Standard

Review information

Authors

[Empty name][1]

[1][Empty affiliation]

Citation example: [Empty name]. Standard. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Abstract

Background

Objectives

Search methods

Selection criteria

Data collection and analysis

Main results

Authors' conclusions

Characteristics of studies

Characteristics of included studies

Abbott 2013

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Intervention Control **Included criteria:** Clinical criteria for diagnosis of OA of the hip or knee established by the American College of Rheumatology **Excluded criteria:** Rheumatoid arthritis; previous knee or hip joint replacement surgery of the affected joint; any other surgical procedure on the lower limbs in the previous 6 months; surgical procedure on the lower limbs planned in the next 6 months; initiation of opioid analgesia or corticosteroid or analgesic injection intervention for hip or knee pain within the previous 30 days; physical impairments unrelated to the hip or knee which would prevent safe participation in exercise, manual therapy, walking or stationary cycling; inability to comprehend and complete study assessments or comply with study instructions; or stated inability to attend or complete the proposed course of intervention and follow-up Schedule. **Pretreatment:** Table 1WOMAC higher in Intervention Group (114.8 vs. 93.8) out of 240 but knee and hip OA Groups are combinedPain intensity score higher in intervention Group (4.2 vs. 3.1) out of 10 but knee and hip OA Groups are combined
Interventions	**Intervention Characteristics** Intervention ● *Usual care + manual therapy*: Manual therapy + usual care (Each participant attended nine treatment sessions of approximately 50 min: seven in the initial 9 weeks of the trial and two ‘booster’ sessions at week 16.)

	Control ● *Usual care + manual therapy*: Routine care by GP or other healthcare providers without restrictions.
Outcomes	*Smerte* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Not reported *Patientrapporteret funktionsevne* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Partially reported ● **Scale**: WOMAC composite score ● **Range**: 0-240 ● **Unit of measure**: points ● **Direction**: Lower is better ● **Data value**: Change from baseline *Helbredsrelateret livskvalitet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Not reported *Forværring hoftemserte >24 t efter MT* ● **Outcome type**: AdverseEvent ● **Reporting**: Not reported *Præstationsbaseret funktionsevne* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Not reported *Smerte (ikke hofterelateret)* ● **Outcome type**: AdverseEvent ● **Reporting**: Not reported
Identification	**Sponsorship source:** Role of the funding source: The MOA Trial was funded by research contracts from the Health Research Council of New Zealand (HRC 07/199 and 07/200) and the New Zealand Lottery Grants Board (MR212664). JHA, MCR, GDB, JCTand AJC were all supported, in part, by grants from the Health Research Council. CC, DP and

	AAW were supported, in part, by graduate student scholarship funding from the Health Research Council. JHA was also supported in part by a grant from the Lottery Grants Board and by the Centre for Physiotherapy Research. All co-authors were supported in part by the University of Otago. JHA is currently supported by the Health Research Council as a Sir Charles Hercus Health Research Fellow. The researchers were independent from the funders: neither the Health Research Council nor the Lottery Grants Board had any role in study design, data collection,analysis, interpretation or reporting, or the decision to write and submit the paper. **Country:** New Zealand **Setting:** Specific setting not listed. Patients referred from GPs with hip or knee OA and from GPs referred for consideration of THA or TKA **Comments:** **Authors name:** JH Abbott **Institution:** **Email:** **Address:**
Notes	*Nkr 41 Hofte* on 27/02/2016 00:03 **Outcomes** Results are pooled for hip and knee OA, except for WOMAC 1 year follw up Uncertainty concerning n for hip OA in the two groups, see Table I and III *Erik Poulsen* on 27/02/2016 08:31 **Outcomes** Studiet bruger en composit score (samlet WOMAC) som indeholder smerte, led stivhed og funktion.Alle andre outcomes rapporteret er ikke opdelt i hofte vs. knee OA

Risk of bias table

Bias	Authors' judgement	Support for judgement
Incomplete outcome data	Low risk	Judgement Comment: Of the participants randomised to the three active interventiongroups, 88.3% attended of at least 80% of scheduled interventionvisits

Selective outcome reporting	Unclear risk	Judgement Comment: Assessors blind to group allocation performed assessments atbaseline, 9 weeks, 6 months and 1 year. But not all outcomes reported as mentioned in the Methods section: 9 weeks and 6 months.
Blinding of participants and personnel	High risk	Judgement Comment: Blinding not possible for patients and therapists
Sequence Generation	Low risk	Judgement Comment: After baseline assessment, participants were randomised usingTENALEA, an online randomisation service15. Randomisation was stratified by condition (hip or knee). Within each stratum, participants were randomised to one of the four intervention groups using block allocation. The block sizewas subject to randomvariation
Allocation concealment	Low risk	Judgement Comment: The TENALEA service generated and held the randomisationschedule, ensuring allocation concealment.
Blinding of outcome assessors	Low risk	Judgement Comment: Outcome assessors were blind to group allocation, and were notinvolved in providing the interventions. The statisticians conducting the statistical analyses were blind to group allocation until after the analyses were completed.
Other sources of bias	Low risk	Judgement Comment: Co-intervention not mentioned. Compliance acceptable. Similar outcome assessment time

Blackman 2014

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Intervention ● *Duration of symptoms (months), mean (SD)*: 17 (15.9) ● *Pain (VAS), Mean (SD)*: 62 (20.6) Control ● *Duration of symptoms (months), mean (SD)*: 13 (8.0) ● *Pain (VAS), Mean (SD)*: 39 (21.8)

	Included criteria: >3 months of groin or buttock activity related painRestricted hip movement>50 yearsmorning stiffness no more than ½ hrProficient English languageAble to attend 6 weekly treatment sessions **Excluded criteria:** Previous hip fracture, dislocation or surgeryCongenital hip dysplasiaInflammatory arthritisosteoporosisHistory of malignancy around the hipSevere LBP or radiculopathy below the kneeComorbidity excluding participant from MT or ExeT (cardiovascular insult, pulmonary disease or obesity)MT or corticosteroid injection for the hip within the last 3 months **Pretreatment:** Longer symptoms duration in intervention group compared to controlHigher baseline pain level in intervention group compared to control
Interventions	**Intervention Characteristics** Intervention ● *Manuel therapy + a home strengthening exercise programme*: Grade B mobilization (passive stretching by a therapist 1 x week for 6 weeks including home stretching exercises + control. Control ● *Manuel therapy + a home strengthening exercise programme*: Home strengthening exercise program (5 exercises, 3 sets of 10 reps, 4 x week for 6 weeks
Outcomes	*Smerte* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: VAS (average pain last week) ● **Range**: 0-100 ● **Unit of measure**: mm ● **Direction**: Lower is better ● **Data value**: Change from baseline *Patientrapporteret funktion* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: Lower extremity functional scale (LEFS) ● **Range**: 0-80 ● **Unit of measure**: points ● **Direction**: Higher is better ● **Data value**: Change from baseline

	Helbredsrelateret livskvalitet ● **Outcome type**: ContinuousOutcome ● **Reporting**: Not reported *Forværring hoftemserte >24 t efter MT* ● **Outcome type**: AdverseEvent ● **Reporting**: Partially reported ● **Notes**: Reports that no harms or unintended effects occured in either group *Præstationsbaseret funktionsevne* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Not reported *Smerte (ikke hofterelateret)* ● **Outcome type**: AdverseEvent ● **Reporting**: Not reported
Identification	**Sponsorship source:** Funding: none; COI: none **Country:** UK **Setting:** NHS community musculoskeletal service. Convinience sample referred from GPs **Comments:** **Authors name:** Fiona Blackman **Institution:** **Email:** **Address:**
Notes	*Nkr 41 Hofte* on 25/02/2016 23:51 **Study Design** Pilot study *Nkr 41 Hofte* on 26/02/2016 01:08 **Outcomes** Adverse events: There were no reported harms or unintended effects in either group *Erik Poulsen* on 26/02/2016 08:56

	Outcomes No adverse events reported but no mentioning of how reporting was collected *Erik Poulsen* on 26/02/2016 22:52 **Population** Hej Lone,Forskellen i change score efter intervention er højst sandsynligt pga. den store baseline forskel i VAS.

Risk of bias table

Bias	Authors' judgement	Support for judgement
Incomplete outcome data	Low risk	Judgement Comment: Data collected for almost all participants
Selective outcome reporting	Low risk	Judgement Comment: All outcomes reported
Blinding of participants and personnel	High risk	Judgement Comment: Participants and therapists were not blinded to interventions
Sequence Generation	Low risk	
Allocation concealment	Unclear risk	Judgement Comment: Not described how concealment was carried out.
Blinding of outcome assessors	High risk	Judgement Comment: Blinding only performed for ½ of PROM of hip
Other sources of bias	High risk	Judgement Comment: No intention-to-treat analysisSome baseline dissimilarity concerning pain severity and duration of symptoms

French 2013

Methods	**Study design:** Randomized controlled trial **Study grouping:** Crossover **Open Label:** **Cluster RCT:**

Participants	**Baseline Characteristics** Intervention Control **Included criteria:** OA of the hip according to the American College of Rheumatology clinical and radiographiccriteria and were aged 40 to 80 years. **Excluded criteria:** Exclusion criteria included previous hip arthroplasty, congenital or adolescent hip disease, clinical signs of lumbar spine disease, physiotherapy in the previous 6 months for hip symptoms, pregnancy, hip fracture, contraindications to ET,24 inflammatory arthritis, on the waitlist for hip joint replacement within the next 7 months, intra-articular hip corticosteroid injection in the previous 30 days, or insufficient understanding of the English language to complete questionnaires **Pretreatment:** Both hips involved (ET group 17% and ET+MT Group 31%) Table 1
Interventions	**Intervention Characteristics** Intervention ● *Exercise therapy + manual therapy (Dose: 6-8 session in 8 weeks)*: Control + MT (up to 15 min). Protocol of intervention included. Training of therapists. Non-manipulative techinques. Control ● *Exercise therapy + manual therapy (Dose: 6-8 session in 8 weeks)*: 30 min sessions incl. stretching and strengthening exercises and home exercises. Encouragement to do aerobic exercise 30 min 5 x week
Outcomes	*Smerte* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: NRS (activity) ● **Range**: 0-10 ● **Unit of measure**: Points ● **Direction**: Lower is better ● **Data value**: Endpoint *Patientrapporteret funktionsevne* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: WOMAC PF (physical function) ● **Range**: 0-68

	● **Unit of measure**: Points ● **Direction**: Lower is better ● **Data value**: Endpoint *Helbredsrelateret livskvalitet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Not reported *Forværring hoftemserte >24 t efter MT* ● **Outcome type**: AdverseEvent ● **Reporting**: Not reported *Præstationsbaseret funktionsevne* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: Sit-to-stand (5 reps) ● **Unit of measure**: Seconds ● **Direction**: Lower is better ● **Data value**: Endpoint *Smerte (ikke hofterelateret)* ● **Outcome type**: AdverseEvent ● **Reporting**: Not reported
Identification	**Sponsorship source:** Supported by a Fellowship for the Therapy Professions from the Health Research Board,Ireland (grant no. CTPF-06-12).No commercial party having a direct financial interest in the results of the research supportingthis article has or will confer a benefit on the authors or on any organization with which the authorsare associated **Country:** Ireland **Setting:** Four academic teahing hospitals with referrals from physio waiting lists, GPs, reumatologists, orthopedic surgeons, other hospital consultants **Comments:** **Authors name:** HP French **Institution:** **Email:** **Address:**

Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Incomplete outcome data	Low risk	Judgement Comment: Attrition rate at the 18-week follow-up was higher than the a prioriestimated rate of 10%. An overall dropout rate of 14.5%
Selective outcome reporting	Low risk	Judgement Comment: All outcomes reported in Tables
Blinding of participants and personnel	High risk	Judgement Comment: Participants and therapists could not be blinded
Sequence Generation	Low risk	Judgement Comment: Two computer generated randomization lists were compiled by anindependent statistician.
Allocation concealment	Low risk	Judgement Comment: Both lists were maintained by a member of the researchteam (T.C.), who was located offsite from the 4 trial centers andwas not involved in participant assessment or treatment. Group allocation was communicated via email by the independent randomizer to the treating therapists in each treatment site.
Blinding of outcome assessors	Low risk	Judgement Comment: A single assessor (H.P.F.), blinded to group allocation andmeasurement data from previous assessment points, carried out all outcome assessments. Patients were requested not to divulgeinformation regarding allocated treatment. Disclosure of groupallocation was recorded prospectively by the blinded assessor. Group assignment was disclosed to the outcome assessor by 5participants, who were all in the control group. No treatmentdisclosure occurred in the 2 intervention groups.
Other sources of bias	Low risk	Judgement Comment: Intention to treat analysis mentioned. Co-intervention not mentioned. Compliance considered acceptable. Outcome assessed at similar times

Poulsen 2013

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Intervention ● *Duration of symptoms (months), mean (SD)*: 26 (26) Control ● *Duration of symptoms (months), mean (SD)*: 32 (25) **Included criteria:** -patients referred from general practitioner, chiropractor or orthopaedic surgeon-unilateral hip pain of minimum 3 months' duration-radiology criteria for hip OA: joint space width (JSW) < 2.0 mm or a side difference in JSW of > 10%-adequate mastering of the Danish language to complete instructions and questionnairesDuring thefirst 2 months of recruitment, three exclusion criteriawere added to the original criteria1: patients who had had MTwithin the previous twelve months2; patients who rated their painseverity as 1 or 2 on the primary outcome 11-box numericalrating scale (NRS), since improvement would not be measurable3;patients with polyarthritis, defined as having OA-like symptomsfrom more than three anatomic areas. **Excluded criteria:** -inflammatory joint disease-previous hip or knee alloplastic-secondary arthritis due to hip fracture or infection-bilateral hip pain-hip dysplasia with a CE angle > 25 degrees and an AA angle > 10 degrees-low back pain which dominates over the hip pain-malignant disease-patients with paresis or paralysis after neuromuscular, cerebrovascular or polyneuropathic disease-hip pain resulting from labral tear, bursitis and/or snapping hip syndrome-polyarthritis-received manual treatment for the hip within the last year **Pretreatment:** Longer symptoms duration in the control group compared to intervention group
Interventions	**Intervention Characteristics** Intervention ● *Manuel therapy + patient education*: Manuel therapy + patient education (Dose: 12 sessions during 6 weeks) Control ● *Manuel therapy + patient education*: Patient education

Outcomes	*Smerte* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: HOOS Pain ● **Range**: 0-100 ● **Unit of measure**: points ● **Direction**: Higher is better ● **Data value**: Change from baseline *Patientrapporteret funktionsevne* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: HOOS ADL ● **Range**: 0-100 ● **Unit of measure**: points ● **Direction**: Higher is better ● **Data value**: Change from baseline *Helbredsrelateret livskvalitet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: HOOS QOL ● **Range**: 0-100 ● **Unit of measure**: points ● **Direction**: Higher is better ● **Data value**: Change from baseline *Forværring hoftemserte >24 t efter MT* ● **Outcome type**: AdverseEvent ● **Reporting**: Partially reported ● **Notes**: Only reported for 63 patients - estimated to correspond to 7 in each of 3 groups, not reported *Præstationsbaseret funktionsevne* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Not reported

	Smerte (ikke hofterelateret) ● **Outcome type**: AdverseEvent ● **Reporting**: Not reported
Identification	**Sponsorship source:** All authors declare that they have no competing interests. **Country:** Denmark **Setting:** **Comments:** **Authors name:** Poulsen et al. 2013 **Institution:** **Email:** **Address:**
Notes	*Nkr 41 Hofte* on 25/02/2016 21:30 **Interventions** It is a 3-arm RCT, we only extract data from 2 arms

Risk of bias table

Bias	Authors' judgement	Support for judgement
Incomplete outcome data	Low risk	Judgement Comment: Retrieved from Wang, 2015
Selective outcome reporting	Low risk	Judgement Comment: Retrieved from Wang, 2015
Blinding of participants and personnel	High risk	Judgement Comment: Retrieved from Wang, 2015
Sequence Generation	Low risk	Judgement Comment: Fra SR Wang et al. 2015 Fra SR Wang et al. 2015
Allocation concealment	Low risk	Judgement Comment: Retrieved from Wang, 2015
Blinding of outcome assessors	Low risk	Judgement Comment: Retrieved from Wang, 2015
Other sources of bias	Low risk	

Footnotes

Summary of findings tables

Additional tables

References to studies

Included studies

Abbott 2013

Abbott,J. H.; Robertson,M. C.; Chapple,C.; Pinto,D.; Wright,A. A.; Leon de la Barra,S.; Baxter,G. D.; Theis,J. C.; Campbell,A. J.; MOA Trial team. Manual therapy, exercise therapy, or both, in addition to usual care, for osteoarthritis of the hip or knee: a randomized controlled trial. 1: clinical effectiveness. Osteoarthritis and cartilage / OARS, Osteoarthritis Research Society 2013;21(4):525-534. [DOI: 10.1016/j.joca.2012.12.014 [doi]]

Blackman 2014

Blackman,Fiona; Atkins,Elaine. The effect of adding grade B hip mobilization to a muscle strengthening home exercise programme on pain, function, and range of movement in adults with symptomatic early-stage hip osteoarthritis: A pilot study for a randomized controlled trial. International Musculoskeletal Medicine 2014;36(2):54-63. [DOI: 10.1179/1753615414Y.0000000029]

French 2013

French,H. P.; Cusack,T.; Brennan,A.; Caffrey,A.; Conroy,R.; Cuddy,V.; FitzGerald,O. M.; Fitzpatrick,M.; Gilsenan,C.; Kane,D.; O'Connell,P. G.; White,B.; McCarthy,G. M.. Exercise and manual physiotherapy arthritis research trial (EMPART) for osteoarthritis of the hip: a multicenter randomized controlled trial. Archives of Physical Medicine and Rehabilitation 2013;94(2):302-314. [DOI: 10.1016/j.apmr.2012.09.030 [doi]]

Poulsen 2013

Poulsen,E.; Hartvigsen,J.; Christensen,H. W.; Roos,E. M.; Vach,W.; Overgaard,S.. Patient education with or without manual therapy compared to a control group in patients with osteoarthritis of the hip. A proof-of-principle three-arm parallel group randomized clinical trial. Osteoarthritis and cartilage / OARS, Osteoarthritis Research Society 2013;21(10):1494-1503. [DOI: 10.1016/j.joca.2013.06.009 [doi]]

Other references

Additional references

Other published versions of this review

Data and analyses

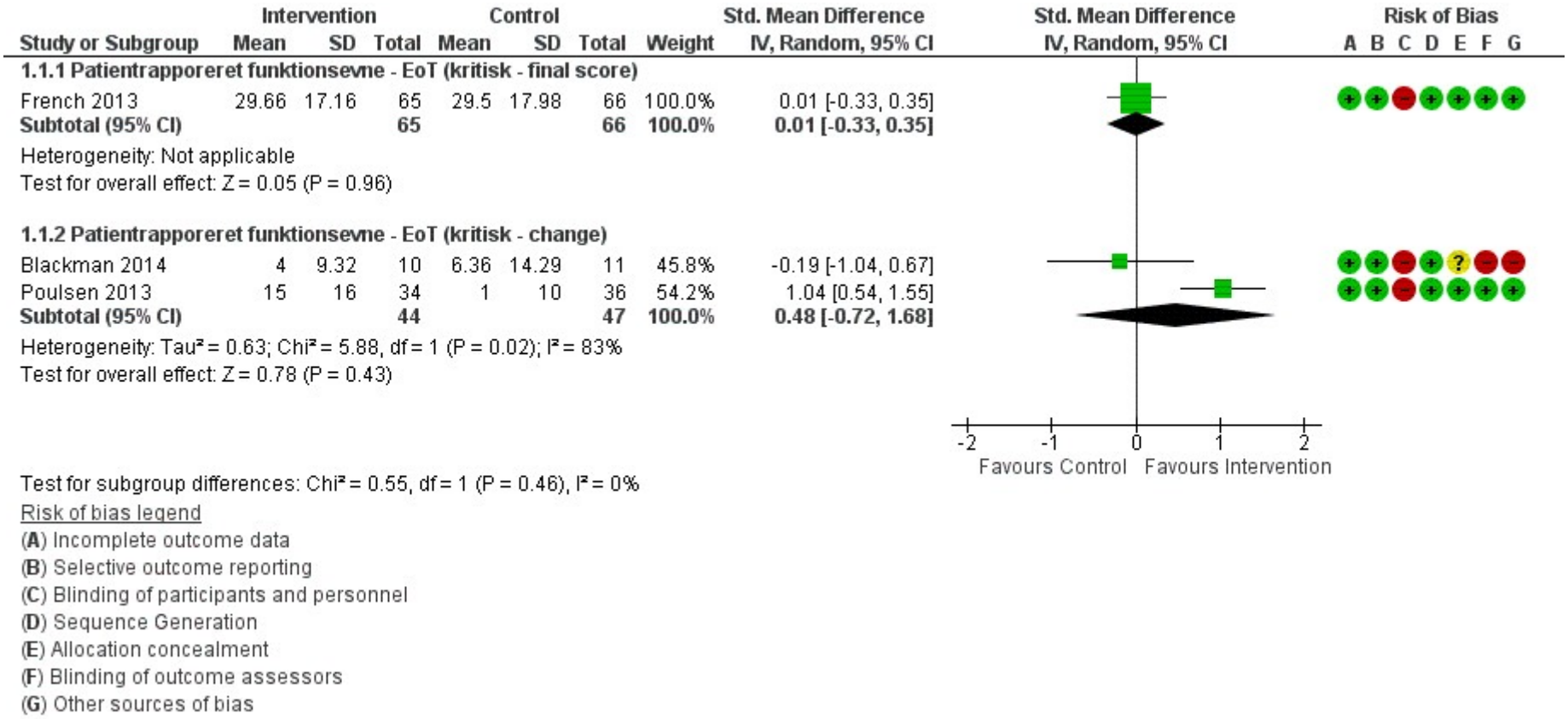
1 Intervention vs Control

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Patientrapporteret funktionsevne	3		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
1.1.1 Patientrapporeret funktionsevne - EoT (kritisk - final score)	1	131	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.33, 0.35]
1.1.2 Patientrapporeret funktionsevne - EoT (kritisk - change)	2	91	Std. Mean Difference (IV, Random, 95% CI)	0.48 [-0.72, 1.68]
1.2 Smerte	3		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
1.2.1 Smerteniveau - end of treatment (kritisk - final score)	1	131	Std. Mean Difference (IV, Random, 95% CI)	-0.18 [-0.52, 0.17]
1.2.2 Smerteniveau - end of treatment (kritisk - change)	2	91	Std. Mean Difference (IV, Random, 95% CI)	-1.41 [-1.90, -0.91]
1.3 Præstationsbaseret funktionsevne	1		Mean Difference (IV, Fixed, 95% CI)	Subtotals only
1.3.1 Præstationsbaseret funktionsevne - end of treatment (vigtigt - final score)	1	131	Mean Difference (IV, Fixed, 95% CI)	0.56 [-2.27, 3.39]
1.4 Patientrapportert funktionsevne 6-12 måneder	2		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
1.4.2 Patientrapporteret funktionsevne 6- 12 måneder (vigtigt - change)	2	155	Std. Mean Difference (IV, Random, 95% CI)	-0.33 [-0.65, -0.02]

1.5 Helbredsrelateret livskvalitet	1		Mean Difference (IV, Fixed, 95% CI)	Subtotals only
1.5.1 Helbredsrelateret livskvalitet - End of treatment (vigtigt - change)	1	70	Mean Difference (IV, Fixed, 95% CI)	14.00 [6.96, 21.04]
1.6 Bivirkninger (forværring af hoftesmerter > 24 timer)	1	42	Risk Ratio (M-H, Fixed, 95% CI)	15.00 [0.91, 246.93]
1.7 Bivirkninger (smerter der ikke er hofterapporteret)	0	0	Odds Ratio (M-H, Fixed, 95% CI)	Not estimable

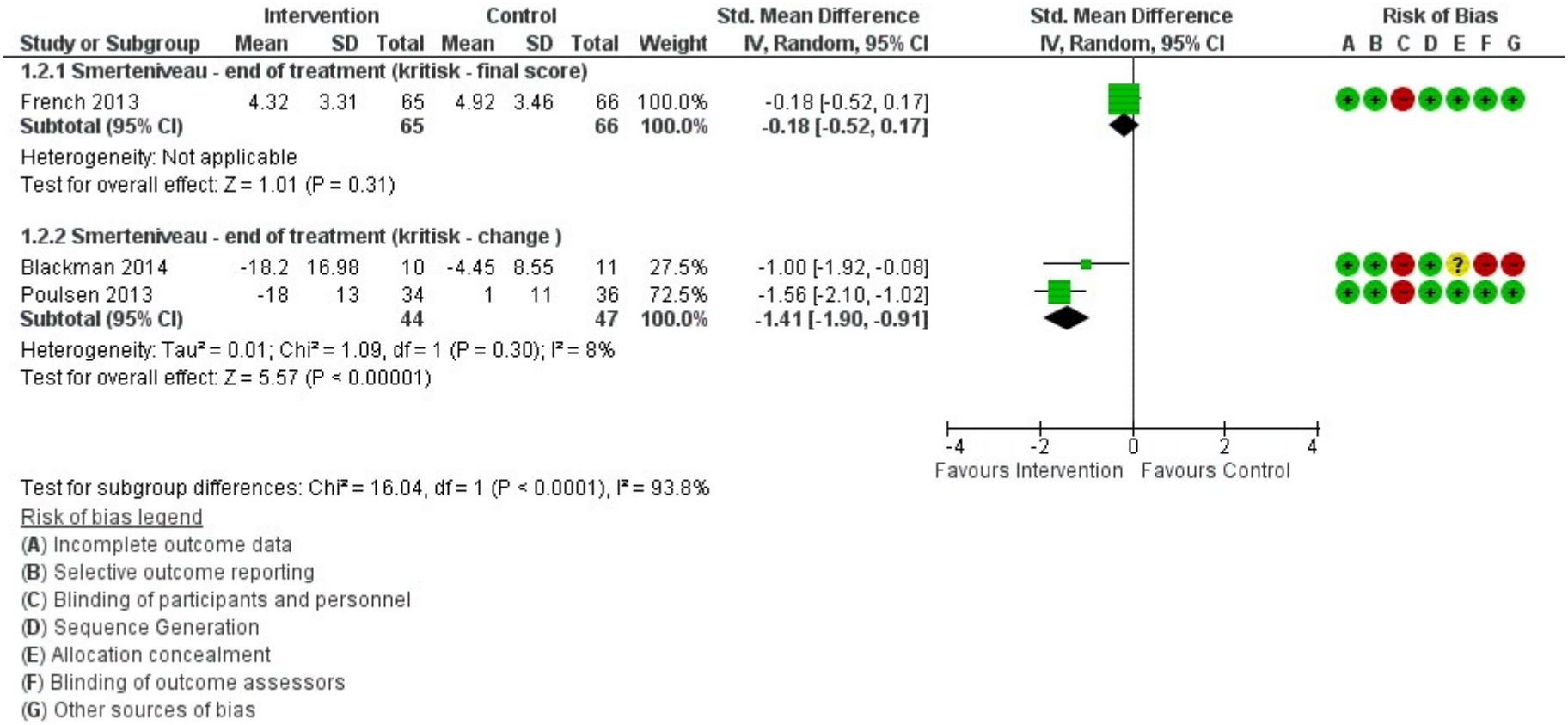
Figures

Figure 1 (Analysis 1.1)



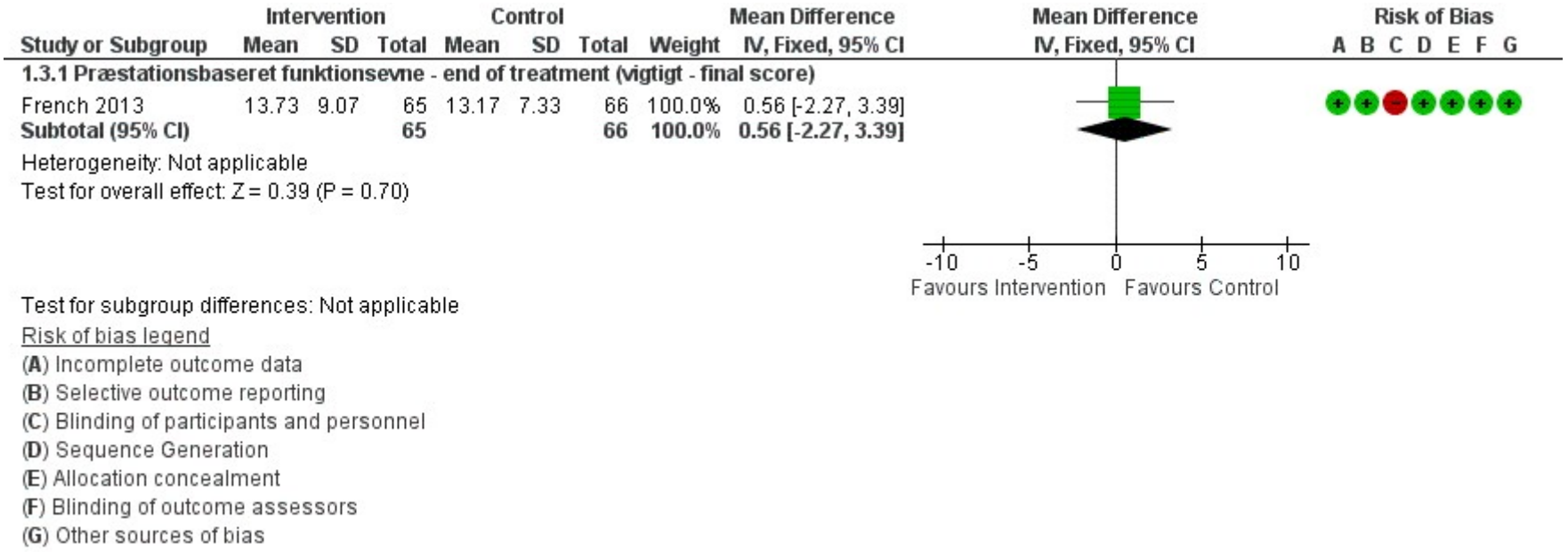
Forest plot of comparison: 1 Intervention vs Control, outcome: 1.1 Patientrapporteret funktionsevne.

Figure 2 (Analysis 1.2)



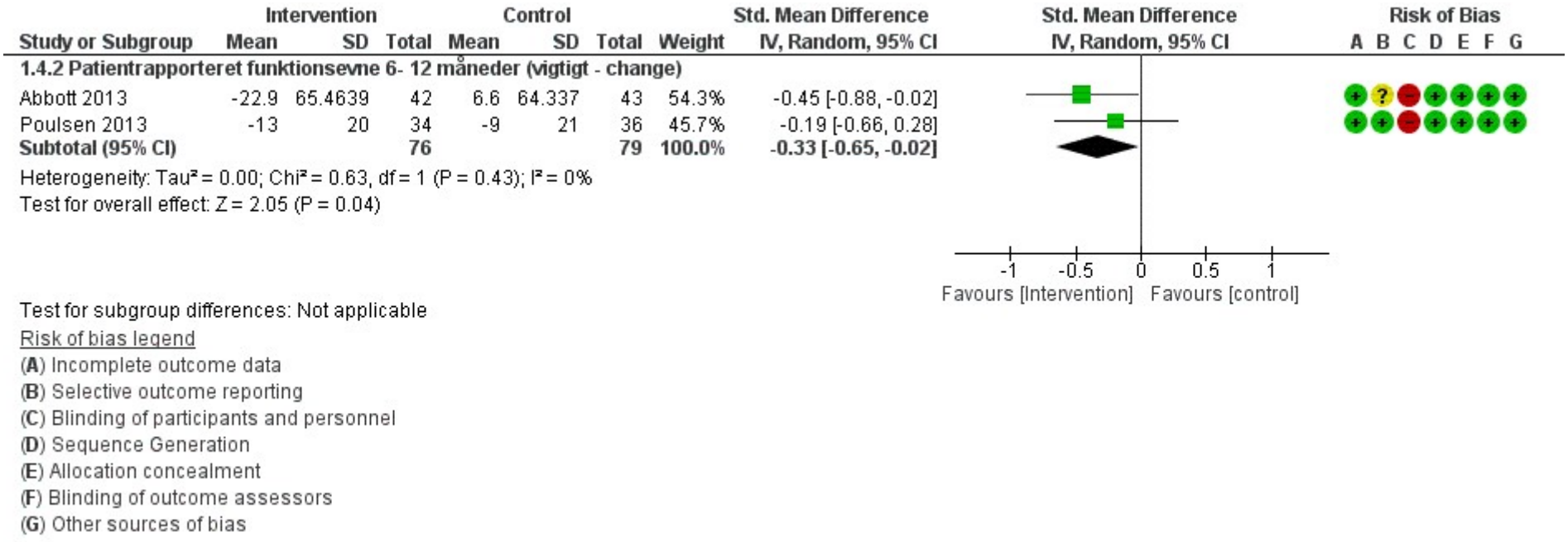
Forest plot of comparison: 1 Intervention vs Control, outcome: 1.2 Smerte.

Figure 3 (Analysis 1.3)



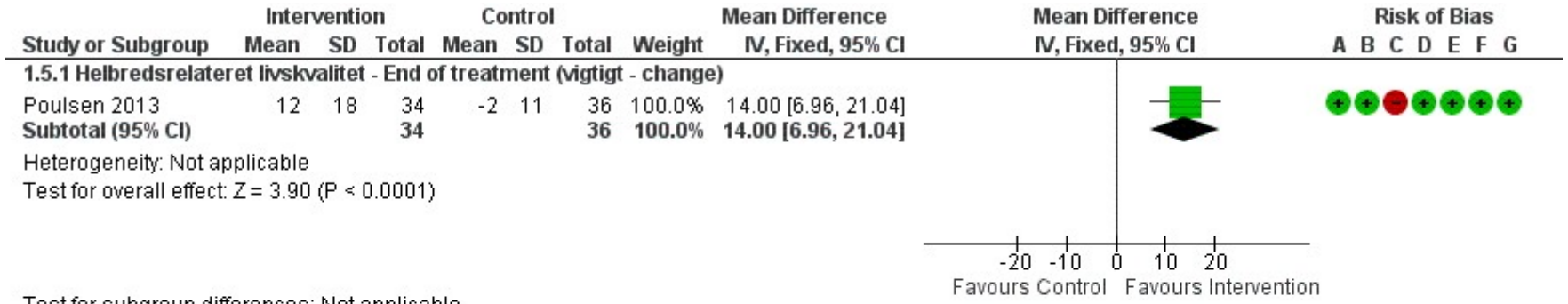
Forest plot of comparison: 1 Intervention vs Control, outcome: 1.3 Præstationsbaseret funktionsevne.

Figure 4 (Analysis 1.4)



Forest plot of comparison: 1 Intervention vs Control, outcome: 1.4 Patientrapportert funktionsevne 6-12 måneder.

Figure 5 (Analysis 1.5)



Test for subgroup differences: Not applicable

Risk of bias legend

(**A**) Incomplete outcome data
(**B**) Selective outcome reporting
(**C**) Blinding of participants and personnel
(**D**) Sequence Generation
(**E**) Allocation concealment
(**F**) Blinding of outcome assessors
(**G**) Other sources of bias

Forest plot of comparison: 1 Intervention vs Control, outcome: 1.5 Helbredsrelateret livskvalitet.