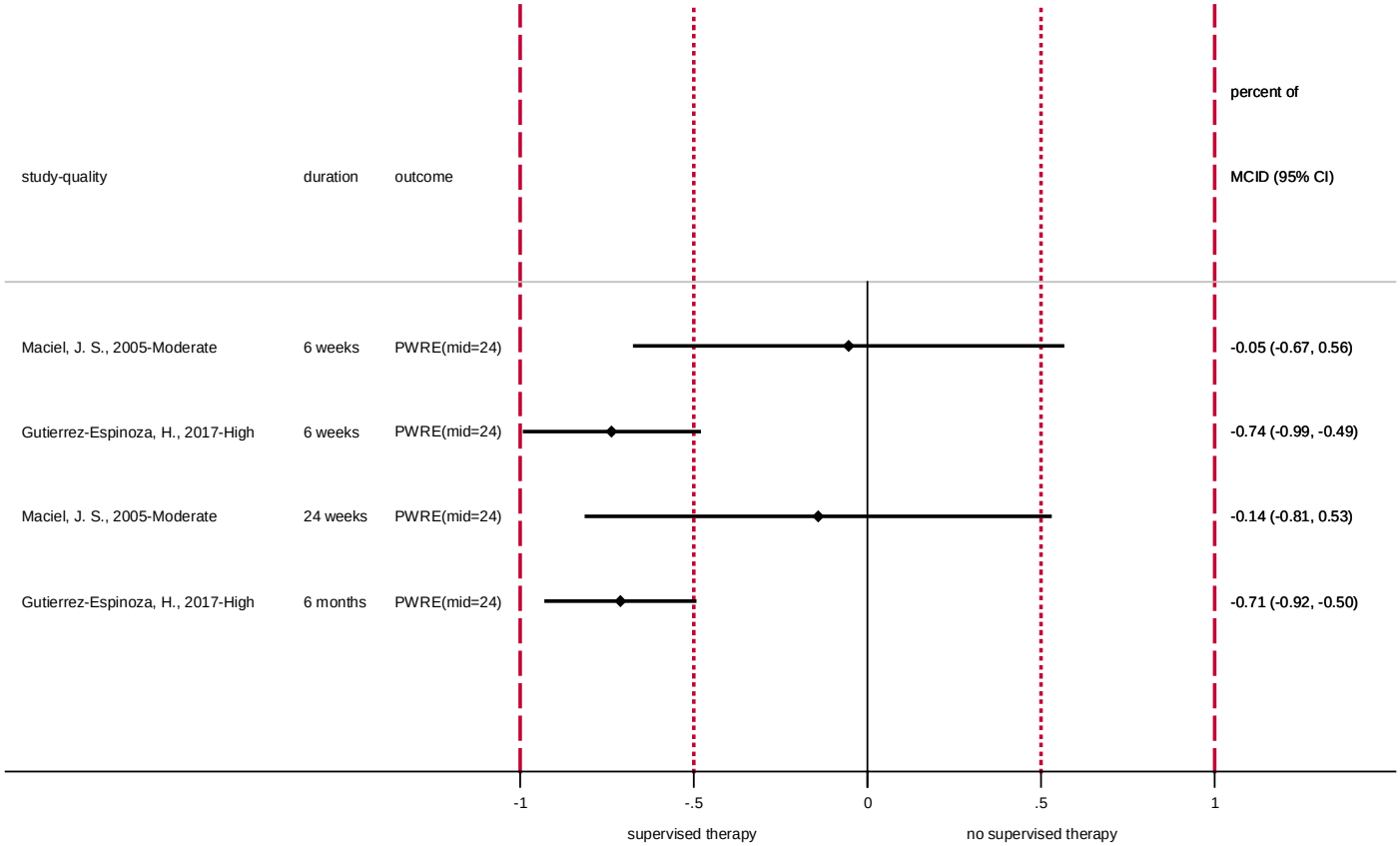
The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 15: PICO 2.2- Non-operative supervised therapy- summary of findings table

	High Quality	Moderate Quality		
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Gutierrez-Espinoza, H., 2017**	**Maciel, J. S., 2005**	**Wakefield, A. E., 2000**	**Oken, O., 2011**
Complications				
Hand edema (mL)				↑
Composite				
PRWE		●		
PRWE: Patient-rated wrist evaluation	↑			
PRWE (Pain)		●		
PRWE (Participation)		●		
PRWE (activity)		●		
SF-36			●	
Other				
Grip strength		●		
Grip strength (kg)				↑
Grip strength (% of contralateral side)			●	
Grip strength: Reported as percentage of contralateral side	↑			
3-point pinch (kg)				↑
Lateral pinch (kg)				↑
Tip-tip pinch (kg)				↑
Pain				
VAS			●	
Pain (VAS): Visual Analog Pain scale	↑			
Pain (PRWE): Patient-rated wrist evaluation (pain)	↑			
Range of Motion				
Range of motion: Extension	↑	●		
Range of motion: Flexion	↑	●		
Range of motion: Flexion/extension (% of contralateral side)			↑	
Range of motion: Pronation/supination (% of contralateral side)			↓	
Range of motion: Radial/ulnar deviation (% of contralateral side)			↑	
Range of motion: Extension (°)				↑
Range of motion: Flexion (°)				↑
Range of motion: Pronation (°)				●
Range of motion: Radial deviation (°)				●
Range of motion: Supination (°)				↑
Range of motion: Ulnar deviation (°)				●

Table 16: PICO 2.2- Non-operative supervised therapy- summary of findings table for outcomes with MIDs



The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 17: PICO 2.1- post-op supervised therapy- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Complications (major): Suboptimal osteosynthesis leading to secondary surgery, Complex regional pain syndrome/prolonged pai	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	57	. %	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	62	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Complications (minor): Transient nerve dysfunction, Superficial wound infection, Trigger finger, Dupuytren contracture, Sca	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	57	. %	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	62	. %	Author Reported	NA	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Secondary surgery: Peripheral nerve decompression (median and ulnar), Plate removal, Secondary osteosynthesis	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	57	. %	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	62	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 18: PICO 2.1- post-op supervised therapy- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	PRWE: Patient-rated wrist evaluation	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	17(18.60)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	15.9(15.80)	MeanDif	1.1(-5.33,7.53)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	PRWE: Patient-rated wrist evaluation	6 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	57	29.6(21.30)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	35.7(21.20)	MeanDif	-6.1(-13.85,1.65)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	PRWE: Patient-rated wrist evaluation	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	10.2(19.10)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	10.7(15.40)	MeanDif	-0.5(-7.14,6.14)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	PRWE: Patient-rated wrist evaluation	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	8.2(17.20)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	8(14.90)	MeanDif	0.2(-5.87,6.27)	Not Significant (P-value>.05)

Table 19: PICO 2.1- post-op supervised therapy- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Oskarsson, G. V., 1997	Low Quality	Grip strength (% of contralateral side)	10 weeks	G1 (Formal physiotherapy)	40	40.9 (22.590	G2 (Self-training)	70	53.7 (23.48)	MeanDif	-12.8 (-21.70--3.89)	**G2 (Self-training) Significant (P-value<.05)**
Oskarsson, G. V., 1997	Low Quality	Grip strength (% of contralateral side)	35 weeks	G1 (Formal physiotherapy)	40	71.8 (17.27	G2 (Self-training)	70	80.9 (16.65)	MeanDif	-9.1 (-15.84--2.35)	**G2 (Self-training) Significant (P-value<.05)**
Oskarsson, G. V., 1997	Low Quality	Grip Strength (matched pair sample; % of contralateral side)	10 weeks	G1 (Formal physiotherapy)	33	44.36	G2 (Self-training)	33	44.52	MeanDif		Not Significant (P-value>.05)
Oskarsson, G. V., 1997	Low Quality	Grip Strength (matched pair sample; % of contralateral side)	35 weeks	G1 (Formal physiotherapy)	33	74.42	G2 (Self-training)	33	78.3	MeanDif		Not Significant (P-value>.05)
Oskarsson, G. V., 1997	Low Quality	Wrist movement (% of contralateral side)	10 weeks	G1 (Formal physiotherapy)	40	70.5 (14.84)	G2 (Self-training)	70	80.4 (11.53)	MeanDif	-9.9 (-15.23 --4.56)	**G2 (Self-training) Significant (P-value<.05)**
Oskarsson, G. V., 1997	Low Quality	Wrist movement (% of contralateral side)	35 weeks	G1 (Formal physiotherapy)	40	85.3 (5.81)	G2 (Self-training)	70	90.9 (6.83)	MeanDif	-5.6 (-8.00- -3.19)	**G2 (Self-training) Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Oskarsson, G. V., 1997	Low Quality	Wrist movement (matched pair sample; % of contralteral side)	10 weeks	G1 (Formal physiotherapy)	29	88.71	G2 (Self-training)	29	89.17	MeanDif		Not Significant (P-value>.05)
Oskarsson, G. V., 1997	Low Quality	Wrist movement (matched pair sample; % of contralteral side)	35 weeks	G1 (Formal physiotherapy)	29	75.13	G2 (Self-training)	29	75.05	MeanDif		Not Significant (P-value>.05)

Table 20: PICO 2.1- post-op supervised therapy- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Grip strength: Measured using hand dynamometer (kg)	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	56	13.6(7.70)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	60	12.2(5.90)	MeanDif	1.4(-1.14,3.94)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Grip strength: Measured using hand dynamometer (kg)	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	21.2(8.50)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	20.5(7.70)	MeanDif	0.7(-2.31,3.71)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Grip strength: Measured using hand dynamometer (kg)	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	27.2(8.10)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	28.3(7.60)	MeanDif	-1.1(-4.11,1.91)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Grip strength: Measured using hand dynamometer (kg)	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	29.2(7.60)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	28.3(7.60)	MeanDif	0.9(-1.96,3.76)	Not Significant (P-value>.05)
Krischak, G. D., 2009	Moderate Quality	Grip strength	6 weeks	PICO 2: Supervised therapy (Physical therapist with 12 sessions- received treatment by prescription in the practice of a physical therapist)	23	. %	PICO 2: Home exercise program (Independent home exercise program using a training diary)	23	. %	Author Reported	NA	**G2 (Independent home exercise program) Significant (P-value<.05)**
Souer, J. S., 2011	Moderate Quality	Grip strength	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	45(17.40)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	55(22.60)	MeanDif	-10(-18.13,-1.87)	**Treatment 2 Significant (P-value<.05)**
Souer, J. S., 2011	Moderate Quality	Pinch strength	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	13(4.10)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	14(4.30)	MeanDif	-1(-2.70,0.70)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Souer, J. S., 2011	Moderate Quality	Grip strength	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	51(17.90)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	57(18.50)	MeanDif	-6(-13.36,1.36)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Pinch strength	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	17(8.60)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	15(4.30)	MeanDif	2(-0.77,4.77)	Not Significant (P-value>.05)
Valdes, K., 2015	Moderate Quality	Grip strength (kg)	6 weeks	PICO 2: Supervised therapy (Instructed with standard pictorial HEP and enrolled in one-on-one supervised therapy under CHT; therapy 2x/week for 30min-1hr, mean of 16 visits)	26	32(.)	PICO 2: Home exercise program (Instructed with same standard pictorial HEP to perform at home; determined compliance based on patient's ability to reproduce HEP independently under observation of CHT)	24	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 21: PICO 2.1- post-op supervised therapy- Radiographic Outcomes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Krischak, G. D., 2009	Moderate Quality	Radiographic outcome: Alignment, lateral (°)	6 weeks	PICO 2: Supervised therapy (Physical therapist with 12 sessions- received treatment by prescription in the practice of a physical therapist)	23	2.9(8.70)	PICO 2: Home exercise program (Independent home exercise program using a training diary)	23	0.4(8.20)	MeanDif	2.5(-2.39,7.39)	Not Significant (P-value>.05)
Krischak, G. D., 2009	Moderate Quality	Radiographic outcome: Radial inclination, AP (°)	6 weeks	PICO 2: Supervised therapy (Physical therapist with 12 sessions- received treatment by prescription in the practice of a physical therapist)	23	17.3(7.50)	PICO 2: Home exercise program (Independent home exercise program using a training diary)	23	16.7(6.00)	MeanDif	0.6(-3.33,4.53)	Not Significant (P-value>.05)
Krischak, G. D., 2009	Moderate Quality	Radiographic outcome: Radial length, AP (mm)	6 weeks	PICO 2: Supervised therapy (Physical therapist with 12 sessions- received treatment by prescription in the practice of a physical therapist)	23	0.2(1.70)	PICO 2: Home exercise program (Independent home exercise program using a training diary)	23	0.9(1.80)	MeanDif	-0.7(-1.71,0.31)	Not Significant (P-value>.05)

Table 22: PICO 2.1- post-op supervised therapy- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Extension	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	57	46.9(18.30)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	42.9(17.40)	MeanDif	4(-2.52,10.52)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Flexion	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	56	38.2(16.00)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	37.7(15.60)	MeanDif	0.5(-5.3,6.3)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Pronation	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	56	79.3(13.40)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	60	74.2(15.20)	MeanDif	-3.7 (-6.9, -0.6) change from baseline	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Radial deviation	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	56	14.1(7.90)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	60	13.1(7.10)	MeanDif	1(-1.77,3.77)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Supination	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	56	60.4(27.40)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	59.8(26.50)	MeanDif	0.6(-9.29,10.49)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Ulnar deviation	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	57	26.9(13.00)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	24.8(12.90)	MeanDif	2.1(-2.63,6.83)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Extension	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	62.2(14.50)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	60.1(14.30)	MeanDif	2.1(-3.23,7.43)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Flexion	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	51.4(14.80)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	51(11.10)	MeanDif	0.4(-4.49,5.29)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Pronation	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	83.6(10.30)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	81.9(12.30)	MeanDif	-3.5(-6.5,-.5) change from baseline	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Radial deviation	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	18.3(7.80)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	18.4(6.90)	MeanDif	-0.1(-2.84,2.64)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Supination	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	75.8(18.50)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	78.6(15.50)	MeanDif	-2.8(-9.16,3.56)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Ulnar deviation	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	33.4(12.00)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	33.9(12.30)	MeanDif	-0.5(-5,4)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Extension	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	67.4(12.90)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	69.1(8.60)	MeanDif	-1.7(-5.93,2.53)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Flexion	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	59.7(13.70)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	61(10.30)	MeanDif	-1.3(-5.95,3.35)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Pronation	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	87(6.10)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	86(6.00)	MeanDif	1(-1.3,3.3)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Radial deviation	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	21.2(8.20)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	21.6(7.70)	MeanDif	-0.4(-3.42,2.62)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Supination	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	84.5(10.80)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	85.9(6.30)	MeanDif	-1.4(-4.83,2.03)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Ulnar deviation	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	37.8(13.20)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	38.1(12.80)	MeanDif	-0.3(-5.23,4.63)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Extension	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	69.4(10.60)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	72.2(7.60)	MeanDif	-2.8(-6.29,0.69)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Flexion	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	64.1(12.30)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	63.4(10.30)	MeanDif	0.7(-3.58,4.98)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Pronation	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	87.4(5.60)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	87.4(5.60)	MeanDif	0(-2.11,2.11)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Radial deviation	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	25.1(8.40)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	25.3(8.40)	MeanDif	-0.2(-3.36,2.96)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Range of Motion: Supination	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	86.8(7.10)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	87.8(4.60)	MeanDif	-1(-3.27,1.27)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Range of Motion: Ulnar deviation	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	40.7(10.70)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	41.3(11.30)	MeanDif	-0.6(-4.74,3.54)	Not Significant (P-value>.05)
Krischak, G. D., 2009	Moderate Quality	Range of motion: Extension and flexion (% of uninjured side)	6 weeks	PICO 2: Supervised therapy (Physical therapist with 12 sessions- received treatment by prescription in the practice of a physical therapist)	23	. %	PICO 2: Home exercise program (Independent home exercise program using a training diary)	23	. %	Author Reported	NA	**G2 (Independent home exercise program) Significant (P-value<.05)**
Krischak, G. D., 2009	Moderate Quality	Range of motion: Ulnar and radial abduction (% of healthy side)	6 weeks	PICO 2: Supervised therapy (Physical therapist with 12 sessions- received treatment by prescription in the practice of a physical therapist)	23	. %	PICO 2: Home exercise program (Independent home exercise program using a training diary)	23	. %	Author Reported	NA	**G2 (Independent home exercise program) Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Souer, J. S., 2011	Moderate Quality	Range of motion: Extension	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	51(13.00)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	54(12.70)	MeanDif	-3(-8.20,2.20)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Flexion	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	54(14.50)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	57(14.90)	MeanDif	-3(-8.94,2.94)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Flexion-extension arc	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	104(22.90)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	111(22.40)	MeanDif	-7(-16.16,2.16)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Pronation	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	90(1.70)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	90(1.70)	MeanDif	0(-0.69,0.69)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Radial deviation	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	21(6.00)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	21(6.00)	MeanDif	0(-2.43,2.43)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Supination	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	86(11.30)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	88(4.40)	MeanDif	-2(-5.49,1.49)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Ulnar deviation	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	33(10.90)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	33(10.70)	MeanDif	0(-4.37,4.37)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Souer, J. S., 2011	Moderate Quality	Range of motion: Extension	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	55(10.20)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	62(13.70)	MeanDif	-7(-11.87,-2.13)	**Treatment 2 Significant (P-value<.05)**
Souer, J. S., 2011	Moderate Quality	Range of motion: Flexion	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	63(12.10)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	67(14.30)	MeanDif	-4(-9.35,1.35)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Flexion-extension arc	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	118(17.70)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	129(22.60)	MeanDif	-11(-19.19,-2.81)	**Treatment 2 Significant (P-value<.05)**
Souer, J. S., 2011	Moderate Quality	Range of motion: Pronation	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	90(1.70)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	90(1.90)	MeanDif	0(-0.73,0.73)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Radial deviation	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	23(7.40)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	25(7.60)	MeanDif	-2(-5.03,1.03)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Range of motion: Supination	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	84(13.10)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	90(0.90)	MeanDif	-6(-9.79,-2.21)	**Treatment 2 Significant (P-value<.05)**
Souer, J. S., 2011	Moderate Quality	Range of motion: Ulnar deviation	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	32(12.10)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	40(9.20)	MeanDif	-8(-12.36,-3.64)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Valdes, K., 2015	Moderate Quality	Range of motion: Forearm ROM	12 weeks	PICO 2: Supervised therapy (Instructed with standard pictorial HEP and enrolled in one-on-one supervised therapy under CHT; therapy 2x/week for 30min-1hr, mean of 16 visits)	26	163(.)	PICO 2: Home exercise program (Instructed with same standard pictorial HEP to perform at home; determined compliance based on patient's ability to reproduce HEP independently under observation of CHT)	24	164(.)	MeanDif	-1(.,.)	Not Significant (P-value>.05)
Valdes, K., 2015	Moderate Quality	Range of motion: Wrist ROM	12 weeks	PICO 2: Supervised therapy (Instructed with standard pictorial HEP and enrolled in one-on-one supervised therapy under CHT; therapy 2x/week for 30min-1hr, mean of 16 visits)	26	102(.)	PICO 2: Home exercise program (Instructed with same standard pictorial HEP to perform at home; determined compliance based on patient's ability to reproduce HEP independently under observation of CHT)	24	110(.)	MeanDif	-8(.,.)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Extension (involved/uninvolved)	6 weeks	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.59(0.18)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.49(0.38)	MeanDif	0.1(-0.16,0.36)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wollstein, R., 2019	Moderate Quality	Range of motion: Flexion (involved/uninvolved)	6 weeks	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.39(0.14)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.39(0.12)	MeanDif	0(-0.11,0.11)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Pronation (involved/uninvolved)	6 weeks	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.99(0.03)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.85(0.23)	MeanDif	0.14(-0.00,0.28)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Radial deviation (involved/uninvolved)	6 weeks	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.63(0.24)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.54(0.19)	MeanDif	0.09(-0.09,0.27)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Supination (involved/uninvolved)	6 weeks	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.68(0.14)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.65(0.26)	MeanDif	0.03(-0.15,0.21)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wollstein, R., 2019	Moderate Quality	Range of motion: Ulnar deviation (involved/uninvolved)	6 weeks	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.6(0.18)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.47(0.17)	MeanDif	0.13(-0.01,0.27)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Extension (involved/uninvolved)	3 months	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.73(0.11)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.83(0.17)	MeanDif	-0.1(-0.22,0.02)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Flexion (involved/uninvolved)	3 months	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.67(0.14)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.76(0.17)	MeanDif	-0.09(-0.22,0.04)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Pronation (involved/uninvolved)	3 months	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	1(0.00)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.99(0.05)	MeanDif	0.01(-0.02,0.04)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wollstein, R., 2019	Moderate Quality	Range of motion: Radial deviation (involved/uninvolved)	3 months	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.71(0.28)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.89(0.24)	MeanDif	-0.18(-0.39,0.03)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Supination (involved/uninvolved)	3 months	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.73(0.16)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.85(0.17)	MeanDif	-0.12(-0.26,0.02)	Not Significant (P-value>.05)
Wollstein, R., 2019	Moderate Quality	Range of motion: Ulnar deviation (involved/uninvolved)	3 months	PICO 2: Supervised therapy (Standard of care; therapy sessions once a week for 1 hr)	13	0.66(0.26)	PICO 2: Home exercise program (Standard of care; therapy sessions once a week for 1 hr with added sensorimotor home protocol (3x/day for 15 min))	10	0.79(0.20)	MeanDif	-0.13(-0.32,0.06)	Not Significant (P-value>.05)

Table 23: PICO 2.1- post-op supervised therapy- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	DASH (QuickDASH)	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	57	29.5(19.40)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	37.3(19.10)	MeanDif	5.8 (0.0; 11.6) change from baseline	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	DASH (QuickDASH)	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	17.1(16.80)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	17.3(14.40)	MeanDif	-0.2(-6.02,5.62)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	DASH (QuickDASH)	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	10.1(17.90)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	10.7(14.50)	MeanDif	-0.6(-6.83,5.63)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	DASH (QuickDASH)	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	7.4(14.50)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	8.5(14.20)	MeanDif	-1.1(-6.5,4.3)	Not Significant (P-value>.05)
Krischak, G. D., 2009	Moderate Quality	PRWE	6 weeks	PICO 2: Supervised therapy (Physical therapist with 12 sessions- received treatment by prescription in the practice of a physical therapist)	23	36.1(13.90)	PICO 2: Home exercise program (Independent home exercise program using a training diary)	23	18.5(15.90)	MeanDif	17.6(8.97,26.23)	**Treatment 2 Significant (P-value<.05)**
Souer, J. S., 2011	Moderate Quality	DASH	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	13.3(9.50)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	13.1(12.10)	MeanDif	0.2(-4.19,4.59)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Gartland and Werley	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	2(2.20)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	2(1.30)	MeanDif	0(-0.73,0.73)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Souer, J. S., 2011	Moderate Quality	Mayo wrist score	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	74(11.40)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	77(8.80)	MeanDif	-3(-7.13,1.13)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	DASH	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	6.7(6.70)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	7.8(7.80)	MeanDif	-1.1(-4.04,1.84)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Gartland and Werley	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	1.1(1.30)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	0.9(1.20)	MeanDif	0.2(-0.31,0.71)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	Mayo wrist score	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	79(9.90)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	83.4(12.70)	MeanDif	-4.4(-8.99,0.19)	Not Significant (P-value>.05)
Valdes, K., 2015	Moderate Quality	PRWE	6 months	PICO 2: Supervised therapy (Instructed with standard pictorial HEP and enrolled in one-on-one supervised therapy under CHT; therapy 2x/week for 30min-1hr, mean of 16 visits)	26	7(.)	PICO 2: Home exercise program (Instructed with same standard pictorial HEP to perform at home; determined compliance based on patient's ability to reproduce HEP independently under observation of CHT)	24	8(.)	MeanDif	-1(.,.)	Not Significant (P-value>.05)

Table 24: PICO 2.1- post-op supervised therapy- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Pain (VAS): Visual Analog Pain scale	6 weeks	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	56	1.8(18.00)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	2.2(1.70)	MeanDif	-0.4(-5.24,4.44)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Pain (VAS): Visual Analog Pain scale	3 months	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	1.1(1.60)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	61	1(1.20)	MeanDif	0.1(-0.43,0.63)	Not Significant (P-value>.05)
Clementsen, S. O., 2019	High Quality	Pain (VAS): Visual Analog Pain scale	1 year	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	51	0.7(1.80)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	59	0.7(1.20)	MeanDif	0(-0.59,0.59)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clementsen, S. O., 2019	High Quality	Pain (VAS): Visual Analog Pain scale	2 years	PICO 2: Supervised therapy (Early mobilization and physiotherapy (plaster splint was removed after 2 to 3 days. During the first 3 months, the patients met with the institution's physiotherapist every other week))	54	0.7(1.90)	PICO 2: Home exercise program (Late mobilization and home exercise - wore the dorsal splint for 2 weeks and only met with our physiotherapist once, when the splint was removed. This group was provided with a home physiotherapy program and instructed to perform home exercises on their own.)	57	0.7(1.50)	MeanDif	0(-0.65,0.65)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	VAS	3 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	1.3(0.90)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	1.2(0.60)	MeanDif	0.1(-0.21,0.41)	Not Significant (P-value>.05)
Souer, J. S., 2011	Moderate Quality	VAS	6 months	PICO 2: Supervised therapy (Supervised occupational therapy)	46	1(1.80)	PICO 2: Home exercise program (Surgeon-directed independent exercises)	48	0.8(1.40)	MeanDif	0.2(-0.45,0.85)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Valdes, K., 2015	Moderate Quality	VAS	12 weeks	PICO 2: Supervised therapy (Instructed with standard pictorial HEP and enrolled in one-on-one supervised therapy under CHT; therapy 2x/week for 30min-1hr, mean of 16 visits)	26	1.3(.)	PICO 2: Home exercise program (Instructed with same standard pictorial HEP to perform at home; determined compliance based on patient's ability to reproduce HEP independently under observation of CHT)	24	1.3(.)	MeanDif	0(.,.)	Not Significant (P-value>.05)
Oskarsson, G. V., 1997	Low Quality		10 weeks	G1 (Formal physiotherapy)	40	6.0 (2.6)	G2 (Self-training)	70	4.6 (2.3)	MeanDif	1.4 (0.43 – 2.37)	**G2 (Self-training) Significant (P-value<.05)**

Table 25: PICO 2.2- Non-operative supervised therapy- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Oken, O., 2011	Moderate Quality	Hand edema (mL)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	7.5(13.60)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	27.3(36.20)	MeanDif	-19.8(-36.29,-3.31)	**Treatment 1 Significant (P-value<.05)**

Table 26: PICO 2.2- Non-operative supervised therapy- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gutierrez-Espinoza, H., 2017	High Quality	PRWE: Patient-rated wrist evaluation	6 weeks	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	27.94(9.26)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	45.62(15.80)	MeanDif	-17.68(-23.71,-11.65)	**Treatment 1 Significant (P-value<.05)**
Gutierrez-Espinoza, H., 2017	High Quality	PRWE: Patient-rated wrist evaluation	6 weeks	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	20.2(4.60)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	35.4(10.20)	MeanDif	-15.2(-18.89,-11.51)	**Treatment 1 Significant (P-value<.05)**
Gutierrez-Espinoza, H., 2017	High Quality	PRWE: Patient-rated wrist evaluation	6 months	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	15.75(6.16)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	32.81(14.21)	MeanDif	-17.06(-22.18,-11.94)	**Treatment 1 Significant (P-value<.05)**

Table 27: PICO 2.2- Non-operative supervised therapy- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gutierrez-Espinoza, H., 2017	High Quality	Grip strength: Reported as percentage of contralateral side	6 weeks	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	66.35(9.40)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	45.13(18.98)	MeanDif	21.22(14.23,28.21)	**Treatment 1 Significant (P-value<.05)**
Gutierrez-Espinoza, H., 2017	High Quality	Grip strength: Reported as percentage of contralateral side	6 months	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	78.64(7.23)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	52.83(21.16)	MeanDif	25.81(18.4,33.22)	**Treatment 1 Significant (P-value<.05)**
Maciel, J. S., 2005	Moderate Quality	Grip strength	6 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	15.5(11.60)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	16	14.8(8.10)	MeanDif	0.7(-5.85,7.25)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	Grip strength	24 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	19(14.00)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	14	20.8(11.10)	MeanDif	-1.8(-10.37,6.77)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Oken, O., 2011	Moderate Quality	3-point pinch (kg)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	8.3(2.50)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	4.8(2.00)	MeanDif	3.5(2.29,4.71)	**Treatment 1 Significant (P-value<.05)**
Oken, O., 2011	Moderate Quality	Grip strength (kg)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	23(7.50)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	11.2(7.80)	MeanDif	11.8(7.57,16.03)	**Treatment 1 Significant (P-value<.05)**
Oken, O., 2011	Moderate Quality	Lateral pinch (kg)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	10.1(2.80)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	6.9(2.60)	MeanDif	3.2(1.73,4.67)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Oken, O., 2011	Moderate Quality	Tip-tip pinch (kg)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	7.9(2.60)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	4.8(1.80)	MeanDif	3.1(1.93,4.27)	**Treatment 1 Significant (P-value<.05)**
Wakefield, A. E., 2000	Moderate Quality	Grip strength (% of contralateral side)	3 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	41.6(4.30)	PICO 2: Home exercise program (Instructed in home exercises only)	47	40.7(4.60)	MeanDif	0.9(-0.88,2.68)	Not Significant (P-value>.05)
Wakefield, A. E., 2000	Moderate Quality	Grip strength (% of contralateral side)	6 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	68.5(6.10)	PICO 2: Home exercise program (Instructed in home exercises only)	47	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 28: PICO 2.2- Non-operative supervised therapy- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gutierrez-Espinoza, H., 2017	High Quality	Range of Motion: Flexion	6 weeks	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	61.35(8.94)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	49.05(15.08)	MeanDif	12.3(6.53,18.07)	**Treatment 1 Significant (P-value<.05)**
Gutierrez-Espinoza, H., 2017	High Quality	Range of Motion: Extension	6 months	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	71.08(6.25)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	50.81(18.20)	MeanDif	20.27(13.9,26.64)	**Treatment 1 Significant (P-value<.05)**
Gutierrez-Espinoza, H., 2017	High Quality	Range of Motion: Extension	6 months	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	77.02(2.48)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	57.97(15.78)	MeanDif	19.05(13.73,24.37)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gutierrez-Espinoza, H., 2017	High Quality	Range of Motion: Flexion	6 months	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	71.08(4.87)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	53.37(15.59)	MeanDif	17.71(12.29,23.13)	**Treatment 1 Significant (P-value<.05)**
Maciel, J. S., 2005	Moderate Quality	Range of motion: Extension	6 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	48.9(15.90)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	16	51.6(16.50)	MeanDif	-2.7(-13.49,8.09)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	Range of motion: Flexion	6 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	42.7(13.70)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	16	46.9(9.30)	MeanDif	-4.2(-11.86,3.46)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	Range of motion: Extension	24 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	56.7(16.50)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	14	54.3(14.40)	MeanDif	2.4(-8.18,12.98)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	Range of motion: Flexion	24 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	50.7(15.60)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	14	51.3(11.60)	MeanDif	-0.6(-9.88,8.68)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Oken, O., 2011	Moderate Quality	Range of motion: Extension (°)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	50.1(14.20)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	31.1(20.50)	MeanDif	19(8.86,29.14)	**Treatment 1 Significant (P-value<.05)**
Oken, O., 2011	Moderate Quality	Range of motion: Flexion (°)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	49.8(13.70)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	39.7(9.70)	MeanDif	10.1(3.88,16.32)	**Treatment 1 Significant (P-value<.05)**
Oken, O., 2011	Moderate Quality	Range of motion: Pronation (°)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	89(4.50)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	89.4(2.40)	MeanDif	-0.4(-2.22,1.42)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Oken, O., 2011	Moderate Quality	Range of motion: Radial deviation (°)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	20.5(6.80)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	15.5(11.00)	MeanDif	5(-0.32,10.32)	Not Significant (P-value>.05)
Oken, O., 2011	Moderate Quality	Range of motion: Supination (°)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	82.2(9.20)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	52.5(35.10)	MeanDif	29.7(14.02,45.38)	**Treatment 1 Significant (P-value<.05)**
Oken, O., 2011	Moderate Quality	Range of motion: Ulnar deviation (°)	3 weeks	PICO 2: Supervised therapy (Passive ROM and gentle wrist stretching exercises under supervision of hand specialist; advised to perform each exercise at home hourly for remainder of day)	35	28.6(10.30)	PICO 2: Home exercise program (Hourly ROM and gentle wrist stretching exercises at home every day)	20	27.7(11.00)	MeanDif	0.9(-5.01,6.81)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wakefield, A. E., 2000	Moderate Quality	Range of motion: Flexion/extension (% of contralateral side)	3 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	82.9(1.80)	PICO 2: Home exercise program (Instructed in home exercises only)	47	. %	Author Reported	NA	Not Significant (P-value>.05)
Wakefield, A. E., 2000	Moderate Quality	Range of motion: Pronation/supination (% of contralateral side)	3 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	92.7(1.00)	PICO 2: Home exercise program (Instructed in home exercises only)	47	93.2(1.00)	MeanDif	-0.5(-0.90,-0.10)	**Treatment 2 Significant (P-value<.05)**
Wakefield, A. E., 2000	Moderate Quality	Range of motion: Radial/ulnar deviation (% of contralateral side)	3 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	85.1(2.40)	PICO 2: Home exercise program (Instructed in home exercises only)	47	81.8(2.50)	MeanDif	3.3(2.32,4.28)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wakefield, A. E., 2000	Moderate Quality	Range of motion: Flexion/extension (% of contralateral side)	6 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	96.6(2.40)	PICO 2: Home exercise program (Instructed in home exercises only)	47	84.4(2.50)	MeanDif	12.2(11.22,13.18)	**Treatment 1 Significant (P-value<.05)**
Wakefield, A. E., 2000	Moderate Quality	Range of motion: Pronation/supination (% of contralateral side)	6 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	96.5(0.80)	PICO 2: Home exercise program (Instructed in home exercises only)	47	95.6(0.80)	MeanDif	0.9(0.58,1.22)	**Treatment 1 Significant (P-value<.05)**
Wakefield, A. E., 2000	Moderate Quality	Range of motion: Radial/ulnar deviation (% of contralateral side)	6 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	94.2(2.90)	PICO 2: Home exercise program (Instructed in home exercises only)	47	91(3.00)	MeanDif	3.2(2.02,4.38)	**Treatment 1 Significant (P-value<.05)**

Table 29: PICO 2.2- Non-operative supervised therapy- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Maciel, J. S., 2005	Moderate Quality	PRWE	6 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	26.9(24.00)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	16	28.2(20.60)	MeanDif	-1.3(-16.08,13.48)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	PRWE (activity)	6 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	27.9(28.20)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	16	34.7(28.20)	MeanDif	-6.8(-25.55,11.95)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	PRWE (Pain)	6 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	29.2(23.40)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	16	28.4(19.20)	MeanDif	0.8(-13.31,14.91)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	PRWE (Participation)	6 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	21.4(24.10)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	14	21.3(24.30)	MeanDif	0.1(-16.62,16.82)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	PRWE	24 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	21.4(24.50)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	14	24.8(22.20)	MeanDif	-3.4(-19.42,12.62)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Maciel, J. S., 2005	Moderate Quality	PRWE (activity)	24 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	19.6(29.40)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	14	24.7(26.40)	MeanDif	-5.1(-24.23,14.03)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	PRWE (Pain)	24 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	26.3(25.40)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	14	28.9(21.30)	MeanDif	-2.6(-18.57,13.37)	Not Significant (P-value>.05)
Maciel, J. S., 2005	Moderate Quality	PRWE (Participation)	24 weeks	PICO 2: Supervised therapy (Activity-focused physiotherapy with physiotherapist for 6 weeks)	19	13.7(23.90)	PICO 2: Home exercise program (Single session of exercise and advice from physiotherapist)	14	18.3(25.00)	MeanDif	-4.6(-21.54,12.34)	Not Significant (P-value>.05)
Wakefield, A. E., 2000	Moderate Quality	SF-36	6 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	.	. %	PICO 2: Home exercise program (Instructed in home exercises only)	.	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 30: PICO 2.2- Non-operative supervised therapy- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gutierrez-Espinoza, H., 2017	High Quality	Pain (PRWE): Patient-rated wrist evaluation (pain)	6 weeks	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	14.1(8.20)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	19.3(7.60)	MeanDif	-5.2(-8.86,-1.54)	**Treatment 1 Significant (P-value<.05)**
Gutierrez-Espinoza, H., 2017	High Quality	Pain (VAS): Visual Analog Pain scale	6 weeks	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	1.27(0.90)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	3.05(1.76)	MeanDif	-1.78(-2.43,-1.13)	**Treatment 1 Significant (P-value<.05)**
Gutierrez-Espinoza, H., 2017	High Quality	Pain (PRWE): Patient-rated wrist evaluation (pain)	6 months	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	10.1(4.50)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	12.9(5.80)	MeanDif	-2.8(-5.21,-0.39)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gutierrez-Espinoza, H., 2017	High Quality	Pain (VAS): Visual Analog Pain scale	6 months	PICO 2: Supervised therapy (Supervised physical therapy; 12 sessions)	37	0.94(0.88)	PICO 2: Home exercise program (Home exerise program; one consultation with physical therapist for exercise instructions/given printed document)	37	1.91(1.01)	MeanDif	-0.97(-1.41,-0.53)	**Treatment 1 Significant (P-value<.05)**
Wakefield, A. E., 2000	Moderate Quality	VAS	6 weeks	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	2.3(2.20)	PICO 2: Home exercise program (Instructed in home exercises only)	47	2(2.10)	MeanDif	0.3(-0.56,1.16)	Not Significant (P-value>.05)
Wakefield, A. E., 2000	Moderate Quality	VAS	3 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	1.4(1.60)	PICO 2: Home exercise program (Instructed in home exercises only)	47	1.4(1.70)	MeanDif	0(-0.66,0.66)	Not Significant (P-value>.05)

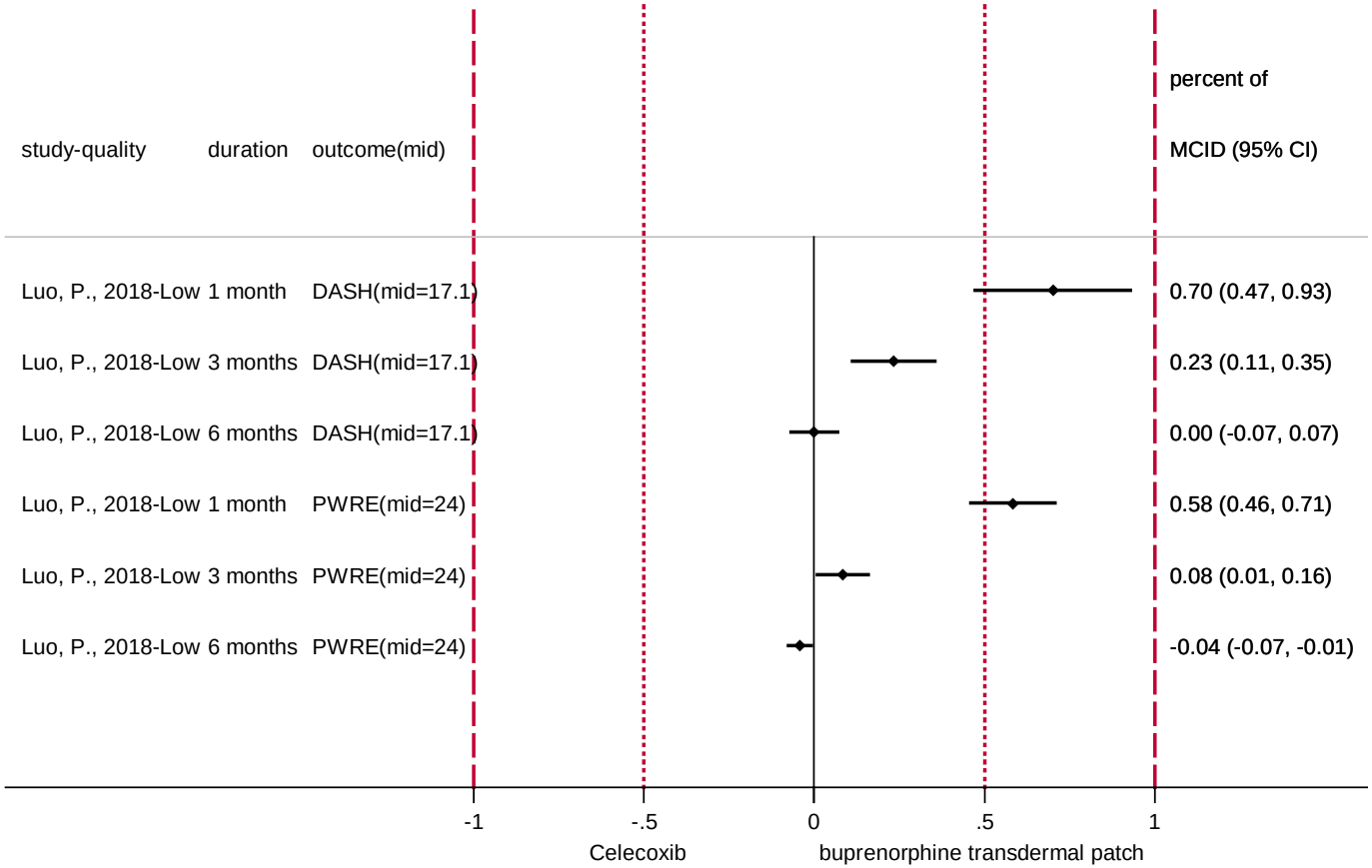
Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wakefield, A. E., 2000	Moderate Quality	VAS	6 months	PICO 2: Supervised therapy (Taught and given a standard sheet of home exercises by the physiotherapist in the fracture clinic and referred for a course of physiotherapy at their local health clinic or hospital)	49	0.9(1.60)	PICO 2: Home exercise program (Instructed in home exercises only)	47	0.8(1.40)	MeanDif	0.1(-0.50,0.70)	Not Significant (P-value>.05)

PICO 3: Opioid Use

Table 31: PICO 3.1- Summary of Findings - Celecoxib vs Buprenorphine Transdermal Patch

	Luo, P., 2018 Low Quality
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	
Composite	
DASH: Disabilities of the Arm Shoulder and Hand score	↓
PRWE: Patient Rated Wrist Evaluation	↓
Other	
Completing the rehabilitation program	↑
Grip strength: Mean percentage	●
Pain	
PRWE: Patient Rated Wrist Evaluation (pain subscale)	●
VAS: Daily activity	↓
VAS: Rehabilitative exercise	↓
VAS: Rest	↓
Range of Motion	
Range of motion: Extension (Mean percentage)	↓
Range of motion: Flexion (mean %)	↓
Range of motion: Pronation (Reported as mean percentage)	●
Range of motion: Radial abduction (mean %)	●
Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	↓
Range of motion: Ulnar abduction (mean %)	●

Figure 1: PICO 3.1- Summary of Findings for outcomes with MIDs- Celecoxib vs Buprenorphine Transdermal Patch



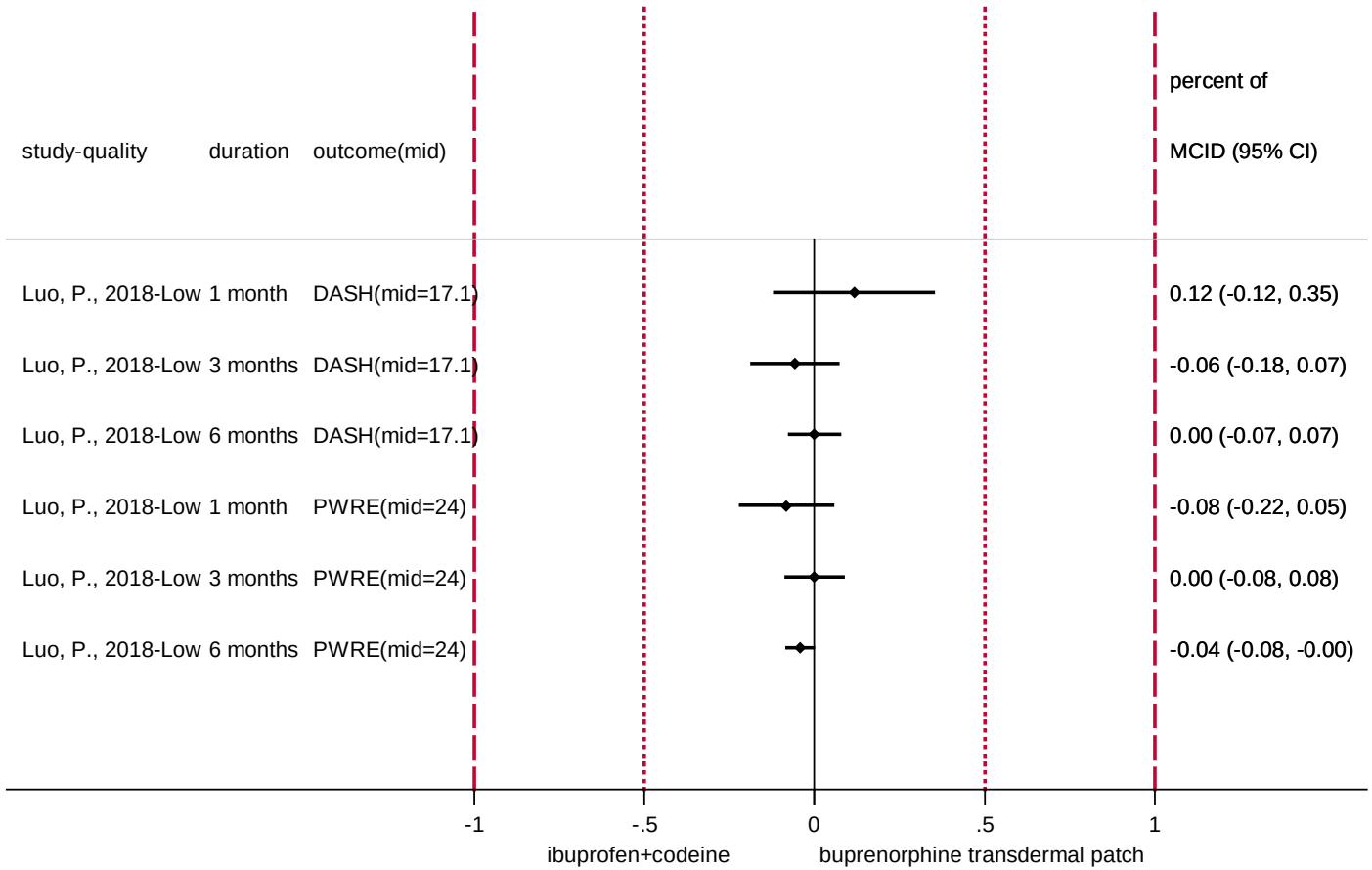
The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 32: PICO 3.2- Summary of Findings - Ibuprofen+Codeine vs Buprenorphine Transdermal Patch

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Luo, P., 2018 Low Quality
Composite	
DASH: Disabilities of the Arm Shoulder and Hand score	●
PRWE: Patient Rated Wrist Evaluation	↑
Other	
Completing the rehabilitation program	●
Grip strength: Mean percentage	●
Pain	
PRWE: Patient Rated Wrist Evaluation (pain subscale)	↑
VAS: Daily activity	↑
VAS: Rehabilitative exercise	↓
VAS: Rest	●
Range of Motion	
Range of motion: Extension (Mean percentage)	●
Range of motion: Flexion (mean %)	↓
Range of motion: Pronation (Reported as mean percentage)	●
Range of motion: Radial abduction (mean %)	●
Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	●
Range of motion: Ulnar abduction (mean %)	●

Figure 2: PICO 3.2- Summary of Findings for outcomes with MIDs- Ibuprofen+Codeine vs Buprenorphine Transdermal Patch



The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 33: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	40(13.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	26(10.00)	MeanDif	14(11.04,16.96)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	18(8.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	16(6.00)	MeanDif	2(0.2,3.8)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	5(3.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	6(3.00)	MeanDif	-1(-1.79,-0.21)	**Treatment 1 Significant (P-value<.05)**

Table 34: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Completing the rehabilitation program	1 week	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	80(54.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	68(76.00)	MeanDif	12(-6.17,30.17)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Completing the rehabilitation program	2 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	110(74.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	76(85.00)	MeanDif	34(12.56,55.44)	**Treatment 1 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Completing the rehabilitation program	3 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	135(91.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	80(90.00)	MeanDif	55(31.12,78.88)	**Treatment 1 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Completing the rehabilitation program	4 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	141(95.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	82(92.00)	MeanDif	59(34.39,83.61)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Grip strength: Mean percentage	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	45(13.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	46(21.00)	MeanDif	-1(-5.88,3.88)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Completing the rehabilitation program	5 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	144(97.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	86(97.00)	MeanDif	58(32.36,83.64)	**Treatment 1 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Completing the rehabilitation program	6 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	142(95.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	84(94.00)	MeanDif	58(33.06,82.94)	**Treatment 1 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Grip strength: Mean percentage	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	91(9.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	91(7.00)	MeanDif	0(-2.06,2.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Grip strength: Mean percentage	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	90(10.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	89(9.00)	MeanDif	1(-1.48,3.48)	Not Significant (P-value>.05)

Table 35: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Ulnar abduction (mean %)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	65(18.00)	(PICO 3: Opioid pain management)	89	78(21.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Ulnar abduction (mean %)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	86(15.00)	(PICO 3: Opioid pain management)	89	91(12.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Extension (Mean percentage)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	43(16.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	61(18.00)	MeanDif	-18(-22.57,-13.43)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Range of motion: Flexion (mean %)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	60(21.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	71(22.00)	MeanDif	-11(-16.72,-5.28)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Pronation (Reported as mean percentage)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	80(21.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	79(24.00)	MeanDif	1(-5.06,7.06)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Radial abduction (mean %)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	50(23.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	57(21.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	54(16.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	60(22.00)	MeanDif	-6(-11.29,-0.71)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Range of motion: Ulnar abduction (mean %)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	45(18.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	60(15.00)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Extension (Mean percentage)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	73(17.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	78(20.00)	MeanDif	-5(-10.01,0.01)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Flexion (mean %)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	78(30.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	84(22.00)	MeanDif	-6(-12.68,0.68)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Pronation (Reported as mean percentage)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	90(10.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	93(16.00)	MeanDif	-3(-6.73,0.73)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Radial abduction (mean %)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	68(19.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	75(23.00)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	60(21.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	68(27.00)	MeanDif	-8(-14.6,-1.4)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Range of motion: Extension (Mean percentage)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	92(12.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	92(10.00)	MeanDif	0(-2.85,2.85)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Flexion (mean %)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	93(11.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	96(10.00)	MeanDif	-3(-5.74,-0.26)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Range of motion: Pronation (Reported as mean percentage)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	93(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	93(8.00)	MeanDif	0(-1.94,1.94)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Radial abduction (mean %)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	88(17.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	91(15.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	90(11.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	90(13.00)	MeanDif	0(-3.25,3.25)	Not Significant (P-value>.05)

Table 36: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	DASH: Disabilities of the Arm Shoulder and Hand score	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	42(16.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	30(14.00)	MeanDif	12(8.1, 15.9)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	DASH: Disabilities of the Arm Shoulder and Hand score	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	25(9.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	21(7.00)	MeanDif	4(1.94, 6.06)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	8(3.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	8(5.00)	MeanDif	0(-1.16,1.16)	Not Significant (P-value>.05)

Table 37: PICO 3.1- Celecoxib vs buprenorphine transdermal patch- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	VAS: Daily activity	1 week	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	31(10.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	32(10.00)	MeanDif	-1(-3.64,1.64)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	1 week	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	67(22.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	45(14.00)	MeanDif	22(17.4,26.6)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	VAS: Rest	1 week	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	27(8.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	26(8.00)	MeanDif	1(-1.11,3.11)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Daily activity	2 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	26(9.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	25(8.00)	MeanDif	1(-1.22,3.22)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	2 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	41(17.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	30(11.00)	MeanDif	11(7.42,14.58)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	VAS: Rest	2 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	24(7.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	22(7.00)	MeanDif	2(0.15, 3.85)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	VAS: Daily activity	3 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	22(7.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	20(7.00)	MeanDif	2(0.15, 3.85)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	3 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	26(8.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	24(8.00)	MeanDif	2(-0.11,4.11)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	VAS: Rest	3 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	19(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	18(5.00)	MeanDif	1(-0.42,2.42)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Daily activity	4 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	16(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	15(5.00)	MeanDif	1(-0.42,2.42)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	4 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	17(8.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	19(9.00)	MeanDif	-2(-4.28,0.28)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rest	4 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	15(5.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	16(5.00)	MeanDif	-1(-2.32,0.32)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation (pain subscale)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	14(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	13(5.00)	MeanDif	1(-0.42,2.42)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Daily activity	5 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	12(5.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	13(6.00)	MeanDif	-1(-2.49,0.49)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	5 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	14(5.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	14(5.00)	MeanDif	0(-1.32,1.32)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rest	5 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	12(4.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	12(4.00)	MeanDif	0(-1.06,1.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	VAS: Daily activity	6 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	8(4.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	8(4.00)	MeanDif	0(-1.06,1.06)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	6 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	8(3.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	7(3.00)	MeanDif	1(0.21, 1.79)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	VAS: Rest	6 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	6(4.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	7(4.00)	MeanDif	-1(-2.06,0.06)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation (pain subscale)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	5(2.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	6(3.00)	MeanDif	-1 (author reported P>.05)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation (pain subscale)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery, 149 patients received 200 mg celecoxib twice per da)	149	3(2.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	3(2.00)	MeanDif	0(-0.53,0.53)	Not Significant (P-value>.05)

Table 38: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	24(11.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	26(10.00)	MeanDif	-2(-5.24,1.24)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	16(7.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	16(6.00)	MeanDif	0(-2.02,2.02)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	5(3.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	6(3.00)	MeanDif	-1(-1.92,-0.08)	**Treatment 1 Significant (P-value<.05)**

Table 39: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Completing the rehabilitation program	1 week	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	57(74.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	68(76.00)	MeanDif	-11(-34.03,12.03)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Completing the rehabilitation program	2 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	66(86.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	76(85.00)	MeanDif	-10(-36.29,16.29)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Completing the rehabilitation program	3 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	68(88.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	80(90.00)	MeanDif	-12(-39.33,15.33)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Completing the rehabilitation program	4 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	72(94.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	82(92.00)	MeanDif	-10(-38.61,18.61)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Grip strength: Mean percentage	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	47(20.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	46(21.00)	MeanDif	1(-5.29,7.29)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Completing the rehabilitation program	5 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	73(95.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	86(97.00)	MeanDif	-13(-42.48,16.48)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Completing the rehabilitation program	6 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	74(96.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	84(94.00)	MeanDif	-10(-39.22,19.22)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Grip strength: Mean percentage	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	90(9.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	91(7.00)	MeanDif	-1(-3.5,1.5)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Grip strength: Mean percentage	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	91(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	89(9.00)	MeanDif	2(-0.32,4.32)	Not Significant (P-value>.05)

Table 40: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Ulnar abduction (mean %)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	61(19.00)	(PICO 3: Opioid pain management)	89	60(15.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Ulnar abduction (mean %)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	76(25.00)	(PICO 3: Opioid pain management)	89	78(21.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Ulnar abduction (mean %)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	90(13.00)	(PICO 3: Opioid pain management)	89	91(12.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Extension (Mean percentage)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	60(15.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	61(18.00)	MeanDif	-1(-6.06,4.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Flexion (mean %)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	71(18.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	71(22.00)	MeanDif	0(-6.13,6.13)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Pronation (Reported as mean percentage)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	83(20.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	79(24.00)	MeanDif	4(-2.74,10.74)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Radial abduction (mean %)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	59(26.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	57(21.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	60(28.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	60(22.00)	MeanDif	0(-7.81,7.81)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Extension (Mean percentage)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	80(26.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	78(20.00)	MeanDif	2(-5.2,9.2)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Flexion (mean %)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	87(23.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	84(22.00)	MeanDif	3(-3.93,9.93)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Pronation (Reported as mean percentage)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	91(12.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	93(16.00)	MeanDif	-2(-6.3,2.3)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Radial abduction (mean %)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	75(26.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	75(23.00)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	67(28.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	68(27.00)	MeanDif	-1(-9.47,7.47)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Extension (Mean percentage)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	91(8.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	92(10.00)	MeanDif	-1(-3.76,1.76)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Flexion (mean %)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	93(9.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	96(10.00)	MeanDif	-3(-5.91,-0.09)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	Range of motion: Pronation (Reported as mean percentage)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	92(10.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	93(8.00)	MeanDif	-1(-3.81,1.81)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	Range of motion: Radial abduction (mean %)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	93(15.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	91(15.00)	Author Reported	NA	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	88(15.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	90(13.00)	MeanDif	-2(-6.34,2.34)	Not Significant (P-value>.05)

Table 41: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	DASH: Disabilities of the Arm Shoulder and Hand score	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	32(12.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	30(14.00)	MeanDif	2(-1.98,5.98)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	DASH: Disabilities of the Arm Shoulder and Hand score	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	20(7.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	21(7.00)	MeanDif	-1(-3.15,1.15)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	8(3.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	8(5.00)	MeanDif	0(-1.25,1.25)	Not Significant (P-value>.05)

Table 42: PICO 3.2- ibuprofen+codeine vs buprenorphine transdermal patch- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	VAS: Daily activity	1 week	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	33(11.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	32(10.00)	MeanDif	1(-2.24,4.24)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	1 week	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	42(12.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	45(14.00)	MeanDif	-3(-6.98,0.98)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rest	1 week	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	28(8.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	26(8.00)	MeanDif	2(-0.46,4.46)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Daily activity	2 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	24(10.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	25(8.00)	MeanDif	-1(-3.81,1.81)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	2 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	32(10.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	30(11.00)	MeanDif	2(-1.22,5.22)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rest	2 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	23(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	22(7.00)	MeanDif	1(-0.99,2.99)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Daily activity	3 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	21(7.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	20(7.00)	MeanDif	1(-1.15,3.15)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	3 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	24(8.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	24(8.00)	MeanDif	0(-2.46,2.46)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	VAS: Rest	3 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	18(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	18(5.00)	MeanDif	0(-1.71,1.71)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Daily activity	4 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	17(8.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	15(5.00)	MeanDif	2(-0.09,4.09)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	4 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	18(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	19(9.00)	MeanDif	-1(-3.32,1.32)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rest	4 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	16(5.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	16(5.00)	MeanDif	0(-1.54,1.54)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation (pain subscale)	1 month	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	12(6.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	13(5.00)	MeanDif	-1(-2.71,0.71)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Daily activity	5 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	11(5.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	13(6.00)	MeanDif	-2(-3.69,-0.31)	**Treatment 1 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	5 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	14(7.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	14(5.00)	MeanDif	0(-1.89,1.89)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rest	5 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	12(4.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	12(4.00)	MeanDif	0(-1.23,1.23)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	VAS: Daily activity	6 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	8(4.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	8(4.00)	MeanDif	0(-1.23,1.23)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	VAS: Rehabilitative exercise	6 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	8(3.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	7(3.00)	MeanDif	1(0.08, 1.92)	**Treatment 2 Significant (P-value<.05)**
Luo, P., 2018	Low Quality	VAS: Rest	6 weeks	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	7(4.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	7(4.00)	MeanDif	0(-1.23,1.23)	Not Significant (P-value>.05)
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation (pain subscale)	3 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	5(3.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	6(3.00)	MeanDif	-1(-1.92,-0.08)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Luo, P., 2018	Low Quality	PRWE: Patient Rated Wrist Evaluation (pain subscale)	6 months	PICO 3: Other pain management w/ or w/o opioids (Initial two weeks afer surgery 77 patients received 13 mg codeine plus 200 mg ibuprofen twice per day)	77	2(1.00)	PICO 3: Opioid pain management (Initial two weeks afer surgery, 89 received buprenorphine transdermal patch at 5 ?g/h)	89	3(2.00)	MeanDif	-1(-1.48,-0.52)	**Treatment 1 Significant (P-value<.05)**

PICO 4.1: Indications for Fixation (Non-Geriatric Patients)

Table 43: PICO 4- Summary of Findings - Operative vs Non-operative Treatment (young population)

	High Quality	Moderate Quality																		
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	ur Rahman, O., 2012	Kreder, H. J. 2006	Young, C. F. 2003	Stoffelen, D. V. 1999	Rodriguez-Merchan, E. C. 1997	Mulders, M. A. M. 2019	Simio, K., 2019	Drobetz, H. 2016	Sharma, H. 2014	Merchan, E. C. 1992	Shankar, N. S. 1992	Abbaszadegan, 1990	Howard, 1989	Olerud, 1989	Pring, 1988	Jenkins, 1988	Kumaravel, 2015	Kumar2014	Ismatullah, 2012	Mardini Kivi, 2011
Complications																				
Complications		●				↓			↓											
Total: Carpal tunnel syndrome, radiocarpal arthritis, flexor tenosynovitis, reoperation							●													
Total hand complications: Radial neuritis, median/ulnar nerve compression, ruoture of extensor pollicus longus													↓							
Stiffness																	●			
Malunion																		●	●	
Non-union																		●		
Pressure sore																		●		
Shoulder stiffness																		↓		
Stiff hand																		●		
Carpal tunnel syndrome																			●	
Pin tract infection																			●	
Reflex sympathetic dystrophy																			●	
Wrist stiffness																			●	
Finger stiffness																				●
Composite																				
Jebsen Taylor function (lower score is better)		↑																		
SF-36 questionnaire		↑																		
Gartland and Werley score (poor)			●																	
Final Cooney Score				●																
DASH						↑		●	↑											
PRWE						↑		●												
DASH (< 65 years)							↑													
DASH (>/= 65 years)							●													
DASH (All)							↑													
Gartland and Werley category (%) - Poor									●											
Modified Gartland and Werley score									↑											
Modified McBride scoring system: (Poor)											●									
Gartland and Werley (Excellent)													●							
Gartland and Werley score (<50 yrs)													●							
Scheck score (Total): Scale range?															●					
Green and O'Brien Score (Excellent)																			●	
Function																				
Chuck Strength		↑																		
Upper extremity fun		●																		
Return to work					●															
Activity of daily life (ADL): Grade 1								↑												
Functional outcome- Excellent (Lidstrom grading)												●								
Subjective function (VAS)												●								
Functional score- Excellent/Good														↑						
Other																				
Grip strength: Score 3: near normal grip power >80% of normal hand grip power];	↑																			
Grip strength		●	●	●	●	↑	↑	↑	↑		↑			●	●	↑	●	●		
Pinch strength		●																		
Anatomical results: (Poor)										●										
Functional results: (Poor)										●										
Stewart score- Objective (Excellent)																●				
Gartland and Werley score																	●			
Subjective satisfaction frequency- Excellent (Saito chart)																				↑
Subjective satisfaction frequency- Good/Fair (Saito chart)																				↓
Pain																				
Pain: Freedom from pain (A) - Score 3: completely free of pain;	↑																			
Number of patients complaining of persistent wrist pain			●																	
VAS pain												↑								
Pain (None)																	↑			

Table 44: PICO 4- Summary of Findings - Operative vs Non-operative Treatment (young population) Continued

	High Quality	Moderate Quality																		
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	ur Rahman, O., 2012	Young, C. F. 2003	Gupta, R. 1999	Stoffelen, D. V. 1999	Rodriguez-Merchan, E. C. 1997	Mulders, M. A. M. 2019	Sirnio, K., 2019	Venkatesh, R. B. 2016	Drobetz, H. 2016	Sharma, H. 2014	Merchan, E. C. 1992	Shankar, N. S. 1992	Abbaszadegan, 1990	Howard, 1989	Olerud, 1989	Jenkins, 1988	Kumaravel, 2015	Kumar2014	Ismatullah, 2012	Cai, 2002
Radiographic Outcome																				
Deformity (D) - Score 3 no deformity	↑																			
Pronation		●	●																	
Radial deviation		●	●																	
Supination		●	●																	
Ulnar deviation		●	●																	
Loss			↑																	
Lateral shift				●																
Radial Shortening				●									●			●				
Step-off					↓															
Dorsal angulation							↑					↑	●			●				
Radial inclination							↑	↑	↓	↑									↑	
Ulnar variance							↓		↑								●			
radial length								↑		↑	●	↑					●	↑		
Volar tilt								↑		↑							●		●	
Volar slope (degrees)									↑											
Radial Angle											●	↑				●	●	↑		
Stewart score (Excellent)														↑						
Palmar tilt																		↑		
Articular step-off																			●	
radial height																			↑	
Decurtation length of radius (mm)																				↑
Palm obliquity (°)																				↑
Radius obliquity (°)																				↑
ROM																				
Range of motion: (B) Score 3: near normal range of movement;	↓																			
Extension		●	●			●	↑		●			↑								
Flexion		●	●			●	↑		●			●								
Pronation						●	●	●	●	↑		●					●	●		
Supination						●	↓	●	●	↑		●					●	●		
Wrist extension (deg)		●																		
Finger movement				●																
Range of motion: Retained range of motion (of normal %)					●															
Range of motion: Radial deviation (deg)						●						●								
Range of motion: Ulnar deviation (deg)						●						↑								
Range of motion: Radial deviation (°)							●													
Range of motion: Ulnar deviation (°)							↑													
Range of motion: Dorsal flexion								●										●		
Range of motion: Palmar Flexion								●												
Range of motion: Radial deviation								●		●										
Range of motion: Ulnar deviation								●		●										
Range of motion: Dorsal ?exion										↑										
Range of motion: Palmar ?exion										↑										
Range of motion: Flexion/Extension (% of contralateral side)													●							
Range of motion: Flexion-Extension (Difference to contralateral side (°))															●					
Range of motion: Pronation-Supination (Difference to contralateral side (°))															●					
Range of motion: Dorsiflexion (% of contralateral side)																	●			
Range of motion: Palmar flexion (% of contralateral side)																	●			
Range of motion: Radial deviation (% of contralateral side)																	●			
Range of motion: Ulnar deviation (% of contralateral side)																	●			
Range of motion: Volar flexion																		●		
Range of motion: Flexion-Extension																				↑
Range of motion: Pronation-Supination																				↑
Range of motion: Radial-Ulnar deviation																				↑

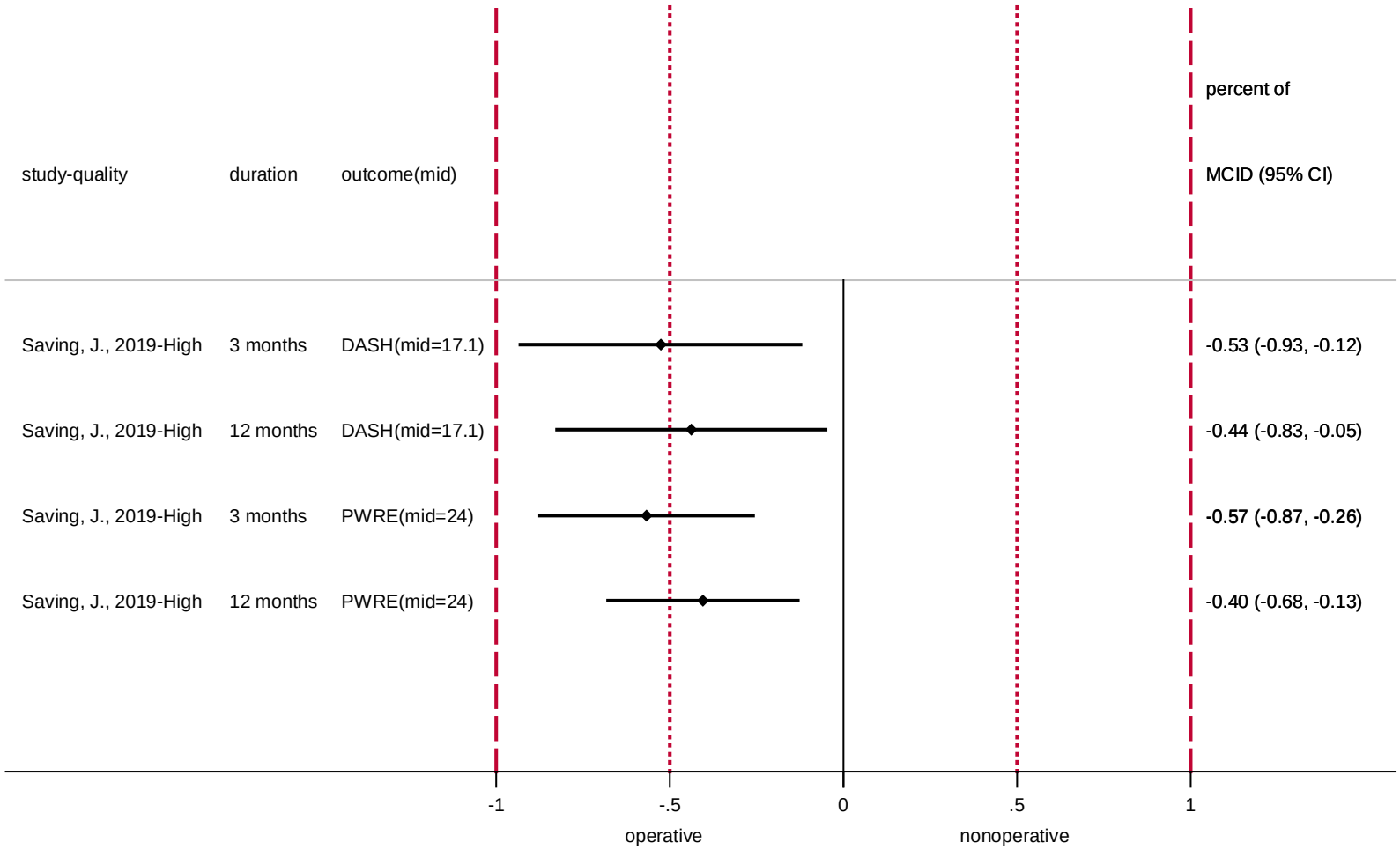
Table 45: PICO 4- Summary of Findings - Operative vs Non-operative Treatment (older population)

	High Quality		Moderate Quality										
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Wong, T. C., 2010	Saving, J., 2019	Arora, R., 2011	Azzopardi, T., 2005	Moroni, A., 2004	Martinez-Mendez, D., 2018	Bartl, C., 2014	Roumen, R. M., 1991	Horne, J. G., 1990	Schmalholz, 1989	Foldhazy, Z., 2010	Hegeman, J. H., 2004	Sanchez-Sotelo, 2000
Complications													
Malunion													↓
Reflex sympathetic dystrophy													●
Total: Infection, redisplacement				●									
Reflex Sympathetic Dystrophy with fair end result								●					
Total: Problems with the pin sites, radial nerve irritation									↑				
Total: Nerve injuries, carpal tunnel syndrome. CRPS, pin-track infection											●		
Major												●	
Pin-track infection												●	
Reflex symphatetic dystrophy												●	
Residual dinner fork deformity												●	
Compression of medial nerve													●
Refracture													●
Rupture of extensor pollicus longus													●
Major complications		●											
Minor complications		●											
Composite													
DASH		↑	↑			↑	●						
PRWE		↑	↑										
Mayo wrist score: Total score (100 points)	●												
WHOQoL: World Health Organization Quality of Life	●												
PRWE-total: Function						↑							
EQ-5D VAS							●						
EQ-5D utility index							●						
Final functional outcome (Excellent): Subjective evaluation, response grid, objective evaluation, grip strength, complications									●				
Green O'Brien Score (Excellent)											●		
Gartland and Werley score (Excellent)												↓	
EQ-5D		●											
Function													
Mayo wrist score: Functional status (25 points)	●												
SF-36 (Mental score)				●									
SF-36 (Physical score)				●									
Horesh Demerit Point system score					↑								
SF-36					●								
SF-36-MCS							●						
SF-36-PCS							●						
Anatomical End Result - Excellent								↑					
Functional End Result - Excellent: Lindstrom Scale								●					
de Bruijn Score								●					
Function- Excellent (Lidstrom)										↑			
Other													
Grip strength	●	↑	↑	●		●				●	●		↑
Mayo wrist score: Grip strength (25 points)	●												
Activities of daily living (Bilateral)				●									
Activities of daily living (Unilateral)				●									
Lindstrom Score								●					
Power: percent								●					
Grip strength of hand (% of contralateral side)												●	
Grip strength of index finger (% of contralateral side)												●	
Pain													
VAS pain						↑					●		
Pain at rest			●										
pain under stress			●										
Pain: Mayo wrist score - Pain (25 points)	●												
Pain score				●									
PRWE-total: Pain						↑							
Pain (Radio-ulnar Joint)												●	
Pain (Radiocarpal Joint)												●	
Pain (Ulnocarpal Joint)												●	
Radio-ulnar pain- None (VAS)													↑
Radio-ulnar pain- Severe (VAS)													●
Radiocarpal pain- None (VAS)													↑
Radiocarpal pain- Severe (VAS)													●

Table 46: PICO 4- Summary of Findings - Operative vs Non-operative Treatment (older population) Continued

	High Quality		Moderate Quality									
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Wong, T. C., 2010**	**Saving, J., 2019**	**Arora, R., 2011**	**Azzopardi, T., 2005**	**Moroni, A., 2004**	**Martinez-Mendez, D., 2018**	**Bartl, C., 2014**	**Horne, J. G., 1990**	**Schmalholz, 1989**	**Foldhazy, Z., 2010**	**Hegeman, J. H., 2004**	**Sanchez-Sotelo, 2000**
Radiographic Outcome												
Radial deviation		●	●									
Ulnar deviation		↑	●									
Radial Shortening					●					●		
Step-off			↑									
Dorsal angulation	↓			↑					●	↑		
Radial inclination	↑	↑	↑	↑		↑	↑			↑	↑	
Ulnar variance	↑		↑	↓		↓						
radial length	↑			↑							●	
Radial Angle					●							
Palmar tilt			↑									
Articular step-off						●						
radial height						↑						
Volar Angle					●							
Radiographic outcome: Arthrosis						●						
Palmar inclination (degrees)*1							↑					
Ulnar advancement, mm*2							↑					
Dorsal Displacement								●				
Radial displacement								●				
Axial compression									●			
Radiocarpal angle (°)											↑	
Dorsal tilt		↓										
ROM												
Extension	●	●	↓	●		●	↓					↑
Flexion	●	↑	●	●		↓	↓				↑	↑
Pronation	●	↑	●	●		↑	●		●	↑	●	↑
Supination	●	●	●	●		↑	●		●	●		↑
Range of motion: Radial deviation (°)	●											
Range of motion: Radial deviation										↓	●	
Range of motion: Ulnar deviation	●									●	●	
Range of motion: Dorsiflexion (% of contralateral side)									●			
Range of motion: Radial deviation (% of contralateral side)				●								↑
Range of motion: Ulnar deviation (% of contralateral side)				↑								↑
Range of motion: Volar flexion										●		
Mayo wrist score: Range of motion (25 points)	●											
Range of motion: Radial abduction							↓					
Range of motion: Ulnar abduction							↓					
Range of motion: Volar flexion (% of contralateral side)									●			
Range of motion: Dorsal extension										↓		
Range of motion: Mean dorsal flexion (% of contralateral side)											●	

Figure 3: Operative vs. Nonoperative Summary of Findings for outcome with MIDs



The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 47: PICO 4.1- operative vs non-operative treatment (younger)- Adverse events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kreder, H. J. 2006	Moderate Quality	Complications	2 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	56	96.43%	Closed reduction and casting ( )	59	6.78%	RR	0.55(0.10,2.86)	Not Significant (P-value>.05)

Table 48: PICO 4.1- operative vs non-operative treatment (younger)- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Howard, 1989	Moderate Quality	Total hand complications: Radial neuritis, median/ulnar nerve compression, ruoture of extensor pollicus longus	6 mos	PICO 4: Operative treatment (External fixation)	26	96.15%	Plaster immobilization (Manipulation and plaster)	25	40.00%	RR	0.10(0.01,0.72)	**Treatment 2**
Ismatullah, 2012	Moderate Quality	Carpal tunnel syndrome	12 wks	PICO 4: Operative treatment (External fixation)	15	100.00%	Plaster immobilization (Plaster casting)	15	13.33%	RD	-0.13(-0.31,0.04)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Malunion	12 wks	PICO 4: Operative treatment (External fixation)	17	88.24%	Plaster immobilization (Plaster casting)	15	33.33%	RR	0.40(0.09,1.75)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Reflex sympathetic dystrophy	12 wks	PICO 4: Operative treatment (External fixation)	16	93.75%	Plaster immobilization (Plaster casting)	15	20.00%	RR	0.33(0.04,2.85)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Pin tract infection	12 wks	PICO 4: Operative treatment (External fixation)	17	88.24%	Plaster immobilization (Plaster casting)	15	0.00%	RD	0.13(-0.04,0.31)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Wrist stiffness	12 wks	PICO 4: Operative treatment (External fixation)	19	78.95%	Plaster immobilization (Plaster casting)	15	20.00%	RR	1.33(0.36,4.97)	Not Significant (P-value>.05)
Kumar2014	Moderate Quality	Malunion	6 wks	PICO 4: Operative treatment (External fixation)	21	95.24%	Plaster immobilization (Plaster cast immobilization)	20	25.00%	RR	0.20(0.03,1.56)	Not Significant (P-value>.05)
Kumar2014	Moderate Quality	Stiff hand	6 wks	PICO 4: Operative treatment (External fixation)	22	90.91%	Plaster immobilization (Plaster cast immobilization)	20	15.00%	RR	0.67(0.12,3.57)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kumar2014	Moderate Quality	Non-union	6 wks	PICO 4: Operative treatment (External fixation)	20	100.00%	Plaster immobilization (Plaster cast immobilization)	20	15.00%	RD	-0.15(-0.31,0.01)	Not Significant (P-value>.05)
Kumar2014	Moderate Quality	Pressure sore	6 wks	PICO 4: Operative treatment (External fixation)	21	95.24%	Plaster immobilization (Plaster cast immobilization)	20	10.00%	RR	0.50(0.05,5.08)	Not Significant (P-value>.05)
Kumar2014	Moderate Quality	Shoulder stiffness	6 wks	PICO 4: Operative treatment (External fixation)	20	100.00%	Plaster immobilization (Plaster cast immobilization)	20	20.00%	RD	-0.20(-0.38,-0.02)	**Treatment 2**
Kumaravel, 2015	Moderate Quality	Stiffness	1 yrs	PICO 4: Operative treatment (External fixation)	27	85.19%	Plaster immobilization (Closed reduction and cast immobilization)	25	16.00%	RR	1.09(0.31,3.85)	Not Significant (P-value>.05)
Mardini Kivi, 2011	Moderate Quality	Finger stiffness	12 wks	PICO 4: Operative treatment (Percutaneous fixation)	.	. %	Plaster immobilization (Closed reduction and long-arm cast)	.	. %	Author Reported	NA	**Treatment 1**
Sirnio, K., 2019	Moderate Quality	Total: Carpal tunnel syndrome, radiocarpal arthritis, flexor tenosynovitis, reoperation	24 months	PICO 4: Operative treatment (Palmar plating)	38	. %	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	. %	Author Reported	NA	**ns**

Table 49: PICO 4.1- operative vs non-operative treatment (younger)- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Drobetz, H. 2016	Moderate Quality	DASH	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	40 (12.00)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	50 (24.00)	Author Reported	-10 (-20.3997,0.399798)	Not Significant (P-value>.05)
Drobetz, H. 2016	Moderate Quality	PRWE	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	21 (20.00)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	47 (40.00)	Author Reported	-26 (-43.3329,-8.66700)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Gartland and Werley (Excellent)	3 mos	PICO 4: Operative treatment (External fixation)	28	89.29%	Plaster immobilization (Manipulation and plaster)	25	12.00%	RR	1.00(0.22,4.49)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Gartland and Werley (Excellent)	6 mos	PICO 4: Operative treatment (External fixation)	41	60.98%	Plaster immobilization (Manipulation and plaster)	25	36.00%	RR	1.78(0.98,3.24)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Gartland and Werley (Good)	3 mos	PICO 4: Operative treatment (External fixation)	36	69.44%	Plaster immobilization (Manipulation and plaster)	25	36.00%	RR	1.22(0.62,2.42)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Gartland and Werley (Good)	6 mos	PICO 4: Operative treatment (External fixation)	28	89.29%	Plaster immobilization (Manipulation and plaster)	25	36.00%	RR	0.33(0.10,1.09)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Gatland and Werley (Fair)	3 mos	PICO 4: Operative treatment (External fixation)	30	83.33%	Plaster immobilization (Manipulation and plaster)	25	32.00%	RR	0.63(0.24,1.65)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Howard, 1989	Moderate Quality	Gatland and Werley (Fair)	6 mos	PICO 4: Operative treatment (External fixation)	30	83.33%	Plaster immobilization (Manipulation and plaster)	25	20.00%	RR	1.00(0.33,3.03)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Gartland and Werley (Poor)	3 mos	PICO 4: Operative treatment (External fixation)	31	80.65%	Plaster immobilization (Manipulation and plaster)	25	20.00%	RR	1.20(0.42,3.43)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Gartland and Werley (Poor)	6 mos	PICO 4: Operative treatment (External fixation)	26	96.15%	Plaster immobilization (Manipulation and plaster)	25	8.00%	RR	0.50(0.05,5.17)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Gartland and Werley score (<50 yrs)	6 mos	PICO 4: Operative treatment (External fixation)	13	2.6 (-4.78)	Plaster immobilization (Manipulation and plaster)	10	5.7 (-9.20)	Author Reported	-3.1 (-9.36498,3.164982)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Green and O'Brien Score (Excellent)	12 wks	PICO 4: Operative treatment (External fixation)	20	75.00%	Plaster immobilization (Plaster casting)	15	26.67%	RR	1.25(0.41,3.77)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Green and O'Brien Score (Good)	12 wks	PICO 4: Operative treatment (External fixation)	21	71.43%	Plaster immobilization (Plaster casting)	15	20.00%	RR	2.00(0.61,6.55)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Green and O'Brien Score (Fair)	12 wks	PICO 4: Operative treatment (External fixation)	17	88.24%	Plaster immobilization (Plaster casting)	15	26.67%	RR	0.50(0.11,2.33)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Green and O'Brien Score (Poor)	12 wks	PICO 4: Operative treatment (External fixation)	16	87.50%	Plaster immobilization (Plaster casting)	15	26.67%	RR	0.54(0.12,2.48)	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Jebsen Taylor function (lower score is better)	6 mos	PICO 4: Operative treatment (Closed reduction and external fixation)	54	0.8 (1.40)	Closed reduction and casting ( )	59	0.68 (1.10)	Author Reported	0.12 (-0.34714,0.587141)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kreder, H. J. 2006	Moderate Quality	Jebsen Taylor function (lower score is better)	1 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	0.321 (1.10)	Closed reduction and casting ( )	59	0.783 (1.10)	Author Reported	-0.462 (-0.86803,-0.05596)	**Treatment 1**
Kreder, H. J. 2006	Moderate Quality	Jebsen Taylor function (lower score is better)	2 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	0.317 (1.10)	Closed reduction and casting ( )	59	0.244 (0.90)	Author Reported	0.073 (-0.29958,0.445586)	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	SF-36 questionnaire	6 wks	PICO 4: Operative treatment (Closed reduction and external fixation)	54	-1.9 (2.00)	Closed reduction and casting ( )	59	-1.7 (2.90)	Author Reported	-0.2 (-1.11222,0.712224)	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	SF-36 questionnaire	6 mos	PICO 4: Operative treatment (Closed reduction and external fixation)	54	0.2 (1.50)	Closed reduction and casting ( )	59	-0.5 (2.00)	Author Reported	0.7 (0.051529,1.348470)	**Treatment 1**
Kreder, H. J. 2006	Moderate Quality	SF-36 questionnaire	1 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	0.8 (0.70)	Closed reduction and casting ( )	59	-0.2 (1.80)	Author Reported	1 (0.504196,1.495803)	**Treatment 1**
Kreder, H. J. 2006	Moderate Quality	SF-36 questionnaire	2 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	0.5 (0.90)	Closed reduction and casting ( )	59	0.1 (1.10)	Author Reported	0.4 (0.030663,0.769336)	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	DASH	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**
Mulders, M. A. M. 2019	Moderate Quality	DASH	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	DASH	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**
Mulders, M. A. M. 2019	Moderate Quality	DASH	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	PRWE	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**
Mulders, M. A. M. 2019	Moderate Quality	PRWE	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	PRWE	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**
Mulders, M. A. M. 2019	Moderate Quality	PRWE	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**
Pring, 1988	Moderate Quality	Scheck score (Total): Scale range?	7 wks	PICO 4: Operative treatment (Bipolar fixation (Percutaneous pinning))	36	5.7 (-17.45)	Plaster immobilization ( )	40	5.44 (-17.55)	Author Reported	0.26 (-7.61931,8.139314)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Pring, 1988	Moderate Quality	Scheck score (Total): Scale range?	12 wks	PICO 4: Operative treatment (Bipolar fixation (Percutaneous pinning))	36	4.82 (-14.76)	Plaster immobilization ( )	40	5 (-16.13)	Author Reported	-0.18 (-7.12495,6.764955)	Not Significant (P-value>.05)
Pring, 1988	Moderate Quality	Scheck score (Total): Scale range?	6 mos	PICO 4: Operative treatment (Bipolar fixation (Percutaneous pinning))	36	3.3 (-10.10)	Plaster immobilization ( )	40	4.19 (-13.52)	Author Reported	-0.89 (-6.22348,4.443488)	Not Significant (P-value>.05)
Shankar, N. S. 1992	Moderate Quality	Modified McBride scoring system: (Poor)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	27	85.19%	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	45.45%	RR	0.38(0.14,1.04)	Not Significant (P-value>.05)
Sharma, H. 2014	Moderate Quality	DASH score	24 mos	PICO 4: Operative treatment (Volar plating group)	32	4.96 (9.42)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	14.04 (10.20)	Author Reported	-9.08 (-13.8906,-4.26930)	**Treatment 1**
Sharma, H. 2014	Moderate Quality	Modified Gartland and Werley score	24 mos	PICO 4: Operative treatment (Volar plating group)	32	1.86 (2.02)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	6.72 (4.08)	Author Reported	-4.86 (-6.43741,-3.28258)	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Gartland and Werley category (%) - Poor	24 mos	PICO 4: Operative treatment (Volar plating group)	32	100.00%	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	0.00%	RD	0.00(0.00,0.00)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	DASH (< 65 years)	2 years	PICO 4: Operative treatment (Palmar plating)	38	6 (.)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	11 (.)	MeanDif	-5 (,)	**G1 (Operative) Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	DASH (>/= 65 years)	2 years	PICO 4: Operative treatment (Palmar plating)	15	11 (.)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	19	17 (.)	MeanDif	-6 (,)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	DASH (All)	2 years	PICO 4: Operative treatment (Palmar plating)	38	7.2 (.)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	14.4 (.)	MeanDif	-7.2 (,)	**G1 (Operative) Significant (P-value<.05)**
Stoffelen, D. V. 1999	Moderate Quality	Final Cooney Score	1 yrs	PICO 4: Operative treatment (Closed reduction and plaster cast)	50	73 (.)	Kapandji-pinning (In the Kapandji-pinning group, triple intra-focal Kapandji-pinning was used and a plaster applied for 1 week until pain subsided.)	48	77 (.)	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Young, C. F. 2003	Moderate Quality	Gartland and Werley score (poor)	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	100.00%	Plaster immobilization (POP group)	49	0.00%	RD	0.00(0.00,0.00)	Not Significant (P-value>.05)

Table 50: PICO 4.1- operative vs non-operative treatment (younger)- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abbaszadegan, 1990	Moderate Quality	Subjective function (VAS)	8 wks	PICO 4: Operative treatment (External fixation)	23	7 (-17.13)	Dorsal plaster cast ( )	24	5 (-12.50)	Author Reported	2 (-6.60232,10.60232)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Subjective function (VAS)	12 wks	PICO 4: Operative treatment (External fixation)	23	7 (-17.13)	Dorsal plaster cast ( )	24	7 (-17.50)	Author Reported	0 (-9.89949,9.899494)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Subjective function (VAS)	24 wks	PICO 4: Operative treatment (External fixation)	23	9 (-22.02)	Dorsal plaster cast ( )	24	8 (-20.00)	Author Reported	1 (-11.0415,13.04159)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Subjective function (VAS)	1 yrs	PICO 4: Operative treatment (External fixation)	22	10 (-23.93)	Dorsal plaster cast ( )	24	9 (-22.50)	Author Reported	1 (-12.4536,14.45362)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Range of motion: Flexion/Extension (% of contralateral side)	8 wks	PICO 4: Operative treatment (External fixation)	23	68 (-166.39)	Dorsal plaster cast ( )	24	64 (-159.97)	Author Reported	4 (-89.3809,97.38094)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Range of motion: Flexion/Extension (% of contralateral side)	12 wks	PICO 4: Operative treatment (External fixation)	23	78 (-190.85)	Dorsal plaster cast ( )	24	73 (-182.46)	Author Reported	5 (-101.831,111.8316)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Range of motion: Flexion/Extension (% of contralateral side)	24 wks	PICO 4: Operative treatment (External fixation)	23	90 (-220.22)	Dorsal plaster cast ( )	24	80 (-199.96)	Author Reported	10 (-110.415,130.4159)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abbaszadegan, 1990	Moderate Quality	Range of motion: Flexion/Extension (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	22	95 (-227.34)	Dorsal plaster cast ( )	24	83 (-207.46)	Author Reported	12 (-114.150,138.1507)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Functional outcome- Excellent (Lidstrom grading)	1 yrs	PICO 4: Operative treatment (External fixation)	34	64.71%	Dorsal plaster cast ( )	24	25.00%	RR	2.18(0.99,4.81)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Functional outcome- Good (Lidstrom grading)	1 yrs	PICO 4: Operative treatment (External fixation)	29	75.86%	Dorsal plaster cast ( )	24	25.00%	RR	1.27(0.51,3.21)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Functional outcome- Fair (Lidstrom grading)	1 yrs	PICO 4: Operative treatment (External fixation)	24	91.67%	Dorsal plaster cast ( )	24	12.50%	RR	0.73(0.13,3.95)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Functional outcome- Poor (Lidstrom grading)	1 yrs	PICO 4: Operative treatment (External fixation)	23	95.65%	Dorsal plaster cast ( )	24	16.67%	RR	0.27(0.03,2.26)	Not Significant (P-value>.05)
Cai, 2002	Moderate Quality	Range of motion: Flexion-Extension	1 yrs	PICO 4: Operative treatment (External fixation)	21	120.12 (16.95)	Plaster immobilization (Closed reduction and cast immobilization)	17	80.24 (13.45)	Author Reported	39.88 (30.21372,49.54627)	**Treatment 1**
Cai, 2002	Moderate Quality	Range of motion: Radial-Ulnar deviation	1 yrs	PICO 4: Operative treatment (External fixation)	21	58.27 (10.23)	Plaster immobilization (Closed reduction and cast immobilization)	17	35.67 (9.34)	Author Reported	22.6 (16.36640,28.83359)	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cai, 2002	Moderate Quality	Range of motion: Pronation-Supination	1 yrs	PICO 4: Operative treatment (External fixation)	21	140.46 (23.45)	Plaster immobilization (Closed reduction and cast immobilization)	17	98.5 (19.34)	Author Reported	41.96 (28.35416,55.56583)	**Treatment 1**
Gupta, R. 1999	Moderate Quality	Extension	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	66 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	58.24 (.)	Author Reported	NA	Not Significant (P-value>.05)
Gupta, R. 1999	Moderate Quality	Flexion	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	73.48 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	55.48 (.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gupta, R. 1999	Moderate Quality	Radial deviation	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	21.92 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	19.2 (.)	Author Reported	NA	Not Significant (P-value>.05)
Gupta, R. 1999	Moderate Quality	Ulnar deviation	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	31.84 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	26 (.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gupta, R. 1999	Moderate Quality	Pronation	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	78.88 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	68.16 (.)	Author Reported	NA	Not Significant (P-value>.05)
Gupta, R. 1999	Moderate Quality	Supination	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	78.96 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	66.24 (.)	Author Reported	NA	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Upper extremity fun	6 wks	PICO 4: Operative treatment (Closed reduction and external fixation)	54	77 (25.30)	Closed reduction and casting ( )	59	80.5 (23.30)	Author Reported	-3.5 (-12.4936,5.493612)	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Upper extremity fun	6 mos	PICO 4: Operative treatment (Closed reduction and external fixation)	54	15.8 (20.00)	Closed reduction and casting ( )	59	22.4 (25.60)	Author Reported	-6.6 (-15.0337,1.833742)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kreder, H. J. 2006	Moderate Quality	Upper extremity fun	1 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	8.6 (14.90)	Closed reduction and casting ( )	59	12.2 (18.20)	Author Reported	-3.6 (-9.71241,2.512414)	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Upper extremity fun	2 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	12.7 (22.90)	Closed reduction and casting ( )	59	15.6 (23.90)	Author Reported	-2.9 (-11.5313,5.731307)	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Grip strength	6 mos	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Grip strength	1 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Grip strength	2 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Chuck Strength	6 mos	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	Not Significant (P-value>.05)
Kreder, H. J. 2006	Moderate Quality	Chuck Strength	1 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	**Treatment 1**
Kreder, H. J. 2006	Moderate Quality	Chuck Strength	2 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	**ns**
Kreder, H. J. 2006	Moderate Quality	Pinch strength	6 mos	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kreder, H. J. 2006	Moderate Quality	Pinch strength	1 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	**ns**
Kreder, H. J. 2006	Moderate Quality	Pinch strength	2 yrs	PICO 4: Operative treatment (Closed reduction and external fixation)	54	. %	Closed reduction and casting ( )	59	. %	Author Reported	NA	**ns**
Kumar2014	Moderate Quality	Range of motion: Volar flexion	6 wks	PICO 4: Operative treatment (External fixation)	20	62.5 (-142.61)	Plaster immobilization (Plaster cast immobilization)	20	51.7 (-117.96)	Author Reported	10.8 (-70.3118,91.91189)	Not Significant (P-value>.05)
Kumar2014	Moderate Quality	Range of motion: Dorsal flexion	6 wks	PICO 4: Operative treatment (External fixation)	20	65.4 (-149.22)	Plaster immobilization (Plaster cast immobilization)	20	52.5 (-119.79)	Author Reported	12.9 (-70.9654,96.76542)	Not Significant (P-value>.05)
Kumar2014	Moderate Quality	Range of motion: Pronation	6 wks	PICO 4: Operative treatment (External fixation)	20	76.8 (-175.23)	Plaster immobilization (Plaster cast immobilization)	20	65.8 (-150.14)	Author Reported	11 (-90.1329,112.1329)	Not Significant (P-value>.05)
Kumar2014	Moderate Quality	Range of motion: Supination	6 wks	PICO 4: Operative treatment (External fixation)	20	62.39 (-142.36)	Plaster immobilization (Plaster cast immobilization)	20	57.2 (-130.51)	Author Reported	5.19 (-79.4524,89.83249)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Range of motion: Palmar flexion (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	21	88.62 (-207.20)	Plaster immobilization (Closed reduction and cast immobilization)	25	61.8 (-157.65)	Author Reported	26.82 (-81.2204,134.8604)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Range of motion: Dorsiflexion (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	21	95.9 (-224.22)	Plaster immobilization (Closed reduction and cast immobilization)	25	72.64 (-185.31)	Author Reported	23.26 (-97.0453,143.5653)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kumaravel, 2015	Moderate Quality	Range of motion: Radial deviation (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	21	96.05 (-224.57)	Plaster immobilization (Closed reduction and cast immobilization)	25	87.36 (-222.86)	Author Reported	8.69 (-121.145,138.5259)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Range of motion: Ulnar deviation (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	21	93.71 (-219.10)	Plaster immobilization (Closed reduction and cast immobilization)	25	68.96 (-175.92)	Author Reported	24.75 (-91.5988,141.0988)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Range of motion: Supination (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	21	90.38 (-211.31)	Plaster immobilization (Closed reduction and cast immobilization)	25	72.04 (-183.78)	Author Reported	18.34 (-97.2381,133.9181)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Range of motion: Pronation (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	21	94.67 (-221.34)	Plaster immobilization (Closed reduction and cast immobilization)	25	77.08 (-196.63)	Author Reported	17.59 (-104.490,139.6708)	Not Significant (P-value>.05)
Olerud, 1989	Moderate Quality	Range of motion: Pronation-Supination (Difference to contralateral side (°))	5 wks	PICO 4: Operative treatment (External fixation)	69	6 (-25.43)	Plaster immobilization (Plaster cast immobilization)	25	16 (-40.82)	Author Reported	-10 (-27.0880,7.088007)	Not Significant (P-value>.05)
Olerud, 1989	Moderate Quality	Range of motion: Flexion-Extension (Difference to contralateral side (°))	5 wks	PICO 4: Operative treatment (External fixation)	69	12 (-50.86)	Plaster immobilization (Plaster cast immobilization)	25	21 (-53.57)	Author Reported	-9 (-33.1867,15.18677)	Not Significant (P-value>.05)
Olerud, 1989	Moderate Quality	Functional score-Excellent/Good	5 wks	PICO 4: Operative treatment (External fixation)	.	. %	Plaster immobilization (Plaster cast immobilization)	.	. %	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rodriguez-Merchan, E. C. 1997	Moderate Quality	Grip strength: % of unaffected side	1 yrs	PICO 4: Operative treatment (Percutaneous fixation)	20	85 (.)	Closed reduction (Closed reduction, consisting of manipulation, under local anesthesia, followed by casting.)	20	65 (.)	Author Reported	NA	**ns**
Stoffelen, D. V. 1999	Moderate Quality	Grip strength	1 yrs	PICO 4: Operative treatment (Closed reduction and plaster cast)	50	. %	Kapandji-pinning (In the Kapandji-pinning group, triple intra-focal Kapandji-pinning was used and a plaster applied for 1 week until pain subsided.)	48	. %	Author Reported	NA	**ns**
Stoffelen, D. V. 1999	Moderate Quality	Finger movement	1 mos	PICO 4: Operative treatment (Closed reduction and plaster cast)	50	. %	Kapandji-pinning (In the Kapandji-pinning group, triple intra-focal Kapandji-pinning was used and a plaster applied for 1 week until pain subsided.)	48	. %	Author Reported	NA	**ns**
Stoffelen, D. V. 1999	Moderate Quality	Finger movement	1 yrs	PICO 4: Operative treatment (Closed reduction and plaster cast)	50	. %	Kapandji-pinning (In the Kapandji-pinning group, triple intra-focal Kapandji-pinning was used and a plaster applied for 1 week until pain subsided.)	48	. %	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Supination (deg)	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	90 (.)	Plaster immobilization (POP group)	49	90 (.)	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Young, C. F. 2003	Moderate Quality	Pronation (deg)	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	90 (.)	Plaster immobilization (POP group)	49	90 (.)	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Flexion (deg)	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	65 (.)	Plaster immobilization (POP group)	49	55 (.)	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Extension (deg)	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	68 (.)	Plaster immobilization (POP group)	49	75 (.)	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Ulna deviation (deg)	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	40 (.)	Plaster immobilization (POP group)	49	40 (.)	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Radial deviation (deg)	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	23 (.)	Plaster immobilization (POP group)	49	20 (.)	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Grip strength	1 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	87 (.)	Plaster immobilization (POP group)	49	100 (.)	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Grip strength	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	73 (.)	Plaster immobilization (POP group)	49	100 (.)	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Wrist extension (deg)	1 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	60 (.)	Plaster immobilization (POP group)	49	60 (.)	Author Reported	NA	**ns**
Young, C. F. 2003	Moderate Quality	Wrist extension (deg)	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	36	75 (.)	Plaster immobilization (POP group)	49	68 (.)	Author Reported	NA	**ns**

Table 51: PICO 4.1- operative vs non-operative treatment (younger)- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
ur Rahman, O., 2012	High Quality	Grip strength: Score 3: near normal grip power >80% of normal hand grip power];	12 weeks	PICO 4: Operative treatment (External fixation with distraction; external fixator (AO type))	30	56.67%	PICO 4: Non-operative treatment ("Plaster of Paris cast immobilization; above-elbow POP cast after reduction of fracture")	30	13.33%	RR	4.25(1.62,11.15)	**Treatment 1 Significant (P-value<.05)**
Abbaszadegan, 1990	Moderate Quality	Radiographic outcome: Radial shortening	10 days	PICO 4: Operative treatment (External fixation)	23	0.7 (-1.71)	Dorsal plaster cast ( )	24	3 (-7.50)	Author Reported	-2.3 (-5.38058,0.780584)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Radiographic outcome: Radial shortening	4 wks	PICO 4: Operative treatment (External fixation)	23	1.9 (-4.65)	Dorsal plaster cast ( )	24	3.6 (-9.00)	Author Reported	-1.7 (-5.77062,2.370626)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Radiographic outcome: Radial shortening	8 wks	PICO 4: Operative treatment (External fixation)	23	2.3 (-5.63)	Dorsal plaster cast ( )	24	4.2 (-10.50)	Author Reported	-1.9 (-6.68852,2.888527)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Radiographic outcome: Dorsal angulation	10 days	PICO 4: Operative treatment (External fixation)	23	89 (-217.77)	Dorsal plaster cast ( )	24	101 (-252.45)	Author Reported	-12 (-146.617,122.6179)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Radiographic outcome: Dorsal angulation	4 wks	PICO 4: Operative treatment (External fixation)	23	88 (-215.32)	Dorsal plaster cast ( )	24	102 (-254.95)	Author Reported	-14 (-148.714,120.7145)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	Radiographic outcome: Dorsal angulation	8 wks	PICO 4: Operative treatment (External fixation)	23	89 (-217.77)	Dorsal plaster cast ( )	24	105 (-262.45)	Author Reported	-16 (-153.644,121.6444)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cai, 2002	Moderate Quality	Radiographic outcome: Palm obliquity (°)	1 yrs	PICO 4: Operative treatment (External fixation)	21	4.1 (8.72)	Plaster immobilization (Closed reduction and cast immobilization)	17	-10.12 (11.00)	Author Reported	14.22 (7.797141,20.64285)	**Treatment 1**
Cai, 2002	Moderate Quality	Radiographic outcome: Radius obliquity (°)	1 yrs	PICO 4: Operative treatment (External fixation)	21	20.12 (4.22)	Plaster immobilization (Closed reduction and cast immobilization)	17	16.4 (3.89)	Author Reported	3.72 (1.135962,6.304037)	**Treatment 1**
Cai, 2002	Moderate Quality	Radiographic outcome: Decurtation length of radius (mm)	1 yrs	PICO 4: Operative treatment (External fixation)	21	1.01 (0.76)	Plaster immobilization (Closed reduction and cast immobilization)	17	5.11 (1.96)	Author Reported	-4.1 (-5.08679,-3.11320)	**Treatment 1**
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Volar slope (degrees)	1 min	PICO 4: Operative treatment (Volar locking plate)	24	-17.2 (17.20)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	-13.4 (14.40)	Author Reported	-3.8 (-12.6313,5.031328)	Not Significant (P-value>.05)
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Volar slope (degrees)	1 days	PICO 4: Operative treatment (Volar locking plate)	24	4.7 (5.40)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	0.08 (7.25)	Author Reported	4.62 (1.093832,8.146167)	**ns**
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Volar slope (degrees)	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	3.5 (4.60)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	-5.4 (11.60)	Author Reported	8.9 (4.076228,13.72377)	**Treatment 1 (operative group)**
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Radial inclination (degrees)	1 min	PICO 4: Operative treatment (Volar locking plate)	24	8.7 (7.60)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	14.2 (-9.40)	Author Reported	-5.5 (-10.25,.74)	**Treatment 2 (non-operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Radial inclination (degrees)	1 days	PICO 4: Operative treatment (Volar locking plate)	24	19.6 (4.50)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	18.69 (4.52)	Author Reported	0.91 (-1.59200,3.412003)	Not Significant (P-value>.05)
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Radial inclination (degrees)	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	19.3 (4.40)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	15.37 (7.00)	Author Reported	3.93 (0.714595,7.145404)	**Treatment 1 (operative group)**
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	1 min	PICO 4: Operative treatment (Volar locking plate)	24	2.5 (2.20)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	2.3 (3.30)	Author Reported	0.2 (-1.34394,1.743943)	Not Significant (P-value>.05)
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	1 days	PICO 4: Operative treatment (Volar locking plate)	24	0.1 (0.60)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	0.4 (1.40)	Author Reported	-0.3 (-0.88925,0.289255)	Not Significant (P-value>.05)
Drobetz, H. 2016	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	0.9 (1.30)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	2.1 (1.90)	Author Reported	-1.2 (-2.09660,-0.30339)	**Treatment 1 (operative group)**
Drobetz, H. 2016	Moderate Quality	Grip strength: (% of grip strength of uninjured limb)	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	64 (29.00)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	42 (32.00)	Author Reported	22 (5.090949,38.90905)	**Treatment 1 (operative group)**
Drobetz, H. 2016	Moderate Quality	Range of motion (in degrees): Flexion	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	60 (21.00)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	49 (22.00)	Author Reported	11 (-0.92066,22.92066)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Drobetz, H. 2016	Moderate Quality	Range of motion (in degrees): Extension	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	65 (48.00)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	48 (27.00)	Author Reported	17 (-4.82902,38.82902)	Not Significant (P-value>.05)
Drobetz, H. 2016	Moderate Quality	Range of motion (in degrees): Pronation	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	70 (31.00)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	68 (26.00)	Author Reported	2 (-13.9281,17.92814)	Not Significant (P-value>.05)
Drobetz, H. 2016	Moderate Quality	Range of motion (in degrees): Supination	3 mos	PICO 4: Operative treatment (Volar locking plate)	24	82 (25.00)	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	79 (24.00)	Author Reported	3 (-10.6069,16.60690)	Not Significant (P-value>.05)
Gupta, R. 1999	Moderate Quality	Radiographic outcome: Loss	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	1.6 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	4.94 (.)	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gupta, R. 1999	Moderate Quality	Radiographic outcome: Loss	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	2.16 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	14.12 (.)	Author Reported	NA	**Treatment 1**
Gupta, R. 1999	Moderate Quality	Radiographic outcome: Loss	6 mos	PICO 4: Operative treatment (Crossed-pin fixation)	25	3.12 (.)	Plaster immobilization (Fracture reduction was maintained by plaster of Paris cast immobilization with the wrist in palmar fle:xion and ulnar deviation for the first 3 weeks. The cast then was changed with the wrist in a neutralposition for the next 3 weeks.)	25	7.32 (.)	Author Reported	NA	**Treatment 1**
Howard, 1989	Moderate Quality	Radiographic outcome: Stewart score (Excellent)	13 wks	PICO 4: Operative treatment (External fixation)	39	64.10%	Plaster immobilization (Manipulation and plaster)	25	8.00%	RR	7.00(1.77,27.66)	**Treatment 1**
Howard, 1989	Moderate Quality	Radiographic outcome: Stewart score (Good)	13 wks	PICO 4: Operative treatment (External fixation)	34	73.53%	Plaster immobilization (Manipulation and plaster)	25	68.00%	RR	0.53(0.29,0.95)	**Treatment 2**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Howard, 1989	Moderate Quality	Radiographic outcome: Stewart score (Fair)	13 wks	PICO 4: Operative treatment (External fixation)	27	92.59%	Plaster immobilization (Manipulation and plaster)	25	20.00%	RR	0.40(0.09,1.87)	Not Significant (P-value>.05)
Howard, 1989	Moderate Quality	Radiographic outcome: Stewart score (Poor)	13 wks	PICO 4: Operative treatment (External fixation)	25	100.00%	Plaster immobilization (Manipulation and plaster)	25	4.00%	RD	-0.04(-0.12,0.04)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Radiographic outcome: Volar tilt	12 wks	PICO 4: Operative treatment (External fixation)	15	5.73 (6.60)	Plaster immobilization (Plaster casting)	15	2.87 (10.14)	Author Reported	2.86 (-3.26280,8.982809)	Not Significant (P-value>.05)
Ismatullah, 2012	Moderate Quality	Radiographic outcome: Radial height	12 wks	PICO 4: Operative treatment (External fixation)	15	8.2 (1.74)	Plaster immobilization (Plaster casting)	15	6 (2.45)	Author Reported	2.2 (0.679253,3.720746)	**Treatment 1**
Ismatullah, 2012	Moderate Quality	Radiographic outcome: Radial inclination	12 wks	PICO 4: Operative treatment (External fixation)	15	18.8 (1.78)	Plaster immobilization (Plaster casting)	15	14.2 (3.53)	Author Reported	4.6 (2.599308,6.600691)	**Treatment 1**
Ismatullah, 2012	Moderate Quality	Radiographic outcome: Articular step-off	12 wks	PICO 4: Operative treatment (External fixation)	15	1.05 (0.97)	Plaster immobilization (Plaster casting)	15	1.52 (0.91)	Author Reported	-0.47 (-1.14309,0.203091)	Not Significant (P-value>.05)
Jenkins, 1988	Moderate Quality	Grip strength (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	59	93.9 (9.40)	Plaster immobilization ( )	41	84.1 (19.60)	Author Reported	9.8 (3.338719,16.26128)	**Treatment 1 (operative group)**
Jenkins, 1988	Moderate Quality	Stewart score-Subjective (Excellent)	1 yrs	PICO 4: Operative treatment (External fixation)	81	72.84%	Plaster immobilization ( )	41	26.83%	RR	1.39(0.76,2.54)	Not Significant (P-value>.05)
Jenkins, 1988	Moderate Quality	Stewart score-Subjective (Good)	1 yrs	PICO 4: Operative treatment (External fixation)	81	72.84%	Plaster immobilization ( )	41	51.22%	RR	0.73(0.47,1.14)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jenkins, 1988	Moderate Quality	Stewart score-Sujective (Fair)	1 yrs	PICO 4: Operative treatment (External fixation)	71	83.10%	Plaster immobilization ( )	41	19.51%	RR	1.04(0.47,2.32)	Not Significant (P-value>.05)
Jenkins, 1988	Moderate Quality	Stewart score-Sujective (Poor)	1 yrs	PICO 4: Operative treatment (External fixation)	62	95.16%	Plaster immobilization ( )	41	2.44%	RR	2.08(0.22,19.35)	Not Significant (P-value>.05)
Jenkins, 1988	Moderate Quality	Stewart score-Objective (Excellent)	1 yrs	PICO 4: Operative treatment (External fixation)	104	56.73%	Plaster immobilization ( )	41	68.29%	RR	1.12(0.87,1.44)	Not Significant (P-value>.05)
Jenkins, 1988	Moderate Quality	Stewart score-Objective (Good)	1 yrs	PICO 4: Operative treatment (External fixation)	71	83.10%	Plaster immobilization ( )	41	29.27%	RR	0.69(0.35,1.39)	Not Significant (P-value>.05)
Jenkins, 1988	Moderate Quality	Stewart score-Objective (Fair)	1 yrs	PICO 4: Operative treatment (External fixation)	61	96.72%	Plaster immobilization ( )	41	2.44%	RR	1.39(0.13,14.83)	Not Significant (P-value>.05)
Jenkins, 1988	Moderate Quality	Stewart score-Objective (Poor)	1 yrs	PICO 4: Operative treatment (External fixation)	59	100.00%	Plaster immobilization ( )	41	0.00%	RD	0.00(0.00,0.00)	Not Significant (P-value>.05)
Jenkins, 1988	Moderate Quality	Radiographic outcome: Dorsal angulation	1 yrs	PICO 4: Operative treatment (External fixation)	59	-6.2 (9.10)	Plaster immobilization ( )	41	7.7 (12.60)	Author Reported	-13.9 (-18.4019,-9.39807)	**ns**
Jenkins, 1988	Moderate Quality	Radiographic outcome: Flattening of Radial angle	1 yrs	PICO 4: Operative treatment (External fixation)	59	2.5 (5.10)	Plaster immobilization ( )	41	6.5 (7.30)	Author Reported	-4 (-6.58586,-1.41413)	**ns**
Jenkins, 1988	Moderate Quality	Radiographic outcome: Radial shortening	1 yrs	PICO 4: Operative treatment (External fixation)	59	2 (3.50)	Plaster immobilization ( )	41	3.8 (4.30)	Author Reported	-1.8 (-3.39062,-0.20937)	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kumar2014	Moderate Quality	Grip strength (% of contralateral side)	6 wks	PICO 4: Operative treatment (External fixation)	20	80.87 (-184.52)	Plaster immobilization (Plaster cast immobilization)	20	72.89 (-166.31)	Author Reported	7.98 (-100.891,116.8510)	Not Significant (P-value>.05)
Kumar2014	Moderate Quality	Radiographic outcome: Radial length	6 wks	PICO 4: Operative treatment (External fixation)	20	9.3 (2.10)	Plaster immobilization (Plaster cast immobilization)	20	8.25 (0.96)	Author Reported	1.05 (0.038024,2.061975)	**Treatment 1 (operative group)**
Kumar2014	Moderate Quality	Radiographic outcome: Radial angle	6 wks	PICO 4: Operative treatment (External fixation)	20	14.17 (1.57)	Plaster immobilization (Plaster cast immobilization)	20	12.75 (1.41)	Author Reported	1.42 (0.495158,2.344841)	**Treatment 1 (operative group)**
Kumar2014	Moderate Quality	Radiographic outcome: Palmar tilt	6 wks	PICO 4: Operative treatment (External fixation)	20	7.9 (0.72)	Plaster immobilization (Plaster cast immobilization)	20	11 (2.22)	Author Reported	-3.1 (-4.12284,-2.07715)	**Treatment 1 (operative group)**
Kumaravel, 2015	Moderate Quality	Radiographic outcome: Radial length		PICO 4: Operative treatment (External fixation)	23	11.09 (-27.14)	Plaster immobilization (Closed reduction and cast immobilization)	25	11.72 (-29.90)	Author Reported	-0.63 (-16.7652,15.50525)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Radiographic outcome: Volar tilt		PICO 4: Operative treatment (External fixation)	23	3.57 (-8.74)	Plaster immobilization (Closed reduction and cast immobilization)	25	3.64 (-9.29)	Author Reported	-0.07 (-5.16848,5.028480)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Radiographic outcome: Radial angulation		PICO 4: Operative treatment (External fixation)	23	19.7 (-48.20)	Plaster immobilization (Closed reduction and cast immobilization)	25	20.88 (-53.27)	Author Reported	-1.18 (-29.8865,27.52652)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Radiographic outcome: Ulnar variance		PICO 4: Operative treatment (External fixation)	23	0.87 (-2.13)	Plaster immobilization (Closed reduction and cast immobilization)	25	0.36 (-0.92)	Author Reported	0.51 (-0.43154,1.451541)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kumaravel, 2015	Moderate Quality	Grip strength (% of contralateral side)	1 yrs	PICO 4: Operative treatment (External fixation)	21	85.29 (-199.41)	Plaster immobilization (Closed reduction and cast immobilization)	25	68.08 (-173.67)	Author Reported	17.21 (-91.9196,126.3396)	Not Significant (P-value>.05)
Kumaravel, 2015	Moderate Quality	Gartland and Werley score	1 yrs	PICO 4: Operative treatment (External fixation)	21	3.86 (-9.02)	Plaster immobilization (Closed reduction and cast immobilization)	25	13.72 (-35.00)	Author Reported	-9.86 (-24.1126,4.392648)	Not Significant (P-value>.05)
Mardini Kivi, 2011	Moderate Quality	Subjective satisfaction frequency-Excellent (Saito chart)	12 wks	PICO 4: Operative treatment (Percutaneous fixation)	192	51.56%	Plaster immobilization (Closed reduction and long-arm cast)	99	81.82%	RR	1.15(1.03,1.28)	**Treatment 1**
Mardini Kivi, 2011	Moderate Quality	Subjective satisfaction frequency-Good/Fair (Saito chart)	12 wks	PICO 4: Operative treatment (Percutaneous fixation)	105	94.29%	Plaster immobilization (Closed reduction and long-arm cast)	99	18.18%	RR	0.33(0.14,0.80)	**Treatment 2**
Merchan, E. C. 1992	Moderate Quality	Radiographic outcome: Dorsal Radial Angle (deg)	1 days	PICO 4: Operative treatment (External fixation)	35	-3.3 (.)	Closed reduction (Closed reduction and foreann plaster)	35	2.5 (.)	Author Reported	NA	**ns**
Merchan, E. C. 1992	Moderate Quality	Radiographic outcome: Dorsal Radial Angle (deg)	7 wks	PICO 4: Operative treatment (External fixation)	35	0.2 (.)	Closed reduction (Closed reduction and foreann plaster)	35	9.5 (.)	Author Reported	NA	**ns**
Merchan, E. C. 1992	Moderate Quality	Radiographic outcome: I.oss of Radial Angle (deg)	1 days	PICO 4: Operative treatment (External fixation)	35	2.5 (.)	Closed reduction (Closed reduction and foreann plaster)	35	1.2 (.)	Author Reported	NA	**ns**
Merchan, E. C. 1992	Moderate Quality	Radiographic outcome: I.oss of Radial Angle (deg)	7 wks	PICO 4: Operative treatment (External fixation)	35	0.2 (.)	Closed reduction (Closed reduction and foreann plaster)	35	3.5 (.)	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Merchan, E. C. 1992	Moderate Quality	Radiographic outcome: Loss of Radial Length (mm)	1 days	PICO 4: Operative treatment (External fixation)	35	0.3 (.)	Closed reduction (Closed reduction and foreann plaster)	35	0.8 (.)	Author Reported	NA	**ns**
Merchan, E. C. 1992	Moderate Quality	Radiographic outcome: Loss of Radial Length (mm)	7 wks	PICO 4: Operative treatment (External fixation)	35	0.5 (.)	Closed reduction (Closed reduction and foreann plaster)	35	4.1 (.)	Author Reported	NA	**ns**
Merchan, E. C. 1992	Moderate Quality	Anatomical results: (Poor)	7 wks	PICO 4: Operative treatment (External fixation)	36	97.22%	Closed reduction (Closed reduction and foreann plaster)	35	11.43%	RR	0.25(0.03,2.13)	Not Significant (P-value>.05)
Merchan, E. C. 1992	Moderate Quality	Functional results: (Poor)	7 wks	PICO 4: Operative treatment (External fixation)	36	97.22%	Closed reduction (Closed reduction and foreann plaster)	35	14.29%	RR	0.20(0.02,1.63)	Not Significant (P-value>.05)
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Radial deviation (deg)	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Radial deviation (deg)	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Radial deviation (deg)	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Radial deviation (deg)	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Ulnar deviation (deg)	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Ulnar deviation (deg)	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Ulnar deviation (deg)	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Ulnar deviation (deg)	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Pronation (deg)	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Pronation (deg)	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Pronation (deg)	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Pronation (deg)	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Supination (deg)	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Supination (deg)	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Supination (deg)	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Supination (deg)	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Extension (deg)	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Extension (deg)	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Extension (deg)	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Extension (deg)	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Flexion (deg)	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Flexion (deg)	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Flexion (deg)	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Range of motion: Flexion (deg)	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**ns**
Mulders, M. A. M. 2019	Moderate Quality	Grip strength: (kg)	6 wks	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Grip strength: (kg)	3 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**
Mulders, M. A. M. 2019	Moderate Quality	Grip strength: (kg)	6 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mulders, M. A. M. 2019	Moderate Quality	Grip strength: (kg)	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	46	. %	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	. %	Author Reported	NA	**Treatment 1**
Mulders, M. A. M. 2019	Moderate Quality	Complications	12 mos	PICO 4: Operative treatment (Open reduction and volar plate fixation)	66	69.70%	Plaster immobilization (The dorsal splint was changed under traction after a minimum of 1 week and a circular plaster of Paris was applied for another 4 to 5 weeks. If loss of reduction occurred during plaster immobilization, ORIF was carried out at the discretion of the treatin)	40	82.50%	RR	0.53(0.37,0.75)	**Treatment 2**
Olerud, 1989	Moderate Quality	Grip strength (% of contralateral side)	5 wks	PICO 4: Operative treatment (External fixation)	69	90 (-381.43)	Plaster immobilization (Plaster cast immobilization)	25	65 (-165.82)	Author Reported	25 (-86.0180,136.0180)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Pring, 1988	Moderate Quality	Grip strength (% of contralateral side)	7 wks	PICO 4: Operative treatment (Bipolar fixation (Percutaneous pinning))	36	21.6 (-66.12)	Plaster immobilization ( )	40	28.5 (-91.96)	Author Reported	-6.9 (-42.6604,28.86045)	Not Significant (P-value>.05)
Pring, 1988	Moderate Quality	Grip strength (% of contralateral side)	12 wks	PICO 4: Operative treatment (Bipolar fixation (Percutaneous pinning))	36	48.5 (-148.47)	Plaster immobilization ( )	40	46.2 (-149.08)	Author Reported	2.3 (-64.6827,69.28275)	Not Significant (P-value>.05)
Pring, 1988	Moderate Quality	Grip strength (% of contralateral side)	6 mos	PICO 4: Operative treatment (Bipolar fixation (Percutaneous pinning))	36	67.6 (-206.94)	Plaster immobilization ( )	40	63.8 (-205.87)	Author Reported	3.8 (-89.1526,96.75267)	Not Significant (P-value>.05)
Rodriguez-Merchan, E. C. 1997	Moderate Quality	Range of motion: Retained range of motion (of normal %)	1 yrs	PICO 4: Operative treatment (Percutaneous fixation)	20	80 (.)	Closed reduction (Closed reduction, consisting of manipulation, under local anesthesia, followed by casting.)	20	60 (.)	Author Reported	NA	**ns**
Rodriguez-Merchan, E. C. 1997	Moderate Quality	Radiographic outcome: Step-off of greater than 2 mm	1 yrs	PICO 4: Operative treatment (Percutaneous fixation)	20	100.00%	Closed reduction (Closed reduction, consisting of manipulation, under local anesthesia, followed by casting.)	20	20.00%	RD	-0.20(-0.38,-0.02)	**Treatment 2**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Range of motion: Flexion (deg)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	31 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	39 (.)	Author Reported	NA	**ns**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Flexion (deg)	16 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	55 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	43 (.)	Author Reported	NA	**ns**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Flexion (deg)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	60 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	54 (.)	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Range of motion: Extension (deg)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	17 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	27 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Extension (deg)	16 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	40 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	31 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Extension (deg)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	48 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	33 (.)	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Range of motion: Supination (deg)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	43 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	62 (.)	Author Reported	NA	**ns**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Supination (deg)	16 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	78 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	71 (.)	Author Reported	NA	**ns**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Supination (deg)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	90 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	85 (.)	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Range of motion: Radial deviation (deg)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	8 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	17 (.)	Author Reported	NA	**ns**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Radial deviation (deg)	16 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	12 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	21 (.)	Author Reported	NA	**ns**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Radial deviation (deg)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	13 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	23 (.)	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Range of motion: Ulnar deviation (deg)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	12 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	8 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Ulnar deviation (deg)	16 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	24 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	10 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Ulnar deviation (deg)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	27 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	13 (.)	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Range of motion: Pronation (deg)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	89 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	82 (.)	Author Reported	NA	**ns**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Pronation (deg)	16 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	90 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	83 (.)	Author Reported	NA	**ns**
Shankar, N. S. 1992	Moderate Quality	Range of motion: Pronation (deg)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	90 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	90 (.)	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Radial angle (deg)	1 days	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	26 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	24 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Radial angle (deg)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	25 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	19 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Radial angle (deg)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	24 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	18 (.)	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Dorsal angle (deg)	1 days	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	-4 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	-4 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Dorsal angle (deg)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	-3 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	5 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Dorsal angle (deg)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	-3 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	6 (.)	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Radial length (mm)	1 days	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	13 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	13 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Radial length (mm)	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	13 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	8.5 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Radiographic outcome: Radial length (mm)	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	13 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	7.5 (.)	Author Reported	NA	**Treatment 1**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shankar, N. S. 1992	Moderate Quality	Grip strength	10 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	20.6 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	16.6 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Grip strength	16 wks	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	56.8 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	27.6 (.)	Author Reported	NA	**Treatment 1**
Shankar, N. S. 1992	Moderate Quality	Grip strength	6 mos	PICO 4: Operative treatment (Percutaneous Kirschner wires)	23	79.6 (.)	Plaster treatment (Treated by manipulation and application of plaster in a 'classical Calles" position of slight palmar flexion, ulnar deviation and pronation)	22	50.6 (.)	Author Reported	NA	**Treatment 1**
Sharma, H. 2014	Moderate Quality	Range of motion: Palmar ?exion	6 wks	PICO 4: Operative treatment (Volar plating group)	32	46.9 (7.66)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	38.7 (7.41)	Author Reported	8.2 (4.507341,11.89265)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Range of motion: Palmar ?exion	12 mos	PICO 4: Operative treatment (Volar plating group)	32	71.9 (5.35)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	60.22 (7.90)	Author Reported	11.68 (8.374179,14.98582)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Range of motion: Palmar ?exion	24 mos	PICO 4: Operative treatment (Volar plating group)	32	83.86 (2.98)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	65.91 (7.53)	Author Reported	17.95 (15.14410,20.75589)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Range of motion: Dorsal ?exion	6 wks	PICO 4: Operative treatment (Volar plating group)	32	65.48 (7.89)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	40.65 (4.34)	Author Reported	24.83 (21.70997,27.95002)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Range of motion: Dorsal ?exion	12 mos	PICO 4: Operative treatment (Volar plating group)	32	80.76 (5.58)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	62.39 (5.40)	Author Reported	18.37 (15.67953,21.06046)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Range of motion: Dorsal ?exion	24 mos	PICO 4: Operative treatment (Volar plating group)	32	84.33 (2.41)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	69.04 (3.91)	Author Reported	15.29 (13.69858,16.88141)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Range of motion: Radial deviation	6 wks	PICO 4: Operative treatment (Volar plating group)	32	49.76 (7.49)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	34.35 (8.16)	Author Reported	15.41 (11.57223,19.24776)	**ns**
Sharma, H. 2014	Moderate Quality	Range of motion: Radial deviation	12 mos	PICO 4: Operative treatment (Volar plating group)	32	71.9 (5.35)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	55.43 (7.52)	Author Reported	16.47 (13.27234,19.66765)	**ns**
Sharma, H. 2014	Moderate Quality	Range of motion: Radial deviation	24 mos	PICO 4: Operative treatment (Volar plating group)	32	79.14 (3.73)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	62.87 (6.68)	Author Reported	16.27 (13.61912,18.92087)	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Range of motion: Ulnar deviation	6 wks	PICO 4: Operative treatment (Volar plating group)	32	51.19 (6.30)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	40.22 (5.10)	Author Reported	10.97 (8.161568,13.77843)	**ns**
Sharma, H. 2014	Moderate Quality	Range of motion: Ulnar deviation	12 mos	PICO 4: Operative treatment (Volar plating group)	32	74.76 (2.94)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	59.35 (6.08)	Author Reported	15.41 (13.07002,17.74997)	**ns**
Sharma, H. 2014	Moderate Quality	Range of motion: Ulnar deviation	24 mos	PICO 4: Operative treatment (Volar plating group)	32	79.62 (3.00)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	65.91 (5.42)	Author Reported	13.71 (11.56358,15.85641)	**ns**
Sharma, H. 2014	Moderate Quality	Range of motion: Pronation	6 wks	PICO 4: Operative treatment (Volar plating group)	32	16.67 (3.29)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	15 (3.69)	Author Reported	1.67 (-0.04290,3.382905)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Range of motion: Pronation	12 mos	PICO 4: Operative treatment (Volar plating group)	32	30.71 (2.86)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	28.39 (2.96)	Author Reported	2.32 (0.893889,3.746110)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Range of motion: Pronation	24 mos	PICO 4: Operative treatment (Volar plating group)	32	34.19 (2.69)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	32.04 (2.91)	Author Reported	2.15 (0.776941,3.523058)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Range of motion: Supination	6 wks	PICO 4: Operative treatment (Volar plating group)	32	25.71 (6.94)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	21.74 (7.16)	Author Reported	3.97 (0.515079,7.424920)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Range of motion: Supination	12 mos	PICO 4: Operative treatment (Volar plating group)	32	40.24 (4.60)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	37 (4.76)	Author Reported	3.24 (0.946464,5.533535)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Range of motion: Supination	24 mos	PICO 4: Operative treatment (Volar plating group)	32	43.43 (3.58)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	41.96 (3.91)	Author Reported	1.47 (-0.36683,3.306830)	Not Significant (P-value>.05)
Sharma, H. 2014	Moderate Quality	Grip strength	6 wks	PICO 4: Operative treatment (Volar plating group)	32	62.62 (6.04)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	54.57 (6.38)	Author Reported	8.05 (5.005960,11.09403)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Grip strength	12 mos	PICO 4: Operative treatment (Volar plating group)	32	84.76 (6.97)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	68.48 (5.52)	Author Reported	16.28 (13.19939,19.36060)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Grip strength	24 mos	PICO 4: Operative treatment (Volar plating group)	32	89.05 (4.36)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	72.17 (4.47)	Author Reported	16.88 (14.71648,19.04351)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Radial inclination	2 days	PICO 4: Operative treatment (Volar plating group)	32	20.52 (1.28)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	18.13 (0.92)	Author Reported	2.39 (1.843831,2.936168)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Radial inclination	6 wks	PICO 4: Operative treatment (Volar plating group)	32	18.9 (0.94)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	16.09 (0.90)	Author Reported	2.81 (2.359093,3.260906)	**ns**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Radial inclination	12 mos	PICO 4: Operative treatment (Volar plating group)	32	17.89 (0.82)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	15.22 (0.75)	Author Reported	2.67 (2.284967,3.055032)	**ns**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Radial inclination	24 mos	PICO 4: Operative treatment (Volar plating group)	32	17.89 (0.82)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	15.22 (0.75)	Author Reported	2.67 (2.284967,3.055032)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Volar tilt	2 days	PICO 4: Operative treatment (Volar plating group)	32	10.1 (1.51)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	8.35 (0.64)	Author Reported	1.75 (1.181758,2.318241)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Volar tilt	6 wks	PICO 4: Operative treatment (Volar plating group)	32	9.67 (1.19)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	6.26 (0.61)	Author Reported	3.41 (2.946671,3.873328)	**ns**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Volar tilt	12 mos	PICO 4: Operative treatment (Volar plating group)	32	8.36 (1.02)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	5.16 (0.52)	Author Reported	3.2 (2.803311,3.596688)	**ns**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Volar tilt	24 mos	PICO 4: Operative treatment (Volar plating group)	32	8.36 (1.02)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	5.16 (0.52)	Author Reported	3.2 (2.803311,3.596688)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Radial length	2 days	PICO 4: Operative treatment (Volar plating group)	32	10.1 (1.51)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	8.04 (1.29)	Author Reported	2.06 (1.371885,2.748114)	**Treatment 1 (operative group)**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Radial length	6 wks	PICO 4: Operative treatment (Volar plating group)	32	9.14 (0.72)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	7.04 (1.29)	Author Reported	2.1 (1.588131,2.611868)	**ns**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Radial length	12 mos	PICO 4: Operative treatment (Volar plating group)	32	8.22 (0.62)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	6.13 (1.12)	Author Reported	2.09 (1.646448,2.533551)	**ns**
Sharma, H. 2014	Moderate Quality	Radiographic outcome: Radial length	24 mos	PICO 4: Operative treatment (Volar plating group)	32	8.22 (0.62)	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	6.13 (1.12)	Author Reported	2.09 (1.646448,2.533551)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sharma, H. 2014	Moderate Quality	Complications	24 mos	PICO 4: Operative treatment (Volar plating group)	40	80.00%	Nonoperative group (Treated by closed manipulation under C-arm guidance and aboveelbow plaster of Paris (POP) cast application for 4 weeks)	32	100.00%	RD	-0.67(-0.86,-0.48)	**Treatment 2**
Sirnio, K., 2019	Moderate Quality	Grip strength	3 months	PICO 4: Operative treatment (Palmar plating)	38	21 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	18 (5.00)	MeanDif	3 (0.805909,5.194090)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Grip strength	6 months	PICO 4: Operative treatment (Palmar plating)	38	25 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	22 (5.00)	MeanDif	3 (0.805909,5.194090)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Grip strength	12 months	PICO 4: Operative treatment (Palmar plating)	38	25 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	22 (5.00)	MeanDif	3 (0.805909,5.194090)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Grip strength	24 months	PICO 4: Operative treatment (Palmar plating)	38	27 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	26 (7.00)	MeanDif	1 (-1.64749,3.647496)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Stoffelen, D. V. 1999	Moderate Quality	Radiographic outcome: Lateral shift	1 yrs	PICO 4: Operative treatment (Closed reduction and plaster cast)	50	1.5 (.)	Kapandji-pinning (In the Kapandji-pinning group, triple intra-focal Kapandji-pinning was used and a plaster applied for 1 week until pain subsided.)	48	0.5 (.)	Author Reported	NA	**ns**
Stoffelen, D. V. 1999	Moderate Quality	Radiographic outcome: Radial shortening	1 yrs	PICO 4: Operative treatment (Closed reduction and plaster cast)	50	2 (.)	Kapandji-pinning (In the Kapandji-pinning group, triple intra-focal Kapandji-pinning was used and a plaster applied for 1 week until pain subsided.)	48	1 (.)	Author Reported	NA	**ns**
Venkatesh, R. B. 2016	Moderate Quality	Range of motion: Palmar Flexion	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	64.5 (.)	Closed reduction (Closed reduction and cast application)	30	63 (.)	Author Reported	NA	**ns**
Venkatesh, R. B. 2016	Moderate Quality	Range of motion: Dorsal flexion	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	62 (.)	Closed reduction (Closed reduction and cast application)	30	61 (.)	Author Reported	NA	**ns**
Venkatesh, R. B. 2016	Moderate Quality	Range of motion: Supination	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	67 (.)	Closed reduction (Closed reduction and cast application)	30	64 (.)	Author Reported	NA	**ns**
Venkatesh, R. B. 2016	Moderate Quality	Range of motion: Pronation	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	64.5 (.)	Closed reduction (Closed reduction and cast application)	30	61 (.)	Author Reported	NA	**ns**
Venkatesh, R. B. 2016	Moderate Quality	Range of motion: Ulnar deviation	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	23 (.)	Closed reduction (Closed reduction and cast application)	30	22 (.)	Author Reported	NA	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Venkatesh, R. B. 2016	Moderate Quality	Range of motion: Radial deviation	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	17 (.)	Closed reduction (Closed reduction and cast application)	30	16 (.)	Author Reported	NA	**ns**
Venkatesh, R. B. 2016	Moderate Quality	Radiographic outcome: Radial length (mm)	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	11.7 (.)	Closed reduction (Closed reduction and cast application)	30	8 (.)	Author Reported	NA	**Treatment 1**
Venkatesh, R. B. 2016	Moderate Quality	Radiographic outcome: Volar tilt (deg)	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	7.5 (.)	Closed reduction (Closed reduction and cast application)	30	4.8 (.)	Author Reported	NA	**Treatment 1**
Venkatesh, R. B. 2016	Moderate Quality	Radiographic outcome: Radial inclination (deg)	3 mos	PICO 4: Operative treatment (Percutaneous K-wire fixation)	30	19.1 (.)	Closed reduction (Closed reduction and cast application)	30	14.2 (.)	Author Reported	NA	**Treatment 1**

Table 52: PICO 4.1- operative vs non-operative treatment (younger)- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
ur Rahman, O., 2012	High Quality	Pain: Freedom from pain (A) - Score 3: completely free of pain;	12 weeks	PICO 4: Operative treatment (External fixation with distraction; external fixator (AO type))	30	43.33%	PICO 4: Non-operative treatment ("Plaster of Paris cast immobilization; above-elbow POP cast after reduction of fracture")	30	6.67%	RR	6.50(1.60,26.36)	**Treatment 1 Significant (P-value<.05)**
Abbaszadegan, 1990	Moderate Quality	VAS	8 wks	PICO 4: Operative treatment (External fixation)	23	2 (-4.89)	Dorsal plaster cast ( )	24	3 (-7.50)	Author Reported	-1 (-4.60555,2.605551)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	VAS	12 wks	PICO 4: Operative treatment (External fixation)	23	1 (-2.45)	Dorsal plaster cast ( )	24	2 (-5.00)	Author Reported	-1 (-3.23606,1.236067)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	VAS	24 wks	PICO 4: Operative treatment (External fixation)	23	0.5 (-1.22)	Dorsal plaster cast ( )	24	2 (-5.00)	Author Reported	-1.5 (-3.56155,0.561552)	Not Significant (P-value>.05)
Abbaszadegan, 1990	Moderate Quality	VAS	1 yrs	PICO 4: Operative treatment (External fixation)	22	0 (0.00)	Dorsal plaster cast ( )	24	1 (-2.50)	Author Reported	-1 (-2,0)	**Treatment 1 (operative group)**
Kumaravel, 2015	Moderate Quality	Pain (None)	1 yrs	PICO 4: Operative treatment (External fixation)	34	61.76%	Plaster immobilization (Closed reduction and cast immobilization)	25	28.00%	RR	2.21(1.08,4.51)	**Treatment 1**
Kumaravel, 2015	Moderate Quality	Pain (Mild)	1 yrs	PICO 4: Operative treatment (External fixation)	28	75.00%	Plaster immobilization (Closed reduction and cast immobilization)	25	56.00%	RR	0.60(0.30,1.20)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kumaravel, 2015	Moderate Quality	Pain (Moderate)	1 yrs	PICO 4: Operative treatment (External fixation)	22	95.45%	Plaster immobilization (Closed reduction and cast immobilization)	25	16.00%	RR	0.30(0.04,2.46)	Not Significant (P-value>.05)
Young, C. F. 2003	Moderate Quality	Number of patients complaining of persistent wrist pain	7 yrs	PICO 4: Operative treatment (Bridging external fixation)	42	85.71%	Plaster immobilization (POP group)	49	20.41%	RR	0.82(0.33,2.04)	Not Significant (P-value>.05)

Table 53: PICO 4.1- operative vs non-operative treatment (younger)- ROM

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
ur Rahman, O., 2012	High Quality	Range of motion: (B) Score 3: near normal range of movement;	12 weeks	PICO 4: Operative treatment (External fixation with distraction; external fixator (AO type))	30	60.00%	PICO 4: Non-operative treatment ("Plaster of Paris cast immobilization; above-elbow POP cast after reduction of fracture")	30	16.67%	RR	3.60(1.54,8.44)	**Treatment 2 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Extension (°)	3 months	PICO 4: Operative treatment (Palmar plating)	38	62 (10.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	52 (12.00)	MeanDif	10 (5.174994,14.82500)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Flexion (°)	3 months	PICO 4: Operative treatment (Palmar plating)	38	58 (12.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	51 (12.00)	MeanDif	7 (1.734181,12.26581)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Pronation (°)	3 months	PICO 4: Operative treatment (Palmar plating)	38	83 (8.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	83 (12.00)	MeanDif	0 (-4.43184,4.431846)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sirnio, K., 2019	Moderate Quality	Range of motion: Radial deviation (°)	3 months	PICO 4: Operative treatment (Palmar plating)	38	19 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	20 (9.00)	MeanDif	-1 (-4.15216,2.152168)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Supination (°)	3 months	PICO 4: Operative treatment (Palmar plating)	38	78 (13.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	84 (10.00)	MeanDif	-6 (-11.1216,-0.87831)	**Treatment 2 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Supination (°)	3 months	PICO 4: Operative treatment (Palmar plating)	38	78 (13.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	73 (17.00)	MeanDif	5 (-1.59688,11.59688)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Ulnar deviation (°)	3 months	PICO 4: Operative treatment (Palmar plating)	38	24 (6.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	20 (7.00)	MeanDif	4 (1.150214,6.849785)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Extension (°)	6 months	PICO 4: Operative treatment (Palmar plating)	38	64 (8.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	65 (11.00)	MeanDif	-1 (-5.18778,3.187783)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sirnio, K., 2019	Moderate Quality	Range of motion: Flexion (°)	6 months	PICO 4: Operative treatment (Palmar plating)	38	64 (8.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	55 (11.00)	MeanDif	9 (4.812216,13.18778)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Pronation (°)	6 months	PICO 4: Operative treatment (Palmar plating)	38	85 (8.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	87 (7.00)	MeanDif	-2 (-5.30937,1.309370)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Radial deviation (°)	6 months	PICO 4: Operative treatment (Palmar plating)	38	21 (4.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	21 (5.00)	MeanDif	0 (-1.97590,1.975900)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Supination (°)	6 months	PICO 4: Operative treatment (Palmar plating)	38	85 (6.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	79 (12.00)	MeanDif	6 (1.899925,10.10007)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Ulnar deviation (°)	6 months	PICO 4: Operative treatment (Palmar plating)	38	27 (6.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	21 (6.00)	MeanDif	6 (3.367090,8.632909)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sirnio, K., 2019	Moderate Quality	Range of motion: Extension (°)	12 months	PICO 4: Operative treatment (Palmar plating)	38	68 (8.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	66 (9.00)	MeanDif	2 (-1.72543,5.725434)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Flexion (°)	12 months	PICO 4: Operative treatment (Palmar plating)	38	66 (8.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	61 (11.00)	MeanDif	5 (0.812216,9.187783)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Pronation (°)	12 months	PICO 4: Operative treatment (Palmar plating)	38	87 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	86 (8.00)	MeanDif	1 (-1.89503,3.895036)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Radial deviation (°)	12 months	PICO 4: Operative treatment (Palmar plating)	38	22 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	21 (4.00)	MeanDif	1 (-0.99770,2.997707)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Supination (°)	12 months	PICO 4: Operative treatment (Palmar plating)	38	85 (7.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	83 (10.00)	MeanDif	2 (-1.75503,5.755037)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sirnio, K., 2019	Moderate Quality	Range of motion: Ulnar deviation (°)	12 months	PICO 4: Operative treatment (Palmar plating)	38	28 (6.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	22 (6.00)	MeanDif	6 (3.367090,8.632909)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Extension (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	69 (6.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	68 (7.00)	MeanDif	1 (-1.84978,3.849785)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Flexion (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	71 (7.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	64 (11.00)	MeanDif	7 (2.997362,11.00263)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Pronation (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	88 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	88 (6.00)	MeanDif	0 (-2.41250,2.412502)	Not Significant (P-value>.05)
Sirnio, K., 2019	Moderate Quality	Range of motion: Radial deviation (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	22 (6.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	22 (5.00)	MeanDif	0 (-2.43435,2.434353)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sirnio, K., 2019	Moderate Quality	Range of motion: Supination (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	88 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	73 (17.00)	MeanDif	15 (9.618435,20.38156)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Supination (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	88 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	84 (10.00)	MeanDif	4 (0.583271,7.416728)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Range of motion: Ulnar deviation (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	28 (5.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	25 (6.00)	MeanDif	3 (0.587497,5.412502)	**Treatment 1 Significant (P-value<.05)**

Table 54: PICO 4.1- operative vs non-operative treatment (younger)- Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
ur Rahman, O., 2012	High Quality	Radiographic outcome: Deformity (D) - Score 3 no deformity	12 weeks	PICO 4: Operative treatment (External fixation with distraction; external fixator (AO type))	30	70.00%	PICO 4: Non-operative treatment ("Plaster of Paris cast immobilization; above-elbow POP cast after reduction of fracture")	30	0.00%	RD	0.70(0.54,0.86)	**Treatment 1 Significant (P-value<.05)**
ur Rahman, O., 2012	High Quality	Radiographic outcome: Joint incongruity (B) - Score 3: acceptable incongruity with step <1mm]	12 weeks	PICO 4: Operative treatment (External fixation with distraction; external fixator (AO type))	30	53.33%	PICO 4: Non-operative treatment ("Plaster of Paris cast immobilization; above-elbow POP cast after reduction of fracture")	30	20.00%	RR	2.67(1.21,5.88)	**Treatment 1 Significant (P-value<.05)**
ur Rahman, O., 2012	High Quality	Radiographic outcome: Radial length (A) - Score 3: normal radial length;	12 weeks	PICO 4: Operative treatment (External fixation with distraction; external fixator (AO type))	30	70.00%	PICO 4: Non-operative treatment ("Plaster of Paris cast immobilization; above-elbow POP cast after reduction of fracture")	30	10.00%	RR	7.00(2.33,21.00)	**Treatment 1 Significant (P-value<.05)**
ur Rahman, O., 2012	High Quality	Radiographic outcome: Radio-ulnar joint position (C) - Score 3: normal distal radioulnar joint position.	12 weeks	PICO 4: Operative treatment (External fixation with distraction; external fixator (AO type))	30	80.00%	PICO 4: Non-operative treatment ("Plaster of Paris cast immobilization; above-elbow POP cast after reduction of fracture")	30	46.67%	RR	1.71(1.12,2.62)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sirnio, K., 2019	Moderate Quality	Radiographic outcome: Dorsal angulation (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	-3 (4.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	3 (9.00)	MeanDif	-6 (-9.00438,-2.99561)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Radiographic outcome: Radial inclination (°)	24 months	PICO 4: Operative treatment (Palmar plating)	38	24 (4.00)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	21 (8.00)	MeanDif	3 (0.266617,5.733382)	**Treatment 1 Significant (P-value<.05)**
Sirnio, K., 2019	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	24 months	PICO 4: Operative treatment (Palmar plating)	38	-0.7 (0.90)	PICO 4: Non-operative treatment (Initial closed reduction and immobilization in below-elbow arm cast)	42	-2 (1.70)	MeanDif	1.3 (0.711590,1.888409)	**Treatment 2 Significant (P-value<.05)**

Table 55: PICO 4.1- operative vs non-operative treatment (younger)- Return to activity

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Drobetz, H. 2016	Moderate Quality	Activity of daily life (ADL): Grade 1	3 mos	PICO 4: Operative treatment (Volar locking plate)	43	55.81%	Cast immobilisation (Cast immobilisation with or without wires or external fixator)	26	38.46%	RR	2.06(1.21,3.49)	**Treatment 1**
Rodriguez-Merchan, E. C. 1997	Moderate Quality	Return to work	1 yrs	PICO 4: Operative treatment (Percutaneous fixation)	25	80.00%	Closed reduction (Closed reduction, consisting of manipulation, under local anesthesia, followed by casting.)	20	10.00%	RR	2.50(0.55,11.41)	Not Significant (P-value>.05)

PICO 4.2: Indications for Fixation (Geriatric Patients)

Table 56: PICO 4.2- operative vs non-operative treatment (older)- Adverse events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saving, J., 2019	High Quality	Minor complications	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	19.64%	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	11.11%	RR	1.77(0.74,4.25)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Major complications	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	14.29%	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	11.11%	RR	1.29(0.50,3.32)	Not Significant (P-value>.05)

Table 57: PICO 4.2- operative vs non-operative treatment (older)- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Azzopardi, T., 2005	Moderate Quality	Total: Infection, redisplacement	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	3.70%	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	3.70%	RR	1.00(0.07,15.18)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Total: Nerve injuries, carpal tunnel syndrome. CRPS, pin-track infection	1 years	PICO 4: Operative treatment (External fixation)	22	31.82%	PICO 4: Non-operative treatment (Plaster casting)	29	10.34%	RR	3.08(0.90,10.56)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Residual dinner fork deformity	6 weeks	PICO 4: Operative treatment (External fixation)	15	0.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	0.00%	RD	0.00(0.00,0.00)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Residual dinner fork deformity	3 months	PICO 4: Operative treatment (External fixation)	15	0.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	0.00%	RD	0.00(0.00,0.00)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Reflex symphatetic dystrophy	3 months	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	. %	Author Reported	NA	**ns**
Hegeman, J. H., 2004	Moderate Quality	Residual dinner fork deformity	1 years	PICO 4: Operative treatment (External fixation)	15	0.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	7.14%	RD	-0.07(-0.21,0.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hegeman, J. H., 2004	Moderate Quality	Pin-track infection	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	. %	Author Reported	NA	**ns**
Hegeman, J. H., 2004	Moderate Quality	Major	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	. %	Author Reported	NA	**ns**
Hegeman, J. H., 2004	Moderate Quality	Reflex symphatetic dystrophy	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	. %	Author Reported	NA	**ns**
Horne, J. G., 1990	Moderate Quality	Total: Problems with the pin sites, radial nerve irritation	15 months	PICO 4: Operative treatment (External fixation)	15	23.33%	PICO 4: Non-operative treatment (Closed reduction and plaster cast immobilization)	.	. %	Author Reported	NA	**Treatment 1**
Roumen, R. M., 1991	Moderate Quality	Reflex Sympathetic Dystrophy with fair end result	26 weeks	PICO 4: Operative treatment (External Fixation)	21	9.52%	PICO 4: Non-operative treatment (Plaster Backslab)	22	4.55%	RR	2.10(0.20,21.42)	Not Significant (P-value>.05)
Sanchez-Sotelo, 2000	Moderate Quality	Malunion	1 yrs	PICO 4: Operative treatment (Norian SRS)	65	84.62%	Plaster immobilization (Closed reduction and cast immobilization)	55	41.82%	RR	0.43(0.23,0.83)	**Treatment 2**
Sanchez-Sotelo, 2000	Moderate Quality	Compression of medial nerve	1 yrs	PICO 4: Operative treatment (Norian SRS)	57	96.49%	Plaster immobilization (Closed reduction and cast immobilization)	55	5.45%	RR	0.67(0.12,3.84)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sanchez-Sotelo, 2000	Moderate Quality	Reflex sympathetic dystrophy	1 yrs	PICO 4: Operative treatment (Norian SRS)	58	94.83%	Plaster immobilization (Closed reduction and cast immobilization)	55	7.27%	RR	0.75(0.18,3.20)	Not Significant (P-value>.05)
Sanchez-Sotelo, 2000	Moderate Quality	Rupture of extensor pollicus longus	1 yrs	PICO 4: Operative treatment (Norian SRS)	57	96.49%	Plaster immobilization (Closed reduction and cast immobilization)	55	1.82%	RR	2.00(0.19,21.42)	Not Significant (P-value>.05)
Sanchez-Sotelo, 2000	Moderate Quality	Refracture	1 yrs	PICO 4: Operative treatment (Norian SRS)	56	98.21%	Plaster immobilization (Closed reduction and cast immobilization)	55	0.00%	RD	0.02(-0.02,0.05)	Not Significant (P-value>.05)

Table 58: PICO 4.2- operative vs non-operative treatment (older)- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saving, J., 2019	High Quality	DASH	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	21.2 (19.30)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	30.2 (19.20)	MeanDif	-9 (-15.91,-2.09)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	PRWE	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	20.6 (20.30)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	34.2 (21.30)	MeanDif	-13.6 (-20.9842,-6.21573)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	EQ-5D	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	0.805 (0.18)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	0.758 (0.20)	MeanDif	0.047 (-0.02114,0.115142)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	DASH	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	15.6 (17.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	23.1 (19.80)	MeanDif	-7.5 (-14.1129,-0.88704)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	EQ-5D	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	0.794 (0.24)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	0.765 (0.21)	MeanDif	0.029 (-0.05312,0.111121)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	PRWE	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	12.7 (15.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	22.4 (21.40)	MeanDif	-9.7 (-16.2848,-3.11513)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wong, T. C., 2010	High Quality	Mayo wrist score: Functional status (25 points)	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	23.1 (7.10)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	23.5 (6.10)	MeanDif	-0.4 (-3.74963,2.949631)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Mayo wrist score: Grip strength (25 points)	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	14.2 (4.50)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	15.3 (6.20)	MeanDif	-1.1 (-3.84143,1.641432)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Mayo wrist score: Range of motion (25 points)	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	20.1 (6.30)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	18.2 (4.20)	MeanDif	1.9 (-0.80948,4.609482)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Mayo wrist score: Total score (100 points)	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	82.2 (6.20)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	80.5 (7.50)	MeanDif	1.7 (-1.78215,5.182150)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	WHOQoL: World Health Organization Quality of Life	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	3.7 (0.70)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	3.5 (0.50)	MeanDif	0.2 (-0.10783,0.507830)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	DASH	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	18.8 (17.90)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	34.4 (22.50)	MeanDif	-15.6 (-24.9141,-6.28583)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Arora, R., 2011	Moderate Quality	PRWE	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	36.4 (28.70)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	64.9 (29.00)	MeanDif	-28.5 (-41.7368,-15.2631)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	DASH	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	13.3 (14.80)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	23.2 (19.30)	MeanDif	-9.9 (-17.7770,-2.02291)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	PRWE	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	33.7 (32.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	54.4 (31.80)	MeanDif	-20.7 (-35.3378,-6.06216)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	DASH	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	12.2 (14.40)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	12.4 (17.00)	MeanDif	-0.2 (-7.42036,7.020361)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	PRWE	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	27.7 (32.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	31.4 (33.00)	MeanDif	-3.7 (-18.6110,11.21106)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	PRWE	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	12.8 (23.20)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	14.6 (22.80)	MeanDif	-1.8 (-12.3550,8.755076)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	DASH	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	5.7 (11.10)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	8 (9.30)	MeanDif	-2.3 (-7.00402,2.404027)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bartl, C., 2014	Moderate Quality	DASH	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	22.7 (16.70)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	28.2 (20.50)	MeanDif	-5.5 (-11.3621,0.362140)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	EQ-5D VAS	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	0.9 (0.14)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	0.87 (0.18)	MeanDif	0.03 (-0.02049,0.080491)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	EQ-5D utility index	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	0.9 (0.14)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	0.87 (0.18)	MeanDif	0.03 (-0.02049,0.080491)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	DASH	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	14 (16.10)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	19 (21.30)	MeanDif	-5 (-11.0134,1.013407)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bartl, C., 2014	Moderate Quality	EQ-5D utility index	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	0.89 (0.21)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	0.89 (0.18)	MeanDif	0 (-0.06346,0.063466)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	EQ-5D VAS	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	76.9 (13.90)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	73.9 (16.80)	MeanDif	3 (-1.92961,7.929611)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Green O'Brien Score (Good)	1 years	PICO 4: Operative treatment (External fixation)	22	31.82%	PICO 4: Non-operative treatment (Plaster casting)	29	24.14%	RR	1.32(0.54,3.21)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Green O'Brien Score (Excellent)	1 years	PICO 4: Operative treatment (External fixation)	22	9.09%	PICO 4: Non-operative treatment (Plaster casting)	29	10.34%	RR	0.88(0.16,4.82)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Gartland and Werley score (Excellent)	6 weeks	PICO 4: Operative treatment (External fixation)	15	0.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	7.14%	RD	-0.07(-0.21,0.06)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Gartland and Werley score (Excellent)	3 months	PICO 4: Operative treatment (External fixation)	15	0.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	28.57%	RD	-0.29(-0.52,-0.05)	**Treatment 2 Significant (P-value<.05)**
Hegeman, J. H., 2004	Moderate Quality	Gartland and Werley score (Excellent)	1 years	PICO 4: Operative treatment (External fixation)	15	46.67%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	42.86%	RR	1.09(0.48,2.45)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Martinez-Mendez, D., 2018	Moderate Quality	DASH	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	16 (14.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	28 (21.00)	MeanDif	-12 (-19.1487,-4.85124)	**Treatment 1 Significant (P-value<.05)**
Martinez-Mendez, D., 2018	Moderate Quality	PRWE-total: Function	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	8 (6.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	13 (12.00)	MeanDif	-5 (-8.81260,-1.18739)	**Treatment 1 Significant (P-value<.05)**

Table 59: PICO 4.2- operative vs non-operative treatment (older)- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Azzopardi, T., 2005	Moderate Quality	SF-36 (Physical score)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	42.2 (9.70)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	38.2 (11.20)	MeanDif	4 (-1.58883,9.588832)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	SF-36 (Mental score)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	51 (13.20)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	50.4 (8.60)	MeanDif	0.6 (-5.34258,6.542580)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	SF-36-MCS	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	53.7 (8.70)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	54 (10.10)	MeanDif	-0.3 (-3.26010,2.660102)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	SF-36-PCS	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	44.5 (8.40)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	42 (10.60)	MeanDif	2.5 (-0.49618,5.496185)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	SF-36-PCS	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	48.6 (10.40)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	45.3 (11.30)	MeanDif	3.3 (-0.18803,6.788033)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bartl, C., 2014	Moderate Quality	SF-36-MCS	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	53.8 (7.60)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	53.6 (9.10)	MeanDif	0.2 (-2.48151,2.881518)	Not Significant (P-value>.05)
Horne, J. G., 1990	Moderate Quality	Final functional outcome (Good): Subjective evaluation, response grid, objective evaluation, grip strength, complications	15 months	PICO 4: Operative treatment (External fixation)	15	26.67%	PICO 4: Non-operative treatment (Closed reduction and plaster cast immobilization)	14	35.71%	RR	0.75(0.25,2.23)	Not Significant (P-value>.05)
Horne, J. G., 1990	Moderate Quality	Final functional outcome (Excellent): Subjective evaluation, response grid, objective evaluation, grip strength, complications	15 months	PICO 4: Operative treatment (External fixation)	15	46.67%	PICO 4: Non-operative treatment (Closed reduction and plaster cast immobilization)	14	35.71%	RR	1.31(0.54,3.17)	Not Significant (P-value>.05)
Moroni, A., 2004	Moderate Quality	Horesh Demerit Point system score		PICO 4: Operative treatment (External Fixation)	20	6.6 (3.40)	PICO 4: Non-operative treatment (Plaster Cast)	20	7.7 (3.30)	MeanDif	-1.1 (,)	Not Significant (P-value>.05)
Moroni, A., 2004	Moderate Quality	SF-36		PICO 4: Operative treatment (External Fixation)	20	67.1 (13.20)	PICO 4: Non-operative treatment (Plaster Cast)	20	66.2 (13.10)	MeanDif	0.9 (,)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Roumen, R. M., 1991	Moderate Quality	Anatomical End Result - Poor	26 weeks	PICO 4: Operative treatment (External Fixation)	21	4.76%	PICO 4: Non-operative treatment (Plaster Backslab)	22	40.91%	RR	0.12(0.02,0.84)	**Treatment 1 Significant (P-value<.05)**
Roumen, R. M., 1991	Moderate Quality	Anatomical End Result - Excellent	26 weeks	PICO 4: Operative treatment (External Fixation)	21	33.33%	PICO 4: Non-operative treatment (Plaster Backslab)	22	0.00%	RD	0.33(0.13,0.53)	**Treatment 1 Significant (P-value<.05)**
Roumen, R. M., 1991	Moderate Quality	Anatomical End Result - Fair	26 weeks	PICO 4: Operative treatment (External Fixation)	21	19.05%	PICO 4: Non-operative treatment (Plaster Backslab)	22	59.09%	RR	0.32(0.12,0.83)	**Treatment 1 Significant (P-value<.05)**
Roumen, R. M., 1991	Moderate Quality	Anatomical End Result - Good	26 weeks	PICO 4: Operative treatment (External Fixation)	21	42.86%	PICO 4: Non-operative treatment (Plaster Backslab)	22	0.00%	RD	0.43(0.22,0.64)	**Treatment 1 Significant (P-value<.05)**
Roumen, R. M., 1991	Moderate Quality	de Bruijn Score	26 weeks	PICO 4: Operative treatment (External Fixation)	21	20.9 (.)	PICO 4: Non-operative treatment (Plaster Backslab)	22	9 (.)	MeanDif	11.9 (,)	**ns**
Roumen, R. M., 1991	Moderate Quality	Functional End Result - Poor: Lindstrom Scale	26 weeks	PICO 4: Operative treatment (External Fixation)	21	19.05%	PICO 4: Non-operative treatment (Plaster Backslab)	22	9.09%	RR	2.10(0.43,10.26)	Not Significant (P-value>.05)
Roumen, R. M., 1991	Moderate Quality	Functional End Result - Excellent: Lindstrom Scale	26 weeks	PICO 4: Operative treatment (External Fixation)	21	33.33%	PICO 4: Non-operative treatment (Plaster Backslab)	22	59.09%	RR	0.56(0.28,1.13)	Not Significant (P-value>.05)
Roumen, R. M., 1991	Moderate Quality	Functional End Result - Fair: Lindstrom Scale	26 weeks	PICO 4: Operative treatment (External Fixation)	21	23.81%	PICO 4: Non-operative treatment (Plaster Backslab)	22	4.55%	RR	5.24(0.67,41.19)	Not Significant (P-value>.05)
Roumen, R. M., 1991	Moderate Quality	Functional End Result - Good: Lindstrom Scale	26 weeks	PICO 4: Operative treatment (External Fixation)	21	23.81%	PICO 4: Non-operative treatment (Plaster Backslab)	22	27.27%	RR	0.87(0.31,2.43)	Not Significant (P-value>.05)
Roumen, R. M., 1991	Moderate Quality	Power: percent	26 weeks	PICO 4: Operative treatment (External Fixation)	21	64 (.)	PICO 4: Non-operative treatment (Plaster Backslab)	22	77 (.)	MeanDif	-13 (,)	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Extension (% of contralateral side)	6 wks	PICO 4: Operative treatment (Norian SRS)	55	65.09 (8.26)	Plaster immobilization (Closed reduction and cast immobilization)	55	40.67 (6.06)	Author Reported	24.42 (21.71250,27.12749)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Extension (% of contralateral side)	3 mos	PICO 4: Operative treatment (Norian SRS)	55	82.49 (5.66)	Plaster immobilization (Closed reduction and cast immobilization)	55	69.45 (5.38)	Author Reported	13.04 (10.97619,15.10380)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Extension (% of contralateral side)	6 mos	PICO 4: Operative treatment (Norian SRS)	55	91.47 (4.05)	Plaster immobilization (Closed reduction and cast immobilization)	55	88.18 (4.27)	Author Reported	3.29 (1.734626,4.845373)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Extension (% of contralateral side)	1 yrs	PICO 4: Operative treatment (Norian SRS)	55	95.7 (3.20)	Plaster immobilization (Closed reduction and cast immobilization)	55	90.1 (3.40)	Author Reported	5.6 (4.366034,6.833965)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Flexion (% of contralateral side)	6 wks	PICO 4: Operative treatment (Norian SRS)	55	53.84 (5.51)	Plaster immobilization (Closed reduction and cast immobilization)	55	43.6 (5.93)	Author Reported	10.24 (8.100667,12.37933)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Flexion (% of contralateral side)	3 mos	PICO 4: Operative treatment (Norian SRS)	55	66.73 (5.58)	Plaster immobilization (Closed reduction and cast immobilization)	55	59.42 (4.02)	Author Reported	7.31 (5.492432,9.127567)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Flexion (% of contralateral side)	6 mos	PICO 4: Operative treatment (Norian SRS)	55	80.33 (3.67)	Plaster immobilization (Closed reduction and cast immobilization)	55	69.6 (4.50)	Author Reported	10.73 (9.195342,12.26465)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Flexion (% of contralateral side)	1 yrs	PICO 4: Operative treatment (Norian SRS)	55	86.2 (3.41)	Plaster immobilization (Closed reduction and cast immobilization)	55	77.8 (4.20)	Author Reported	8.4 (6.970210,9.829789)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Pronation (% of contralateral side)	6 wks	PICO 4: Operative treatment (Norian SRS)	55	91.05 (2.21)	Plaster immobilization (Closed reduction and cast immobilization)	55	79.56 (10.35)	Author Reported	11.49 (8.692973,14.28702)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Pronation (% of contralateral side)	3 mos	PICO 4: Operative treatment (Norian SRS)	55	93.67 (2.00)	Plaster immobilization (Closed reduction and cast immobilization)	55	91.15 (3.72)	Author Reported	2.52 (1.403772,3.636227)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Pronation (% of contralateral side)	6 mos	PICO 4: Operative treatment (Norian SRS)	55	98.69 (1.22)	Plaster immobilization (Closed reduction and cast immobilization)	55	96.96 (2.60)	Author Reported	1.73 (0.970968,2.489031)	**ns**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Pronation (% of contralateral side)	1 yrs	PICO 4: Operative treatment (Norian SRS)	55	99.6 (1.10)	Plaster immobilization (Closed reduction and cast immobilization)	55	98.7 (2.10)	Author Reported	0.9 (0.273468,1.526531)	**ns**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Supination (% of contralateral side)	6 wks	PICO 4: Operative treatment (Norian SRS)	55	67.62 (8.43)	Plaster immobilization (Closed reduction and cast immobilization)	55	51.84 (7.16)	Author Reported	15.78 (12.85691,18.70308)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Supination (% of contralateral side)	3 mos	PICO 4: Operative treatment (Norian SRS)	55	80.42 (2.99)	Plaster immobilization (Closed reduction and cast immobilization)	55	77.34 (3.33)	Author Reported	3.08 (1.897218,4.262781)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Supination (% of contralateral side)	6 mos	PICO 4: Operative treatment (Norian SRS)	55	90.44 (3.87)	Plaster immobilization (Closed reduction and cast immobilization)	55	87.53 (5.07)	Author Reported	2.91 (1.224321,4.595678)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Supination (% of contralateral side)	1 yrs	PICO 4: Operative treatment (Norian SRS)	55	97.21 (2.30)	Plaster immobilization (Closed reduction and cast immobilization)	55	88.6 (4.82)	Author Reported	8.61 (7.198542,10.02145)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Radial deviation (% of contralateral side)	6 wks	PICO 4: Operative treatment (Norian SRS)	55	69.82 (3.61)	Plaster immobilization (Closed reduction and cast immobilization)	55	40.04 (4.15)	Author Reported	29.78 (28.32631,31.23368)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Radial deviation (% of contralateral side)	3 mos	PICO 4: Operative treatment (Norian SRS)	55	90.51 (2.54)	Plaster immobilization (Closed reduction and cast immobilization)	55	73.95 (8.37)	Author Reported	16.56 (14.24831,18.87168)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Radial deviation (% of contralateral side)	6 mos	PICO 4: Operative treatment (Norian SRS)	55	98.15 (1.75)	Plaster immobilization (Closed reduction and cast immobilization)	55	93.53 (4.73)	Author Reported	4.62 (3.287110,5.952889)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Radial deviation (% of contralateral side)	1 yrs	PICO 4: Operative treatment (Norian SRS)	55	99.6 (1.60)	Plaster immobilization (Closed reduction and cast immobilization)	55	94.6 (3.80)	Author Reported	5 (3.910319,6.089680)	**ns**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Ulnar deviation (% of contralateral side)	6 wks	PICO 4: Operative treatment (Norian SRS)	55	59.91 (3.79)	Plaster immobilization (Closed reduction and cast immobilization)	55	50.07 (3.93)	Author Reported	9.84 (8.397059,11.28294)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Ulnar deviation (% of contralateral side)	3 mos	PICO 4: Operative treatment (Norian SRS)	55	77.82 (7.55)	Plaster immobilization (Closed reduction and cast immobilization)	55	63.04 (5.84)	Author Reported	14.78 (12.25737,17.30262)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Ulnar deviation (% of contralateral side)	6 mos	PICO 4: Operative treatment (Norian SRS)	55	89.87 (6.16)	Plaster immobilization (Closed reduction and cast immobilization)	55	79.31 (4.58)	Author Reported	10.56 (8.531320,12.58867)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Range of motion: Ulnar deviation (% of contralateral side)	1 yrs	PICO 4: Operative treatment (Norian SRS)	55	92.3 (4.20)	Plaster immobilization (Closed reduction and cast immobilization)	55	81.4 (3.70)	Author Reported	10.9 (9.420704,12.37929)	**Treatment 1 (operative group)**
Schmalholz, 1989	Moderate Quality	Range of motion: Dorsiflexion (% of contralateral side)	1 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	62.875 (-157.15)	Plaster immobilization (Reduction and plaster cast immobilization)	23	43.04 (-105.31)	Author Reported	19.835 (-56.3601,96.03019)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Range of motion: Dorsiflexion (% of contralateral side)	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	98.3 (-245.70)	Plaster immobilization (Reduction and plaster cast immobilization)	23	88.26 (-215.96)	Author Reported	10.04 (-122.068,142.1487)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Range of motion: Volar flexion (% of contralateral side)	1 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	74.875 (-187.15)	Plaster immobilization (Reduction and plaster cast immobilization)	23	27.43 (-67.12)	Author Reported	47.445 (-32.2962,127.1862)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Range of motion: Volar flexion (% of contralateral side)	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	95.29 (-238.18)	Plaster immobilization (Reduction and plaster cast immobilization)	23	67.26 (-164.58)	Author Reported	28.03 (-88.6065,144.6665)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schmalholz, 1989	Moderate Quality	Range of motion: Pronation (% of contralateral side)	1 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	95.29 (-238.18)	Plaster immobilization (Reduction and plaster cast immobilization)	23	44.04 (-107.76)	Author Reported	51.25 (-53.7247,156.2247)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Range of motion: Pronation (% of contralateral side)	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	100 (-249.95)	Plaster immobilization (Reduction and plaster cast immobilization)	23	91.91 (-224.89)	Author Reported	8.09 (-127.731,143.9113)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Range of motion: Supination (% of contralateral side)	1 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	88.67 (-221.63)	Plaster immobilization (Reduction and plaster cast immobilization)	23	35.83 (-87.67)	Author Reported	52.84 (-42.7955,148.4755)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Range of motion: Supination (% of contralateral side)	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	100 (-249.95)	Plaster immobilization (Reduction and plaster cast immobilization)	23	77.57 (-189.80)	Author Reported	22.43 (-104.128,148.9887)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Function- Excellent (Lidstrom)	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	31	77.42%	Plaster immobilization (Reduction and plaster cast immobilization)	23	0.00%	RD	0.29(0.11,0.47)	**Treatment 1**
Schmalholz, 1989	Moderate Quality	Function- Poor (Lidstrom)	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	100.00%	Plaster immobilization (Reduction and plaster cast immobilization)	23	39.13%	RD	-0.39(-0.59,-0.19)	**Treatment 2**

Table 60: PICO 4.2- operative vs non-operative treatment (older)- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saving, J., 2019	High Quality	Grip strength (%)	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	72.4 (18.60)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	52.3 (29.30)	MeanDif	20.1 (11.47182,28.72817)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	Grip strength (%)	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	96 (23.70)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	80.9 (23.60)	MeanDif	15.1 (6.585652,23.61434)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Grip strength: Kilograms	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	8.5 (6.20)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	9 (7.20)	MeanDif	-0.5 (-3.90009,2.900096)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Grip strength* (kg)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	14.1 (5.50)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	16.1 (5.60)	MeanDif	-2 (-4.54637,0.546375)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Grip strength* (kg)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	15.7 (6.20)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	10.7 (5.60)	MeanDif	5 (2.287438,7.712561)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	Grip strength* (kg)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	19.8 (7.40)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	12.5 (4.40)	MeanDif	7.3 (4.497573,10.10242)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Arora, R., 2011	Moderate Quality	Grip strength* (kg)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	22.2 (6.30)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	18.8 (5.80)	MeanDif	3.4 (0.620053,6.179946)	**Treatment 1 Significant (P-value<.05)**
Azzopardi, T., 2005	Moderate Quality	Grip strength (% of contralateral side)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	. %	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	. %	Author Reported	NA	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Activities of daily living (Bilateral)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	9.7 (2.20)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	9.4 (2.50)	MeanDif	0.3 (-0.95614,1.556145)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Activities of daily living (Unilateral)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	7.6 (1.20)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	7.4 (1.30)	MeanDif	0.2 (-0.46733,0.867338)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Grip strength	2 months	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Grip strength	6 months	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Grip strength	1 years	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Grip strength of index finger (% of contralateral side)	6 weeks	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hegeman, J. H., 2004	Moderate Quality	Grip strength of index finger (% of contralateral side)	3 months	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Grip strength of index finger (% of contralateral side)	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Grip strength of hand (% of contralateral side)	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Martinez-Mendez, D., 2018	Moderate Quality	Grip strength: % of that in the unaffected side	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	73 (27.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	64 (33.00)	MeanDif	9 (-3.04247,21.04247)	Not Significant (P-value>.05)
Roumen, R. M., 1991	Moderate Quality	Lindstrom Score	26 weeks	PICO 4: Operative treatment (External Fixation)	21	2.29 (.)	PICO 4: Non-operative treatment (Plaster Backslab)	22	1.64 (.)	MeanDif	0.65 (,)	**ns**
Sanchez-Sotelo, 2000	Moderate Quality	Grip strength (% of contralateral side)	6 wks	PICO 4: Operative treatment (Norian SRS)	55	38 (4.43)	Plaster immobilization (Closed reduction and cast immobilization)	55	21.42 (4.87)	Author Reported	16.58 (14.84008,18.31991)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Grip strength (% of contralateral side)	3 mos	PICO 4: Operative treatment (Norian SRS)	55	58.44 (6.00)	Plaster immobilization (Closed reduction and cast immobilization)	55	44.09 (10.03)	Author Reported	14.35 (11.26111,17.43888)	**Treatment 1 (operative group)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sanchez-Sotelo, 2000	Moderate Quality	Grip strength (% of contralateral side)	6 mos	PICO 4: Operative treatment (Norian SRS)	55	78.38 (6.28)	Plaster immobilization (Closed reduction and cast immobilization)	55	71.2 (9.28)	Author Reported	7.18 (4.218615,10.14138)	**Treatment 1 (operative group)**
Sanchez-Sotelo, 2000	Moderate Quality	Grip strength (% of contralateral side)	1 yrs	PICO 4: Operative treatment (Norian SRS)	55	92.3 (4.32)	Plaster immobilization (Closed reduction and cast immobilization)	55	80.3 (7.30)	Author Reported	12 (9.758197,14.24180)	**Treatment 1 (operative group)**
Schmalholz, 1989	Moderate Quality	Grip strength (% of contralateral side)	1 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	39.5 (-98.73)	Plaster immobilization (Reduction and plaster cast immobilization)	23	17.13 (-41.91)	Author Reported	22.37 (-20.6844,65.42446)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Grip strength (% of contralateral side)	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	87.375 (-218.39)	Plaster immobilization (Reduction and plaster cast immobilization)	23	67 (-163.94)	Author Reported	20.375 (-89.7312,130.4812)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Radiographic outcome: Dorsal angulation		PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	6.875 (-17.18)	Plaster immobilization (Reduction and plaster cast immobilization)	23	24.13 (-59.04)	Author Reported	-17.255(-42.3452,7.835287)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Radiographic outcome: Dorsal angulation	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	6.67 (-16.67)	Plaster immobilization (Reduction and plaster cast immobilization)	23	34.78 (-85.10)	Author Reported	-28.11 (-63.5238,7.303800)	Not Significant (P-value>.05)
Schmalholz, 1989	Moderate Quality	Radiographic outcome: Axial compression		PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	1.375 (-3.44)	Plaster immobilization (Reduction and plaster cast immobilization)	23	3.61 (-8.83)	Author Reported	-2.235 (-6.09799,1.627994)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schmalholz, 1989	Moderate Quality	Radiographic outcome: Axial compression	24 mos	PICO 4: Operative treatment (Bone cement (Methylmethacrylate))	24	1.375 (-3.44)	Plaster immobilization (Reduction and plaster cast immobilization)	23	5.61 (-13.73)	Author Reported	-4.235 (-10.0110,1.541047)	Not Significant (P-value>.05)

Table 61: PICO 4.2- operative vs non-operative treatment (older)- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wong, T. C., 2010	High Quality	Pain: Mayo wrist score - Pain (25 points)	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	20.5 (3.20)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	21.8 (3.40)	MeanDif	-1.3 (-2.97079,0.370797)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Pain under stress† (points)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	2 (2.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	2.5 (2.10)	MeanDif	-0.5 (-1.44059,0.440596)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Pain at rest† (points)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.3 (0.80)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	0.3 (0.80)	MeanDif	0 (-0.36707,0.367075)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Pain under stress† (points)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	1.4 (2.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	1.8 (2.00)	MeanDif	-0.4 (-1.31768,0.517688)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Pain at rest† (points)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.2 (0.70)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	0.3 (0.80)	MeanDif	-0.1 (-0.44458,0.244583)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Pain under stress† (points)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	1.3 (1.70)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	1 (1.60)	MeanDif	0.3 (-0.45775,1.057754)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Arora, R., 2011	Moderate Quality	Pain at rest† (points)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.6 (1.30)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	0.3 (1.00)	MeanDif	0.3 (-0.23307,0.833074)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Pain at rest† (points)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.1 (0.30)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	0.1 (0.50)	MeanDif	0 (-0.18857,0.188575)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Pain under stress† (points)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.7 (1.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	0.6 (1.40)	MeanDif	0.1 (-0.45696,0.656966)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Pain score	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	0.7 (1.30)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	1.2 (1.60)	MeanDif	-0.5 (-1.27762,0.277622)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	VAS	2 months	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	VAS	6 months	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	VAS	1 years	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Pain (Radio-ulnar Joint)	6 weeks	PICO 4: Operative treatment (External fixation)	15	60.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	29.41%	RR	2.04(0.88,4.75)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hegeman, J. H., 2004	Moderate Quality	Pain (Radiocarpal Joint)	6 weeks	PICO 4: Operative treatment (External fixation)	15	60.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	42.86%	RR	1.40(0.67,2.91)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Pain (Ulnocarpal Joint)	6 weeks	PICO 4: Operative treatment (External fixation)	15	60.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	35.71%	RR	1.68(0.74,3.80)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Pain (Radio-ulnar Joint)	3 months	PICO 4: Operative treatment (External fixation)	15	33.33%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	35.71%	RR	0.93(0.34,2.54)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Pain (Ulnocarpal Joint)	3 months	PICO 4: Operative treatment (External fixation)	15	33.33%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	35.71%	RR	0.93(0.34,2.54)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Pain (Radiocarpal Joint)	3 months	PICO 4: Operative treatment (External fixation)	15	40.00%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	35.71%	RR	1.12(0.44,2.86)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Pain (Radiocarpal Joint)	1 years	PICO 4: Operative treatment (External fixation)	15	13.33%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	17.65%	RR	0.76(0.15,3.93)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Pain (Radio-ulnar Joint)	1 years	PICO 4: Operative treatment (External fixation)	15	13.33%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	21.43%	RR	0.62(0.12,3.19)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hegeman, J. H., 2004	Moderate Quality	Pain (Ulnocarpal Joint)	1 years	PICO 4: Operative treatment (External fixation)	15	13.33%	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	14	21.43%	RR	0.62(0.12,3.19)	Not Significant (P-value>.05)
Martinez-Mendez, D., 2018	Moderate Quality	VAS pain	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	2 (2.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	3 (2.00)	MeanDif	-1 (-1.79641,-0.20358)	**Treatment 1 Significant (P-value<.05)**
Martinez-Mendez, D., 2018	Moderate Quality	PRWE-total: Pain	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	17 (13.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	30 (25.00)	MeanDif	-13 (-21.0043,-4.99564)	**Treatment 1 Significant (P-value<.05)**
Sanchez-Sotelo, 2000	Moderate Quality	Radiocarpal pain- None (VAS)	3 mos	PICO 4: Operative treatment (Norian SRS)	96	57.29%	Plaster immobilization (Closed reduction and cast immobilization)	55	52.73%	RR	1.41(1.05,1.90)	**Treatment 1**
Sanchez-Sotelo, 2000	Moderate Quality	Radiocarpal pain- None (VAS)	6 mos	PICO 4: Operative treatment (Norian SRS)	102	53.92%	Plaster immobilization (Closed reduction and cast immobilization)	55	61.82%	RR	1.38(1.09,1.75)	**Treatment 1**
Sanchez-Sotelo, 2000	Moderate Quality	Radiocarpal pain- None (VAS)	1 yrs	PICO 4: Operative treatment (Norian SRS)	103	53.40%	Plaster immobilization (Closed reduction and cast immobilization)	55	72.73%	RR	1.20(0.99,1.45)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sanchez-Sotelo, 2000	Moderate Quality	Radiocarpal pain- Severe (VAS)	3 mos	PICO 4: Operative treatment (Norian SRS)	58	94.83%	Plaster immobilization (Closed reduction and cast immobilization)	55	12.73%	RR	0.43(0.12,1.57)	Not Significant (P-value>.05)
Sanchez-Sotelo, 2000	Moderate Quality	Radiocarpal pain- Severe (VAS)	6 mos	PICO 4: Operative treatment (Norian SRS)	56	98.21%	Plaster immobilization (Closed reduction and cast immobilization)	55	5.45%	RR	0.33(0.04,3.11)	Not Significant (P-value>.05)
Sanchez-Sotelo, 2000	Moderate Quality	Radiocarpal pain- Severe (VAS)	1 yrs	PICO 4: Operative treatment (Norian SRS)	56	98.21%	Plaster immobilization (Closed reduction and cast immobilization)	55	3.64%	RR	0.50(0.05,5.36)	Not Significant (P-value>.05)
Sanchez-Sotelo, 2000	Moderate Quality	Radio-ulnar pain- None (VAS)	3 mos	PICO 4: Operative treatment (Norian SRS)	100	55.00%	Plaster immobilization (Closed reduction and cast immobilization)	55	54.55%	RR	1.50(1.14,1.97)	**Treatment 1**
Sanchez-Sotelo, 2000	Moderate Quality	Radio-ulnar pain- None (VAS)	6 mos	PICO 4: Operative treatment (Norian SRS)	103	53.40%	Plaster immobilization (Closed reduction and cast immobilization)	55	58.18%	RR	1.50(1.17,1.92)	**Treatment 1**
Sanchez-Sotelo, 2000	Moderate Quality	Radio-ulnar pain- None (VAS)	1 yrs	PICO 4: Operative treatment (Norian SRS)	104	52.88%	Plaster immobilization (Closed reduction and cast immobilization)	55	69.09%	RR	1.29(1.06,1.57)	**Treatment 1**
Sanchez-Sotelo, 2000	Moderate Quality	Radio-ulnar pain- Severe (VAS)	3 mos	PICO 4: Operative treatment (Norian SRS)	57	96.49%	Plaster immobilization (Closed reduction and cast immobilization)	55	10.91%	RR	0.33(0.07,1.58)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sanchez-Sotelo, 2000	Moderate Quality	Radio-ulnar pain- Severe (VAS)	6 mos	PICO 4: Operative treatment (Norian SRS)	56	98.21%	Plaster immobilization (Closed reduction and cast immobilization)	55	7.27%	RR	0.25(0.03,2.17)	Not Significant (P-value>.05)
Sanchez-Sotelo, 2000	Moderate Quality	Radio-ulnar pain- Severe (VAS)	1 yrs	PICO 4: Operative treatment (Norian SRS)	56	98.21%	Plaster immobilization (Closed reduction and cast immobilization)	55	5.45%	RR	0.33(0.04,3.11)	Not Significant (P-value>.05)

Table 62: PICO 4.2- operative vs non-operative treatment (older)- ROM

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saving, J., 2019	High Quality	Range of motion: Extension (deg)	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	47 (11.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	50 (11.00)	MeanDif	-3 (-6.90863,0.908631)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Range of motion: Flexion (deg)	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	63 (57.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	46 (15.00)	MeanDif	17 (1.877121,32.12287)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	Range of motion: Pronation (deg	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	86 (8.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	82 (11.00)	MeanDif	4 (0.608535,7.391464)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	Range of motion: Supination (deg)	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	95 (15.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	90 (17.00)	MeanDif	5 (-0.67890,10.67890)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Range of motion: Extension (deg)	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	55 (11.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	56 (12.00)	MeanDif	-1 (-5.13296,3.132965)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Range of motion: Flexion (deg)	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	63 (13.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	51 (14.00)	MeanDif	12 (7.147676,16.85232)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saving, J., 2019	High Quality	Range of motion: Pronation (deg	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	85 (9.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	83 (10.00)	MeanDif	2 (-1.41385,5.413850)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Range of motion: Supination (deg)	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	96 (16.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	92 (17.00)	MeanDif	4 (-1.93162,9.931625)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Range of motion: Extension	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	72 (7.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	71 (8.00)	MeanDif	1 (-2.80394,4.803948)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Range of motion: Flexion	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	73 (8.20)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	72 (10.00)	MeanDif	1 (-3.62770,5.627703)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Range of motion: Pronation	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	77 (4.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	75 (7.00)	MeanDif	2 (-0.88504,4.885041)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Range of motion: Radial deviation (°)	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	21 (6.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	24 (7.00)	MeanDif	-3 (-6.29917,0.299171)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wong, T. C., 2010	High Quality	Range of motion: Supination	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	76 (4.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	75 (7.00)	MeanDif	1 (-1.88504,3.885041)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Range of motion: Ulnar deviation	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	20 (6.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	21 (7.00)	MeanDif	-1 (-4.29917,2.299171)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Extension* (deg)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	46 (15.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	55 (12.00)	MeanDif	-9 (-15.2418,-2.75811)	**Treatment 2 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	Range of motion: Flexion* (deg)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	44 (13.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	41 (11.00)	MeanDif	3 (-2.53147,8.531477)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Pronation* (deg)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	81 (9.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	77 (16.00)	MeanDif	4 (-1.93492,9.934923)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Supination* (deg)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	75 (18.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	73 (16.00)	MeanDif	2 (-5.82010,9.820109)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Extension* (deg)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	51 (13.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	45 (15.00)	MeanDif	6 (-0.43391,12.43391)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Arora, R., 2011	Moderate Quality	Range of motion: Flexion* (deg)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	47 (12.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	49 (11.00)	MeanDif	-2 (-7.28483,3.284833)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Pronation* (deg)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	81 (13.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	81 (12.00)	MeanDif	0 (-5.74328,5.743280)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Supination* (deg)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	80 (14.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	80 (12.00)	MeanDif	0 (-5.98886,5.988862)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Extension* (deg)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	55 (11.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	52 (9.00)	MeanDif	3 (-1.61757,7.617578)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Flexion* (deg)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	51 (10.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	48 (13.00)	MeanDif	3 (-2.31205,8.312050)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Pronation* (deg)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	84 (8.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	81 (14.00)	MeanDif	3 (-2.21340,8.213406)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Supination* (deg)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	83 (.)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	79 (12.00)	MeanDif	4 (,)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Arora, R., 2011	Moderate Quality	Range of motion: Extension* (deg)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	59 (10.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	61 (7.00)	MeanDif	-2 (-5.96971,1.969714)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Flexion* (deg)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	55 (11.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	57 (10.00)	MeanDif	-2 (-6.82646,2.826463)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Pronation* (deg)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	84 (7.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	85 (8.00)	MeanDif	-1 (-4.44583,2.445834)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Range of motion: Supination* (deg)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	85 (8.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	85 (8.00)	MeanDif	0 (-3.67075,3.670754)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Range of motion: Extension (% of contralateral side)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	. %	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	. %	Author Reported	NA	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Range of motion: Flexion (% of contralateral side)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	. %	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	. %	Author Reported	NA	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Range of motion: Pronation (% of contralateral side)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	. %	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Azzopardi, T., 2005	Moderate Quality	Range of motion: Radial deviation (% of contralateral side)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	. %	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	. %	Author Reported	NA	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Range of motion: Supination (% of contralateral side)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	. %	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	. %	Author Reported	NA	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Range of motion: Ulnar deviation (% of contralateral side)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	. %	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	. %	Author Reported	NA	**G1 (Operative) Significant (P-value<.05)**
Bartl, C., 2014	Moderate Quality	Range of motion: Extension	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	11.9 (13.70)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	18.2 (13.00)	MeanDif	-6.3 (-10.5183,-2.08163)	**Treatment 2 Significant (P-value<.05)**
Bartl, C., 2014	Moderate Quality	Range of motion: Flexion	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	13.3 (18.10)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	22.5 (16.50)	MeanDif	-9.2 (-14.6767,-3.72323)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bartl, C., 2014	Moderate Quality	Range of motion: Pronation	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	6.5 (10.40)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	10.2 (15.70)	MeanDif	-3.7 (-7.85206,0.452064)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	Range of motion: Radial abduction	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	5.1 (7.50)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	8 (6.90)	MeanDif	-2.9 (-5.17829,-0.62170)	**Treatment 2 Significant (P-value<.05)**
Bartl, C., 2014	Moderate Quality	Range of motion: Supination	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	8 (14.30)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	9.7 (15.10)	MeanDif	-1.7 (-6.33068,2.930681)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	Range of motion: Ulnar abduction	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	73	5.3 (10.60)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	82	10.7 (8.90)	MeanDif	-5.4 (-8.50222,-2.29777)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bartl, C., 2014	Moderate Quality	Range of motion: Extension	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	7.5 (11.70)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	7.5 (10.00)	MeanDif	0 (-3.53216,3.532165)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	Range of motion: Flexion	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	8.2 (11.90)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	11.5 (12.80)	MeanDif	-3.3 (-7.27122,0.671221)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	Range of motion: Pronation	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	2.8 (5.60)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	2.6 (9.40)	MeanDif	0.2 (-2.24178,2.641786)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	Range of motion: Radial abduction	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	3.9 (6.30)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	3 (5.70)	MeanDif	0.9 (-1.04503,2.845034)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bartl, C., 2014	Moderate Quality	Range of motion: Supination	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	2.5 (5.90)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	3.2 (8.30)	MeanDif	-0.7 (-2.98775,1.587753)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	Range of motion: Ulnar abduction	12 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	68	4.4 (7.50)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	81	5.9 (8.00)	MeanDif	-1.5 (-3.99261,0.992615)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Dorsal extension	2 months	PICO 4: Operative treatment (External fixation)	22	41.2 (2.90)	PICO 4: Non-operative treatment (Plaster casting)	29	43.1 (3.40)	MeanDif	-1.9 (-3.63201,-0.16798)	**Treatment 2 Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Pronation	2 months	PICO 4: Operative treatment (External fixation)	22	76 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	65.3 (.)	MeanDif	10.7 (,)	**G1 (Operative) Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Radial deviation	2 months	PICO 4: Operative treatment (External fixation)	22	14.8 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	16.3 (.)	MeanDif	-1.5 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Supination	2 months	PICO 4: Operative treatment (External fixation)	22	64 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	68.3 (.)	MeanDif	-4.3 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Ulnar deviation	2 months	PICO 4: Operative treatment (External fixation)	22	25.7 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	21.8 (.)	MeanDif	3.9 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Volar flexion	2 months	PICO 4: Operative treatment (External fixation)	22	39.2 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	37.3 (.)	MeanDif	1.9 (,)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Dorsal extension	6 months	PICO 4: Operative treatment (External fixation)	22	54.3 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	58.2 (.)	MeanDif	-3.9 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Pronation	6 months	PICO 4: Operative treatment (External fixation)	22	72.1 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	76.4 (.)	MeanDif	-4.3 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Radial deviation	6 months	PICO 4: Operative treatment (External fixation)	22	20.3 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	18.7 (.)	MeanDif	1.6 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Supination	6 months	PICO 4: Operative treatment (External fixation)	22	74.6 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	75.9 (.)	MeanDif	-1.3 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Ulnar deviation	6 months	PICO 4: Operative treatment (External fixation)	22	34.5 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	29 (.)	MeanDif	5.5 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Volar flexion	6 months	PICO 4: Operative treatment (External fixation)	22	47.9 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	42.4 (.)	MeanDif	5.5 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Dorsal extension	1 years	PICO 4: Operative treatment (External fixation)	22	56 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	63.9 (.)	MeanDif	-7.9 (,)	**G2 (Non-operative) Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Pronation	1 years	PICO 4: Operative treatment (External fixation)	22	68.9 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	72.9 (.)	MeanDif	-4 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Radial deviation	1 years	PICO 4: Operative treatment (External fixation)	22	17.5 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	21.3 (.)	MeanDif	-3.8 (,)	**G2 (Non-operative) Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Supination	1 years	PICO 4: Operative treatment (External fixation)	22	75.8 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	78.2 (.)	MeanDif	-2.4 (,)	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Ulnar deviation	1 years	PICO 4: Operative treatment (External fixation)	22	33.7 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	29.8 (.)	MeanDif	3.9 (,)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Foldhazy, Z., 2010	Moderate Quality	Range of motion: Volar flexion	1 years	PICO 4: Operative treatment (External fixation)	22	46.3 (.)	PICO 4: Non-operative treatment (Plaster casting)	29	49.5 (.)	MeanDif	-3.2 (,)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Mean dorsal flexion (% of contralateral side)	6 weeks	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Mean dorsal flexion (% of contralateral side)	3 months	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Mean range of flexion (% of contralateral side)	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	**G1 (Operative) Significant (P-value<.05)**
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Mean dorsal flexion (% of contralateral side)	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Pronation	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Pronation	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Pronation	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Pronation	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Radial deviation	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Range of motion: Ulnar deviation	1 years	PICO 4: Operative treatment (External fixation)	15	. %	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	. %	Author Reported	NA	Not Significant (P-value>.05)
Martinez-Mendez, D., 2018	Moderate Quality	Range of motion: Extension	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	57 (11.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	54 (13.00)	MeanDif	3 (-1.80729,7.807294)	Not Significant (P-value>.05)
Martinez-Mendez, D., 2018	Moderate Quality	Range of motion: Flexion (deg)	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	54 (13.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	60 (16.00)	MeanDif	-6 (-11.8231,-0.17685)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Martinez-Mendez, D., 2018	Moderate Quality	Range of motion: Pronation	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	84 (10.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	71 (19.00)	MeanDif	13 (6.901643,19.09835)	**Treatment 1 Significant (P-value<.05)**
Martinez-Mendez, D., 2018	Moderate Quality	Range of motion: Supination	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	85 (8.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	72 (20.00)	MeanDif	13 (6.867160,19.13283)	**Treatment 1 Significant (P-value<.05)**

Table 63: PICO 4.2- operative vs non-operative treatment (older)- Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saving, J., 2019	High Quality	Radiographic outcome: Dorsal tilt (deg)	1 days	PICO 4: Operative treatment (Volar locking plate fixation)	68	1 (7.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	72	-8 (8.00)	MeanDif	9 (6.513442,11.48655)	**Treatment 2 Significant (P-value<.05)**
Saving, J., 2019	High Quality	Radiographic outcome: Radial inclination (deg)	1 days	PICO 4: Operative treatment (Volar locking plate fixation)	68	18 (8.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	72	18 (8.00)	MeanDif	0 (-2.65148,2.651486)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Radial deviation (deg)	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	21 (5.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	20 (6.00)	MeanDif	1 (-0.95365,2.953653)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Ulnar deviation (deg)	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	25 (7.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	24 (6.00)	MeanDif	1 (-1.32516,3.325164)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Radiographic outcome: Dorsal tilt (deg)	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	-3 (8.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	16 (12.00)	MeanDif	-19 (-22.5892,-15.4107)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	Radiographic outcome: Radial inclination (deg)	3 months	PICO 4: Operative treatment (Volar locking plate fixation)	58	20 (6.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	64	13 (4.00)	MeanDif	7 (5.171109,8.828890)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Saving, J., 2019	High Quality	Ulnar deviation (deg)	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	30 (11.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	26 (8.00)	MeanDif	4 (0.506695,7.493304)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	Radial deviation (deg)	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	56	22 (4.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	63	23 (7.00)	MeanDif	-1 (-3.02126,1.021264)	Not Significant (P-value>.05)
Saving, J., 2019	High Quality	Radiographic outcome: Dorsal tilt (deg)	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	53	1 (9.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	58	14 (13.00)	MeanDif	-13 (-17.1309,-8.86904)	**Treatment 1 Significant (P-value<.05)**
Saving, J., 2019	High Quality	Radiographic outcome: Radial inclination (deg)	12 months	PICO 4: Operative treatment (Volar locking plate fixation)	53	19 (8.00)	PICO 4: Non-operative treatment (Nonoperative treatment with a plaster splint)	58	14 (7.00)	MeanDif	5 (2.192082,7.807917)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Dorsal angulation	1 day	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	-8 (1.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	-7.5 (1.00)	MeanDif	-0.5 (-1.00606,0.006069)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial inclination	1 day	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	23 (2.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	23 (4.00)	MeanDif	0 (-1.60033,1.600333)	Not Significant (P-value>.05)
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial length	1 day	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	11.4 (1.80)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	10.7 (2.10)	MeanDif	0.7 (-0.28975,1.689751)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wong, T. C., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	1 day	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	0.3 (0.10)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	0.5 (0.20)	MeanDif	-0.2 (-0.28001,-0.11998)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Dorsal angulation	1 week	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	-5 (1.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	-4 (1.00)	MeanDif	-1 (-1.50606,-0.49393)	**Treatment 2 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial inclination	1 week	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	22 (4.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	19 (3.00)	MeanDif	3 (1.210772,4.789227)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial length	1 week	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	9.2 (2.10)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	7.4 (1.50)	MeanDif	1.8 (0.876509,2.723490)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	1 week	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	1.2 (0.60)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	1.7 (0.70)	MeanDif	-0.5 (-0.82991,-0.17008)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Dorsal angulation	2 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	-5 (1.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	2 (1.00)	MeanDif	-7 (-7.50606,-6.49393)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial inclination	2 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	21 (3.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	18 (3.00)	MeanDif	3 (1.481790,4.518209)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial length	2 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	8.8 (1.90)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	6.5 (1.70)	MeanDif	2.3 (1.387669,3.212330)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	2 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	1.3 (0.70)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	1.9 (0.90)	MeanDif	-0.6 (-1.00800,-0.19199)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Dorsal angulation	4 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	-4 (1.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	2 (1.00)	MeanDif	-6 (-6.50606,-5.49393)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial inclination	4 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	20 (2.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	17 (2.00)	MeanDif	3 (1.987860,4.012139)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial length	4 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	8.4 (1.70)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	5.5 (1.20)	MeanDif	2.9 (2.155371,3.644628)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wong, T. C., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	4 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	1.3 (0.80)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	2.4 (1.20)	MeanDif	-1.1 (-1.61609,-0.58390)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Dorsal angulation	6 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	-4 (1.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	2 (1.00)	MeanDif	-6 (-6.50606,-5.49393)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial inclination	6 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	20 (2.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	17 (2.00)	MeanDif	3 (1.987860,4.012139)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial length	6 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	7.7 (2.50)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	4.8 (1.30)	MeanDif	2.9 (1.891663,3.908336)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	6 weeks	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	1.9 (0.70)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	3.1 (1.40)	MeanDif	-1.2 (-1.76011,-0.63988)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Dorsal angulation	3 months	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	-4 (1.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	3 (1.00)	MeanDif	-7 (-7.50606,-6.49393)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial inclination	3 months	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	20 (2.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	16 (2.00)	MeanDif	4 (2.987860,5.012139)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial length	3 months	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	7.5 (2.20)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	4.2 (1.10)	MeanDif	3.3 (2.419816,4.180183)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	3 months	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	2.1 (1.10)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	3.2 (1.40)	MeanDif	-1.1 (-1.73712,-0.46287)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Dorsal angulation	6 months	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	-4 (1.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	3 (1.00)	MeanDif	-7 (-7.50606,-6.49393)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial inclination	6 months	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	20 (2.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	16 (2.00)	MeanDif	4 (2.987860,5.012139)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial length	6 months	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	7.5 (2.20)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	4.2 (1.10)	MeanDif	3.3 (2.419816,4.180183)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Wong, T. C., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	6 months	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	2.1 (1.10)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	3.2 (1.40)	MeanDif	-1.1 (-1.73712,-0.46287)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Dorsal angulation	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	-4 (1.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	3 (1.00)	MeanDif	-7 (-7.50606,-6.49393)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial inclination	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	20 (2.00)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	16 (2.00)	MeanDif	4 (2.987860,5.012139)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Radial length	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	7.5 (2.20)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	4.2 (1.10)	MeanDif	3.3 (2.419816,4.180183)	**Treatment 1 Significant (P-value<.05)**
Wong, T. C., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	1 year	PICO 4: Operative treatment (K-wire; percutaneous K-wire pin fixation)	30	2.1 (1.10)	PICO 4: Non-operative treatment (Cast; closed reduction and Plaster of Paris cast immobilization)	30	3.2 (1.40)	MeanDif	-1.1 (-1.73712,-0.46287)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	Radiographic outcome: Palmar tilt (deg)	1 days	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	3.6 (6.90)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	-3.6 (11.20)	MeanDif	7.2 (2.945052,11.45494)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Arora, R., 2011	Moderate Quality	Radiographic outcome: Radial inclination (deg)	1 days	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	21.8 (2.70)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	20.3 (3.30)	MeanDif	1.5 (0.118478,2.881521)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	Radiographic outcome: Step-off (mm)	1 days	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.2 (0.60)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	0.7 (1.20)	MeanDif	-0.5 (-0.93350,-0.06649)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	1 days	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.6 (1.60)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	0.8 (1.70)	MeanDif	-0.2 (-0.95712,0.557126)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Radiographic outcome: Radial deviation* (deg)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	18 (8.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	19 (8.00)	MeanDif	-1 (-4.67075,2.670754)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Radiographic outcome: Ulnar deviation* (deg)	6 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	26 (8.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	26 (11.00)	MeanDif	0 (-4.40370,4.403700)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Radiographic outcome: Radial deviation* (deg)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	20 (7.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	20 (7.00)	MeanDif	0 (-3.21191,3.211910)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Radiographic outcome: Ulnar deviation* (deg)	12 weeks	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	30 (10.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	28 (10.00)	MeanDif	2 (-2.58844,6.588443)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Arora, R., 2011	Moderate Quality	Radiographic outcome: Radial deviation* (deg)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	20 (7.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	21 (12.00)	MeanDif	-1 (-5.49220,3.492208)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Radiographic outcome: Ulnar deviation* (deg)	6 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	33 (9.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	30 (10.00)	MeanDif	3 (-1.36191,7.361915)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Radiographic outcome: Radial deviation* (deg)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	24 (6.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	25 (7.00)	MeanDif	-1 (-3.98816,1.988164)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Radiographic outcome: Ulnar deviation* (deg)	12 months	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	35 (8.00)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	35 (8.00)	MeanDif	0 (-3.67075,3.670754)	Not Significant (P-value>.05)
Arora, R., 2011	Moderate Quality	Radiographic outcome: Palmar tilt (deg)	1 years	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	3 (7.20)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	-10.4 (19.10)	MeanDif	13.4 (6.811446,19.98855)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	Radiographic outcome: Radial inclination (deg)	1 years	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	21.2 (2.60)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	15.9 (9.00)	MeanDif	5.3 (2.278186,8.321813)	**Treatment 1 Significant (P-value<.05)**
Arora, R., 2011	Moderate Quality	Radiographic outcome: Step-off (mm)	1 years	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.2 (0.50)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	0.6 (1.10)	MeanDif	-0.4 (-0.7902 6,-0.00973)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Arora, R., 2011	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	1 years	PICO 4: Operative treatment (ORIF with a volar locking plate)	36	0.7 (1.80)	PICO 4: Non-operative treatment (Closed reduction and cast immobilization)	37	3.2 (2.90)	MeanDif	-2.5 (-3.60405,-1.39594)	**Treatment 1 Significant (P-value<.05)**
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Dorsal angulation (°)	1 days	PICO 4: Operative treatment (Percutaneous pinning)	27	-4 (7.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	-5 (7.00)	MeanDif	1 (-2.73411,4.734111)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Radial inclination (°)	1 days	PICO 4: Operative treatment (Percutaneous pinning)	27	22 (3.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	21 (3.00)	MeanDif	1 (-0.60033,2.600333)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Radial length (mm)	1 days	PICO 4: Operative treatment (Percutaneous pinning)	27	12 (3.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	10 (2.00)	MeanDif	2 (0.639978,3.360021)	**Treatment 1 Significant (P-value<.05)**
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	1 days	PICO 4: Operative treatment (Percutaneous pinning)	27	0 (1.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	0 (1.00)	MeanDif	0 (-0.53344,0.533444)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	1 days	PICO 4: Operative treatment (Percutaneous pinning)	27	0 (1.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	3 (2.00)	MeanDif	-3 (-3.84344,-2.15655)	**Treatment 1 Significant (P-value<.05)**
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Dorsal angulation (°)	5 weeks	PICO 4: Operative treatment (Percutaneous pinning)	27	-3 (10.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	2 (7.00)	MeanDif	-5 (-9.60433,-0.39566)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Radial inclination (°)	5 weeks	PICO 4: Operative treatment (Percutaneous pinning)	27	22 (5.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	20 (6.00)	MeanDif	2 (-0.94604,4.946043)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Radial length (mm)	5 weeks	PICO 4: Operative treatment (Percutaneous pinning)	27	8 (4.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	6 (3.00)	MeanDif	2 (0.113989,3.886010)	**Treatment 1 Significant (P-value<.05)**
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	5 weeks	PICO 4: Operative treatment (Percutaneous pinning)	27	3 (2.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	0 (1.00)	MeanDif	3 (2.156550,3.843449)	**Treatment 2 Significant (P-value<.05)**
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	5 weeks	PICO 4: Operative treatment (Percutaneous pinning)	27	3 (2.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	3 (2.00)	MeanDif	0 (-1.06688,1.066888)	Not Significant (P-value>.05)
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Dorsal angulation (°)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	-3 (10.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	4 (8.00)	MeanDif	-7 (-11.8305,-2.16945)	**Treatment 1 Significant (P-value<.05)**
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Radial inclination (°)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	22 (5.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	19 (6.00)	MeanDif	3 (0.053956,5.946043)	**Treatment 1 Significant (P-value<.05)**
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Radial length (mm)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	8 (3.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	5 (4.00)	MeanDif	3 (1.113989,4.886010)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Azzopardi, T., 2005	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	1 years	PICO 4: Operative treatment (Percutaneous pinning)	27	3 (2.00)	PICO 4: Non-operative treatment (Closed reduction under fluoroscopic guidance)	27	3 (2.00)	MeanDif	0 (-1.06688,1.066888)	Not Significant (P-value>.05)
Bartl, C., 2014	Moderate Quality	Radiographic outcome: Palmar inclination (degrees)*1	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	71	5.1 (6.70)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	78	-3.7 (12.90)	MeanDif	8.8 (5.540433,12.05956)	**Treatment 1 Significant (P-value<.05)**
Bartl, C., 2014	Moderate Quality	Radiographic outcome: Radial inclination (degrees)	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	71	20.3 (4.50)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	78	17.7 (6.30)	MeanDif	2.6 (0.853445,4.346554)	**Treatment 1 Significant (P-value<.05)**
Bartl, C., 2014	Moderate Quality	Radiographic outcome: Ulnar advancement, mm*2	3 months	PICO 4: Operative treatment (Open reduction and internal fixation (ORIF) - open reduction with volar locking plate fixation)	71	0.4 (1.60)	PICO 4: Non-operative treatment (Closed forearm cast for 6 weeks, followed by physiotherapy according to local standards)	78	1.6 (2.30)	MeanDif	-1.2 (-1.83170,-0.56829)	**Treatment 1 Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Dorsal angulation	2 weeks	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	**G1 (Operative) Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Radial inclination	2 weeks	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	**G1 (Operative) Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Radial shortening	2 weeks	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Dorsal angulation	5 weeks	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	**G1 (Operative) Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Radial inclination	5 weeks	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	**G1 (Operative) Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Radial shortening	5 weeks	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Dorsal angulation	2 months	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	**G1 (Operative) Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Radial inclination	2 months	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	**G1 (Operative) Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Radial shortening	2 months	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Dorsal angulation	1 years	PICO 4: Operative treatment (External fixation)	22	11 (9.00)	PICO 4: Non-operative treatment (Plaster casting)	29	20 (14.00)	MeanDif	-9 (-15.3330,-2.66691)	**Treatment 1 Significant (P-value<.05)**
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Radial inclination	1 years	PICO 4: Operative treatment (External fixation)	22	23 (6.00)	PICO 4: Non-operative treatment (Plaster casting)	29	16 (6.00)	MeanDif	7 (3.675073,10.32492)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Foldhazy, Z., 2010	Moderate Quality	Radiographic outcome: Radial shortening	1 years	PICO 4: Operative treatment (External fixation)	22	. %	PICO 4: Non-operative treatment (Plaster casting)	29	. %	Author Reported	NA	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Radiographic outcome: Radial inclination (°)	1 days	PICO 4: Operative treatment (External fixation)	15	24.5 (5.50)	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	23.1 (3.90)	MeanDif	1.4 (-1.94429,4.744297)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Radiographic outcome: Radial inclination (°)	3 months	PICO 4: Operative treatment (External fixation)	15	23.8 (5.10)	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	16.9 (6.40)	MeanDif	6.9 (2.910347,10.88965)	**Treatment 1 Significant (P-value<.05)**
Hegeman, J. H., 2004	Moderate Quality	Radiographic outcome: Loss of radial length (mm)	1 years	PICO 4: Operative treatment (External fixation)	15	3.2 (.)	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	2.9 (.)	MeanDif	0.3 (,)	Not Significant (P-value>.05)
Hegeman, J. H., 2004	Moderate Quality	Radiographic outcome: Radial inclination (°)	1 years	PICO 4: Operative treatment (External fixation)	15	22.7 (4.90)	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	17.5 (7.80)	MeanDif	5.2 (0.739335,9.660664)	**Treatment 1 Significant (P-value<.05)**
Hegeman, J. H., 2004	Moderate Quality	Radiographic outcome: Radiocarpal angle (°)	1 years	PICO 4: Operative treatment (External fixation)	15	-2.9 (.)	PICO 4: Non-operative treatment (Immobilization in below elbow plaster cast)	17	-12.7 (.)	MeanDif	9.8 (,)	**G1 (Operative) Significant (P-value<.05)**
Horne, J. G., 1990	Moderate Quality	Radiographic outcome: Dorsal Displacement	15 months	PICO 4: Operative treatment (External fixation)	15	3.1 (.)	PICO 4: Non-operative treatment (Closed reduction and plaster cast immobilization)	14	2.3 (.)	MeanDif	0.8 (,)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Horne, J. G., 1990	Moderate Quality	Radiographic outcome: Radial displacement	15 months	PICO 4: Operative treatment (External fixation)	15	1.7 (.)	PICO 4: Non-operative treatment (Closed reduction and plaster cast immobilization)	14	2.6 (.)	MeanDif	-0.9 (,)	Not Significant (P-value>.05)
Martinez-Mendez, D., 2018	Moderate Quality	Radiographic outcome: Arthrosis	0 days	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	. %	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	. %	Author Reported	NA	Not Significant (P-value>.05)
Martinez-Mendez, D., 2018	Moderate Quality	Radiographic outcome: Arthrosis	1 days	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	. %	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	. %	Author Reported	NA	Not Significant (P-value>.05)
Martinez-Mendez, D., 2018	Moderate Quality	Radiographic outcome: Articular step-off (mm)	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	0.4 (1.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	1 (3.00)	MeanDif	-0.6 (-1.501366,0.301364)	Not Significant (P-value>.05)
Martinez-Mendez, D., 2018	Moderate Quality	Radiographic outcome: Radial height (mm)	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	9 (2.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	5 (3.00)	MeanDif	4 (2.978749,5.021250)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Martinez-Mendez, D., 2018	Moderate Quality	Radiographic outcome: Radial inclination	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	19 (6.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	13 (6.00)	MeanDif	6 (3.610762,8.389237)	**Treatment 1 Significant (P-value<.05)**
Martinez-Mendez, D., 2018	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	24 months	PICO 4: Operative treatment (Open reduction and volar locking plate fixation through a standard Henry approach)	50	4 (3.00)	PICO 4: Non-operative treatment (Plaster immobilization, and then (after 2 weeks) plaster was changed to a forearm cast for four more weeks)	47	1 (2.00)	MeanDif	3 (1.990825,4.009174)	**Treatment 2 Significant (P-value<.05)**
Moroni, A., 2004	Moderate Quality	Radial Angle	Post-Op	PICO 4: Operative treatment (External Fixation)	20	23.5 (3.50)	PICO 4: Non-operative treatment (Plaster Cast)	20	20.6 (4.90)	MeanDif	2.9 (,)	**ns**
Moroni, A., 2004	Moderate Quality	Volar Angle	Post-Op	PICO 4: Operative treatment (External Fixation)	20	3.4 (1.80)	PICO 4: Non-operative treatment (Plaster Cast)	20	8.6 (5.80)	MeanDif	-5.2 (,)	**ns**
Moroni, A., 2004	Moderate Quality	Radial Shortening	Post-Op	PICO 4: Operative treatment (External Fixation)	20	0.9 (0.90)	PICO 4: Non-operative treatment (Plaster Cast)	20	1.7 (1.60)	MeanDif	-0.8 (,)	**ns**
Moroni, A., 2004	Moderate Quality	Volar Angle	6 weeks	PICO 4: Operative treatment (External Fixation)	20	1.9 (3.40)	PICO 4: Non-operative treatment (Plaster Cast)	20	-1.9 (9.40)	MeanDif	3.8 (,)	**ns**
Moroni, A., 2004	Moderate Quality	Radial Angle	6 weeks	PICO 4: Operative treatment (External Fixation)	20	23.3 (3.50)	PICO 4: Non-operative treatment (Plaster Cast)	20	17.1 (6.30)	MeanDif	6.2 (,)	**ns**
Moroni, A., 2004	Moderate Quality	Radial Shortening	6 weeks	PICO 4: Operative treatment (External Fixation)	20	1.6 (1.10)	PICO 4: Non-operative treatment (Plaster Cast)	20	2.5 (2.00)	MeanDif	-0.9 (,)	**ns**
Moroni, A., 2004	Moderate Quality	Radial Shortening	3 months	PICO 4: Operative treatment (External Fixation)	20	1.6 (1.10)	PICO 4: Non-operative treatment (Plaster Cast)	20	2.6 (2.00)	MeanDif	-1 (,)	**ns**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Moroni, A., 2004	Moderate Quality	Volar Angle	3 months	PICO 4: Operative treatment (External Fixation)	20	1.7 (3.40)	PICO 4: Non-operative treatment (Plaster Cast)	20	-1.9 (9.40)	MeanDif	3.6 (,)	**ns**
Moroni, A., 2004	Moderate Quality	Radial Angle	3 months	PICO 4: Operative treatment (External Fixation)	20	23.3 (3.50)	PICO 4: Non-operative treatment (Plaster Cast)	20	16.9 (6.40)	MeanDif	6.4 (,)	**ns**

PICO 5: Serial Radiography

Table 64: PICO 5 Frequent vs. Infrequent Radiographs

	Moderate Quality
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**van Gerven, P., 2019**
composite	
DASH	●
EQ-5D	●
PRWHE	●
Function	
SF-36: MCS	●
SF-36: PCS	●
pain	
VAS health status	●
VAS: At rest	●
VAS: With movement	●
Range of Motion	
Range of motion: Flexion-extension	↓
Range of motion: Pronation - supination	↓
Complication	
Total number of complications	●

Table 65: PICO 5- frequent vs infrequent radiographs- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	complications	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 66: PICO 5- frequent vs infrequent radiographs- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	SF-36: MCS	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	SF-36: PCS	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 67: PICO 5- frequent vs infrequent radiographs- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	VAS health status	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 68: PICO 5- frequent vs infrequent radiographs- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	VAS: With movement	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	VAS: At rest	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 69: PICO 5- frequent vs infrequent radiographs- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	Range of motion: Flexion-extension	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	107(36.00)	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	117(35.00)	MeanDif	-10(-17.71,-2.29)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	Range of motion: Pronation - supination	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	157(31.00)	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	161(31.00)	MeanDif	-4(-10.73,2.73)	Not Significant (P-value>.05)
van Gerven, P., 2019	Moderate Quality	Range of motion: Pronation - supination	52 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	175(12.00)	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	155(7.00)	MeanDif	20(17.88,22.12)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	Range of motion: Flexion-extension	52 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	123(27.00)	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	113(39.00)	MeanDif	10(2.69,17.31)	**Treatment 1 Significant (P-value<.05)**

Table 70: PICO 5- frequent vs infrequent radiographs- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	EQ-5D	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
van Gerven, P., 2019	Moderate Quality	PRWHE	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)
van Gerven, P., 2019	Moderate Quality	DASH	12 weeks	PICO 5: Frequent radiographs - during/after tx (Standard radiographic evaluation at 1, 2, 6, and 12 weeks)	166	. %	PICO 5: Less frequent radiographs - during/after tx (No routine radiographs were to be obtained after the initial radiographs in the first 2 weeks unless there was a clinical indication for them, including new trauma to the wrist, a pain score of >6 on a visual analog scale (VAS), loss of range of motion, or the presence of neurovascularrelated symptoms)	160	. %	Author Reported	NA	Not Significant (P-value>.05)

PICO 6: Fixation Technique (Complete Articular Fractures)

Table 71: PICO 6.01- Summary of Findings - Volar locking plate vs dorsal plating

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Chappuis, J., 2011 High Quality
Other	
Grip strength: Tightening strength (kg)	●
Radiographic Outcome	
Radiographic outcome: Radial inclination (°)	●
Radiographic outcome: Ulnar inclination (°)	●
Range of Motion	
Range of motion: Pronation (°)	↑
Range of motion: Supination (°)	●
Range of motion: Extension (°) (Injured)	↓
Range of motion: Flexion (°) - Injured	●
Complication	
Complications	●

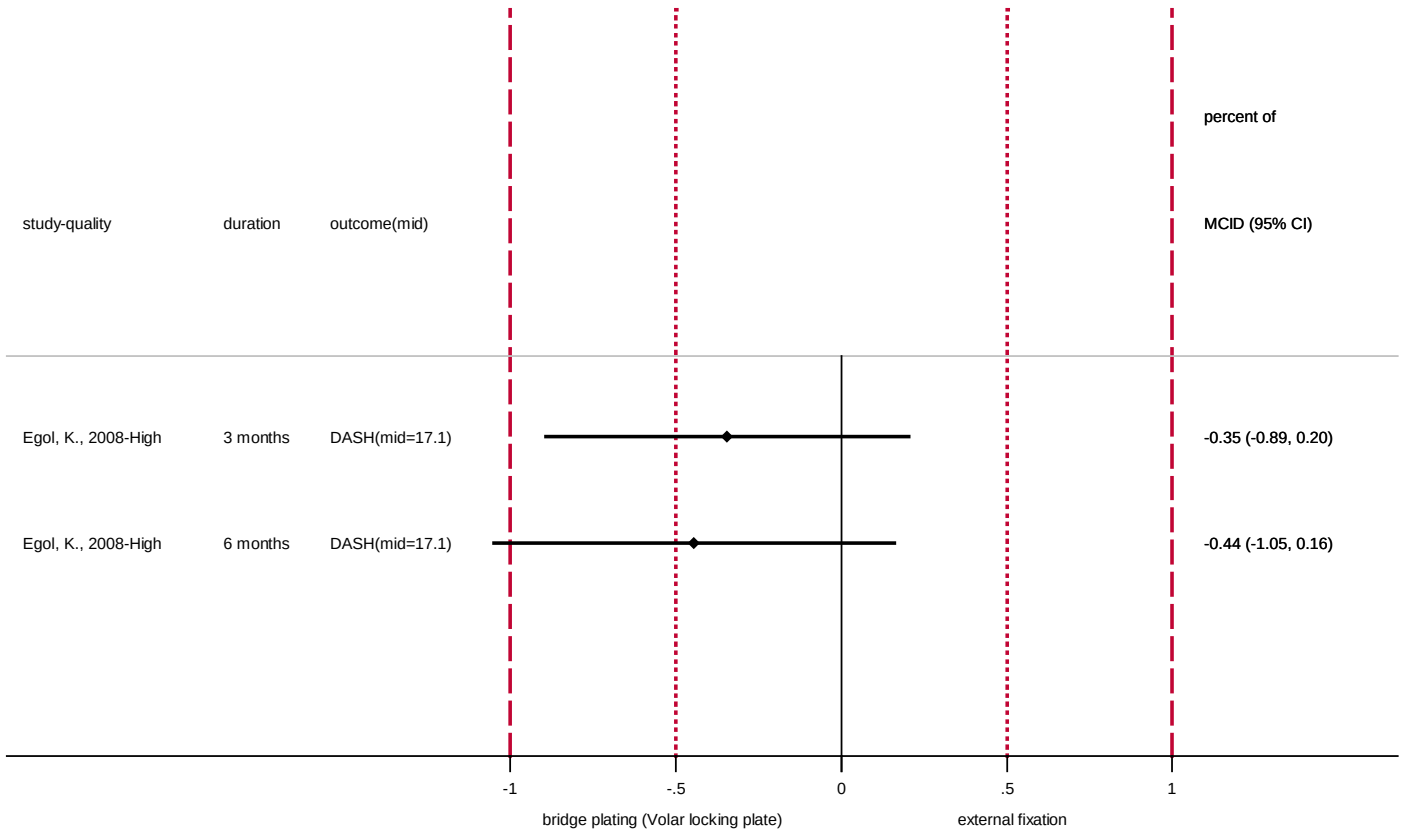
*Table 72: PICO 6.02- Summary of Findings - Volar locking plate vs External Fixation *Complete articular**

	High quality
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Hammer, O. L., 2019**
Composite	
DASH (QuickDASH): 11 questions evaluating physical activities, symptom severity, and effect of injury on social act.	↑
Other	
Grip strength: Kilograms	↑
Pain	
Pain (VAS): Visual Analog Pain scale	●
Radiographic Outcome	
Radiographic outcome: Volar tilt (°)	●
Radiographic outcome: Radial inclination (°)	↑
Radiographic outcome: Radial length (mm)	↑
Radiographic outcome: Intra-articular gap (mm)	●
Radiographic outcome: Intra-articular step (mm)	●
Range of Motion	
Range of motion: Extension (°)	↑
Range of motion: Flexion (°)	↑
Range of motion: Pronation (°)	↑
Range of motion: Supination (°)	↑

Table 73: PICO 6.02- Summary of Findings - Volar locking plate vs External Fixation

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality		
	Egol, K., 2008	Mellstrand Navarro, C., 2016	Roh, Y. H., 2015
Composite			
DASH: Disabilities of the Arm Shoulder and Hand score	●	●	
PRWE: Patient-Rated Wrist Evaluation (PRWE)1Patient-Rated Wrist Evaluation (PRWE)		●	
MHOQ: Michigan hand outcome questionnaire: includes four parts- general, work, pain, and appearance			●
Other			
Grip strength: Mean percentage	●		↑
Grip Strength: Mean Value, kPa		↑	
Pain			
Pain (VAS): Visual analogue scale (mm)	●		
Quality of life			
EuroQol-5D (EQ-5D)		↑	
Radiographic Outcome			
Radiographic outcome: Volar tilt (°)	●		●
Radiographic outcome: Radial inclination (°)	●		●
Radiographic outcome: Ulnar variance (mm)	↑		
Radiographic outcome: Radial length (mm)	●		
Radiographic outcome: Dorsal tilt from 0° - Injured wrist		↑	
Radiographic outcome: Radial inclination (°) - Injured wrist		●	
Radiographic outcome: Ulnar variance (mm) - Injured wrist		↑	
Radiographic outcome: Articular incongruity stepoff, mm (0-1)			●
Radiographic outcome: Articular incongruity stepoff, mm (1-2)			●
Radiographic outcome: Articular incongruity stepoff, mm (2-3)			●
Radiographic outcome: Articular incongruity stepoff, mm (>3)			●
Radiographic outcome: Ulnar variance (injured side)			↑
Radiographic outcome: Ulnar variance (uninjured side)			●
Range of Motion			
Range of motion: Supination		●	
Range of Motion: Extension		●	
Range of Motion: Flexion		●	
Range of Motion: Pronation		●	
Range of Motion: Radial deviation		↑	
Range of Motion: Ulnar deviation		●	
Range of motion: Extension (Mean percentage)	↑		
Range of motion: Flexion (mean %)	●		
Range of motion: Pronation (Reported as mean percentage)	↑		
Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	●		
Range of motion: Radial deviation (Reported as mean percentage)	↑		
Range of motion: Ulnar deviation (Reported as percentage of the uninjured contralateral side)	●		
Range of motion: Flexion-extension (%)			↑
Range of motion: Pronation-supination (%)			↑
Complication			
Complications (# of patients): Postoperative nerve deficit, wound infection, pin-track infection, tendon rupture, further surgery	●		
Complications (major/minor): One or more complications		●	

Figure 4: PICO 6.02- Summary of Findings for outcomes with MIDs- Volar locking plate vs External Fixation



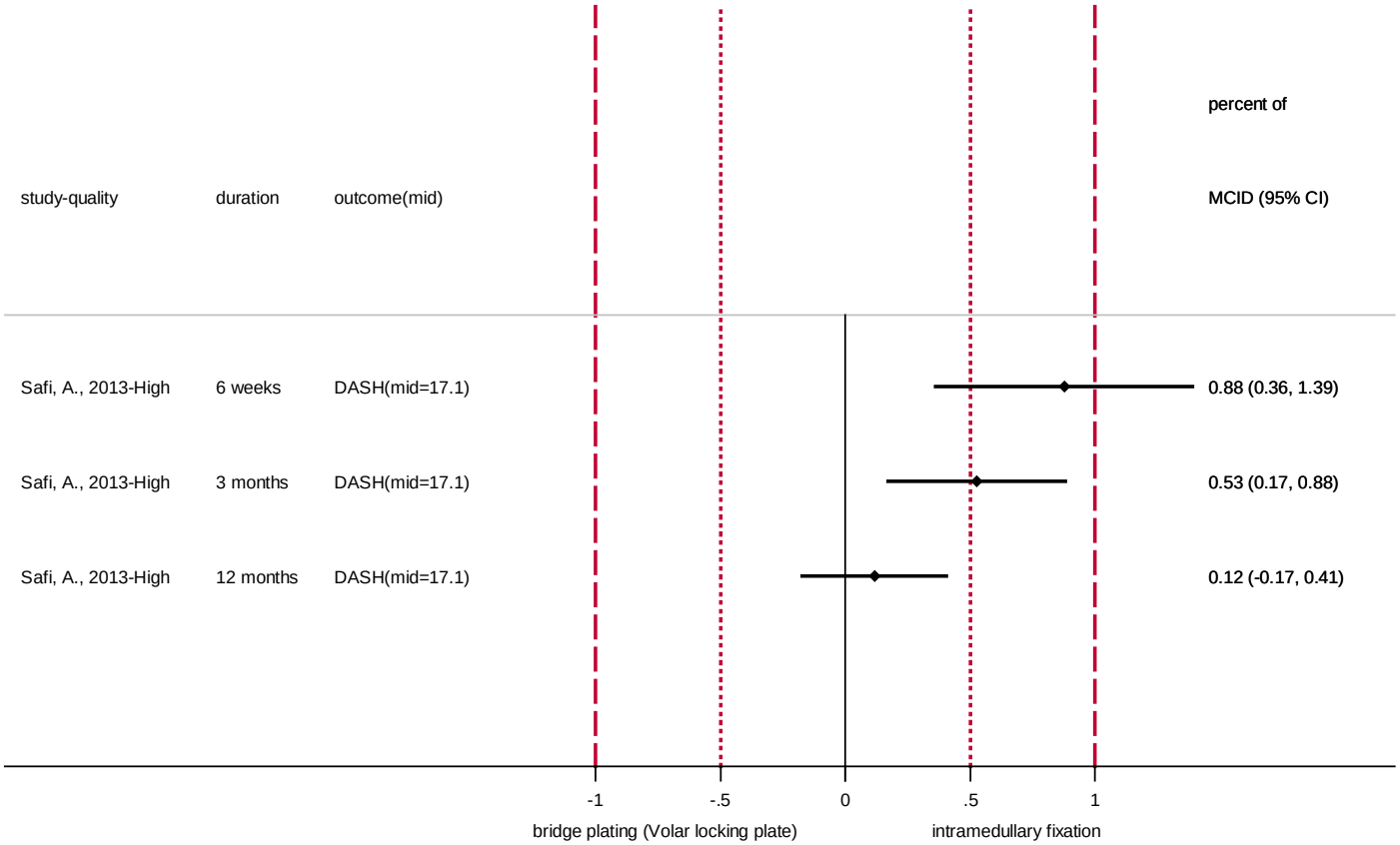
The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 74: PICO 6.03- Summary of Findings - Volar locking plate vs Intramedullary fixation

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality	
	Safi, A., 2013	Zehir, S., 2014
Composite		
DASH: Disabilities of the Arm Shoulder and Hand score	↓	
Mayo wrist score: Assesses pain, grip strength, range of motion, and return to employment	↓	
Gartland and Werley score: Subjective and objective evaluation		●
Pain		
Pain (at wrist)		●
Radiographic Outcome		
Radiographic outcome: Volar tilt (°)	●	
Radiographic outcome: Radial inclination (°)	●	
Radiographic outcome: Ulnar variance (mm)	●	
Radiographic outcome: Radial height (mm)	●	
Radiographic outcome: Radial inclination >/= 15°		●
Radiographic outcome: Radial shortening <5mm vs. healthy wrist		●
Radiographic outcome: Stewart score		●
Radiographic outcome: Volar tilt <20°		●
Range of Motion		
Range of motion: Extension (°)	↓	
Range of motion: Flexion (°)	↓	
Range of motion: Pronation (°)	↓	
Range of motion: Radial deviation (°)	↓	
Range of motion: Supination (°)	↓	
Range of motion: Ulnar deviation (°)	↓	
Complication		
Carpal tunnel syndrome		●
Complications (# of patients): Overall total		●
Infection		●
Radial nerve paraesthesia		●
Sudeck atrophy		●
Tendon rupture		●
Tenosynovitis		●

Figure 5: PICO 6.03- Summary of Findings for outcomes with MIDs - Volar locking plate vs Intramedullary fixation



The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

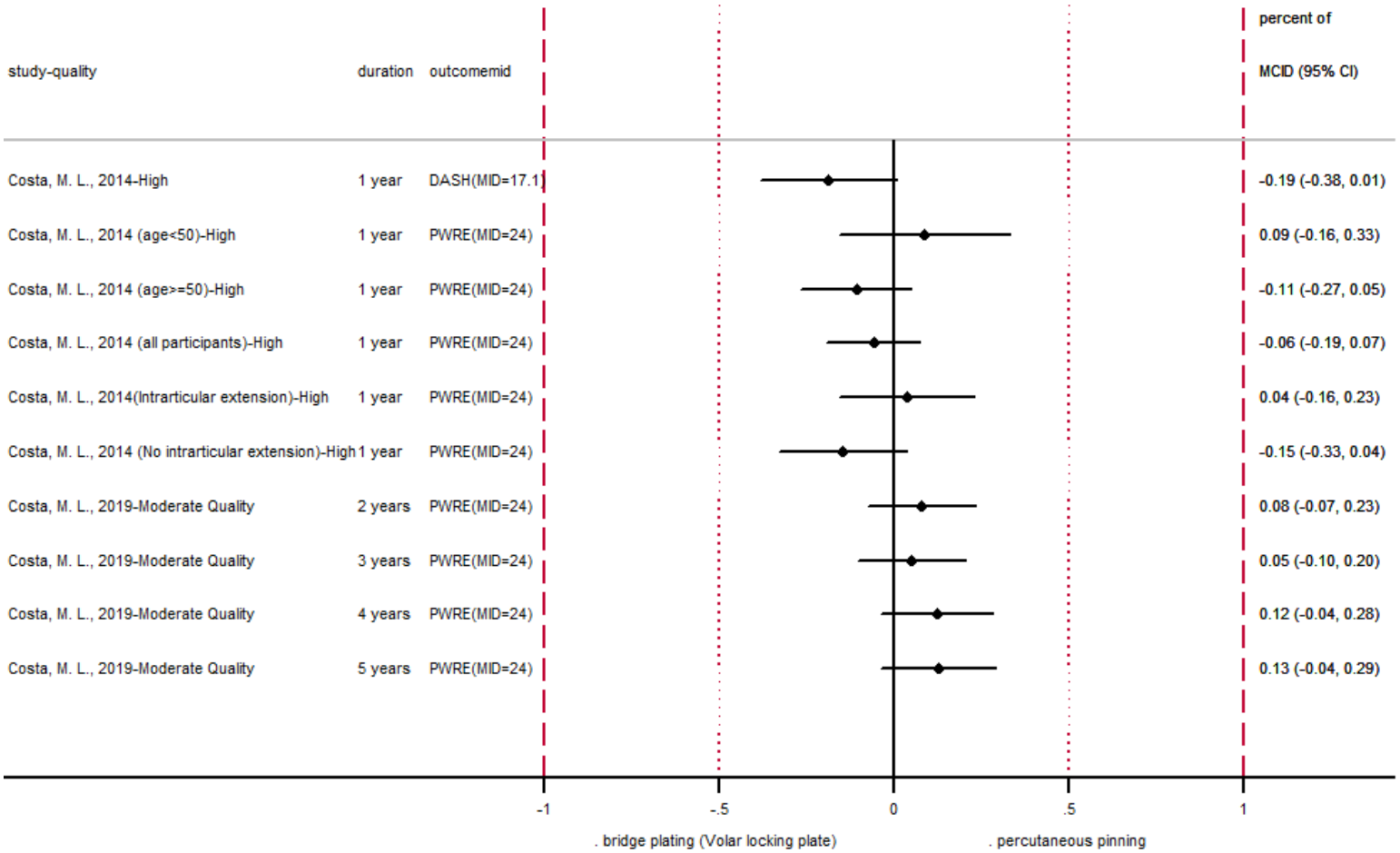
Table 75: PICO 6.04- Summary of Findings - Volar locking plate vs Percutaneous Pinning

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Costa, M. L., 2014 High Quality	Costa, M. L., 2019 Moderate Quality
Composite		
DASH: Disabilities of the Arm Shoulder and Hand score	●	
PRWE: Patient Rated Wrist Evaluation (All participants)	●	
PRWE: Patient Rated Wrist Evaluation (Intrarticular extension)	●	
PRWE: Patient Rated Wrist Evaluation (Age <50)	●	
PRWE: Patient Rated Wrist Evaluation (Age >/= 50)	●	
PRWE: Patient Rated Wrist Evaluation (No intrarticular extension)	●	
PRWE		●
Function		
EQ-5D: Euro-Qol; five domains of health; also includes Visual Analogue Scale	●	●
Quality of life		
EuroQol-5D (EQ-5D): Euro-Qol; five domains of health; also includes Visual Analogue Scale	●	
Complication		
Infection (deep): Number of complications; not necessarily number of patients	●	
Infection (superficial): Number of complications; not necessarily number of patients	●	
Neurological injury: Number of complications; not necessarily number of patients	●	
Refracture: Number of complications; not necessarily number of patients	●	
Tendon injury: Number of complications; not necessarily number of patients	●	
Vascular injury: Number of complications; not necessarily number of patients	●	

Table 76: PICO 6.04- Summary of Findings - Volar plating vs percutaneous fixation

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality		
	Marcheix, P. S., 2010	Rozental, T. D., 2009	Goehre, F., 2014
Composite			
DASH: Disabilities of the Arm Shoulder and Hand score	↑	↑	
Range of motion & grip strength: Herzberg scoring system (Assesses wrist range in flexion, extension, supination, and pronation, and grip strength)	↑		
Function			
Return to activities of daily living: Duration of time required to resume activities			↑
Other			
Grip strength: Reported as percentage of contralateral side		↑	
Grip stength: Percentage of contralateral side	↑		
Digital motion to palm (mm)		●	
Pinch strength: (Reported as percentage of contralateral side)		↑	
Pain			
Pain (Complex Regional Pain Syndrome)	●		
Radiographic Outcome			
Radiographic outcome: Volar tilt (°)		●	
Radiographic outcome: Radial inclination (°)	●	●	
Radiographic outcome: Ulnar variance (mm)	●		
Radiographic outcome: Radial inclination			●
Radiographic outcome: Radial length			●
Radiographic outcome: Radial height (mm)		●	
Radiographic outcome: Palmar tilt (°)	↓		
Radiographic outcome: Radial shortening (mm)	●		
Range of Motion			
Range of motion: Extension (°)	●	↑	
Range of motion: Flexion (°)	↑	↑	
Range of motion: Pronation (°)	●	↑	
Range of motion: Radial deviation (°)		↑	●
Range of motion: Supination (°)	↑	↑	
Range of motion: Ulnar deviation (°)		↑	
Range of motion: Supination			●
Range of Motion: Extension			↑
Range of Motion: Flexion			↑
Range of Motion: Pronation			●
Range of Motion: Ulnar deviation			●
Range of motion: Extension/Flexion (°)		↑	
Complication			
Infection (wound): Number of complications; not necessarily number of patients	●		
Over-reduction (Palmar tilt >15°): Number of complications; not necessarily number of patients	↑		

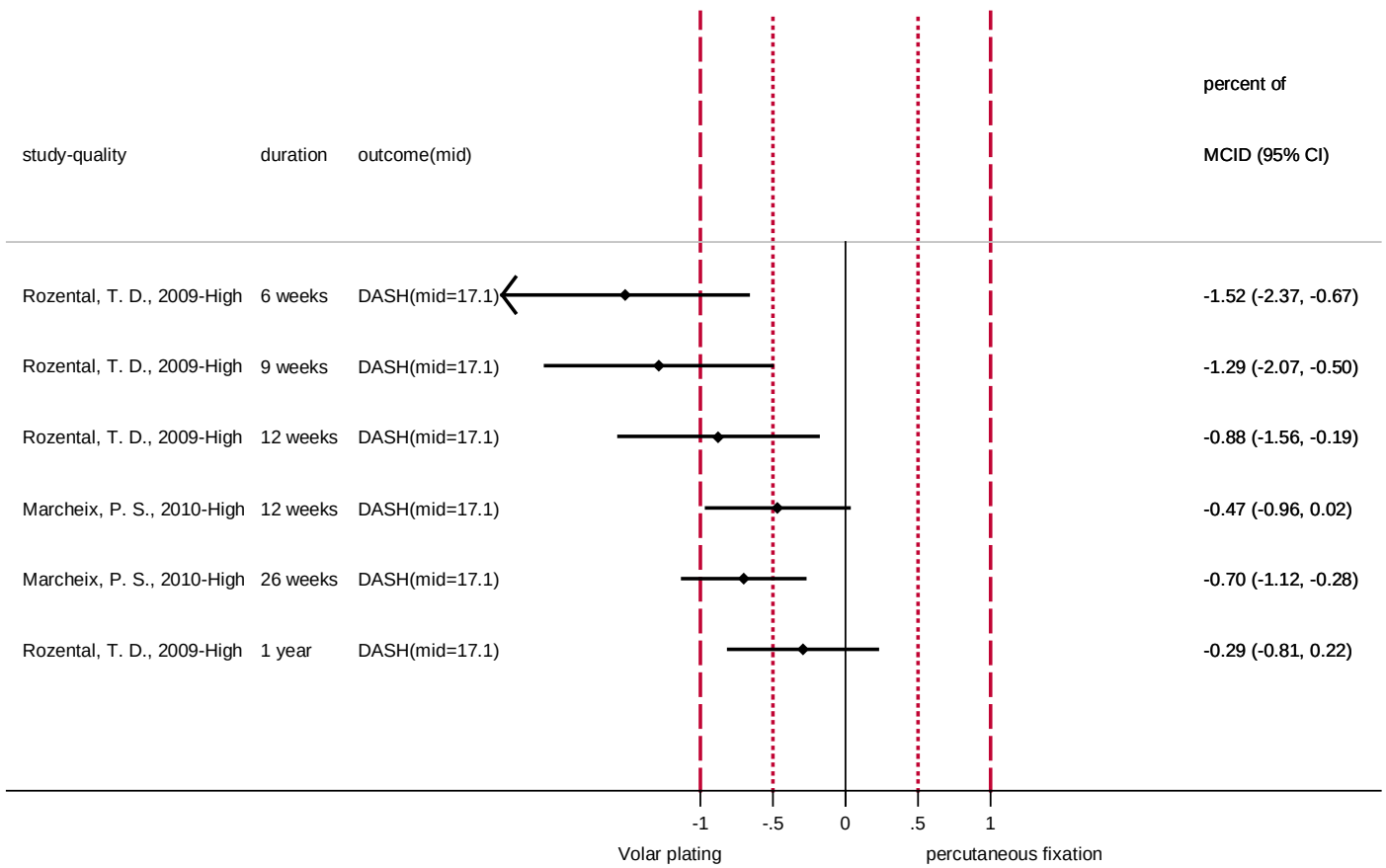
Figure 6: PICO 6.04- Summary of Findings for outcomes with MIDs - Volar locking plate vs Percutaneous Pinning



The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Figure 7: PICO 6.04- Summary of Findings for outcomes with MIDs- Volar plating vs percutaneous fixation



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Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

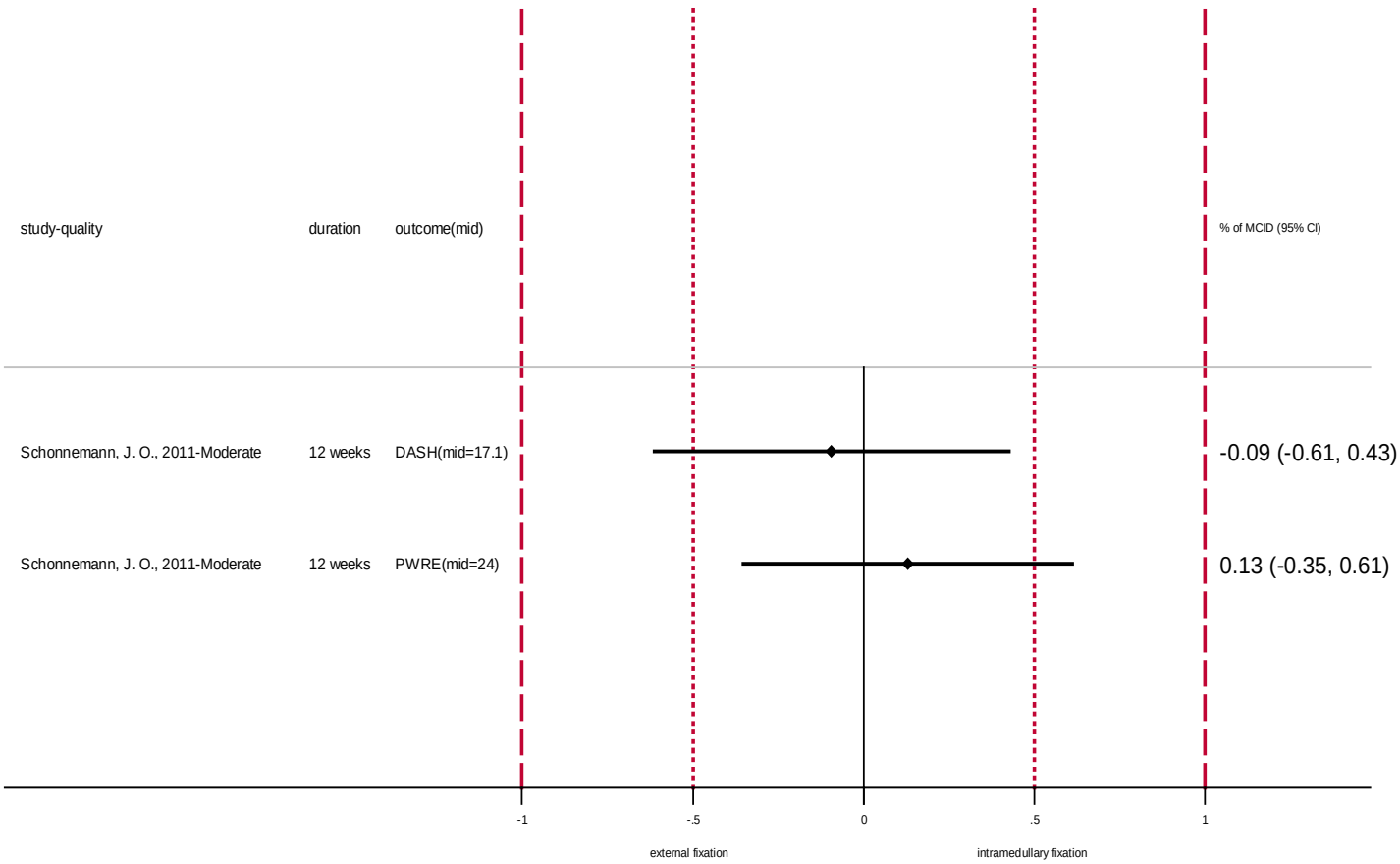
Table 77: PICO 6.05- Summary of Findings - Locking Plate vs Volar Non-Locking Plate

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Koshimune, M., 2005 Moderate Quality
Composite	
Gartland and Werley score: Subjective and objective evaluation (score of 'Excellent')	●
Gartland and Werley score: Subjective and objective evaluation (score of 'Fair')	●
Gartland and Werley score: Subjective and objective evaluation (score of 'Good')	↓
Gartland and Werley score: Subjective and objective evaluation (score of 'Poor')	●
Radiographic Outcome	
Radiographic outcome: Radial inclination (°)	●
Radiographic outcome: Radial length (mm)	●
Radiographic outcome: Palmar tilt (°)	●
Range of Motion	
Range of motion: Extension (°)	●
Range of motion: Flexion (°)	↑
Range of motion: Pronation (°)	●
Range of motion: Supination (°)	●

Table 78: PICO 6.06- Summary of Findings - External Fixation vs Intramedullary Fixation

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Schonnemann, J. O., 2011 Moderate Quality
Composite	
DASH: Disabilities of the Arm Shoulder and Hand score	●
PRWE: Patient Rated Wrist Evaluation	●
Other	
Grip strength: Kilograms	↓
Radiographic Outcome	
Radiographic outcome: Volar tilt (°)	↓
Radiographic outcome: Radial length (mm)	↓
Radiographic outcome: Change in radial length (mm)	●
Radiographic outcome: Change in volar tilt (°)	●
Complication	
Complications (# of patients)	●

Figure 8: PICO 6.06- Summary of Findings for outcomes with MIDs- External Fixation vs Intramedullary Fixation



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Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

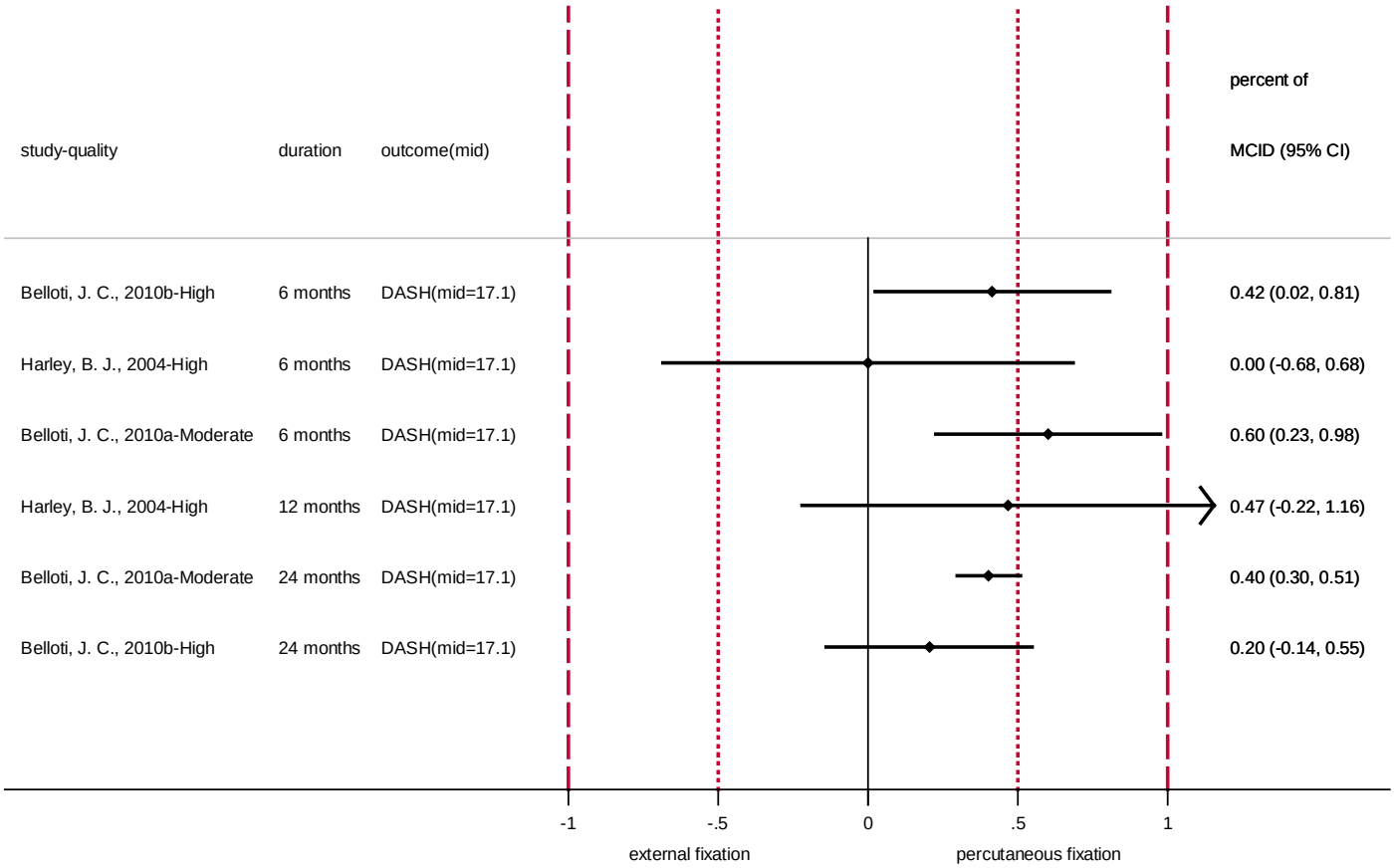
*Table 79: PICO 6.07- Summary of Findings - External Fixation vs Percutaneous Fixation *Complete articular**

	Moderate Quality
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Yazdanshenas, Hamed, 2019**
Composite	
QuickDASH	↑
Function	
EQ-5D questionnaire: Health state	●
EQ-5D questionnaire: Index value	●
Other	
Grip strength	↓
Radiographic Outcome	
Radiographic outcome: Radial length	●
Radiographic outcome: Palmar Tilt	●
Radiographic outcome: Radial Angle	●
Range of Motion	
Range of motion: Supination	↓
Range of Motion: Extension	↓
Range of Motion: Flexion	↓
Range of Motion: Pronation	↑
Complication	
Minor & major	●

Table 80: PICO 6.07- Summary of Findings - External Fixation vs Percutaneous Fixation

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality	
	Belloti, J. C., 2010	Harley, B. J., 2004
Composite		
DASH: Disabilities of the Arm Shoulder and Hand score	↓	●
Function		
SF-36 (MCS): Mental component score,		●
SF-36 (PCS): Physical component score,		●
Other		
Grip Strength (Kg): Mean difference in values between the uninjured and affected sides (index of limitation)	●	
Grip strength: Reported as percentage of the uninjured contralateral side		●
Pain		
Pain (VAS): Visual analogue scale (cm)	●	
Radiographic Outcome		
Radiographic outcome: Volar angle (°)	●	
Radiographic outcome: Height of radius (mm)	●	
Radiographic outcome: Radial angle (°)	↓	
Radiographic outcome: Gaps (1–2 mm)		●
Radiographic outcome: Gaps (>2 mm)		●
Radiographic outcome: Gaps (none)		●
Radiographic outcome: Steps (1–2 mm)		↓
Radiographic outcome: Steps (>2 mm)		●
Radiographic outcome: Steps (none)		●
Range of Motion		
Range of motion: Pronation (°)	●	
Range of motion: Radial deviation (°)	●	
Range of motion: Supination (°)	↓	
Range of motion: Ulnar deviation (°)	●	
Range of motion: Extension (°) - Mean limitation in degrees (control side minus affected side)	●	
Range of motion: Flexion (°) - Mean limitation in degrees (control side minus affected side)	●	
Range of motion: Extension/Flexion		●
Range of motion: Pronation/supination		●
Range of motion: Radial/ulnar deviation		●
Range of motion: Total		●
Complication		
Complications (# of patients): Failure of method, ulnar fracture, deep infection, pseudoarthrosis	●	
Complications: Pin drainage requiring abx, RSD, Nerve disturbance		●

Figure 9: PICO 6.07- Summary of Findings for outcomes with MIDs- External Fixation vs Percutaneous Fixation



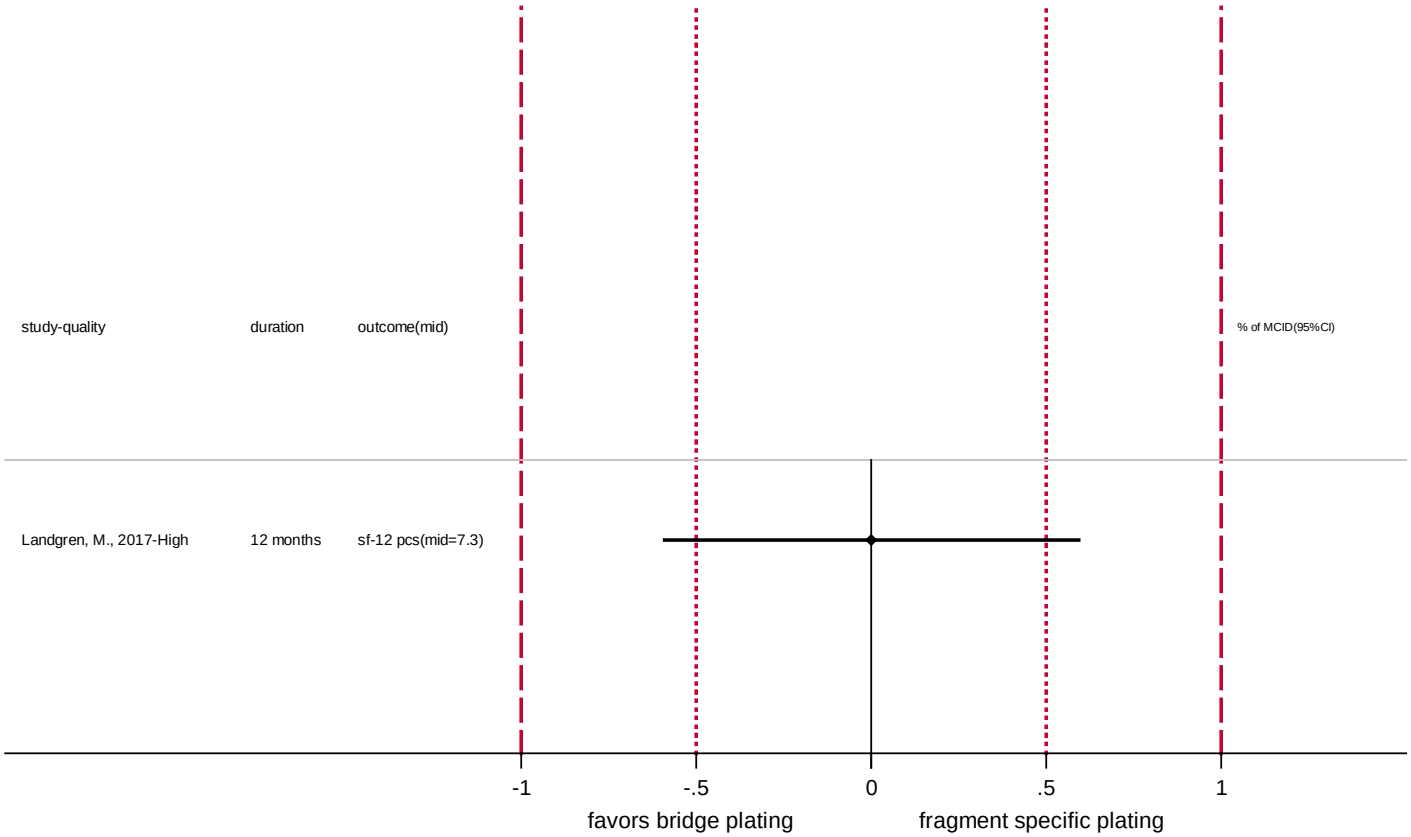
The red line indicates the MCID. Dotted line is 1/2 the MCID.

Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 81: PICO 6.08- Summary of Findings - Fragment Specific Plating vs Volar Plating

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Landgren, M., 2017 High Quality
Composite	
DASH (QuickDASH): Mean score	●
Function	
SF-12 MCS: General health status, mental component score	●
SF-12 PCS: General health status, physical component score	●
Other	
Grip strength: Kilograms	●
Grip strength: Reported as percentage of uninjured side	●
Pain	
Pain (VAS): VAS pain at activity (mm/100mm)	●
Pain (VAS): VAS pain at rest (mm/100mm)	●
Radiographic Outcome	
Radiographic outcome: Radial inclination (°)	●
Radiographic outcome: Ulnar variance (mm)	●
Radiographic outcome: DRUJ incongruence (mm)	●
Radiographic outcome: Dorsal angulation (°) Immediate postoperative period	↓
Radiographic outcome: Dorsal angulation (°) 12 month follow up	●
Radiographic outcome: Radiocarpal joint incongruence (mm)	●
Range of Motion	
Range of motion: Extension (°)	●
Range of motion: Flexion (°)	●
Range of motion: Pronation (°)	●
Range of motion: Radial deviation (°)	●
Range of motion: Supination (°)	●
Range of motion: Ulnar deviation (°)	●
Complication	
Complications (major): Loosening of hardware, loosening of hardware & EPL rupture, complex regional pain syndrome	●
Complications (major/minor)	↓
Complications (minor): Transient radial neurapraxia, carpal tunnel syndrome, tendinitis, skin adherence	●

Figure 10: PICO 6.08- Summary of Findings for outcomes with MIDs - Fragment Specific Plating vs Volar Plating



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Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 82: PICO 6.09- Summary of Findings - Fragment Specific Plating vs External Fixation

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Landgren, M., 2011 Moderate Quality
Composite	
DASH (QuickDASH): 11 questions evaluating physical activities, symptom severity, and effect of injury on social act.	●
Function	
SF-36: Mental health: General health assessment; 8 scaled scores	●
SF-36: Physical functioning: General health assessment; 8 scaled scores	●
SF-36: Role-emotional: General health assessment; 8 scaled scores	●
SF-36: Role-physical: General health assessment; 8 scaled scores	●
SF-36: Social functioning: General health assessment; 8 scaled scores	●
Days away from work (Manual work)	↑
Other	
Grip strength: Kilograms	●
Grip strength: Reported as percentage of uninjured side	●
DRU joint incongruence	↑
Pain	
SF-36: Bodily pain: General health assessment; 8 scaled scores	●
Quality of life	
SF-36: General Health: General health assessment; 8 scaled scores	●
SF-36: Vitality: General health assessment; 8 scaled scores	●
Radiographic Outcome	
Radiographic outcome: Radial inclination (°)	●
Radiographic outcome: Ulnar variance (mm)	●
Radiographic outcome: Dorsal angulation (Negative values indicate palmar angulation)	●
Range of Motion	
Range of motion: Extension-flexion (°)	●
Range of motion: Pronation-supination (°)	●
Range of motion: Radial-ulnar deviation (°)	●
Complication	
Osteoarthritis	●
Reoperations due to complications: Malunion, carpal tunnel release, pin tract adherence, osteosynthesis removal, tenosynovectomy	●

*Table 83: PICO 6.10- Summary of Findings- Volar plating vs dorsal plating *Complete articular**

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Jakubietz, M. G., 2012 High Quality
Composite	
DASH: Disabilities of the Arm Shoulder and Hand score	●
Gartland and Werley score: Subjective and objective evaluation	↑
Other	
Grip strength: Reported as percentage of contralateral side	↑
Pain	
Pain	↑
Radiographic Outcome	
Radiographic outcome: Radial inclination (°)	●
Radiographic outcome: Ulnar variance (mm)	●
Radiographic outcome: Radial height (mm)	●
Radiographic outcome: Palmar tilt (°)	↓
Range of Motion	
Range of motion: Extension/Flexion (°)	↑
Range of motion: Pronation/Supination (°)	↑
Range of motion: Radial/Ulnarduction (°)	●
Complication	
Complications: Complex regional pain syndrome Type 1, tendon ruptures, secondary fragment dislocations	●

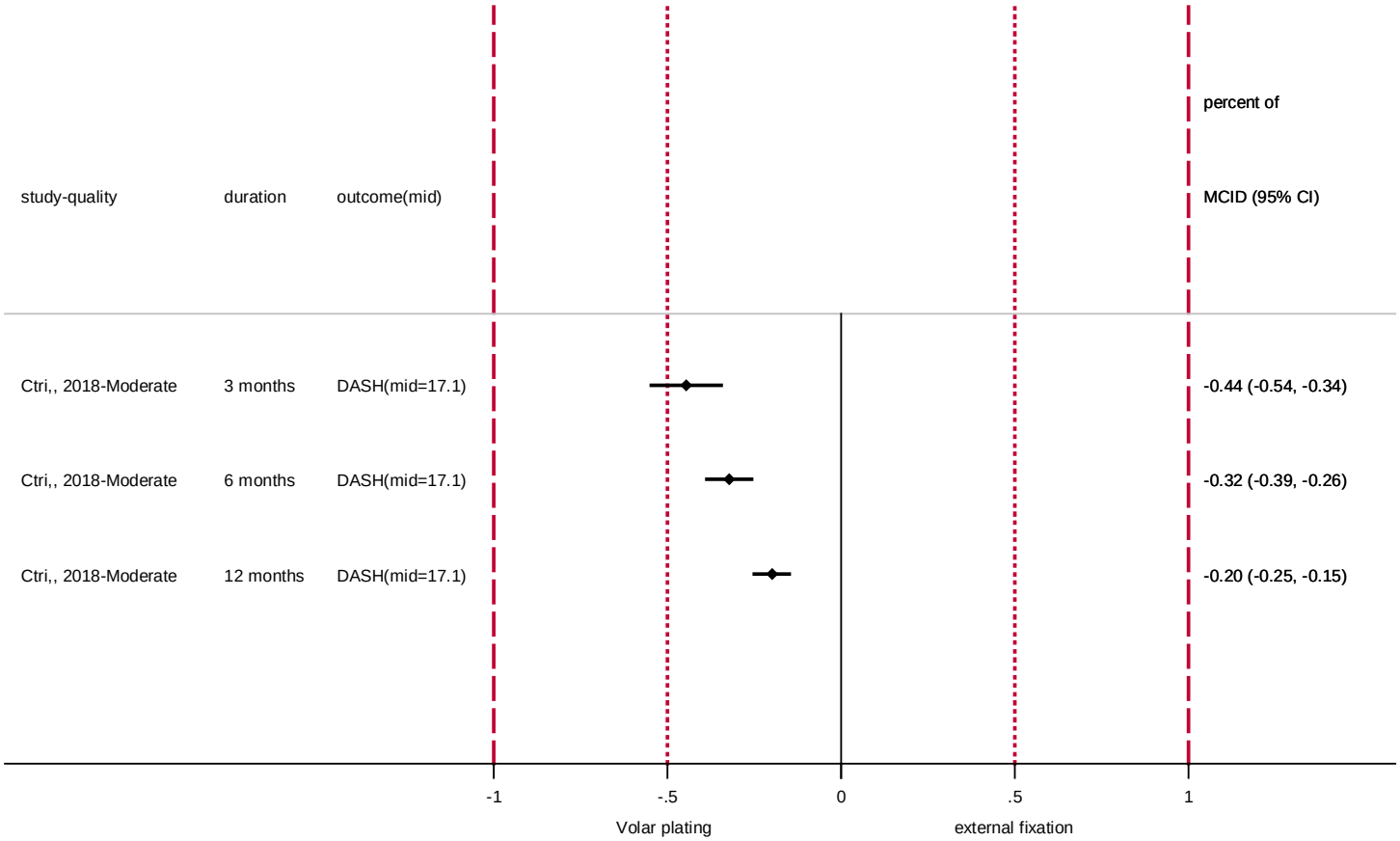
Table 84: PICO 6.10- Summary of Findings- Volar plating vs dorsal plating

	Moderate Quality
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Jakubietz, R. G., 2008**
Composite	
Gartland and Werley score: Subjective and objective evaluation	↑
Other	
Grip strength: Reported as percentage of contralateral side	↑
Pain	
Pain (VAS): Visual Analog Pain scale	↑
Range of Motion	
Range of motion: Pronation-supination (°)	↑
Range of motion: Flexion-extension (°)	↑
Range of motion: Radial-ulnar (°)	↑

Table 85: PICO 6.11- Summary of Findings - Volar Plating vs External Fixation

	Moderate Quality
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Mishra, A. K., 2019**
Composite	
DASH: Disabilities of the Arm Shoulder and Hand score	↑
Other	
Grip strength: Reported as percentage of contralateral side	↑
Pain	
Pain (VAS): Visual Analog Pain scale	↑
Range of Motion	
Range of motion: Dorsiflexion (Percentage value of the contralateral uninjured side)	↑
Range of motion: Pronation (Reported as percentage of contralateral uninjured side)	↑
Range of motion: Radial deviation (Reported as mean percentage)	↑
Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	↑
Range of motion: Ulnar deviation (Reported as percentage of the uninjured contralateral side)	↑
Range of motion: Volar flexion (Reported as percentage of the uninjured contralateral side)	↑
Complication	
Complications: Stiffness, infection, CRPS, extensor tendon irritation, loss of reduction	●

Figure 71: PICO 6.11- Summary of Findings for outcomes with MIDs- Volar Plating vs External Fixation



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Effects >= .5 of the MCID means treatment may benefit an appreciable number of patients

Table 86: PICO 6.01- Volar locking plate vs dorsal plating- Complication

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chappuis, J., 2011	High Quality	Complications	6 months	PICO 6: (Volar locking plate fixation; DVR plate through Henry type volar approach)	15	26.67%	PICO 6: Dorsal plating (Dorsal nail plate fixation)	16	25.00%	RR	1.07(0.32,3.52)	Not Significant (P-value>.05)

Table 87: PICO 6.01- Volar locking plate vs dorsal plating - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chappuis, J., 2011	High Quality	Grip strength: Tightening strength (kg)	6 months	PICO 6: (Volar locking plate fixation; DVR plate through Henry type volar approach)	15	18(.)	PICO 6: Dorsal plating (Dorsal nail plate fixation)	16	35.5(.)	MeanDif	-17.5(.,.)	Not Significant (P-value>.05)

Table 88: PICO 6.01- Volar locking plate vs dorsal plating - Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chappuis, J., 2011	High Quality	Radiographic outcome: Ulnar inclination (°)	6 months	PICO 6: (Volar locking plate fixation; DVR plate through Henry type volar approach)	15	30(.)	PICO 6: Dorsal plating (Dorsal nail plate fixation)	16	40(.)	MeanDif	-10(.,.)	Not Significant (P-value>.05)
Chappuis, J., 2011	High Quality	Radiographic outcome: Radial inclination (°)	6 months	PICO 6: (Volar locking plate fixation; DVR plate through Henry type volar approach)	15	10(.)	PICO 6: Dorsal plating (Dorsal nail plate fixation)	16	15(.)	MeanDif	-5(.,.)	Not Significant (P-value>.05)

Table 89: PICO 6.01- Volar locking plate vs dorsal plating - Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chappuis, J., 2011	High Quality	Range of motion: Extension (°) (Injured)	6 months	PICO 6: (Volar locking plate fixation; DVR plate through Henry type volar approach)	15	50(.)	PICO 6: Dorsal plating (Dorsal nail plate fixation)	16	42.5(.)	MeanDif	7.5(.,.)	**G2 (Bridge plating) Significant**
Chappuis, J., 2011	High Quality	Range of motion: Flexion (°) - Injured	6 months	PICO 6: (Volar locking plate fixation; DVR plate through Henry type volar approach)	15	60(.)	PICO 6: Dorsal plating (Dorsal nail plate fixation)	16	62.5(.)	MeanDif	-2.5(.,.)	Not Significant (P-value>.05)
Chappuis, J., 2011	High Quality	Range of motion: Pronation (°)	6 months	PICO 6: (Volar locking plate fixation; DVR plate through Henry type volar approach)	15	80(.)	PICO 6: Dorsal plating (Dorsal nail plate fixation)	16	85(.)	MeanDif	-5(.,.)	**G1(Dorsal nail fixation) Significan**
Chappuis, J., 2011	High Quality	Range of motion: Supination (°)	6 months	PICO 6: (Volar locking plate fixation; DVR plate through Henry type volar approach)	15	80(.)	PICO 6: Dorsal plating (Dorsal nail plate fixation)	16	80(.)	MeanDif	0(.,.)	Not Significant (P-value>.05)

Table 90: PICO 6.02- Volar locking plate vs External Fixation - Complication

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Complications (# of patients): Postoperative nerve deficit, wound infection, pin-track infection, tendon rupture, further surgery	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	20.51%	PICO 6: External fixation (Bridge external fixation)	38	18.42%	RR	1.11(0.45,2.77)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Complications (major/minor): One or more complications	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	50.72%	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	44.62%	RR	1.14(0.8,1.62)	Not Significant (P-value>.05)

Table 91: PICO 6.02- Volar locking plate vs External Fixation - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	PRWE: Patient-Rated Wrist Evaluation (PRWE)1Patient-Rated Wrist Evaluation (PRWE)	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	21(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	25(.)	Author Reported	NA	**NS**
Mellstrand Navarro, C., 2016	High Quality	PRWE: Patient-Rated Wrist Evaluation (PRWE)1Patient-Rated Wrist Evaluation (PRWE)	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	13(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	14(.)	Author Reported	NA	**NS**

Table 92: PICO 6.02- Volar locking plate vs External Fixation - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Grip strength: Mean percentage	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Grip strength: Mean percentage	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Grip strength: Mean percentage	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Grip strength: Kilograms	6 weeks	PICO 6: (Volar locking plate fixation; DVR plate)	84	12.2(9.40)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	2.2(4.20)	MeanDif	10(7.77,12.23)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Grip strength: Kilograms	3 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	20.7(10.90)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	13.5(8.10)	MeanDif	7.2(4.26,10.14)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hammer, O. L., 2019	High Quality	Grip strength: Kilograms	6 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	26.9(12.40)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	21.6(9.30)	MeanDif	5.3(1.94,8.66)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Grip strength: Kilograms	1 year	PICO 6: (Volar locking plate fixation; DVR plate)	82	30.3(123.00)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	27.4(9.70)	MeanDif	2.9(-24.21,30.01)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Grip strength: Kilograms	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	31.6(12.60)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	30.1(9.90)	MeanDif	1.5(-2.03,5.03)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Grip Strength: Mean Value, kPa	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	46(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	36(.)	MeanDif	10(.,.)	**G1 (Bridge plating) Significant**
Mellstrand Navarro, C., 2016	High Quality	Grip Strength: Mean Value, kPa	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	63(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	59(.)	MeanDif	4(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Roh, Y. H., 2015	High Quality	Grip strength: Mean percentage	3 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	. %	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Roh, Y. H., 2015	High Quality	Grip strength: Mean percentage	6 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	. %	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Roh, Y. H., 2015	High Quality	Grip strength: Mean percentage	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	78(16.00)	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	75(14.00)	MeanDif	3(-3.99,9.99)	Not Significant (P-value>.05)

Table 93: PICO 6.02- Volar locking plate vs External Fixation - Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Radiographic outcome: Ulnar variance (mm)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	0.6(2.00)	PICO 6: External fixation (Bridge external fixation)	38	1.6(1.90)	MeanDif	-1(-1.89,-0.11)	**Treatment 1 Significant (P-value<.05)**
Egol, K., 2008	High Quality	Radiographic outcome: Ulnar variance (mm)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	1.4(4.20)	PICO 6: External fixation (Bridge external fixation)	39	1.3(1.90)	MeanDif	0.1(-1.38,1.58)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Radiographic outcome: Ulnar variance (mm)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	1(1.90)	PICO 6: External fixation (Bridge external fixation)	38	1.8(2.60)	MeanDif	-0.8(-1.84,0.24)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Radiographic outcome: Intra-articular gap (mm)	1 day	PICO 6: (Volar locking plate fixation; DVR plate)	84	0.48(0.80)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	0.44(0.80)	MeanDif	0.04(-0.21,0.29)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Radiographic outcome: Intra-articular step (mm)	1 day	PICO 6: (Volar locking plate fixation; DVR plate)	84	0.24(0.60)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	0.33(0.70)	MeanDif	-0.09(-0.29,0.11)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hammer, O. L., 2019	High Quality	Radiographic outcome: Radial inclination (°)	1 day	PICO 6: (Volar locking plate fixation; DVR plate)	84	20.8(4.80)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	19.35(5.20)	MeanDif	1.45(-0.08,2.98)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Radiographic outcome: Radial length (mm)	1 day	PICO 6: (Volar locking plate fixation; DVR plate)	84	10.63(2.50)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	9.63(3.00)	MeanDif	1(0.15, 1.85)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Radiographic outcome: Volar tilt (°)	1 day	PICO 6: (Volar locking plate fixation; DVR plate)	84	2.19(7.00)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	0.11(5.90)	MeanDif	2.08 p=.110 from linear mixed model	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Radiographic outcome: Intra-articular gap (mm)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	0.16(0.20)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	0.15(0.50)	MeanDif	0.01(-0.11,0.13)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Radiographic outcome: Intra-articular step (mm)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	0.17(0.60)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	0.15(0.50)	MeanDif	0.02(-0.15,0.19)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Radiographic outcome: Radial inclination (°)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	19.87(4.50)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	17.9(4.80)	MeanDif	1.97(0.52,3.42)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hammer, O. L., 2019	High Quality	Radiographic outcome: Radial length (mm)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	9.59(3.10)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	8.16(3.00)	MeanDif	1.43(0.48,2.38)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Radiographic outcome: Volar tilt (°)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	2.07(7.80)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	-0.23(7.10)	MeanDif	2.3 p=.074 from linear mixed model	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Dorsal tilt from 0° - Injured wrist	1 day	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	33(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	32(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Dorsal tilt from 0° - Injured wrist	1 day	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	-7(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	-2(.)	MeanDif	-5(.,.)	**G1 (Bridge plating) Significant**
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Radial inclination (°) - Injured wrist	1 day	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	12(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	11(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Radial inclination (°) - Injured wrist	1 day	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	22(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	20(.)	MeanDif	2(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Ulnar variance (mm) - Injured wrist	1 day	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	12(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	11(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Ulnar variance (mm) - Injured wrist	1 day	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	-0.6(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	-2(.)	MeanDif	1.4(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Dorsal tilt from 0° - Injured wrist	2 weeks	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	-5(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	-1(.)	MeanDif	-4(.,.)	**G1 (Bridge plating) Significant**
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Radial inclination (°) - Injured wrist	2 weeks	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	20(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	20(.)	MeanDif	0(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Ulnar variance (mm) - Injured wrist	2 weeks	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	-0.07(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	-0.1(.)	MeanDif	0.03(.,.)	**G1 (Bridge plating) Significant**
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Dorsal tilt from 0° - Injured wrist	6 weeks	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	-5(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	-1(.)	MeanDif	-4(.,.)	**G1 (Bridge plating) Significant**
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Radial inclination (°) - Injured wrist	6 weeks	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	21(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	20(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Ulnar variance (mm) - Injured wrist	6 weeks	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	-0.6(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	0.4(.)	MeanDif	-1(.,.)	**G1 (Bridge plating) Significant**
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Dorsal tilt from 0° - Injured wrist	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	-4(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	-1(.)	MeanDif	-3(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Radial inclination (°) - Injured wrist	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	21(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	20(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Ulnar variance (mm) - Injured wrist	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	-0.6(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	0.6(.)	MeanDif	-1.2(.,.)	**G1 (Bridge plating) Significant**
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Dorsal tilt from 0° - Injured wrist	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	-2(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	1(.)	MeanDif	-3(.,.)	**G1 (Bridge plating) Significant**
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Radial inclination (°) - Injured wrist	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	21(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	20(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Radiographic outcome: Ulnar variance (mm) - Injured wrist	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	-0.4(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	0.6(.)	MeanDif	-1(.,.)	**G1 (Bridge plating) Significant**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Roh, Y. H., 2015	High Quality	Radiographic outcome: Radial inclination (°)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	24(3.00)	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	23(3.00)	MeanDif	1(-0.39,2.39)	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	Radiographic outcome: Articular incongruity stepoff, mm (>3)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	0.00%	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	0.00%	RD	0(-9.18,9.64)	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	Radiographic outcome: Articular incongruity stepoff, mm (0-1)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	38.89%	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	31.58%	RR	1.23(0.66,2.29)	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	Radiographic outcome: Articular incongruity stepoff, mm (1-2)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	58.33%	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	60.53%	RR	0.96(0.66,1.41)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Roh, Y. H., 2015	High Quality	Radiographic outcome: Articular incongruity stepoff, mm (2-3)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	2.78%	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	7.89%	RR	0.35(0.04,3.23)	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	Radiographic outcome: Ulnar variance (injured side)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	0.7(1.40)	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	1.5(1.70)	MeanDif	-0.8(-1.52,-0.08)	**Treatment 1 Significant (P-value<.05)**
Roh, Y. H., 2015	High Quality	Radiographic outcome: Ulnar variance (uninjured side)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	0.5(1.30)	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	0.4(1.20)	MeanDif	0.1(-0.48,0.68)	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	Radiographic outcome: Volar tilt (°)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	5(5.00)	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	3(4.00)	MeanDif	2(-0.11,4.11)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Radiographic outcome: Radial inclination (°)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	22.2(4.50)	PICO 6: External fixation (Bridge external fixation)	38	19.9(5.40)	MeanDif	2.3(.,.) p=.07 when adjusted for baseline score	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Radiographic outcome: Radial length (mm)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	10.9(2.70)	PICO 6: External fixation (Bridge external fixation)	38	10.5(2.90)	MeanDif	0.4(-0.87,1.67)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Radiographic outcome: Volar tilt (°)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	4.4(6.90)	PICO 6: External fixation (Bridge external fixation)	38	3.3(7.20)	MeanDif	1.1(-2.1,4.3)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Radiographic outcome: Radial inclination (°)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	21.2(3.40)	PICO 6: External fixation (Bridge external fixation)	38	19.7(5.00)	MeanDif	1.5(-0.45,3.45)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Radiographic outcome: Radial length (mm)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	10.3(1.90)	PICO 6: External fixation (Bridge external fixation)	38	9.7(2.70)	MeanDif	0.6(-0.46,1.66)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Radiographic outcome: Volar tilt (°)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	6.5(5.10)	PICO 6: External fixation (Bridge external fixation)	38	3.2(10.30)	MeanDif	3.3(-0.43,7.03)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Radiographic outcome: Radial inclination (°)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	20(4.20)	PICO 6: External fixation (Bridge external fixation)	38	20.7(5.30)	MeanDif	-0.7(-2.88,1.48)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Radiographic outcome: Radial length (mm)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	9.9(2.60)	PICO 6: External fixation (Bridge external fixation)	38	10.7(2.80)	MeanDif	-0.8(-2.03,0.43)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Radiographic outcome: Volar tilt (°)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	5.7(6.60)	PICO 6: External fixation (Bridge external fixation)	38	2.5(10.90)	MeanDif	3.2(-0.92,7.32)	Not Significant (P-value>.05)

Table 94: PICO 6.02- Volar locking plate vs External Fixation - Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Range of motion: Extension (Mean percentage)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Egol, K., 2008	High Quality	Range of motion: Flexion (mean %)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Pronation (Reported as mean percentage)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Egol, K., 2008	High Quality	Range of motion: Radial deviation (Reported as mean percentage)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Egol, K., 2008	High Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Range of motion: Ulnar deviation (Reported as percentage of the uninjured contralateral side)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Extension (Mean percentage)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Egol, K., 2008	High Quality	Range of motion: Flexion (mean %)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Pronation (Reported as mean percentage)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Egol, K., 2008	High Quality	Range of motion: Radial deviation (Reported as mean percentage)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Ulnar deviation (Reported as percentage of the uninjured contralateral side)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Extension (Mean percentage)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Flexion (mean %)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Pronation (Reported as mean percentage)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Range of motion: Radial deviation (Reported as mean percentage)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Range of motion: Ulnar deviation (Reported as percentage of the uninjured contralateral side)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	. %	PICO 6: External fixation (Bridge external fixation)	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Range of motion: Extension (°)	6 weeks	PICO 6: (Volar locking plate fixation; DVR plate)	84	34.1(20.70)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	8.4(16.80)	MeanDif	25.7(19.93,31.47)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Range of motion: Flexion (°)	6 weeks	PICO 6: (Volar locking plate fixation; DVR plate)	84	30.7(17.20)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	10.5(20.70)	MeanDif	20.2(14.36,26.04)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hammer, O. L., 2019	High Quality	Range of motion: Pronation (°)	6 weeks	PICO 6: (Volar locking plate fixation; DVR plate)	84	73.4(21.90)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	48.3(30.00)	MeanDif	25.1(17.03,33.17)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Range of motion: Supination (°)	6 weeks	PICO 6: (Volar locking plate fixation; DVR plate)	84	58.3(26.00)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	18.2(29.30)	MeanDif	40.1(31.6,48.6)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Range of motion: Extension (°)	3 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	52(16.00)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	41.2(18.80)	MeanDif	10.8(5.44,16.16)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Range of motion: Flexion (°)	3 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	46.6(17.60)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	40(13.70)	MeanDif	6.6(1.77,11.43)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Range of motion: Flexion (°)	3 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	46.6(17.60)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	41.2(18.80)	MeanDif	5.4(-0.18,10.98)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Range of motion: Pronation (°)	3 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	84.5(8.20)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	81.4(11.30)	MeanDif	3.1(0.07,6.13)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hammer, O. L., 2019	High Quality	Range of motion: Supination (°)	3 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	75.9(15.90)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	63.9(24.30)	MeanDif	12(5.68,18.32)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Range of motion: Extension (°)	6 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	60.4(15.30)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	15.6(.)	MeanDif	3.9(-0.84,8.64)	**G1 (Bridge plating) Significant**
Hammer, O. L., 2019	High Quality	Range of motion: Pronation (°)	6 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	85.2(9.20)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	84.8(10.60)	MeanDif	0.4(-2.65,3.45)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Range of motion: Supination (°)	6 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	84.7(7.20)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	76.8(16.20)	Author Reported	NA	**G1 (Bridge plating) Significant**
Hammer, O. L., 2019	High Quality	Range of motion: Extension (°)	1 year	PICO 6: (Volar locking plate fixation; DVR plate)	82	66.5(13.10)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	63.4(15.80)	MeanDif	3.1(-1.45,7.65)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Range of motion: Flexion (°)	1 year	PICO 6: (Volar locking plate fixation; DVR plate)	82	57.5(11.10)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	54.3(15.60)	MeanDif	3.2(-1.05,7.45)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hammer, O. L., 2019	High Quality	Range of motion: Pronation (°)	1 year	PICO 6: (Volar locking plate fixation; DVR plate)	82	87.2(5.40)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	85.6(8.60)	MeanDif	1.6(-0.66,3.86)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Range of motion: Supination (°)	1 year	PICO 6: (Volar locking plate fixation; DVR plate)	82	84.8(11.80)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	81.7(10.80)	MeanDif	3.1(-0.43,6.63)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Range of motion: Extension (°)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	70.1(11.00)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	66.2(13.60)	MeanDif	3.9(0.02,7.78)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	Range of motion: Flexion (°)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	59.3(11.80)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	59.3(12.10)	MeanDif	0(-3.73,3.73)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Range of motion: Pronation (°)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	87.3(5.70)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	86.4(5.60)	MeanDif	0.9(-0.86,2.66)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Range of motion: Supination (°)	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	87.7(5.50)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	81.8(16.40)	MeanDif	5.9(2.02,9.78)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Extension	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	48(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	47(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Flexion	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	57(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	56(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Pronation	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	86(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	87(.)	MeanDif	-1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Radial deviation	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	20(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	19(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Supination	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	115(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	99(.)	MeanDif	16(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Ulnar deviation	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	. %	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	. %	Author Reported	NA	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Extension	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	58(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	57(.)	MeanDif	1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Flexion	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	76(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	68(.)	MeanDif	8(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Pronation	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	91(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	92(.)	MeanDif	-1(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Radial deviation	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	23(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	23(.)	MeanDif	0(.,.)	**Volar bridge locking plate Signific**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Supination	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	114(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	111(.)	MeanDif	3(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	Range of motion: Ulnar deviation	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	. %	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	. %	Author Reported	NA	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	Range of motion: Flexion-extension (%)	3 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	. %	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Roh, Y. H., 2015	High Quality	Range of motion: Pronation-supination (%)	3 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	. %	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	. %	Author Reported	NA	**G1 (Bridge plating) Significant**
Roh, Y. H., 2015	High Quality	Range of motion: Flexion-extension (%)	6 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	. %	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Roh, Y. H., 2015	High Quality	Range of motion: Pronation-supination (%)	6 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	. %	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	. %	Author Reported	NA	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	Range of motion: Flexion-extension (%)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	86(12.00)	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	84(13.00)	MeanDif	2(-3.79,7.79)	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	Range of motion: Pronation-supination (%)	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	92(8.00)	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	90(9.00)	MeanDif	2(-1.94,5.94)	Not Significant (P-value>.05)

Table 95: PICO 6.02- Volar locking plate vs External Fixation - composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	19.5(20.10)	PICO 6: External fixation (Bridge external fixation)	38	25.4(21.10)	MeanDif	-5.9(-15.26,3.46)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	25(21.70)	PICO 6: External fixation (Bridge external fixation)	38	32.6(23.80)	MeanDif	-7.6(-17.95,2.75)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	13(30.90)	PICO 6: External fixation (Bridge external fixation)	17.2	33.7(.)	MeanDif	-20.7(.,.)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	DASH (QuickDASH): 11 questions evaluating physical activities, symptom severity, and effect of injury on social act.	6 weeks	PICO 6: (Volar locking plate fixation; DVR plate)	84	40.9(20.30)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	55.5(18.60)	MeanDif	-14.6(-20.56,-8.64)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hammer, O. L., 2019	High Quality	DASH (QuickDASH): 11 questions evaluating physical activities, symptom severity, and effect of injury on social act.	6 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	13.6(13.30)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	16.3(18.50)	MeanDif	-2.7(-7.65,2.25)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	DASH (QuickDASH): 11 questions evaluating physical activities, symptom severity, and effect of injury on social act.	1 year	PICO 6: (Volar locking plate fixation; DVR plate)	84	8.6(10.40)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	11.6(8.10)	MeanDif	-3(-5.85,-0.15)	**Treatment 1 Significant (P-value<.05)**
Hammer, O. L., 2019	High Quality	DASH (QuickDASH): 11 questions evaluating physical activities, symptom severity, and effect of injury on social act.	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	7.6(12.90)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	11.6(8.10)	MeanDif	-4(-7.35,-0.65)	**Treatment 1 Significant (P-value<.05)**
Mellstrand Navarro, C., 2016	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	18(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	23(.)	MeanDif	-5(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	11(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	13(.)	MeanDif	-2(.,.)	Not Significant (P-value>.05)
Roh, Y. H., 2015	High Quality	MHOQ: Michigan hand outcome questionnaire: includes four parts- general, work, pain, and appearance	12 months	PICO 6: (Volar locking plate fixation; Synthes 2.4 LCP distal radius systems and Medartis Aptus Radius 2.5)	36	81(15.00)	PICO 6: External fixation (External fixation (with or without intra-focal fixation); uniplanar bridging EF system (Orthotech Multi-Fix))	38	79(14.00)	MeanDif	2(-4.73,8.73)	Not Significant (P-value>.05)

Table 96: PICO 6.02- Volar locking plate vs External Fixation - pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Egol, K., 2008	High Quality	Pain (VAS): Visual analogue scale (mm)	3 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	2.3(2.50)	PICO 6: External fixation (Bridge external fixation)	38	1.8(2.20)	MeanDif	0.5(-0.57,1.57)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Pain (VAS): Visual analogue scale (mm)	6 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	2.6(2.40)	PICO 6: External fixation (Bridge external fixation)	38	2.3(2.30)	MeanDif	0.3(-0.77,1.37)	Not Significant (P-value>.05)
Egol, K., 2008	High Quality	Pain (VAS): Visual analogue scale (mm)	12 months	PICO 6: (Volar locking plate fixation with screws; locked pre-contoured volar plate)	39	2.5(2.90)	PICO 6: External fixation (Bridge external fixation)	38	2.1(2.70)	MeanDif	0.4(-0.87,1.67)	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Pain (VAS): Visual Analog Pain scale	6 weeks	PICO 6: (Volar locking plate fixation; DVR plate)	84	2.2(1.70)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	1.6(1.50)	MeanDif	0.1 (-0.3, 0.5) estimated from linear mixed model	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Pain (VAS): Visual Analog Pain scale	6 months	PICO 6: (Volar locking plate fixation; DVR plate)	84	0.9(1.30)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	1.5(1.50)	MeanDif	0.1 (-0.3, 0.4) estimated from linear mixed model	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hammer, O. L., 2019	High Quality	Pain (VAS): Visual Analog Pain scale	1 year	PICO 6: (Volar locking plate fixation; DVR plate)	84	0.6(1.10)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	82	0.8(1.40)	MeanDif	0(-.3, .3) estimated from linear mixed model	Not Significant (P-value>.05)
Hammer, O. L., 2019	High Quality	Pain (VAS): Visual Analog Pain scale	2 years	PICO 6: (Volar locking plate fixation; DVR plate)	82	0.4(1.00)	PICO 6: External fixation (Augmented external fixation; Hoffman Compact II fixator)	78	0.4(1.10)	MeanDif	-0.1 (-0.5, 0.2) estimated from linear mixed model	Not Significant (P-value>.05)

Table 97: PICO 6.02- Volar locking plate vs External Fixation - quality of life

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mellstrand Navarro, C., 2016	High Quality	EuroQol-5D (EQ-5D)	2 weeks	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	. %	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	. %	Author Reported	NA	**Volar locking plate group Significant**
Mellstrand Navarro, C., 2016	High Quality	EuroQol-5D (EQ-5D)	6 weeks	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	0.75(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	69	0.65(.)	MeanDif	0.1(.,.)	**Volar locking plate group Significa**
Mellstrand Navarro, C., 2016	High Quality	EuroQol-5D (EQ-5D)	3 months	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	70	0.81(.)	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	67	0.77(.)	MeanDif	0.04(.,.)	Not Significant (P-value>.05)
Mellstrand Navarro, C., 2016	High Quality	EuroQol-5D (EQ-5D)	1 year	PICO 6: ("Volar locking plate fixation; 2.4-mm Variable Angle LCP Two-Column Volar Distal Radius Plate")	69	. %	PICO 6: External fixation (External fixation with optional K-wires; Hoffman Compact II)	65	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 98: PICO 6.03- Volar locking plate vs intramedullary fixation- Complication

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Zehir, S., 2014	High Quality	Carpal tunnel syndrome	13 months	PICO 6: (Volar locking plate fixation)	33	9.09%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	0.00%	RD	9.091(-3.44,23.57)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Complications (# of patients): Overall total	13 months	PICO 6: (Volar locking plate fixation)	33	45.45%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	29.03%	RR	1.57(0.8,3.05)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Infection	13 months	PICO 6: (Volar locking plate fixation)	33	12.12%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	6.45%	RR	1.88(0.37,9.54)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Radial nerve paraesthesia	13 months	PICO 6: (Volar locking plate fixation)	33	0.00%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	9.68%	RD	-9.677(-24.9,2.52)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Sudeck atrophy	13 months	PICO 6: (Volar locking plate fixation)	33	6.06%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	0.00%	RD	6.061(-5.8,19.61)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Zehir, S., 2014	High Quality	Tendon rupture	13 months	PICO 6: (Volar locking plate fixation)	33	3.03%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	0.00%	RD	3.03(-8.27,15.32)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Tenosynovitis	13 months	PICO 6: (Volar locking plate fixation)	33	6.06%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	9.68%	RR	0.63(0.11,3.5)	Not Significant (P-value>.05)

Table 99: PICO 6.03- Volar locking plate vs intramedullary fixation - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	Mayo wrist score: Assesses pain, grip strength, range of motion, and return to employment	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	53(17.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	77(15.10)	MeanDif	-24(-32.31,-15.69)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Mayo wrist score: Assesses pain, grip strength, range of motion, and return to employment	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	80(13.00)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	91(11.60)	MeanDif	-11(-17.26,-4.74)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Mayo wrist score: Assesses pain, grip strength, range of motion, and return to employment	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	92(10.10)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	95(9.20)	MeanDif	-3(-7.91,1.91)	Not Significant (P-value>.05)

Table 100: PICO 6.03- Volar locking plate vs intramedullary fixation - Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	Radiographic outcome: Radial height (mm)	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	10(3.10)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	9(3.50)	MeanDif	1(-0.68,2.68)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Radial inclination (°)	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	19(8.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	20(8.10)	MeanDif	-1(-5.22,3.22)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Radial height (mm)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	9(3.70)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	9(3.10)	MeanDif	0(-1.74,1.74)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Radial inclination (°)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	17(7.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	19(7.30)	MeanDif	-2(-5.76,1.76)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Ulnar variance (mm)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	2.1(2.90)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	1.9(3.20)	MeanDif	0.2(-1.35,1.75)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	Radiographic outcome: Volar tilt (°)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	6(10.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	4(9.60)	MeanDif	2(-3.11,7.11)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Ulnar variance (mm)	6 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	2.2(2.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	1.7(3.00)	MeanDif	0.5(-0.9,1.9)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Volar tilt (°)	6 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	6(12.10)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	3(10.30)	MeanDif	3(-2.71,8.71)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Radial height (mm)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	9(3.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	9(3.10)	MeanDif	0(-1.68,1.68)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Radial inclination (°)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	18(7.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	19(7.10)	MeanDif	-1(-4.71,2.71)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Radiographic outcome: Ulnar variance (mm)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	2.1(2.80)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	2(3.30)	MeanDif	0.1(-1.46,1.66)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	Radiographic outcome: Volar tilt (°)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	5(10.20)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	4(9.50)	MeanDif	1(-4.01,6.01)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Radiographic outcome: Radial inclination >/= 15°	12 months	PICO 6: (Volar locking plate fixation)	33	96.97%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	96.77%	RR	1(0.92, 1.09)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Radiographic outcome: Radial shortening <5mm vs. healthy wrist	13 months	PICO 6: (Volar locking plate fixation)	33	87.88%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	93.55%	RR	0.94(0.8,1.1)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Radiographic outcome: Stewart score	13 months	PICO 6: (Volar locking plate fixation)	33	1.45(0.66)	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	1.52(0.62)	MeanDif	-0.07(-0.39,0.25)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Radiographic outcome: Volar tilt <20°	13 months	PICO 6: (Volar locking plate fixation)	33	100.00%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	100.00%	RD	0(-10.43,11.03)	Not Significant (P-value>.05)

Table 101: PICO 6.03- Volar locking plate vs intramedullary fixation - Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	Range of motion: Extension (°)	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	41(13.70)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	54	12.9(.)	MeanDif	28.1(.,.)	**G2 (Intramedullary fixation) Signif**
Safi, A., 2013	High Quality	Range of motion: Flexion (°)	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	39(13.00)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	53(12.50)	MeanDif	-14(-20.48,-7.52)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Range of motion: Pronation (°)	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	63(10.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	77(9.80)	MeanDif	-14(-19.16,-8.84)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Range of motion: Radial deviation (°)	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	7(10.10)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	12(10.40)	MeanDif	-5(.,.) p<.04 from linear mixed model	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Range of motion: Supination (°)	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	67(11.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	78(10.10)	MeanDif	-11(-16.5,-5.5)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	Range of motion: Ulnar deviation (°)	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	16(9.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	22(9.30)	MeanDif	-6(-10.78,-1.22)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Range of motion: Extension (°)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	61(12.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	65(12.10)	MeanDif	-4(-10.25,2.25)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Range of motion: Flexion (°)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	55(12.10)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	61(11.40)	MeanDif	-6(-11.97,-0.03)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Range of motion: Pronation (°)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	77(10.10)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	82(9.20)	MeanDif	-5(-9.91,-0.09)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Range of motion: Radial deviation (°)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	17(9.20)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	17(9.00)	MeanDif	0(-4.62,4.62)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Range of motion: Supination (°)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	79(11.00)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	83(9.50)	MeanDif	-4(-9.22,1.22)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	Range of motion: Ulnar deviation (°)	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	26(11.40)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	27(8.90)	MeanDif	-1(-6.2,4.2)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Range of motion: Extension (°)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	67(10.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	70(10.30)	MeanDif	-3(-8.28,2.28)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Range of motion: Flexion (°)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	62(11.00)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	64(9.90)	MeanDif	-2(-7.32,3.32)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Range of motion: Pronation (°)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	79(8.90)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	84(8.50)	MeanDif	-5(-9.42,-0.58)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	Range of motion: Radial deviation (°)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	19(8.60)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	20(7.50)	MeanDif	-1(-5.1,3.1)	Not Significant (P-value>.05)
Safi, A., 2013	High Quality	Range of motion: Supination (°)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	83(9.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	86(7.80)	MeanDif	-3(-7.42,1.42)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	Range of motion: Ulnar deviation (°)	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	30(9.50)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	29(8.00)	MeanDif	1(-3.46,5.46)	Not Significant (P-value>.05)

Table 102: PICO 6.03- Volar locking plate vs intramedullary fixation - composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Safi, A., 2013	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 weeks	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	36(18.30)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	21(16.20)	MeanDif	15(6.22,23.78)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	3 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	18(12.60)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	9(11.30)	MeanDif	9(2.92, 15.08)	**Treatment 2 Significant (P-value<.05)**
Safi, A., 2013	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 months	PICO 6: (Volar locking plate fixation with Adaptive plate)	31	6(9.90)	PICO 6: Intramedullary fixation (Fixed angled intramedullary nail – micro-nail)	31	4(9.50)	MeanDif	2(-2.93,6.93)	Not Significant (P-value>.05)
Zehir, S., 2014	High Quality	Gartland and Werley score: Subjective and objective evaluation	13 months	PICO 6: (Volar locking plate fixation)	33	1.64(0.82)	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	1.77(0.84)	MeanDif	-0.13(-0.55,0.29)	Not Significant (P-value>.05)

Table 103: PICO 6.03- Volar locking plate vs intramedullary fixation - pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Zehir, S., 2014	High Quality	Pain (at wrist)	13 months	PICO 6: (Volar locking plate fixation)	33	9.09%	PICO 6: Intramedullary fixation (Intramedullary nail fixation using Sonoma Wrx device)	31	3.23%	RR	2.82(0.31,25.68)	Not Significant (P-value>.05)

Table 104: PICO 6.04- Volar plating vs percutaneous fixation- Complication

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Marcheix, P. S., 2010	High Quality	Infection (wound): Number of complications; not necessarily number of patients	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	0.00%	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	5.66%	RD	-5.66(-15.37,2.38)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Over-reduction (Palmar tilt >15°): Number of complications; not necessarily number of patients	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	0.00%	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	15.09%	RD	-15.094(--27.05,-4.93)	**Treatment 1 Significant (P-value<.05)**

Table 105: PICO 6.04- Volar plating vs percutaneous fixation- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Marcheix, P. S., 2010	High Quality	Range of motion & grip strength: Herzberg scoring system (Assesses wrist range in flexion, extension, supination, and pronation, and grip strength)	12 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	103(19.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	50	91(23.00)	MeanDif	12(3.62,20.38)	**Treatment 1 Significant (P-value<.05)**
Marcheix, P. S., 2010	High Quality	Range of motion & grip strength: Herzberg scoring system (Assesses wrist range in flexion, extension, supination, and pronation, and grip strength)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	117(16.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	105(24.00)	MeanDif	12(4.06,19.94)	**Treatment 1 Significant (P-value<.05)**

Table 106: PICO 6.04- Volar plating vs percutaneous fixation- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Goehre, F., 2014	High Quality	Return to activities of daily living: Duration of time required to resume activities	12 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	. %	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	10	. %	Author Reported	NA	**G1 (Volar plating) Significant**

Table 107: PICO 6.04- Volar plating vs percutaneous fixation- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Marcheix, P. S., 2010	High Quality	Grip stength: Percentage of contralateral side	12 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	. %	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	. %	Author Reported	NA	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Grip stength: Percentage of contralateral side	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	. %	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	. %	Author Reported	NA	**G1 (Volar plating)**
Rozental, T. D., 2009	High Quality	Digital motion to palm (mm)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	0.1(0.40)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	0.1(0.40)	MeanDif	0(-0.25,0.25)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Grip strength: Reported as percentage of contralateral side	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	49.3(20.90)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	25.6(30.10)	MeanDif	23.7(7.48,39.92)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Pinch strength: (Reported as percentage of contralateral side)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	59.1(25.80)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	38.8(27.00)	MeanDif	20.3(3.83,36.77)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Digital motion to palm (mm)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	0(0.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	0.1(0.70)	MeanDif	-0.1(-0.42,0.22)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Grip strength: Reported as percentage of contralateral side	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	62.5(18.20)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	36.6(23.70)	MeanDif	25.9(12.69,39.11)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Pinch strength: (Reported as percentage of contralateral side)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	72(17.20)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	54.8(25.40)	MeanDif	17.2(3.61,30.79)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Digital motion to palm (mm)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	0(0.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	0(0.00)	MeanDif	0(.,.)	

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Grip strength: Reported as percentage of contralateral side	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	64.5(18.50)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	69.8(63.00)	MeanDif	-5.3(-34.91,24.31)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Pinch strength: (Reported as percentage of contralateral side)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	83.4(16.80)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	76(22.40)	MeanDif	7.4(-4.98,19.78)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Digital motion to palm (mm)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	0(0.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	0(0.00)	MeanDif	0(.,.)	
Rozental, T. D., 2009	High Quality	Grip strength: Reported as percentage of contralateral side	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	87.9(19.20)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	90.2(59.60)	MeanDif	-2.3(-30.49,25.89)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Pinch strength: (Reported as percentage of contralateral side)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	96.9(39.80)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	87.4(26.70)	MeanDif	9.5(-11.73,30.73)	Not Significant (P-value>.05)

Table 108: PICO 6.04- Volar plating vs percutaneous fixation- Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Goehre, F., 2014	High Quality	Radiographic outcome: Radial inclination	6 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	. %	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	. %	Author Reported	NA	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Radiographic outcome: Radial length	6 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	. %	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	. %	Author Reported	NA	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Radiographic outcome: Radial inclination (°)	1 day	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	22(3.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	21(3.00)	MeanDif	1(-0.87,2.87)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Radiographic outcome: Volar tilt (°)	1 day	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	2(4.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	5(5.00)	MeanDif	-3(.,.) unclear which statistical test used	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Radiographic outcome: Radial height (mm)	1 day	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	11(2.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	11(2.00)	MeanDif	0(-1.25,1.25)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Radiographic outcome: Radial inclination (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	21(3.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	21(4.00)	MeanDif	0(-2.21,2.21)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Radiographic outcome: Volar tilt (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	3(4.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	5(5.00)	MeanDif	-2(-4.83,0.83)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Radiographic outcome: Radial height (mm)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	11(2.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	11(2.00)	MeanDif	0(-1.25,1.25)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Radiographic outcome: Palmar tilt (°)	1 day	PICO 6: Volar plating (Palmar fixed-angle plating)	50	4(6.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	8(7.00)	MeanDif	-4(-6.54,-1.46)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Marcheix, P. S., 2010	High Quality	Radiographic outcome: Radial inclination (°)	1 day	PICO 6: Volar plating (Palmar fixed-angle plating)	50	23(3.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	23(4.00)	MeanDif	0(-1.38,1.38)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Radiographic outcome: Radial shortening (mm)	1 day	PICO 6: Volar plating (Palmar fixed-angle plating)	50	12(2.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	11(2.00)	MeanDif	1(.,.) p=.11 with non parametric test	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	1 day	PICO 6: Volar plating (Palmar fixed-angle plating)	50	1(2.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	1(2.00)	MeanDif	0(-0.78,0.78)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Radiographic outcome: Palmar tilt (°)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	1(7.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	4(11.00)	MeanDif	-3(-6.59,0.59)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Radiographic outcome: Radial inclination (°)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	22(4.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	23(5.00)	MeanDif	-1(-2.77,0.77)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Radiographic outcome: Radial shortening (mm)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	11(2.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	11(2.00)	MeanDif	0(-0.78,0.78)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Radiographic outcome: Ulnar variance (mm)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	2(2.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	2(2.00)	MeanDif	0(-0.78,0.78)	Not Significant (P-value>.05)

Table 109: PICO 6.04- Volar plating vs percutaneous fixation- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Goehre, F., 2014	High Quality	Range of motion: Extension	3 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	79.8(18.70)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	72.7(17.20)	MeanDif	7.1(-4.39,18.59)	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Flexion	3 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	73.2(17.00)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	70.3(20.50)	MeanDif	2.9(-9.26,15.06)	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Pronation	3 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	87.5(14.90)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	84.4(18.70)	MeanDif	-756.9(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Radial deviation (°)	3 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	74.2(19.60)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	72.6(26.20)	MeanDif	1.6(.,.) p>.05 non parametric test	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Goehre, F., 2014	High Quality	Range of motion: Supination	3 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	90.7(12.10)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	79.9(17.70)	MeanDif	10.8(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Ulnar deviation	3 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	75.3(17.70)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	77.5(24.10)	MeanDif	-2.2(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Extension	6 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	85.8(16.30)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	80.4(17.20)	MeanDif	5.4(-5.36,16.16)	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Flexion	6 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	81.4(14.20)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	77.4(18.80)	MeanDif	4(-6.8,14.8)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Goehre, F., 2014	High Quality	Range of motion: Pronation	6 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	93(9.30)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	91.3(11.00)	MeanDif	1.7(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Radial deviation (°)	6 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	81.2(15.90)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	80.8(24.60)	MeanDif	0.4(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Supination	6 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	94(6.70)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	86.8(12.20)	MeanDif	7.2(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Ulnar deviation	6 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	84.3(15.50)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	83.4(22.10)	MeanDif	0.9(.,.) p>.05 non parametric test	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Goehre, F., 2014	High Quality	Range of motion: Extension	12 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	91.2(14.00)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	85.4(16.50)	MeanDif	5.8(.,.) non parametric test significant	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Flexion	12 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	86.7(14.70)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	80.5(18.40)	MeanDif	6.2(.,.) non parametric test significant	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Pronation	12 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	96.1(5.90)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	95.9(6.50)	MeanDif	0.2(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Radial deviation (°)	12 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	81.5(24.20)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	86.2(21.10)	MeanDif	-4.7(.,.) p>.05 non parametric test	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Goehre, F., 2014	High Quality	Range of motion: Supination	12 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	95.6(7.80)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	93.8(5.70)	MeanDif	1.8(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Goehre, F., 2014	High Quality	Range of motion: Ulnar deviation	12 months	PICO 6: Volar plating (Palmar fixed-angle plate fixation; LCP Distal Radius System 2.4)	21	88(15.20)	PICO 6: Percutaneous fixation (K-wire fixation using a combined Kapaandji and Willengger technique)	19	86.7(17.50)	MeanDif	1.3(.,.) p>.05 non parametric test	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Extension (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	45(20.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	16(13.00)	MeanDif	29(18.43,39.57)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Range of motion: Extension/Flexion (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	. %	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	. %	Author Reported	NA	**G1 (Volar plating - ORIF) Significa**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Range of motion: Flexion (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	50(12.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	26(16.00)	MeanDif	24(15.16,32.84)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Range of motion: Pronation (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	77(17.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	63(26.00)	MeanDif	14(0.23,27.77)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Range of motion: Radial deviation (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	15(7.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	7(6.00)	MeanDif	8(3.93, 12.07)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Range of motion: Supination (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	79(21.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	40(29.00)	MeanDif	39(23.16,54.84)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Range of motion: Ulnar deviation (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	27(10.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	15(11.00)	MeanDif	12(5.44,18.56)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Range of motion: Extension (°)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	54(14.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	37(16.00)	MeanDif	17(7.62,26.38)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Range of motion: Extension/Flexion (°)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	. %	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	. %	Author Reported	NA	**G1 (Volar plating - ORIF) Significa**
Rozental, T. D., 2009	High Quality	Range of motion: Flexion (°)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	56(13.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	41(14.00)	MeanDif	15(6.57,23.43)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Range of motion: Pronation (°)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	86(9.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	84(9.00)	MeanDif	2(-3.61,7.61)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Radial deviation (°)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	17(7.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	14(9.00)	MeanDif	3(-2.04,8.04)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Supination (°)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	81(15.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	59(28.00)	MeanDif	22(7.86,36.14)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Range of motion: Ulnar deviation (°)	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	32(7.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	21(9.00)	MeanDif	11(5.96,16.04)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Range of motion: Extension (°)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	58(14.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	48(18.00)	MeanDif	10(-0.08,20.08)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Extension/Flexion (°)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	. %	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	. %	Author Reported	NA	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Flexion (°)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	58(13.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	55(19.00)	MeanDif	3(-7.2,13.2)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Pronation (°)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	85(11.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	80(20.00)	MeanDif	5(-5.16,15.16)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Range of motion: Radial deviation (°)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	22(9.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	20(10.00)	MeanDif	2(-3.94,7.94)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Supination (°)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	84(13.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	72(26.00)	MeanDif	12(-0.97,24.97)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Ulnar deviation (°)	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	35(6.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	30(8.00)	MeanDif	5(0.58, 9.42)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	Range of motion: Extension (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	64(17.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	66(20.00)	MeanDif	-2(-13.59,9.59)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Range of motion: Extension/Flexion (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	. %	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	. %	Author Reported	NA	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Flexion (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	68(14.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	72(15.00)	MeanDif	-4(-13.05,5.05)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Pronation (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	88(4.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	88(4.00)	MeanDif	0(-2.49,2.49)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Radial deviation (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	28(15.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	22(10.00)	MeanDif	6(-1.99,13.99)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	Range of motion: Supination (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	88(5.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	87(9.00)	MeanDif	1(-3.58,5.58)	Not Significant (P-value>.05)
Rozental, T. D., 2009	High Quality	Range of motion: Ulnar deviation (°)	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	40(11.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	32(7.00)	MeanDif	8(2.22, 13.78)	**Treatment 1 Significant (P-value<.05)**
Marcheix, P. S., 2010	High Quality	Range of motion: Extension (°)	12 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	42(12.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	41(12.00)	MeanDif	1(-3.69,5.69)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Range of motion: Flexion (°)	12 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	49(14.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	41(17.00)	MeanDif	8(1.93, 14.07)	**Treatment 1 Significant (P-value<.05)**
Marcheix, P. S., 2010	High Quality	Range of motion: Pronation (°)	12 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	75(12.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	74(15.00)	MeanDif	1(-4.3,6.3)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Range of motion: Supination (°)	12 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	68(18.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	63(25.00)	MeanDif	5(-3.49,13.49)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Marcheix, P. S., 2010	High Quality	Range of motion: Extension (°)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	50(16.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	47(10.00)	MeanDif	3(-2.27,8.27)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Range of motion: Flexion (°)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	53(16.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	47(16.00)	MeanDif	6(-0.26,12.26)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Range of motion: Pronation (°)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	77(5.80)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	78(5.00)	MeanDif	-1(-3.12,1.12)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	Range of motion: Supination (°)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	81(6.80)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	70(23.00)	MeanDif	11(4.4, 17.6)	**Treatment 1 Significant (P-value<.05)**

Table 110: PICO 6.04- Volar plating vs percutaneous fixation- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Marcheix, P. S., 2010	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	25(21.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	33(22.00)	MeanDif	-8(-16.41,0.41)	Not Significant (P-value>.05)
Marcheix, P. S., 2010	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	10(14.00)	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	22(22.00)	MeanDif	-12(-19.18,-4.82)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	27(17.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	53(28.00)	MeanDif	-26(-40.54,-11.46)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	9 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	17(17.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	39(25.00)	MeanDif	-22(-35.39,-8.61)	**Treatment 1 Significant (P-value<.05)**
Rozental, T. D., 2009	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 weeks	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	11(13.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	26(23.00)	MeanDif	-15(-26.75,-3.25)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rozental, T. D., 2009	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	1 year	PICO 6: Volar plating (Open reduction internal fixation with volar plate; VLS plate and DVR plate)	21	4(8.00)	PICO 6: Percutaneous fixation (Closed reduction and K-wire pin fixation (supplemental external fixation if needed))	21	9(18.00)	MeanDif	-5(-13.81,3.81)	Not Significant (P-value>.05)

Table 111: PICO 6.04- Volar plating vs percutaneous fixation- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Marcheix, P. S., 2010	High Quality	Pain (Complex Regional Pain Syndrome)	26 weeks	PICO 6: Volar plating (Palmar fixed-angle plating)	50	. %	PICO 6: Percutaneous fixation (Mixed pinning; K-wire fixation)	53	. %	Author Reported	NA	**NS**

Table 112: PICO 6.04- Volar locking plate vs percutaneous pinning- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Costa, M. L., 2014	Mod Quality	Infection (deep): Number of complications; not necessarily number of patients	12 months	PICO 6: (Volar locking plate fixation)	228	0.0044	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	227	0.0044	RR	1(0.06, 15.82)	Not Significant (P-value>.05)
Costa, M. L., 2014	Mod Quality	Infection (superficial): Number of complications; not necessarily number of patients	12 months	PICO 6: (Volar locking plate fixation)	228	0.0526	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	227	0.0793	RR	0.66(0.33,1.35)	Not Significant (P-value>.05)
Costa, M. L., 2014	Mod Quality	Neurological injury: Number of complications; not necessarily number of patients	12 months	PICO 6: (Volar locking plate fixation)	230	0.087	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	229	0.0611	RR	1.42(0.74,2.75)	Not Significant (P-value>.05)
Costa, M. L., 2014	Mod Quality	Refracture: Number of complications; not necessarily number of patients	12 months	PICO 6: (Volar locking plate fixation)	228	0.0088	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	227	0.0088	RR	1(0.14, 7.01)	Not Significant (P-value>.05)
Costa, M. L., 2014	Mod Quality	Tendon injury: Number of complications; not necessarily number of patients	12 months	PICO 6: (Volar locking plate fixation)	229	0.0262	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	229	0.0175	RR	1.5(0.43,5.25)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Costa, M. L., 2014	Mod Quality	Vascular injury: Number of complications; not necessarily number of patients	12 months	PICO 6: (Volar locking plate fixation)	228	0	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	229	0	RD	0(-1.65,1.66)	Not Significant (P-value>.05)

Table 113: PICO 6.04- Volar locking plate vs percutaneous pinning - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Costa, M. L., 2014	Mod Quality	PRWE: Patient Rated Wrist Evaluation (Age <50)	12 months	PICO 6: (Volar locking plate fixation)	49	15.3(16.30)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	52	13.2(13.00)	MeanDif	2.1(-3.75,7.95)	Not Significant (P-value>.05)
Costa, M. L., 2014	Mod Quality	PRWE: Patient Rated Wrist Evaluation (Age >/= 50)	12 months	PICO 6: (Volar locking plate fixation)	155	13.4(17.40)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	159	16(16.50)	MeanDif	-2.6(-6.37,1.17)	Not Significant (P-value>.05)
Costa, M. L., 2014	Mod Quality	PRWE: Patient Rated Wrist Evaluation (No intrarticular extension)	12 months	PICO 6: (Volar locking plate fixation)	105	13.2(16.10)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	110	16.7(16.50)	MeanDif	-3.5(-7.88,0.88)	Not Significant (P-value>.05)

Table 114: PICO 6.04- Volar locking plate vs percutaneous pinning - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Costa, M. L., 2014	Mod Quality	PRWE: Patient Rated Wrist Evaluation (All participants)	12 months	PICO 6: (Volar locking plate fixation)	204	13.9(17.10)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	211	15.3(15.80)	MeanDif	-1.4(-4.58,1.78)	Not Significant (P-value>.05)
Costa, M. L., 2014	Mod Quality	PRWE: Patient Rated Wrist Evaluation (Intrarticular extension)	12 months	PICO 6: (Volar locking plate fixation)	99	14.7(18.20)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	101	13.8(14.90)	MeanDif	0.9(-3.74,5.54)	Not Significant (P-value>.05)

Table 115: PICO 6.04- Volar locking plate vs percutaneous pinning - composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Costa, M. L., 2014	Mod Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 months	PICO 6: (Volar locking plate fixation)	195	13(15.60)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	201	16.2(17.90)	MeanDif	-3.2(-6.51,0.11)	Not Significant (P-value>.05)
Costa, M. L., 2019	Moderate Quality	PRWE	2 years	PICO 6: (Volar locking plate fixation)	157	13.6(16.90)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	137	11.7(15.00)	MeanDif	1.9(-1.75,5.55)	Not Significant (P-value>.05)
Costa, M. L., 2019	Moderate Quality	EQ-5D: Euro-Qol; five domains of health; also includes Visual Analogue Scale	2 years	PICO 6: (Volar locking plate fixation)	155	0.86(0.18)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	135	0.88(0.15)	MeanDif	-0.02(-0.06,0.02)	Not Significant (P-value>.05)
Costa, M. L., 2019	Moderate Quality	PRWE	3 years	PICO 6: (Volar locking plate fixation)	129	11.1(14.20)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	106	9.9(14.40)	MeanDif	1.2(-2.48,4.88)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Costa, M. L., 2019	Moderate Quality	EQ-5D: Euro-Qol; five domains of health; also includes Visual Analogue Scale	3 years	PICO 6: (Volar locking plate fixation)	129	0.88(0.17)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	105	0.87(0.19)	MeanDif	0.01(-0.04,0.06)	Not Significant (P-value>.05)
Costa, M. L., 2019	Moderate Quality	PRWE	4 years	PICO 6: (Volar locking plate fixation)	110	11.6(15.10)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	97	8.7(13.00)	MeanDif	2.9(-0.93,6.73)	Not Significant (P-value>.05)
Costa, M. L., 2019	Moderate Quality	EQ-5D: Euro-Qol; five domains of health; also includes Visual Analogue Scale	4 years	PICO 6: (Volar locking plate fixation)	110	0.86(0.18)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	96	0.88(0.16)	MeanDif	-0.02(-0.07,0.03)	Not Significant (P-value>.05)
Costa, M. L., 2019	Moderate Quality	PRWE	5 years	PICO 6: (Volar locking plate fixation)	105	11.3(15.60)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	93	8.3(12.50)	MeanDif	3(-0.92,6.92)	Not Significant (P-value>.05)
Costa, M. L., 2019	Moderate Quality	EQ-5D: Euro-Qol; five domains of health; also includes Visual Analogue Scale	5 years	PICO 6: (Volar locking plate fixation)	105	0.84(0.20)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	93	0.89(0.17)	MeanDif	-0.05(-0.10,0.00)	Not Significant (P-value>.05)

Table 116: PICO 6.04- Volar locking plate vs percutaneous pinning - quality of life

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Costa, M. L., 2014	Mod Quality	EuroQol-5D (EQ-5D): Euro-Qol; five domains of health; also includes Visual Analogue Scale	12 months	PICO 6: (Volar locking plate fixation)	194	0.85(0.19)	PICO 6: Percutaneous fixation (Percutaneous pinning with K-wires (percutaneous K-wire fixation))	204	0.83(0.19)	MeanDif	0.02(-0.02,0.06)	Not Significant (P-value>.05)

Table 117: PICO 6.05- Locking plate vs volar non-locking plate- Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koshimune, M., 2005	Moderate Quality	Radiographic outcome: Palmar tilt (°)	1 day	PICO 6: (Locking plate fixation; distal radius plate)	22	6.5(3.50)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	7(3.00)	MeanDif	-0.5(-2.36,1.36)	Not Significant (P-value>.05)
Koshimune, M., 2005	Moderate Quality	Radiographic outcome: Radial inclination (°)	1 day	PICO 6: (Locking plate fixation; distal radius plate)	22	21(3.00)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	22(3.50)	MeanDif	-1(-2.8,0.8)	Not Significant (P-value>.05)
Koshimune, M., 2005	Moderate Quality	Radiographic outcome: Radial length (mm)	1 day	PICO 6: (Locking plate fixation; distal radius plate)	22	9.5(1.50)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	10(2.00)	MeanDif	-0.5(-1.47,0.47)	Not Significant (P-value>.05)
Koshimune, M., 2005	Moderate Quality	Radiographic outcome: Palmar tilt (°)	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	6.5(3.50)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	6.5(3.50)	MeanDif	0(-1.96,1.96)	Not Significant (P-value>.05)
Koshimune, M., 2005	Moderate Quality	Radiographic outcome: Radial inclination (°)	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	20.5(3.00)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	20(3.30)	MeanDif	0.5(-1.25,2.25)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koshimune, M., 2005	Moderate Quality	Radiographic outcome: Radial length (mm)	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	9.5(1.50)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	9.5(1.50)	MeanDif	0(-0.84,0.84)	Not Significant (P-value>.05)

Table 118: PICO 6.05- Locking plate vs volar non-locking plate- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koshimune, M., 2005	Moderate Quality	Range of motion: Extension (°)	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	71(.)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	66(.)	MeanDif	5(.,.)	Not Significant (P-value>.05)
Koshimune, M., 2005	Moderate Quality	Range of motion: Flexion (°)	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	59(.)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	49(.)	MeanDif	10(.,.)	**G1 (Bridge plating) Significant**
Koshimune, M., 2005	Moderate Quality	Range of motion: Pronation (°)	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	80(.)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	78(.)	MeanDif	2(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koshimune, M., 2005	Moderate Quality	Range of motion: Supination (°)	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	78(.)	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	82(.)	MeanDif	-4(.,.)	Not Significant (P-value>.05)

Table 119: PICO 6.05- Locking plate vs volar non-locking plate- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koshimune, M., 2005	Moderate Quality	Gartland and Werley score: Subjective and objective evaluation (score of 'Excellent')	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	36.36%	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	32.26%	RR	1.13(0.53,2.39)	Not Significant (P-value>.05)
Koshimune, M., 2005	Moderate Quality	Gartland and Werley score: Subjective and objective evaluation (score of 'Fair')	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	36.36%	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	32.26%	RR	1.13(0.53,2.39)	Not Significant (P-value>.05)
Koshimune, M., 2005	Moderate Quality	Gartland and Werley score: Subjective and objective evaluation (score of 'Good')	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	59.09%	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	64.52%	Author Reported	NA	**Treatment 2**
Koshimune, M., 2005	Moderate Quality	Gartland and Werley score: Subjective and objective evaluation (score of 'Poor')	12 months	PICO 6: (Locking plate fixation; distal radius plate)	22	0.00%	PICO 6: Volar plating (Non-locking plate fixation; 3.5mm T-shaped plate or Symmetry plate)	31	0.00%	RD	0(-11.03,14.87)	Not Significant (P-value>.05)

Table 120: PICO 6.06- External fixation vs intramedullary fixation- Complication

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schonneman, J. O., 2011	Moderate Quality	Complications (# of patients)	12 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	26.67%	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	18.75%	Author Reported	NA	**Treatment 1**

Table 121: PICO 6.06- External fixation vs intramedullary fixation- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schonneman, J. O., 2011	Moderate Quality	PRWE: Patient Rated Wrist Evaluation	12 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	29.3(21.30)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	26.2(23.80)	MeanDif	3.1(-8.46,14.66)	Not Significant (P-value>.05)

Table 122: PICO 6.06- External fixation vs intramedullary fixation- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schonneman, J. O., 2011	Moderate Quality	Grip strength: Kilograms	5 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	3.8(2.80)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	9(7.70)	MeanDif	-5.2(-8.18,-2.22)	**Treatment 2 Significant (P-value<.05)**
Schonneman, J. O., 2011	Moderate Quality	Grip strength: Kilograms	12 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	11.8(5.70)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	16.4(11.90)	MeanDif	-4.6(-9.39,0.19)	Not Significant (P-value>.05)

Table 123: PICO 6.06- External fixation vs intramedullary fixation- Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schonneman, J. O., 2011	Moderate Quality	Radiographic outcome: Radial length (mm)	1 day	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	-0.2(2.20)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	0.9(1.40)	MeanDif	NA	**G2 (Intramedullary fixation) Signif**
Schonneman, J. O., 2011	Moderate Quality	Radiographic outcome: Radial length (mm)	12 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	-2(2.60)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	0.2(1.50)	MeanDif	NA	**G2 (Intramedullary fixation) Signif**
Schonneman, J. O., 2011	Moderate Quality	Radiographic outcome: Volar tilt (°)	1 day	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	10.6(8.40)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	2.2(6.60)	MeanDif	8.4(4.52,12.28)	**Treatment 2 Significant (P-value<.05)**
Schonneman, J. O., 2011	Moderate Quality	Radiographic outcome: Change in radial length (mm)	12 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	1.8(1.90)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	0.7(0.70)	MeanDif	1.1(0.35,1.85)	**Treatment 2 Significant (P-value<.05)**
Schonneman, J. O., 2011	Moderate Quality	Radiographic outcome: Change in volar tilt (°)	12 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	1.9(7.40)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	2.1(5.40)	MeanDif	-0.2(-3.54,3.14)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schonneman, J. O., 2011	Moderate Quality	Radiographic outcome: Volar tilt (°)	12 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	8.7(10.90)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	0.03(9.80)	MeanDif	8.67(3.35,13.99)	**Treatment 2 Significant (P-value<.05)**

Table 124: PICO 6.06- External fixation vs intramedullary fixation- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schonneman, J. O., 2011	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 weeks	PICO 6: External fixation (Non-bridging external fixation; Hoffman II compact non-bridging fixator)	30	21.3(16.10)	PICO 6: Intramedullary fixation (Intramedullary fixation with Micronail)	31	22.9(18.50)	MeanDif	-1.6(-10.48,7.28)	Not Significant (P-value>.05)

Table 125: PICO 6.07- External fixation vs percutaneous fixation- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Belloti, J. C., 2010	High Quality	Complications (# of patients): Failure of method, ulnar fracture, deep infection, pseudoarthrosis	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	6.52%	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	4.44%	RR	1.47(0.26,8.37)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Complications: Pin drainage requiring abx, RSD, Nerve disturbance	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	. %	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	. %	Author Reported	NA	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Minor & major	24 months	PICO 6: External fixation (External Fixation)	48	. %	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 126: PICO 6.07- External fixation vs percutaneous fixation- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Harley, B. J., 2004	High Quality	SF-36 (MCS): Mental component score,	6 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	51(12.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	54(8.00)	MeanDif	-3(-8.82,2.82)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	SF-36 (PCS): Physical component score,	6 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	48(7.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	46(11.00)	MeanDif	2(-3.27,7.27)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	SF-36 (MCS): Mental component score,	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	52(12.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	54(8.00)	MeanDif	-2(-7.82,3.82)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	SF-36 (PCS): Physical component score,	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	45(11.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	48(11.00)	MeanDif	-3(-9.26,3.26)	Not Significant (P-value>.05)

Table 127: PICO 6.07- External fixation vs percutaneous fixation- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Belloti, J. C., 2010	High Quality	Grip Strength (Kg): Mean difference in values between the uninjured and affected sides (index of limitation)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	. %	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	. %	Author Reported	NA	**NS**
Belloti, J. C., 2010	High Quality	Grip Strength (Kg): Mean difference in values between the uninjured and affected sides (index of limitation)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	. %	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	. %	Author Reported	NA	**NS**
Harley, B. J., 2004	High Quality	Grip strength: Reported as percentage of the uninjured contralateral side	6 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	72(20.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	81(18.00)	MeanDif	-9(-19.82,1.82)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Grip strength: Reported as percentage of the uninjured contralateral side	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	79(25.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	90(19.00)	MeanDif	-11(-23.65,1.65)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Grip Strength	2 months	PICO 6: External fixation (External Fixation)	48	11(13.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	16(10.00)	MeanDif	-5(-9.61,-0.39)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yazdanshenas, Hamed, 2019	Moderate Quality	Grip Strength	4 months	PICO 6: External fixation (External Fixation)	48	42(19.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	48(18.00)	MeanDif	-6(-13.33,1.33)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Grip Strength	12 months	PICO 6: External fixation (External Fixation)	48	76(17.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	82(11.00)	MeanDif	-6(-11.69,-0.31)	**Treatment 2 Significant (P-value<.05)**
Yazdanshenas, Hamed, 2019	Moderate Quality	Grip Strength	24 months	PICO 6: External fixation (External Fixation)	48	83(14.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	89(15.00)	MeanDif	-6(-11.74,-0.26)	**Treatment 2 Significant (P-value<.05)**

Table 128: PICO 6.07- External fixation vs percutaneous fixation- Radiographic Outcomes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Harley, B. J., 2004	High Quality	Radiographic outcome: Gaps (>2 mm)	1 year	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	8.00%	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	0.00%	RD	8(-6.52,24.97)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Radiographic outcome: Gaps (1–2 mm)	1 year	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	40.00%	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	24.00%	RR	1.67(0.71,3.89)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Radiographic outcome: Gaps (none)	1 year	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	52.00%	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	76.00%	RR	0.68(0.44,1.06)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Radiographic outcome: Steps (>2 mm)	1 year	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	0.00%	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	4.00%	RD	-4(-19.54,9.72)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Radiographic outcome: Steps (1–2 mm)	1 year	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	52.00%	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	20.00%	RR	2.6(1.09,6.2)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Harley, B. J., 2004	High Quality	Radiographic outcome: Steps (none)	1 year	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	48.00%	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	76.00%	RR	0.63(0.4,1)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Radiographic outcome: Height of radius (mm)	1 day	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	9.3043(2.60)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	9.9556(2.29)	MeanDif	-0.65(-1.67,0.37)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Radiographic outcome: Radial angle (°)	1 day	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	20.8478(2.66)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	21.7333(2.26)	MeanDif	-0.89(-1.91,0.14)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Radiographic outcome: Volar angle (°)	1 day	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	6.6522(4.90)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	8.4(4.35)	MeanDif	-1.75(-3.68,0.18)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Radiographic outcome: Height of radius (mm)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	8.0435(3.13)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	8.8889(2.84)	MeanDif	-0.85(-2.09,0.4)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Radiographic outcome: Radial angle (°)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	19.6739(3.13)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	20.7111(3.18)	MeanDif	-1.04(-2.35,0.28)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Belloti, J. C., 2010	High Quality	Radiographic outcome: Volar angle (°)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	4.8696(6.82)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	7.4444(5.88)	MeanDif	-2.57(-5.23,0.08)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Radiographic outcome: Radial angle (°)	12 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	18.8222(4.09)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	20.4444(3.60)	MeanDif	-1.62(-3.23,-0.02)	**Treatment 2 Significant (P-value<.05)**
Belloti, J. C., 2010	High Quality	Radiographic outcome: Height of radius (mm)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	7.7778(3.41)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	8.4(3.40)	MeanDif	-0.62(-2.04,0.8)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Radiographic outcome: Volar angle (°)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	4.4(7.19)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	6.8667(6.63)	MeanDif	-2.47(-5.35,0.41)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Palmar Tilt	2 months	PICO 6: External fixation (External Fixation)	48	2.6(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	3.5(.)	MeanDif	-0.9(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Radial Angle	2 months	PICO 6: External fixation (External Fixation)	48	21.9(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	22.2(.)	MeanDif	-0.3(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Radial Length	2 months	PICO 6: External fixation (External Fixation)	48	11.1(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	10.7(.)	MeanDif	0.4(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Palmar Tilt	4 months	PICO 6: External fixation (External Fixation)	48	1.4(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	2.7(.)	MeanDif	-1.3(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Radial Angle	4 months	PICO 6: External fixation (External Fixation)	48	22.4(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	21.1(.)	MeanDif	1.3(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Radial Length	4 months	PICO 6: External fixation (External Fixation)	48	10.3(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	9.6(.)	MeanDif	0.7(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Palmar Tilt	12 months	PICO 6: External fixation (External Fixation)	48	3(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	3.7(.)	MeanDif	-0.7(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Radial Angle	12 months	PICO 6: External fixation (External Fixation)	48	22.6(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	20.4(.)	MeanDif	2.2(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Radial Length	12 months	PICO 6: External fixation (External Fixation)	48	10.5(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	8.6(.)	MeanDif	1.9(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Radial Length	24 months	PICO 6: External fixation (External Fixation)	48	9.8(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	8.3(.)	MeanDif	1.5(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Palmar Tilt	24 months	PICO 6: External fixation (External Fixation)	48	3.3(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	2.4(.)	MeanDif	0.9(.,.)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Radiographic outcome: Radial Angle	24 months	PICO 6: External fixation (External Fixation)	48	24.3(.)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	21.1(.)	MeanDif	3.2(.,.)	Not Significant (P-value>.05)

Table 129: PICO 6.07- External fixation vs percutaneous fixation- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Harley, B. J., 2004	High Quality	Range of motion: Extension/Flexion	6 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	88(11.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	87(14.00)	MeanDif	1(-6.17,8.17)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Range of motion: Pronation/supination	6 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	77(25.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	73(19.00)	MeanDif	4(-8.65,16.65)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Range of motion: Radial/ulnar deviation	6 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	83(20.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	81(11.00)	MeanDif	2(-7.25,11.25)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Range of motion: Total	6 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	83(15.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	82(12.00)	MeanDif	1(-6.73,8.73)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Range of motion: Extension/Flexion	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	81(13.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	87(20.00)	MeanDif	-6(-15.63,3.63)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Harley, B. J., 2004	High Quality	Range of motion: Pronation/supination	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	90(10.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	86(14.00)	MeanDif	4(-2.94,10.94)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Range of motion: Radial/ulnar deviation	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	79(21.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	85(22.00)	MeanDif	-6(-18.23,6.23)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	Range of motion: Total	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	83(10.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	86(16.00)	MeanDif	-3(-10.63,4.63)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Extension (°) - Mean limitation in degrees (control side minus affected side)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	21.3(15.20)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	17(11.50)	MeanDif	4.3(-1.17,9.77)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Flexion (°) - Mean limitation in degrees (control side minus affected side)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	20.4(11.90)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	16.7(12.50)	MeanDif	3.7(-1.25,8.65)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Belloti, J. C., 2010	High Quality	Range of motion: Pronation (°)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	16.8(12.20)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	15.7(11.70)	MeanDif	1.1(-3.74,5.94)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Radial deviation (°)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	6(5.10)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	4.6(4.40)	MeanDif	1.4(-0.53,3.33)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Supination (°)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	16.6(14.30)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	23.4(16.70)	MeanDif	-6.8(-13.1,-0.5)	**Treatment 2 Significant (P-value<.05)**
Belloti, J. C., 2010	High Quality	Range of motion: Ulnar deviation (°)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	7.8(7.50)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	8.2(7.80)	MeanDif	-0.4(-3.5,2.7)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Extension (°) - Mean limitation in degrees (control side minus affected side)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	6.4(9.30)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	5.3(9.40)	MeanDif	1.1(-2.8,5)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Belloti, J. C., 2010	High Quality	Range of motion: Flexion (°) - Mean limitation in degrees (control side minus affected side)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	6(8.60)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	7(12.10)	MeanDif	-1(-5.39,3.39)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Pronation (°)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	5(7.30)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	4.2(8.90)	MeanDif	0.8(-2.6,4.2)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Radial deviation (°)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	1.6(2.60)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	2.1(4.00)	MeanDif	-0.5(-1.91,0.91)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Supination (°)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	5.4(10.90)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	5.8(10.40)	MeanDif	-0.4(-4.84,4.04)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Range of motion: Ulnar deviation (°)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	4.2(5.90)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	2.8(5.00)	MeanDif	1.4(-0.88,3.68)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Supination	2 months	PICO 6: External fixation (External Fixation)	48	32(21.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	34(21.00)	MeanDif	-2(-10.32,6.32)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Extension	2 months	PICO 6: External fixation (External Fixation)	48	24(25.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	10(24.00)	MeanDif	14(4.29,23.71)	**Treatment 1 Significant (P-value<.05)**
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Pronation	2 months	PICO 6: External fixation (External Fixation)	48	63(22.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	62(18.00)	MeanDif	1(-6.98,8.98)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Flexion	2 months	PICO 6: External fixation (External Fixation)	48	45(18.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	43(15.00)	MeanDif	2(-4.57,8.57)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Supination	4 months	PICO 6: External fixation (External Fixation)	48	82(14.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	86(15.00)	MeanDif	-4(-9.74,1.74)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Flexion	4 months	PICO 6: External fixation (External Fixation)	48	70(19.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	68(16.00)	MeanDif	2(-4.97,8.97)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Pronation	4 months	PICO 6: External fixation (External Fixation)	48	88(12.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	86(10.00)	MeanDif	2(-2.38,6.38)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Extension	4 months	PICO 6: External fixation (External Fixation)	48	75(17.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	54(20.00)	MeanDif	21(13.66,28.34)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Pronation	12 months	PICO 6: External fixation (External Fixation)	48	97(9.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	94(8.00)	MeanDif	3(-0.38,6.38)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Supination	12 months	PICO 6: External fixation (External Fixation)	48	90(7.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	92(9.00)	MeanDif	-2(-5.19,1.19)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Extension	12 months	PICO 6: External fixation (External Fixation)	48	90(7.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	83(6.00)	MeanDif	7(4.41, 9.59)	**Treatment 1 Significant (P-value<.05)**
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Flexion	12 months	PICO 6: External fixation (External Fixation)	48	86(11.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	85(13.00)	MeanDif	1(-3.76,5.76)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Pronation	24 months	PICO 6: External fixation (External Fixation)	48	106(7.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	103(8.00)	MeanDif	3(0.03, 5.97)	**Treatment 1 Significant (P-value<.05)**
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Flexion	24 months	PICO 6: External fixation (External Fixation)	48	95(12.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	93(15.00)	MeanDif	2(-3.37,7.37)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Supination	24 months	PICO 6: External fixation (External Fixation)	48	97.7(4.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	99(6.00)	MeanDif	-1.3(-3.31,0.71)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yazdanshenas, Hamed, 2019	Moderate Quality	Range of Motion: Extension	24 months	PICO 6: External fixation (External Fixation)	48	98(6.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	94(9.00)	MeanDif	4(0.98, 7.02)	**Treatment 1 Significant (P-value<.05)**

Table 130: PICO 6.07- External fixation vs percutaneous fixation- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Harley, B. J., 2004	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	22(19.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	22(22.00)	MeanDif	0(-11.7,11.7)	Not Significant (P-value>.05)
Harley, B. J., 2004	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 months	PICO 6: External fixation (Augmented external fixation; Hoffman II compact external fixator system)	25	23(23.00)	PICO 6: Percutaneous fixation (Percutaneous pin fixation with casting; smooth K-wires)	25	15(18.00)	MeanDif	8(-3.76,19.76)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	23.6(18.10)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	16.5(14.70)	MeanDif	7.1(0.41,13.79)	**Treatment 2 Significant (P-value<.05)**
Belloti, J. C., 2010	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	12.9(15.20)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	9.4(12.90)	MeanDif	3.5(-2.37,9.37)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	QuickDASH		PICO 6: External fixation (External Fixation)	48	39(22.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	55(21.00)	MeanDif	-16(-24.52,-7.48)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yazdanshenas, Hamed, 2019	Moderate Quality	EQ-5D questionnaire: Index value	2 months	PICO 6: External fixation (External Fixation)	48	0.62(0.21)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	0.59(0.24)	MeanDif	0.03(-0.06,0.12)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	EQ-5D questionnaire: Health state	2 months	PICO 6: External fixation (External Fixation)	48	73(15.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	76(14.00)	MeanDif	-3(-8.75,2.75)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	EQ-5D questionnaire: Health state	4 months	PICO 6: External fixation (External Fixation)	48	77(18.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	79(16.00)	MeanDif	-2(-8.75,4.75)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	EQ-5D questionnaire: Index value	4 months	PICO 6: External fixation (External Fixation)	48	0.74(0.21)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	0.71(0.19)	MeanDif	0.03(-0.05,0.11)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	QuickDASH	4 months	PICO 6: External fixation (External Fixation)	48	16(15.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	28(17.00)	MeanDif	-12(-18.34,-5.66)	**Treatment 1 Significant (P-value<.05)**
Yazdanshenas, Hamed, 2019	Moderate Quality	QuickDASH	12 months	PICO 6: External fixation (External Fixation)	48	8(19.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	11(16.00)	MeanDif	-3(-9.97,3.97)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	EQ-5D questionnaire: Index value	12 months	PICO 6: External fixation (External Fixation)	48	0.86(0.13)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	0.9(0.15)	MeanDif	-0.04(-0.10,0.02)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yazdanshenas, Hamed, 2019	Moderate Quality	EQ-5D questionnaire: Health state	12 months	PICO 6: External fixation (External Fixation)	48	82(10.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	83(8.00)	MeanDif	-1(-4.59,2.59)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	EQ-5D questionnaire: Health state	24 months	PICO 6: External fixation (External Fixation)	48	92(7.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	94(2.00)	MeanDif	-2(-4.06,0.06)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	EQ-5D questionnaire: Index value	24 months	PICO 6: External fixation (External Fixation)	48	0.95(0.11)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	0.98(0.80)	MeanDif	-0.03(-0.25,0.19)	Not Significant (P-value>.05)
Yazdanshenas, Hamed, 2019	Moderate Quality	QuickDASH	24 months	PICO 6: External fixation (External Fixation)	48	3(9.00)	PICO 6: Percutaneous fixation (Modified Pins and Plaster Technique)	50	5(7.00)	MeanDif	-2(-5.20,1.20)	Not Significant (P-value>.05)

Table 131: PICO 6.07- External fixation vs percutaneous fixation- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Belloti, J. C., 2010	High Quality	Pain (VAS): Visual analogue scale (cm)	6 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	48	3.5(2.00)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	48	2.8(1.80)	MeanDif	0.7(-0.07,1.47)	Not Significant (P-value>.05)
Belloti, J. C., 2010	High Quality	Pain (VAS): Visual analogue scale (cm)	24 months	PICO 6: External fixation (Bridging external fixation; bridging external linear fixator (Biomecanica))	46	1.4(1.50)	PICO 6: Percutaneous fixation (Modified De Palma percutaneous pinning)	45	1.2(1.40)	MeanDif	0.2(-0.4,0.8)	Not Significant (P-value>.05)

Table 132: PICO 6.08- Fragment specific plating vs volar locking plate- Complication

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	Complications (major): Loosening of hardware, loosening of hardware & EPL rupture, complex regional pain syndrome	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	. %	PICO 6: Bridge plating (Volar locking plate fixation)	24	. %	Author Reported	NA	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Complications (major/minor)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	. %	PICO 6: Bridge plating (Volar locking plate fixation)	24	. %	Author Reported	NA	**G2 (Bridge plating) Significant**
Landgren, M., 2017	High Quality	Complications (minor): Transient radial neurapraxia, carpal tunnel syndrome, tendinitis, skin adherence	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	. %	PICO 6: Bridge plating (Volar locking plate fixation)	24	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 133: PICO 6.08- Fragment specific plating vs volar locking plate - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	SF-12 MCS: General health status, mental component score	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	54(9.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	57(6.00)	MeanDif	-3(-7.39,1.39)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	SF-12 PCS: General health status, physical component score	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	52(8.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	52(7.00)	MeanDif	0(-4.32,4.32)	Not Significant (P-value>.05)

Table 134: PICO 6.08- Fragment specific plating vs volar locking plate - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	Grip strength: Kilograms	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	14(7.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	16(7.00)	MeanDif	-2(-6.02,2.02)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Grip strength: Reported as percentage of uninjured side	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	. %	PICO 6: Bridge plating (Volar locking plate fixation)	24	. %	Author Reported	NA	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Grip strength: Kilograms	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	23(10.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	23(9.00)	MeanDif	0(-5.46,5.46)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Grip strength: Reported as percentage of uninjured side	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	. %	PICO 6: Bridge plating (Volar locking plate fixation)	24	. %	Author Reported	NA	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Grip strength: Kilograms	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	29(12.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	28(8.00)	MeanDif	1(-4.86,6.86)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Grip strength: Reported as percentage of uninjured side	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	. %	PICO 6: Bridge plating (Volar locking plate fixation)	24	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 135: PICO 6.08- Fragment specific plating vs volar locking plate - Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	Radiographic outcome: Dorsal angulation (°)	1 day	PICO 6: Fragment specific plating (Fragment-specific plating)	25	5(5.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	-2(6.00)	MeanDif	7(3.82, 10.18)	**Treatment 2 Significant (P-value<.05)**
Landgren, M., 2017	High Quality	Radiographic outcome: DRUJ incongruence (mm)	1 day	PICO 6: Fragment specific plating (Fragment-specific plating)	25	0(0.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	0.2(0.50)	MeanDif	-0.2(-0.41,0.01)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Radiographic outcome: Radial inclination (°)	1 day	PICO 6: Fragment specific plating (Fragment-specific plating)	25	21(4.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	19(4.00)	MeanDif	2(-0.3,4.3)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Radiographic outcome: Radiocarpal joint incongruence (mm)	1 day	PICO 6: Fragment specific plating (Fragment-specific plating)	25	0(0.20)	PICO 6: Bridge plating (Volar locking plate fixation)	24	0.1(0.40)	MeanDif	-0.1(-0.28,0.08)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Radiographic outcome: Ulnar variance (mm)	1 day	PICO 6: Fragment specific plating (Fragment-specific plating)	25	0.1(0.80)	PICO 6: Bridge plating (Volar locking plate fixation)	24	0(1.20)	MeanDif	0.1(-0.49,0.69)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Radiographic outcome: Dorsal angulation (°)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	3(7.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	-1(7.00)	MeanDif	4(-0.02,8.02)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Radiographic outcome: DRUJ incongruence (mm)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	0.1(0.40)	PICO 6: Bridge plating (Volar locking plate fixation)	24	0(0.20)	MeanDif	0.1(-0.08,0.28)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	Radiographic outcome: Radial inclination (°)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	23(5.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	21(5.00)	MeanDif	2(-0.87,4.87)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Radiographic outcome: Radiocarpal joint incongruence (mm)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	0.3(0.70)	PICO 6: Bridge plating (Volar locking plate fixation)	24	0.2(0.50)	MeanDif	0.1(-0.25,0.45)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Radiographic outcome: Ulnar variance (mm)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	-2(2.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	-1(2.00)	MeanDif	-1(-2.15,0.15)	Not Significant (P-value>.05)

Table 136: PICO 6.08- Fragment specific plating vs volar locking plate - Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	Range of motion: Extension (°)	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	40(8.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	41(11.00)	MeanDif	-1(-6.56,4.56)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Flexion (°)	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	46(11.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	44(12.00)	MeanDif	2(-4.63,8.63)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Pronation (°)	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	67(7.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	70(6.00)	MeanDif	-3(-6.74,0.74)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Radial deviation (°)	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	17(6.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	17(6.00)	MeanDif	0(-3.45,3.45)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Supination (°)	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	58(12.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	61(15.00)	MeanDif	-3(-10.84,4.84)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Ulnar deviation (°)	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	25(7.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	28(8.00)	MeanDif	-3(-7.33,1.33)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Extension (°)	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	52(15.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	54(13.00)	MeanDif	-2(-10.06,6.06)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Flexion (°)	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	54(16.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	51(11.00)	MeanDif	3(-4.89,10.89)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	Range of motion: Pronation (°)	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	69(15.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	73(6.00)	MeanDif	-4(-10.6,2.6)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Radial deviation (°)	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	20(7.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	19(5.00)	MeanDif	1(-2.49,4.49)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Supination (°)	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	67(16.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	72(11.00)	MeanDif	-5(-12.89,2.89)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Ulnar deviation (°)	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	29(8.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	30(8.00)	MeanDif	-1(-5.6,3.6)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Extension (°)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	63(10.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	64(10.00)	MeanDif	-1(-6.75,4.75)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Flexion (°)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	65(7.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	64(13.00)	MeanDif	1(-5.09,7.09)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Pronation (°)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	73(8.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	75(6.00)	MeanDif	-2(-6.06,2.06)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Radial deviation (°)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	22(7.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	23(8.00)	MeanDif	-1(-5.33,3.33)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Range of motion: Supination (°)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	73(8.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	75(10.00)	MeanDif	-2(-7.23,3.23)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	Range of motion: Ulnar deviation (°)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	35(8.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	38(4.00)	MeanDif	-3(-6.64,0.64)	Not Significant (P-value>.05)

Table 137: PICO 6.08- Fragment specific plating vs volar locking plate - composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	DASH (QuickDASH): Mean score	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	36(19.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	34(18.00)	MeanDif	2(-8.63,12.63)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	DASH (QuickDASH): Mean score	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	15(16.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	16(11.00)	MeanDif	-1(-8.89,6.89)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	DASH (QuickDASH): Mean score	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	9(9.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	12(16.00)	MeanDif	-3(-10.56,4.56)	Not Significant (P-value>.05)

Table 138: PICO 6.08- Fragment specific plating vs volar locking plate - pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2017	High Quality	Pain (VAS): VAS pain at activity (mm/100mm)	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	23(18.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	30(18.00)	MeanDif	-7(-17.35,3.35)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Pain (VAS): VAS pain at rest (mm/100mm)	6 weeks	PICO 6: Fragment specific plating (Fragment-specific plating)	25	13(14.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	20(26.00)	MeanDif	-7(-19.18,5.18)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Pain (VAS): VAS pain at activity (mm/100mm)	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	19(19.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	18(18.00)	MeanDif	1(-9.63,11.63)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Pain (VAS): VAS pain at rest (mm/100mm)	3 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	6(11.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	12(17.00)	MeanDif	-6(-14.31,2.31)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Pain (VAS): VAS pain at activity (mm/100mm)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	14(18.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	14(21.00)	MeanDif	0(-11.27,11.27)	Not Significant (P-value>.05)
Landgren, M., 2017	High Quality	Pain (VAS): VAS pain at rest (mm/100mm)	12 months	PICO 6: Fragment specific plating (Fragment-specific plating)	25	2(6.00)	PICO 6: Bridge plating (Volar locking plate fixation)	24	6(9.00)	MeanDif	-4(-8.44,0.44)	Not Significant (P-value>.05)

Table 139: PICO 6.09- Fragment specific plating vs external fixation- Complication

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2011	Moderate Quality	Reoperations due to complications: Malunion, carpal tunnel release, pin tract adherence, osteosynthesis removal, tenosynovectomy	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	53.85%	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	41.67%	RR	1.29(0.71,2.34)	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	Osteoarthritis	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	8.70%	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	18.18%	RR	0.48(0.1,2.35)	Not Significant (P-value>.05)

Table 140: PICO 6.09- Fragment specific plating vs external fixation- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2011	Moderate Quality	SF-36: Mental health: General health assessment; 8 scaled scores	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	. %	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	. %	medians	trt1=88; trt2=90	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	SF-36: Physical functioning: General health assessment; 8 scaled scores	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	. %	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	. %	medians	trt1=90; trt2=100	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	SF-36: Role-emotional: General health assessment; 8 scaled scores	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	. %	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	. %	medians	trt1=100; trt2=100	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	SF-36: Role-physical: General health assessment; 8 scaled scores	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	. %	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	. %	medians	trt1=100; trt2=0	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	SF-36: Social functioning: General health assessment; 8 scaled scores	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	. %	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	. %	medians	trt1=100; trt2=100	Not Significant (P-value>.05)

Table 141: PICO 6.09- Fragment specific plating vs external fixation- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2011	Moderate Quality	Grip strength: Kilograms	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	31(13.00)	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	30(11.00)	MeanDif	1(-6.23,8.23)	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	Grip strength: Reported as percentage of uninjured side	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	95(12.00)	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	90(21.00)	MeanDif	5(-5.43,15.43)	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	DRU joint incongruence	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	0.00%	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	18.18%	RD	-18.182(-38.52,-0.21)	**Treatment 1 Significant (P-value<.05)**

Table 142: PICO 6.09- Fragment specific plating vs external fixation- Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2011	Moderate Quality	Radiographic outcome: Dorsal angulation (Negative values indicate palmar angulation)	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	-4(7.00)	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	-2(9.00)	MeanDif	-2(-6.87,2.87)	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	Radiographic outcome: Radial inclination (°)	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	25(4.00)	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	23(5.00)	MeanDif	2(-0.74,4.74)	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	Radiographic outcome: Ulnar variance (mm)	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	1(2.10)	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	1.8(2.10)	MeanDif	-0.8(-2.06,0.46)	Not Significant (P-value>.05)

Table 143: PICO 6.09- Fragment specific plating vs external fixation- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2011	Moderate Quality	Range of motion: Extension-flexion (°)	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	126(15.00)	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	119(25.00)	MeanDif	7(-5.56,19.56)	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	Range of motion: Pronation-supination (°)	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	155(17.00)	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	154(20.00)	MeanDif	1(-10.2,12.2)	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	Range of motion: Radial-ulnar deviation (°)	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	23	66(16.00)	PICO 6: External fixation (Closed reduction and bridging external fixation)	22	65(13.00)	MeanDif	1(-7.75,9.75)	Not Significant (P-value>.05)

Table 144: PICO 6.09- Fragment specific plating vs external fixation- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2011	Moderate Quality	DASH (QuickDASH): 11 questions evaluating physical activities, symptom severity, and effect of injury on social act.	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	15(14.00)	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	13(16.00)	MeanDif	2(-6.59,10.59)	Not Significant (P-value>.05)

Table 145: PICO 6.09- Fragment specific plating vs external fixation- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2011	Moderate Quality	SF-36: Bodily pain: General health assessment; 8 scaled scores	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	. %	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	. %	medians	trt1=84; trt2=100	Not Significant (P-value>.05)

Table 146: PICO 6.09- Fragment specific plating vs external fixation- quality of life

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Landgren, M., 2011	Moderate Quality	SF-36: General Health: General health assessment; 8 scaled scores	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	. %	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	. %	medians	trt1=82; trt2=84	Not Significant (P-value>.05)
Landgren, M., 2011	Moderate Quality	SF-36: Vitality: General health assessment; 8 scaled scores	5 years	PICO 6: Fragment specific plating (Open reduction and internal fixation using Tri-Med fragment-specific system)	26	. %	PICO 6: External fixation (Closed reduction and bridging external fixation)	24	. %	medians	trt1=80; trt2=85	Not Significant (P-value>.05)

Table 147: PICO 6.10- Volar plating vs dorsal plating- Complication

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	Complications: Complex regional pain syndrome Type 1, tendon ruptures, secondary fragment dislocations	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	27.27%	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	35.00%	RR	0.78(0.31,1.93)	Not Significant (P-value>.05)

Table 148: PICO 6.10- Volar plating vs dorsal plating- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, R. G., 2008	Moderate Quality	Grip strength: Reported as percentage of contralateral side	6 weeks	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	47(21.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	26(15.00)	MeanDif	21(7.29,34.71)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Grip strength: Reported as percentage of contralateral side	3 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	77(20.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	49(17.00)	MeanDif	28(14.1,41.9)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Grip strength: Reported as percentage of contralateral side	6 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	95(11.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	65(15.00)	MeanDif	30(20.12,39.88)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Grip strength: Reported as percentage of contralateral side	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	47(21.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	25(16.00)	MeanDif	22(10.41,33.59)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Grip strength: Reported as percentage of contralateral side	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	76(20.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	42(18.00)	MeanDif	34(22.15,45.85)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Grip strength: Reported as percentage of contralateral side	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	91(12.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	60(18.00)	MeanDif	31(21.29,40.71)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	Grip strength: Reported as percentage of contralateral side	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	95(10.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	75(21.00)	MeanDif	20(9.41,30.59)	**Treatment 1 Significant (P-value<.05)**

Table 149: PICO 6.10- Volar plating vs dorsal plating- Radiographic Outcome

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Palmar tilt (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	9(5.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	15(6.00)	MeanDif	-6(-9.47,-2.53)	**Treatment 2 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Radial height (mm)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	11(2.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	11(3.00)	MeanDif	0(-1.62,1.62)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Radial inclination (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	23(4.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	21(5.00)	MeanDif	2(-0.85,4.85)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Palmar tilt (°)	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	9(5.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	14(5.00)	MeanDif	-5(-8.12,-1.88)	**Treatment 2 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Radial height (mm)	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	11(2.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	11(2.00)	MeanDif	0(-1.25,1.25)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Radial inclination (°)	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	23(4.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	21(4.00)	MeanDif	2(-0.5,4.5)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Ulnar variance (mm)	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	0.23(1.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	1.75(3.00)	MeanDif	-1.52(-.,.) authro reported p>.05	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Palmar tilt (°)	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	9(5.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	13(5.00)	MeanDif	-4(-7.12,-0.88)	**Treatment 2 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Radial height (mm)	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	11(1.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	12(2.00)	MeanDif	-1(-2.02,0.02)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Radial inclination (°)	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	23(4.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	22(4.00)	MeanDif	1(-1.5,3.5)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Ulnar variance (mm)	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	0.21(1.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	2(3.00)	MeanDif	-1.79(.,.)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Ulnar variance (mm)	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	0.11(1.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	0.95(3.00)	MeanDif	-0.84(-2.3,0.62)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Palmar tilt (°)	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	9(6.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	13(5.00)	MeanDif	-4(-7.43,-0.57)	**Treatment 2 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Radial height (mm)	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	11(2.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	12(2.00)	MeanDif	-1(-2.25,0.25)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Radial inclination (°)	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	24(5.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	22(4.00)	MeanDif	2(-0.81,4.81)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Radiographic outcome: Ulnar variance (mm)	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	0.19(1.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	1.62(3.00)	MeanDif	-1.43(-2.89,0.03)	Not Significant (P-value>.05)

Table 150: PICO 6.10- Volar plating vs dorsal plating- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	Range of motion: Extension/Flexion (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	64(28.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	42(16.00)	MeanDif	22(7.86,36.14)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Range of motion: Pronation/Supination (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	112(42.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	87(36.00)	MeanDif	25(0.66,49.34)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Range of motion: Radial/Ulnarduction (°)	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	35(15.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	28(15.00)	MeanDif	7(-2.37,16.37)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Range of motion: Extension/Flexion (°)	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	97(27.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	55(23.00)	MeanDif	42(26.4,57.6)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Range of motion: Pronation/Supination (°)	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	143(23.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	108(42.00)	MeanDif	35(13.33,56.67)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Range of motion: Radial/Ulnarduction (°)	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	49(10.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	38(15.00)	MeanDif	11(.,.) authro reported p>.05	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Range of motion: Extension/Flexion (°)	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	111(20.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	72(16.00)	MeanDif	39(27.75,50.25)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	Range of motion: Pronation/Supination (°)	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	156(15.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	138(17.00)	MeanDif	18(7.94,28.06)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Range of motion: Radial/Ulnarduction (°)	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	57(8.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	47(10.00)	MeanDif	10(.,.) authro reported p>.05	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Range of motion: Extension/Flexion (°)	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	129(20.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	92(33.00)	MeanDif	37(19.61,54.39)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Range of motion: Pronation/Supination (°)	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	167(14.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	141(33.00)	MeanDif	26(9.61,42.39)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Range of motion: Radial/Ulnarduction (°)	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	54(7.00)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	47(20.00)	MeanDif	7(-2.75,16.75)	Not Significant (P-value>.05)
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Flexion-extension (°)	6 weeks	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	60(27.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	40(17.00)	MeanDif	20(2.98,37.02)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Pronation-supination (°)	6 weeks	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	103(31.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	95(27.00)	MeanDif	8(-13.76,29.76)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Radial-ulnar (°)	6 weeks	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	35(13.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	28(8.00)	MeanDif	7(-1.15,15.15)	Not Significant (P-value>.05)
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Flexion-extension (°)	3 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	98(23.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	63(20.00)	MeanDif	35(18.87,51.13)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Pronation-supination (°)	3 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	144(16.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	118(34.00)	MeanDif	26(5.76,46.24)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Radial-ulnar (°)	3 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	39(7.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	40(14.00)	MeanDif	-1(-9.41,7.41)	Not Significant (P-value>.05)
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Flexion-extension (°)	6 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	115(23.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	68(17.00)	MeanDif	47(31.81,62.19)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Pronation-supination (°)	6 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	115(23.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	68(17.00)	MeanDif	47(31.81,62.19)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, R. G., 2008	Moderate Quality	Range of motion: Radial-ulnar (°)	6 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	60(9.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	47(7.00)	MeanDif	13(6.95,19.05)	**Treatment 1 Significant (P-value<.05)**

Table 151: PICO 6.10- Volar plating vs dorsal plating- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	10.5(.)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	14.3(.)	MeanDif	-3.8(.,.)	Not Significant (P-value>.05)
Jakubietz, M. G., 2012	High Quality	Gartland and Werley score: Subjective and objective evaluation	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	2.1(.)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	9.2(.)	MeanDif	-7.1(.,.)	**G1 (Volar plating) Significant**
Jakubietz, R. G., 2008	Moderate Quality	Gartland and Werley score: Subjective and objective evaluation	6 weeks	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	6.06(4.48)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	11.13(4.14)	MeanDif	-5.07(-8.3,-1.84)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Gartland and Werley score: Subjective and objective evaluation	3 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	2.53(1.31)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	6.73(3.41)	MeanDif	-4.2(-6.18,-2.22)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Gartland and Werley score: Subjective and objective evaluation	6 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	1.73(1.09)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	4.86(2.08)	MeanDif	-3.13(-4.39,-1.87)	**Treatment 1 Significant (P-value<.05)**

Table 152: PICO 6.10- Volar plating vs dorsal plating- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, R. G., 2008	Moderate Quality	Pain (VAS): Visual Analog Pain scale	6 weeks	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	3.8(2.00)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	5.5(2.00)	MeanDif	-1.7(-3.2,-0.2)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Pain (VAS): Visual Analog Pain scale	3 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	1.6(1.20)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	5(1.40)	MeanDif	-3.4(-4.38,-2.42)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, R. G., 2008	Moderate Quality	Pain (VAS): Visual Analog Pain scale	6 months	PICO 6: Volar plating (Palmar plate fixation; allowing multidirectional screw placement)	15	1.2(0.80)	PICO 6: Dorsal plating (Dorsal pi-plate fixation)	15	3.1(1.50)	MeanDif	-1.9(-2.81,-0.99)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Pain	6 weeks	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	3.9(2.10)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	5.4(1.70)	MeanDif	-1.5(-2.69,-0.31)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Pain	3 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	1.9(1.10)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	4.3(1.50)	MeanDif	-2.4(-3.23,-1.57)	**Treatment 1 Significant (P-value<.05)**
Jakubietz, M. G., 2012	High Quality	Pain	6 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	1.2(0.60)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	3(1.60)	MeanDif	-1.8(-2.58,-1.02)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jakubietz, M. G., 2012	High Quality	Pain	12 months	PICO 6: Volar plating (Open reduction internal fixation with palmar plate)	22	1.2(0.50)	PICO 6: Dorsal plating (Open reduction internal fixation with dorsal pi-plate)	20	2(1.50)	MeanDif	-0.8(-1.53,-0.07)	**Treatment 1 Significant (P-value<.05)**

Table 153: PICO 6.11- Volar plating vs external fixation- Complications

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mishra, A. K., 2019	Moderate Quality	Complications: Stiffness, infection, CRPS, extensor tendon irritation, loss of reduction	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)

Table 154: PICO 6.11- Volar plating vs external fixation- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mishra, A. K., 2019	Moderate Quality	Grip strength: Reported as percentage of contralateral side	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Mishra, A. K., 2019	Moderate Quality	Grip strength: Reported as percentage of contralateral side	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Grip strength: Reported as percentage of contralateral side	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**

Table 155: PICO 6.11- Volar plating vs external fixation- Range of Motion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mishra, A. K., 2019	Moderate Quality	Range of motion: Dorsiflexion (Percentage value of the contralateral uninjured side)	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Range of motion: Pronation (Reported as percentage of contralateral uninjured side)	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	75.75	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Range of motion: Radial deviation (Reported as mean percentage)	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Range of motion: Ulnar deviation (Reported as percentage of the uninjured contralateral side)	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mishra, A. K., 2019	Moderate Quality	Range of motion: Volar flexion (Reported as percentage of the uninjured contralateral side)	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Mishra, A. K., 2019	Moderate Quality	Range of motion: Dorsiflexion (Percentage value of the contralateral uninjured side)	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Range of motion: Pronation (Reported as percentage of contralateral uninjured side)	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Mishra, A. K., 2019	Moderate Quality	Range of motion: Radial deviation (Reported as mean percentage)	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Mishra, A. K., 2019	Moderate Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mishra, A. K., 2019	Moderate Quality	Range of motion: Ulnar deviation (Reported as percentage of the uninjured contralateral side)	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Range of motion: Volar flexion (Reported as percentage of the uninjured contralateral side)	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Range of motion: Dorsiflexion (Percentage value of the contralateral uninjured side)	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Range of motion: Pronation (Reported as percentage of contralateral uninjured side)	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Mishra, A. K., 2019	Moderate Quality	Range of motion: Radial deviation (Reported as mean percentage)	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mishra, A. K., 2019	Moderate Quality	Range of motion: Supination (Reported as percentage of the uninjured contralateral side)	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Mishra, A. K., 2019	Moderate Quality	Range of motion: Ulnar deviation (Reported as percentage of the uninjured contralateral side)	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Mishra, A. K., 2019	Moderate Quality	Range of motion: Volar flexion (Reported as percentage of the uninjured contralateral side)	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	Author Reported	NA	**G1 (Volar plating) Significant**

Table 156: PICO 6.11- Volar plating vs external fixation- composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mishra, A. K., 2019	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	16.3(3.35)	PICO 6: External fixation (External fixation)	40	23.9(4.28)	MeanDif	-7.6(-9.31,-5.89)	**Treatment 1 Significant (P-value<.05)**
Mishra, A. K., 2019	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	6.98(2.52)	PICO 6: External fixation (External fixation)	40	12.48(2.47)	MeanDif	-5.5(-6.61,-4.39)	**Treatment 1 Significant (P-value<.05)**
Mishra, A. K., 2019	Moderate Quality	DASH: Disabilities of the Arm Shoulder and Hand score	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	1(1.75)	PICO 6: External fixation (External fixation)	40	4.4(2.09)	MeanDif	-3.4(-4.26,-2.54)	**Treatment 1 Significant (P-value<.05)**

Table 157: PICO 6.11- Volar plating vs external fixation- pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mishra, A. K., 2019	Moderate Quality	Pain (VAS): Visual Analog Pain scale	3 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	medians	trt1=2; trt2=4	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Pain (VAS): Visual Analog Pain scale	6 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	medians	trt1=0; trt2=2	**G1 (Volar plating) Significant**
Mishra, A. K., 2019	Moderate Quality	Pain (VAS): Visual Analog Pain scale	12 months	PICO 6: Volar plating (Open reduction with volar plate fixation)	40	. %	PICO 6: External fixation (External fixation)	40	. %	medians	trt1=0; trt2=0	Not Significant (P-value>.05)