NKR 46: Education for hand eczema

Review information

Authors

[Empty name][1]

[1][Empty affiliation]

Citation example: [Empty name]. NKR 46: Education for hand eczema. Cochrane Database of Systematic Reviews [Year], Issue [Issue].

Characteristics of studies

Characteristics of included studies

Ibler 2012

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Intervention ● *Women %*: 95 ● *Age (SD)*: 45 Control ● *Women %*: 90 ● *Age (SD)*: 43 **Included criteria:** an affirmative answer to the question “Have you had handeczema during the past 12 months?” and informed consent. **Excluded criteria:** Exclusion criteriawere pregnancy, systemic use of immunosuppressive drugs orretinoids, psoriatic lesions on the hands, and any serious medicalcondition that could influence the results. **Pretreatment:** None see table 1
Interventions	**Intervention Characteristics** Intervention ● *Description*: At study entry participants in the intervention group were patchtested. We obtained a history of work related and domestic exposures.The participants were given instructions on how to avoidrelevant allergens and how to protect their skin at work and athome. The participants applied a fluorescent emollient to theirhands; we used ultraviolet radiation to determine whether it hadbeen successfully applied. The doctor observed hand washingand advised the participants to use cold or lukewarm water, towet their hands before using the detergent, and to dry their handscarefully with paper wipes.27 The wearing of rings wasdiscouraged. The doctor instructed the participants accordingto a skin protection programme and handed out a written versionof the advice.3 The participants were encouraged to usedisinfectants instead of washing their hands when the skin wasnot visibly dirty (according to workplace recommendations)and to use a lipid-rich moisturiser free of fragrances at leastthree times daily during working hours(on arrival, before lunch,and before leaving) and at bedtime. Protective gloves wererecommended to be worn during wet work and while handlingdrugs, cleaning, and cooking (handling of vegetables, raw meat,and fish). When the gloves were expected to be worn for morethan five minutes, cotton gloves were recommended to be wornunderneath. The time spent on reading the patch test andindividual counselling was 20 to 30 minutes per participant.Participants in the intervention group with severe hand eczemarequiring medical treatment were advised to consult their generalpractitioner or dermatologist. ● *Duration*: instructions follow up 5 month Control ● *Description*: Participants in the control group received no intervention ● *Duration*: -
Outcomes	*Sværhedsgrad af eksemet* ● **Outcome type**: ContinuousOutcome ● **Scale**: HECSI ● **Range**: 0-360 ● **Direction**: Lower is better ● **Data value**: Endpoint ● **Notes**: Det fremgår ikke klart om der er tale om endpoint. *Livskvalitet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: DLQI ● **Range**: 0-30 ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** Funding: This study was funded by Region Zealand’s Research Fundand the Danish Working Environment Research Fund **Country:** Denmark **Setting:** Survey

	Comments: **Authors name:** Kristina Ibler **Institution:** Bispebjerg University Hospital Denmark **Email:** kristinaibler@hotmail.com **Address:**
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Sequence Generation	Low risk	Quote: "using a computer generated allocation sequence with a block size of 10."
Allocation concealment	Low risk	Quote: "The allocation sequence and block size were concealed from the clinical investigators."
Blinding of participants and personnel	High risk	
Blinding of outcome assessors	Low risk	Quote: "told the allocated intervention. Blinding A trained nurse who was blinded to treatment allocation obtained the outcome measurements. It was not possible to blind the participants or the doctors to treatment allocation. The blinded nurse carried out double data entry and a blinded statistician analysed the data. To reduce the risk of information bias, the participants were individually requested not to share information. Outcomes The primary outcome was"
Incomplete outcome data	Low risk	Quote: "corticosteroids. Dropouts and missing values Follow-up data were available for 247 of the 255 (97%) participants. In the intervention group, 122 of 123 participants received the intervention as planned; one did not attend. Two participants were excluded at follow-up because they were pregnant and one did not attend. In the control group one participant was excluded because systemic corticosteroids had been prescribed and three participants did not attend follow-up. Table 2⇓ shows the absolute"
Selective outcome reporting	Low risk	
Other sources of bias	Low risk	

Mollerup 2014

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Intervention ● *Women %*: 63 ● *Age (SD)*: Control ● *Women %*: 66 ● *Age (SD)*: **Included criteria:** ligible patients(referred because of hand eczema, aged between 18 and70 years, and capable of replying to questionnaires inDanish) were invited to participate. **Excluded criteria:** **Pretreatment:** None of significant value. table 1
Interventions	**Intervention Characteristics** Intervention ● *Description*: ● *Duration*: Control ● *Description*: ● *Duration*:
Outcomes	*Sværhedsgrad af eksemet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: HECSI ● **Range**: 0-360 ● **Direction**: Lower is better ● **Data value**: Endpoint *Livskvalitet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: DLQI ● **Range**: 0-30 ● **Direction**: Lower is better ● **Data value**: Endpoint *sværhedsgrad af eksemet* ● **Outcome type**: ContinuousOutcome

	● **Reporting**: Fully reported ● **Scale**: HECSI ● **Range**: 0-360 ● **Direction**: Lower is better ● **Data value**: Change from baseline *livskvalitet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: DLQI ● **Range**: 0-30 ● **Direction**: Lower is better ● **Data value**: Change from baseline
Identification	**Sponsorship source:** The study was funded by Trygfonden,Denmark. Financial support was also received from AageBang's Foundation **Country:** Danmark **Setting:** outpatient clinic **Comments:** **Authors name:** Annette Mollerup **Institution:** Department of Dermato-Allergology, National Allergy Research Centre, **Email:** **Address:** Copenhagen University Hospital Gentofte Niels Andersens Vej 65, 2900, Hellerup,Denmark
Notes	*Louise Klokker Madsen* on 27/02/2016 02:17 **Population** Age groups given in percent distributions per decade (largest group in the intervention group age 18-29: 33%, in the control group age 40-49: 25% *Louise Klokker Madsen* on 27/02/2016 02:27 **Outcomes** Median - IQR

Risk of bias table

Bias	Authors' judgement	Support for judgement
Sequence Generation	Low risk	Quote: "Randomization was individual, and was performed centrally at the National Allergy Research Centre with a computer-generated algorithm unknown to the investigator."
Allocation concealment	Low risk	
Blinding of participants and personnel	High risk	
Blinding of outcome assessors	High risk	Judgement Comment: ikke mulig med blinding her
Incomplete outcome data	Low risk	Judgement Comment: Dropout analysis performed
Selective outcome reporting	Low risk	
Other sources of bias	Low risk	Quote: "First, we deliberately included patients on the basis of wide criteria and at two different settings, to enhance generalizability, but this resulted in a cohort that was even more heterogeneous than anticipated. This was especially critical in relation to the prescription of intensified treatment." Quote: "Second, the time lags of HECSI assessments and questionnaires made it difficult to validate the clinical findings with supplemental subjective measurements." Quote: "In addition, the clinical outcome measurements were not blinded, which could result in an observer bias." Quote: "Third, the controllability of the intervention may be questioned. We did not require the patients in the intervention group to fully comply with the intentional self-monitoring features or with the other elements in the Healthy Skin Intervention."

VanGils 2012

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** Intervention ● *Women %*: 54 ● *Age (SD)*: 43.4 (13.8) ● *Atopic dermatitis %*: 34 Control ● *Women %*: 48 ● *Age (SD)*: 43 (13.9) ● *Atopic dermatitis %*: 19 **Included criteria:** atients aged≥ 16 years with moderate tosevere, chronic (>3 months) hand eczema who visiteda

	dermatologist of one of the participating hospitals.The degree of hand eczema was determined witha Photographic Guide (12). Patients with mild handeczema who were on sick leave from work, or who scoredat least 4 points on a visual analogue scale (VAS) forperceived burden of disease in the last 3 months beforeinclusion, were also eligible. **Excluded criteria:** (i) had generalized eczema where hand eczema was notthe main disease; (ii) used topical pharmacotherapy orphototherapy other than used in the study; (iii) usedsystemic treatment affecting hand eczema; and (iv) wereunable to complete questionnaires written in the Dutchlanguage **Pretreatment:** significant difference inhistory of atopic eczema was observed between thegroups. The difference in risk profession between thegroups was considered to be clinically relevant, althoughthis difference was not significant. No differences wereobserved between patients with follow-up measurementsand patients who were lost to follow-up.
Interventions	**Intervention Characteristics** Intervention ● *Description*: Content of the programme.The programme consisted ofclinical and allergo-dermatological evaluation by thedermatologist. The specialized nurse/physician assistantwas responsible for counselling the patient on compliancewith topical treatment and with regard to hand washing and care procedures, and the use of protective measures,such as protective gloves in general and the useof cotton gloves worn underneath. Topical treatmentwas standardized, and consisted of topical steroids andemollients, supplemented, if necessary, with calcineurininhibitors.When the hand eczema was work-related or whenthere was a risk for (potential) absenteeism as a resultof hand eczema, the clinical occupational physician wasinvolved. If needed, materials derived from the workplacewere tested. Workplace visits were organized, if indicated,to gain relevant material for testing or information onwork circumstances. The clinical occupational physicianalso gave advice about prevention and work procedures.If needed, provision of modified work was organized incommunication with the employer's supervisor. ● *Duration*: ● *Number of hand washings daily*: ● *Use of moisturisers daily*: ● *Use of protective gloves*: ● *Use of desinfections daily*: Control ● *Description*: Usual care.Patients allocated to the usual care groupreceived prick tests and/or patch testing with the Euro-pean baseline series and additional series, undertaken bytheir own dermatologists. The patient's own dermatolo-gist was also responsible for further usual medical care,such as pharmacotherapy, and provision of standardwritten information and advice. ● *Duration*: ● *Number of hand washings daily*: ● *Use of moisturisers daily*: ● *Use of protective gloves*: ● *Use of desinfections daily*:
Outcomes	*Sværhedsgrad af eksemet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: HECSI ● **Range**: 0-360 ● **Direction**: Lower is better ● **Data value**: Endpoint *Livskvalitet* ● **Outcome type**: ContinuousOutcome ● **Reporting**: Fully reported ● **Scale**: DLQI ● **Range**: 0-30 ● **Direction**: Lower is better ● **Data value**: Endpoint
Identification	**Sponsorship source:** **Country:** The Netherlands **Setting:** **Comments:** **Authors name:** Robin F. van Gils **Institution:** Department of Publicand Occupational Health, EMGO Institute for Health and Care Research **Email:** h.anema@vumc.nl (Professor Dr Johannes R. Anema) **Address:** VU University Medical Centre, Van der Boechorststraat 7, 1081 BT Amsterdam,The Netherlands
Notes	*Louise Klokker Madsen* on 27/02/2016 02:09 **Outcomes** Shared SEs

Risk of bias table

Bias	Authors' judgement	Support for judgement
Sequence Generation	Low risk	Quote: "Pre-stratification was applied for hospital and risk profession. Block randomization (with blocks of four) was applied to ensure equal group sizes. Within each stratum, a research assistant prepared sequentially numbered sealed envelopes containing a referral for either the intervention group or the control group."

Allocation concealment	Low risk	Quote: "Block randomization (with blocks of four) was applied to ensure equal group sizes. Within each stratum, a research assistant prepared sequentially numbered sealed envelopes containing a referral for either the intervention group or the control group."
Blinding of participants and personnel	High risk	Judgement Comment: It was not possible to blind the patients for thetreatment allocation. The care providers were also notblinded, but they were not involved in measuring theoutcomes.
Blinding of outcome assessors	Low risk	Judgement Comment: Clinical scoring of the primary outcomemeasure was performed by an independent, trainedclinical investigator, who was blinded for allocatedtreatment. A research assistant entered all data in thecomputer by the research code. Therefore, the analyses ofthe data by the researcher were blind.
Incomplete outcome data	High risk	Quote: "of patients through the study. Loss to follow-up and compliance Data on the primary outcome measure were complete for 196 patients and for 158 (81%) patients during 26 weeks of follow-up. Follow up data on secondary outcomes were complete for 124 patients (63%). Nine patients did not Intention -to -treat analyses for primary outcome (n = 88) Intention to treat analyses for secondary outcome (n = 67) Loss to follow-up for primary outcome (n = 25) Loss to follow-up for secondary outcome (n = 38) Loss to follow-up for primary outcome (n = 13) Loss to follow-up for secondary outcome (n = 34) Intention to treat analyses for primary outcome (n = 70) Intention to treat analyses for secondary outcome (n = 57) Randomized (n = 196) Allocated to usual care (n = 95) Allocated to integrated care (n = 101) Fig. 1. Flow of patients through the study. Table 1. Baseline characteristics and prognostic factors of outcome measures; values are expressed as number of patients (percentages), unless stated otherwise Variable Integrated care (n = 101) Usual care (n = 95) Men 46 (46) 48 (52) Women 55 (54) 47 (48) Age (years), mean (SD) 43.4 (13.8) 43.0 (13.9) Risk profession 50 (50) 38 (40) History of atopic eczema 34 (34) 18 (19) Presence of allergens 65 (64) 66 (69) HECSI, mean (SD) 43.9 (33.7) 36.5 (33.9) Quality of life, mean (SD) Symptoms 59.9 (16.0) 59.7 (18.2) Emotion 31.8 (19.7) 28.7 (18.6) Function 24.4 (18.8) 20.8 (18.2) Total 38.7 (15.9) 36.4 (15.5) Patients' global assessment, mean (SD) Pain 4.4 (2.7) 4.5 (2.4) Itching 4.2 (2.4) 4.1 (2.6) Fatigue 4.5 (2.9) 3.9 (2.7) HECSI, Hand Eczema Severity Index; SD, standard deviation. complete the intervention period for various reasons: no time (n = 4), no perceived improvement (n = 3), or perceived recovery (n = 2). Patient characteristics Table 1 shows"
Selective outcome reporting	Low risk	
Other sources of bias	Low risk	

Footnotes

Characteristics of excluded studies

Fisker 2013

Reason for exclusion	Wrong study design

Ktting 2010

Reason for exclusion	Wrong patient population

Kupfer 2010

Reason for exclusion	Wrong outcomes

Meding 2006

Reason for exclusion	Wrong study design

Oreskov 2015

Reason for exclusion	Wrong study design

vanderMeer 2014

Reason for exclusion	Wrong outcomes

vanderMeer 2014a

Reason for exclusion	Wrong outcomes

vanderMeer 2015

Reason for exclusion	Wrong patient population

vanGils 2012

Reason for exclusion	Wrong outcomes

Veien 2012

Reason for exclusion	Wrong study design

Weisshaar 2006

Reason for exclusion	Wrong study design

Weisshaar 2013

Reason for exclusion	Wrong study design

Footnotes

Characteristics of studies awaiting classification

Footnotes

Characteristics of ongoing studies

Footnotes

Summary of findings tables

Additional tables

References to studies

Included studies

Ibler 2012

Ibler, K. S.; Jemec, G. B.; Diepgen, T. L.; Gluud, C.; Lindschou Hansen, J.; Winkel, P.; Thomsen, S. F.; Agner, T.. Skin care education and individual counselling versus treatment as usual in healthcare workers with hand eczema: randomised clinical trial. BMJ 2012;345:e7822. [DOI: 10.1136/bmj.e7822]

Mollerup 2014

Mollerup, A.; Veien, N. K.; Johansen, J. D.. The effectiveness of tailored nurse-led counselling in hand eczema. Contact Dermatitis 2014;70:31. [DOI: http://dx.doi.org/10.1111/cod.12260]

VanGils 2012

Van Gils R.F. Boot C.R.L. Knol D.L. Rustemeyer T. Van Mechelen W. Van Der Valk P.G.M. Anema J.R. The effectiveness of integrated care for patients with hand eczema: Results of a randomized, controlled trial. Contact Dermatitis 2012;66(4):197-204. [DOI: 10.1111/j.1600-0536.2011.02024.x [doi]]

Excluded studies

Fisker 2013

Fisker, Maja Hvid; Agner, Tove; Lindschou, Jane; Bonde, Jens Peter; Ibler, Kristina Sophie; Gluud, Christian; Winkel, Per; Ebbehoj, Niels E.. Protocol for a randomised trial on the effect of group education on skin-protective behaviour versus treatment as usual among individuals with newly notified occupational hand eczema - the Prevention of Hand Eczema (PREVEX) Trial. BMC Dermatology 2013;13:16. [DOI: 10.1186/1471-5945-13-16]

Ktting 2010

Ktting, B.; Baumeister, T.; Weistenhfer, W.; Pfahlberg, A.; Uter, W.; Drexler, H.. Effectiveness of skin protection measures in prevention of occupational hand eczema: results of a prospective randomized controlled trial over a follow-up period of 1 year. The British journal of dermatology 2010;162(2):362-70. [DOI: 10.1111/j.1365-2133.2009.09485.x]

Kupfer 2010

Kupfer, J.; Gieler, U.; Diepgen, T. L.; Fartasch, M.; Lob-Corzilius, T.; Ring, J.; Scheewe, S.; Scheidt, R.; Schnopp, C.; Szczepanski, R.; Staab, D.; Werfel, T.; Wittenmeier, M.; Wahn, U.; Schmid-Ott, G.. Structured education program improves the coping with atopic dermatitis in children and their parents-a multicenter, randomized controlled trial. Journal of Psychosomatic Research 2010;68(4):353-8. [DOI: 10.1016/j.jpsychores.2009.04.014]

Meding 2006

Meding, B.; Wrangsjo, K.; Hosseiny, S.; Andersson, E.; Hagberg, S.; Toren, K.; Wass, K.; Brisman, J.. Occupational skin exposure and hand eczema among dental technicians-need for improved prevention. Scandinavian Journal of Work, Environment and Health 2006;32(3):219-24. [DOI:]

Oreskov 2015

Oreskov, K. W.; Sosted, H.; Johansen, J. D.. Glove use among hairdressers: difficulties in the correct use of gloves among hairdressers and the effect of education. Contact Dermatitis 2015;72(6):362-6. [DOI: 10.1111/cod.12336]

vanderMeer 2014

van der Meer, E. W.; Boot, C. R.; Twisk, J. W.; Coenraads, P. J.; Jungbauer, F. H.; van der Gulden, J. W.; Anema, J. R.. Hands4U: the effectiveness of a multifaceted implementation strategy on behaviour related to the prevention of hand eczema-a randomised controlled trial among healthcare workers. Occupational and Environmental Medicine 2014;71(7):492-9. [DOI: 10.1136/oemed-2013-102034]

vanderMeer 2014a

van der Meer EW.; Boot CR.; Jungbauer FH.; Coenraads PJ.; van der Gulden JW.; Anema JR.. Implementation of recommendations for hand eczema through a multifaceted strategy. A process evaluation among health care workers.. Acta dermato-venereologica 2014;94(6):651-7. [DOI: 10.2340/00015555-1830]

vanderMeer 2015

van der Meer, E. W.; Boot, C. R.; van der Gulden, J. W.; Knol, D. L.; Jungbauer, F. H.; Coenraads, P. J.; Anema, J. R.. Hands4U: the effects of a multifaceted implementation strategy on hand eczema prevalence in a healthcare setting. Results of a randomized controlled trial. Contact Dermatitis 2015;72(5):312-24. [DOI: 10.1111/cod.12313]

vanGils 2012

van Gils, Robin F.; Groenewoud, Karin; Boot, Cecile R. L.; Rustemeyer, Thomas; van Mechelen, Willem; van der Valk, Pieter G. M.; Anema, Johannes R.. Process evaluation of an integrated, multidisciplinary intervention programme for hand eczema. 2012;66(dp7, 7604950):254-63. [DOI: 10.1111/j.1600-0536.2011.02031.x]

Veien 2012

Veien, Niels Kren; Johansen, Jeanne Duus. Chronic hand eczema--self-management and prognosis: a study protocol for a randomised clinical trial.. BMC Dermatol 2012;12(100968541). [DOI: http://dx.doi.org/10.1186/1471-5945-12-6]

Weisshaar 2006

Weisshaar, E.; Radulescu, M.; Bock, M.; Albrecht, U.; Diepgen, T. L.. Educational and dermatological aspects of secondary individual prevention in healthcare workers. Contact Dermatitis 2006;54(5):254-60. [DOI: 10.1111/j.0105-1873.2006.00811.x]

Weisshaar 2013

Weisshaar, E.; Skudlik, C.; Scheidt, R.; Matterne, U.; Wulfhorst, B.; Schonfeld, M.; Elsner, P.; Diepgen, T. L.; John, S. M.; ROQ Study Group. Multicentre study 'rehabilitation of occupational skin diseases -optimization and quality assurance of inpatient management (ROQ)'-results from 12-month follow-up. Contact Dermatitis 2013;68(3):169-74. [DOI: http://dx.doi.org/10.1111/j.1600-0536.2012.02170.x]

Studies awaiting classification

Ongoing studies

Other references

Additional references

Other published versions of this review

Classification pending references

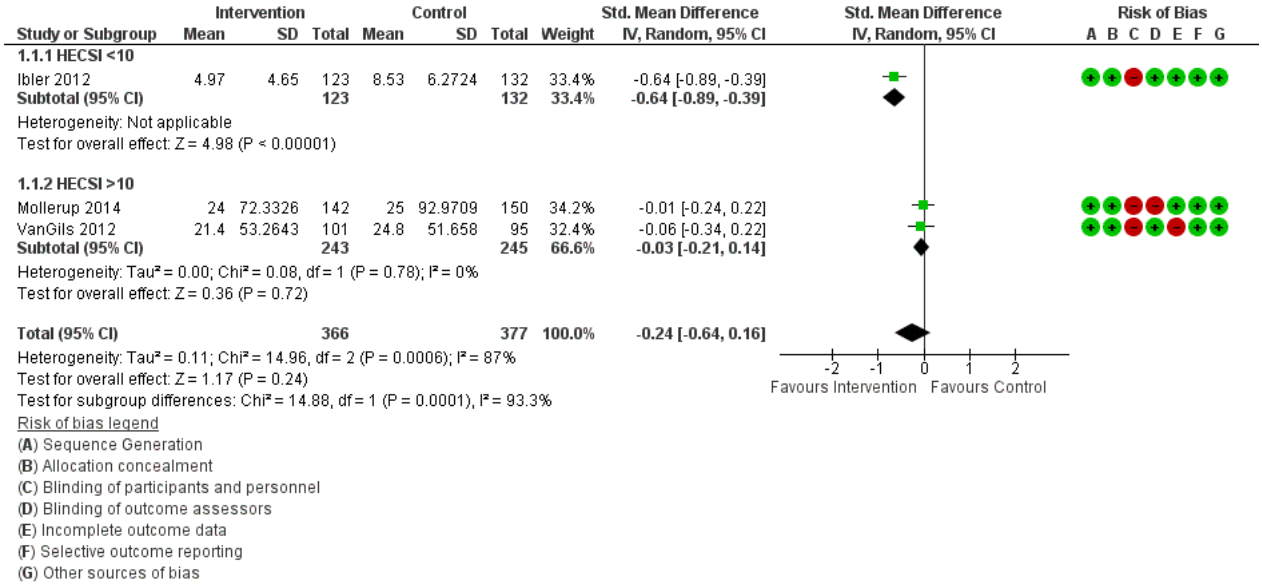
Data and analyses

1 Intervention vs Control

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 Sværhedsgrad af eksemet (HECSI, lower is better)	3	743	Std. Mean Difference (IV, Random, 95% CI)	-0.24 [-0.64, 0.16]
1.1.1 HECSI <10	1	255	Std. Mean Difference (IV, Random, 95% CI)	-0.64 [-0.89, -0.39]
1.1.2 HECSI >10	2	488	Std. Mean Difference (IV, Random, 95% CI)	-0.03 [-0.21, 0.14]
1.2 Sværhedsgrad af eksemet (HECSI, lower is better)	0	0	Std. Mean Difference (IV, Random, 95% CI)	Not estimable
1.2.1 Longest follow up	0	0	Std. Mean Difference (IV, Random, 95% CI)	Not estimable
1.3 Livskvalitet, longest follow up	3	743	Std. Mean Difference (IV, Random, 95% CI)	-0.06 [-0.35, 0.24]
1.3.1 HECSI <10	1	255	Std. Mean Difference (IV, Random, 95% CI)	-0.35 [-0.60, -0.11]
1.3.2 HECSI >10	2	488	Std. Mean Difference (IV, Random, 95% CI)	0.10 [-0.08, 0.28]

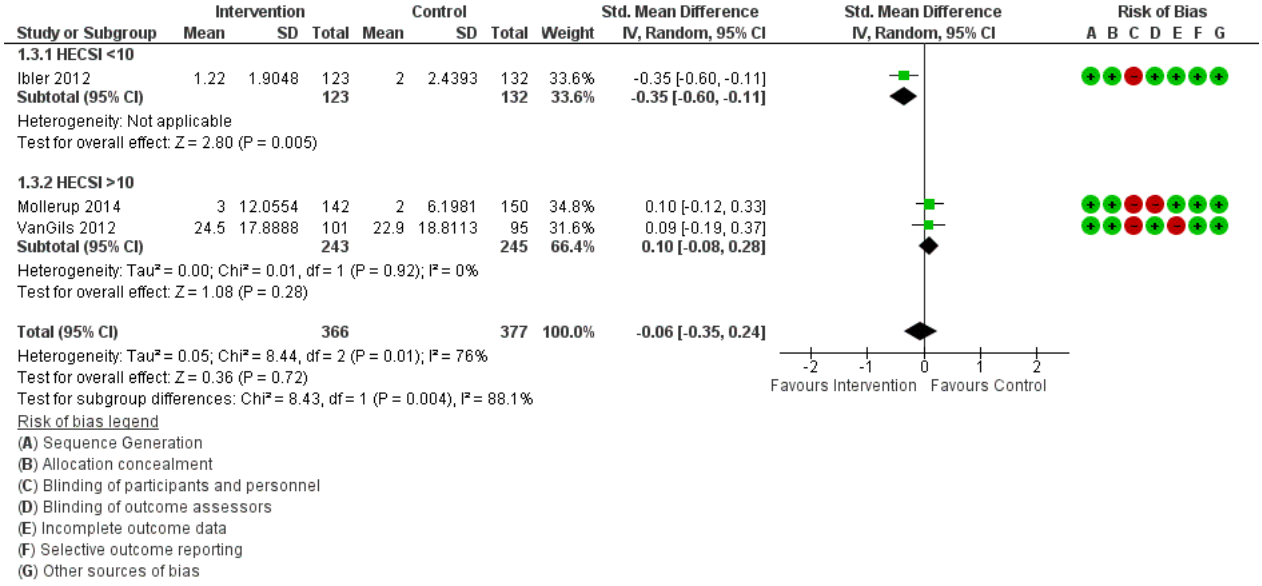
Figures

Figure 1 (Analysis 1.1)



Forest plot of comparison: 1 Intervention vs Control, outcome: 1.1 Sværhedsgrad af eksemet (HECSI, lower is better).

Figure 2 (Analysis 1.3)



Forest plot of comparison: 1 Intervention vs Control, outcome: 1.3 Livskvalitet, longest follow up.