PICO 9: Er der effekt af ’Self-management” tilgange som integreret del af (eller supplement til) den sygdomsspecifikke patientuddannelse af type 2 diabetes?

Methods

Criteria for considering studies for this review

Types of outcome measures

Primary outcomes

HbA1c >= 1 år - kritisk
QoL – længste follow-up

Secondary outcomes

Følgende outcomes er vurderet vigtige:

HbA1c< 1 år
Komplikationer >= 1 år
Hjertekarsygdom >= 1 år
Selvrapporteret helbred - længste follow-up
Self-efficacy - længste follow-up
Depression - længste follow-up
Frafaldsrate - efter endt forløb

Characteristics of studies

Characteristics of included studies

Chen 2012

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:** YES
Participants	**Baseline Characteristics** intervention ● *age*: 59.19 (10.24) ● *gender (% females)*: 58 (55.8) ● *diabetes duration (yrs)*: 7.98 (7.57) ● *HbA1c (%)*: 8.92 (2.17) control ● *age*: 58.67 (10.23) ● *gender (% females)*: 50 (45.0) ● *diabetes duration (yrs)*: 7.91 (6.95) ● *HbA1c (%)*: 8.52 (1.82) **Included criteria:** The inclusion criteria for study subjects were: enrolledin the diabetes clinic and have a diagnosis for more than 3months with type 2 diabetes; more than 18 years of age;able to consent to participate on their own behalf; have noobvious confusion or psychiatric illness; and able to speak,read and write Chinese. **Excluded criteria:** Individuals were excluded fromparticipating if they demonstrated: difficulty communicatingin Chinese or were too ill to participate because of aterminal illness or hemodialysis.
Interventions	**Intervention Characteristics** intervention ● *education and intervention*: Participants allocated to the intervention group receivedthe motivational interview intervention comprising a 45–60 min interview. The researcher who conducted themotivational interviews has a nursing background andhas had extensive experience conducting motivationalinterviews with diabetic people. The researcher introducedthe motivational interview to participants as an opportunityto talk about their thoughts and feelings about diabetes,emphasizing that it was up to the participants themselves tomake decisions about diabetes self-management. control

	● *education and intervention*: Control participants were invited to attend hospitalbased educational sessions (including individual educationduring clinic visiting) and the ‘Diabetics Club’. The diabeteseducational sessions and Diabetics Club are conducted by adiabetes team of experienced allied health care professionalsin the hospital. The educational material andsessions provided to participants are endorsed by theTaiwan Diabetes Association. The material addresses diet,exercise, medication and self-monitoring blood glucose,and gives a clear rationale for adopting a self-managementapproach to diabetes. The education sessions are conductedfor 1 h/week and provided by nurse, diabeteseducator, physician, dietician, pharmacist, social worker inhospital.
Outcomes	*Continuous*: ● QoL (VAS) ● self rated Health ● HbA1c (%) ● QoL (EuroQoL) ● self efficacy (diet) ● Self efficacy (physical) ● Depression score *Dichotomous*: ● komplikation ● CVD ● frafald *Adverse Events*: ● admitted to hospital (SAE) and terminal disease
Identification	**Sponsorship source:** This research was supported by grants fromthe Pingtung Christian Hospital (PS-97002). **Country:** Taiwan **Setting:** **Comments:** **Authors name:** Shu Ming Chen **Institution:** School of Nursing, Fooyin University, Kaohsiung, Taiwan **Email:** ft036@mail.fy.edu.tw **Address:** Faculty of nursing, Fooyin University, 151 Chin-Hsueh Rd., Ta-Liao, Hsiang, Kaohsiung, Hsion 83102, Taiwan, ROC.

Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** *Solveig Jansen* The participants in both group had the same chronic oral precriptions during this 3 month period **Continuous outcomes:** *Solveig Jansen* There were no significant differences between the withdrawal participants and those who continued with respect to baseline characteristics, HbA1c, self-manegement, and psychological outcomes. total randomized 250, 125 intervention and 125 control group. 214 people completed the outcome data collection. 104 (83%) intervention and 110 (85%) control group. *Elisabeth Ginnerup-Nielsen* Euroqol er i dette tilfælde "WHOQOL"Citat: Quality of life increased steadily in the experimentalgroup (t = -4.49, p < 0.01) but not in control group(t = -0.93, p = 0.35) from baseline to 3 month follow-up.Because the interaction of group and baseline quality of lifewas significant (F = 6.49, p = 0.012),The diabetes management self-efficacy increased steadilyin the experimental group (t = -6.40, p < 0.01) but notin control group (t = -1.94, p = 0.054) from baseline to3 month follow-up. Because the interaction of group andbaseline self-efficacy was significant (F = 6.76, p = 0.010),Johnson–Neyman methods rather than ANCOVA was usedto explore the intervention effect on diabetes managementself-efficacy. The result showed the motivational interviewdid improve participants significantly in diabetes managementself-efficacy among diabetes people with baselinevalue less than 174.57 (possible score range: 0–200) **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Quote: "125 were randomly assigned to the experimental group, and 125 were randomized to the control group." Comment: unclear how random
Allocation concealment (selection bias)	Unclear risk	Comment: Not described

Blinding of participants and personnel (performance bias)	High risk	Comment: neither the nurses, researcher nor the patients could be blinded, due to intervention assigmentNo blinding and selfreported outcome
Blinding of outcome assessment (detection bias)	Low risk	Quote: "The research assistant involved in the recruitment, baseline and outcomes measures data collection was not informed of a participant’s group allocation. To ensure that the research protocol was followed precisely a research assistant with a clinical background was employed for baseline and post intervention data collection. Neither the research assistant nor the clinical diabetes educators knew the group allocations of participants." Comment: Selfreported and objective outcome not likely to be changed by blinding
Incomplete outcome data (attrition bias)	Low risk	Quote: "The participants in both group had the same chronic oral prescriptions during this 3 month period. There were no significant differences between the withdrawal parti- cipants and those who continued with respect to baseline characteristics, HbA1c, self-management, and psychologi- cal outcomes."
Selective reporting (reporting bias)	Unclear risk	Comment: No trial protocol. Outcomes are unclearly reported.
Other bias	Low risk	

D'Eramo Melkus 1992

Methods	
Participants	
Interventions	
Outcomes	
Identification	
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Subjects were com- puter randomized IO one of three inter- vention groups."
Allocation concealment (selection bias)	Unclear risk	Not described
Blinding of participants and personnel (performance bias)	Low risk	Comment: Objective outcomesnot indicated, probably not blinded
Blinding of outcome assessment (detection bias)	Low risk	Not so relevant for outcome
Incomplete outcome data (attrition bias)	High risk	Comment: 8/26 og 11/28 dropped out. No intention to treat
Selective reporting (reporting bias)	Unclear risk	Comment: outcome probably assessed but no trial protocol
Other bias	Low risk	

Goderis 2010

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:** YES
Participants	**Baseline Characteristics** intervention ● *age*: 68 (12) ● *gender (% females)*: 51 ● *diabetes duration (yrs)*: 7.2 (6.9) ● *HbA1c (%)*: 7.1 (1.3) control ● *age*: 68 (12) ● *gender (% females)*: 53 ● *diabetes duration (yrs)*: 7.2 (7.3) ● *HbA1c (%)*: 7.2 (1.3)

	Included criteria: Not described. Randomization at GP level **Excluded criteria:** Not described. Randomization at GP level
Interventions	**Intervention Characteristics** intervention ● *education and intervention*: GPs of both arms received thesame basic support program of interventions (UQIP) that wasbasedonthe chronic caremodel andtheoretical frameworks forchange management [24–26]. These interventions representstandard requirements for what is considered quality diabetescare [1]. The aimof UQIPwas to implement the evidence-basedguidelines recommending a global, target-driven and intensifiedtreatment of type2diabetes. For patients of the AQIP arm, the IDCT was reinforced witha health psychologist and a diabetes educator who delivereddiabetes education at the patient's home. Referral to thehealth psychologist was recommended for all patients withdifficulties in maintaining healthy lifestyle habits. Thecounselling techniques included extended motivational interviewing based on the transtheoretical model of changewithdifficulties in maintaining healthy lifestyle habits. Thecounselling techniques included extendedmotivational interviewingbased on the transtheoretical model of change control ● *education and intervention*: The intervention periodwas January 2005 toNovember 2006. Asexplained in the study protocol, GPs of both arms received thesame basic support program of interventions (UQIP) that wasbasedonthe chronic caremodel andtheoretical frameworks forchange management [24–26]. These interventions representstandard requirements for what is considered quality diabetescare [1]. The aimof UQIPwas to implement the evidence-basedguidelines recommending a global, target-driven and intensifiedtreatmentof type2diabetes.TheinterventionsofUQIPwereavailable for all participating GPs and patients.
Outcomes	*Continuous*: ● HbA1c (%) ● QoL (EuroQoL) ● QoL (VAS) ● self rated Health ● self efficacy (diet) ● Self efficacy (physical) ● Depression score ● HbA1c *Dichotomous*:

	● frafald ● komplikation ● CVD
Identification	**Sponsorship source:** The Belgian Natinal Institute for Health and Disability Insurance (NIHDI) **Country:** Belgium **Setting:** **Comments:** **Authors name:** Geert Goderis **Institution:** Department of General Practice, Katholieke Universiteit Leuven, Belgium **Email:** geert.goderis@skynet.be, geert.goderis@med.kuleuven.be **Address:** Katholieke Universiteit Leuven, Department of General Practice (Academisch Centrum voor Huisartsgeneeskunde),Kapucijnenvoer 33/J Bus 7001, 3000 Leuven, Belgium
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** **Dichotomous outcomes:** **Adverse outcomes:** *Solveig Jansen* Number of events are not directly mention. Reason for patient lost to follow up are for example: died, moving to a nursing home.

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "After the initial recruitment phase, a researcher blinded to the study design used computer-generated numbers to randomly assign practices."
Allocation concealment (selection bias)	Unclear risk	Comment: Not described

Blinding of participants and personnel (performance bias)	Low risk	Comment: HbA1c not likely to be changed by this Quote: "All patients were blinded to the study design, but physicians were not, as they were involved in the execution of the programs."
Blinding of outcome assessment (detection bias)	Low risk	Comment: objective outcomes. Quote: "All patients were blinded to the study design, but physicians were not, as they were involved in the execution of the programs."
Incomplete outcome data (attrition bias)	Low risk	Comment: A little skewed dropout, but not too large.. intention to treat analysis has been done
Selective reporting (reporting bias)	Low risk	Quote: "registered as # NTR1369," Comment: Outcomes from protocol reported
Other bias	High risk	Quote: "A total of 142 physicians from 90 practices agreed to participate and were randomized (Fig. 1). Within the first 30 days, 22 physicians dropped out (UQIP = 18, AQIP = 4, p < 0.001). Thus, only 120 physicians (36% of those available, 67 AQIP vs. 53 UQIP) registered baseline data. During the study" Quote: "There were several weaknesses of the present study. First, considerable effort was required to motivate GPs for the project, resulting in a global enhancement of diabetes awareness throughout the region. Secondly, despite the motivation of the GPs, we observed a significant difference in initial drop-out rate between the UQIP and AQIP-assigned GPs, which may indicate that being assigned to AQIP motivated more physicians to pay closer attention to T2DM care. However, probably the most motivated GPs remained in the UQIP arm, with possible effects on the final outcomes. Thirdly, some of the additional interventions of the AQIP arm were only used by a small number of participants. This is particularly true for the health psychologist counseling, which was only used by 18 patients. Finally, the follow-up period may have been too short to find a significant difference between AQIP and UQIP. Therefore, it will be interesting to organize a post-intervention follow-up of the included patients."

Gregg 2007

Methods	
Participants	
Interventions	
Outcomes	
Identification	
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "participants were then randomly assigned (using a random numbers table)"
Allocation concealment (selection bias)	Unclear risk	Quote: "assessment, participants were then randomly assigned (using a random numbers table) to one" Comment: difficult to conceal allocation with a table. Might have been done though
Blinding of participants and personnel (performance bias)	Low risk	Comment: Probably not but for oubjective outcome not relevant
Blinding of outcome assessment (detection bias)	Low risk	Quote: "Psychosocial assessments and a blood draw for HbA 1 c were administered during the lst hr (and again at 3-month follow-up) by clinic and research personnel blind to group assignment."
Incomplete outcome data (attrition bias)	Low risk	Complete blood data were therefore available for 73 of the participants (90%). The main outcome analysis was done on an intent-to-treat basis, and missing follow-up values were assumed not to have changed."
Selective reporting (reporting bias)	Unclear risk	No trial protocol
Other bias	Low risk	

Naik 2011

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** intervention ● *age*: 63.82 (7.9) ● *gender (% females)*: 0 ● *diabetes duration (yrs)*: 4.98(3.1) ● *HbA1c (%)*: 8.86(1.3) control ● *age*: 63.45 (7.8) ● *gender (% females)*: 0 ● *diabetes duration (yrs)*: 5.04(3) ● *HbA1c (%)*: 8.74(1.2) **Included criteria:** type 2 diabetes 50-90 yrs, HbA1c >= 7.5% prior to study **Excluded criteria:** dementia, creatinin above 200 micromol/l
Interventions	**Intervention Characteristics** intervention ● *education and intervention*: 4 Group sessions every 3 weeks over 3 Moths.Each session were followed by the Diabetes ABC session, goal setting, proactive patient behavior and physician-patient comminucation and finaly performance feed-back control ● *education and intervention*: traditional Group education, 2 sessions by educator and dietician
Outcomes	*Continuous*: ● HbA1c (%) ● QoL (EuroQoL) ● QoL (VAS)

	• self rated Health • self efficacy (diet) • Self efficacy (physical) • Depression score • Diabetes self-afficacy score *Dichotomous*: • frafald • komplikation • CVD
Identification	**Sponsorship source:** EPIC study sponsors: Agency for Healthcare and quality, Centres for research and education on therapeutics, Clinical Scientist Development Award from the Doris Duke Charitable Foundation, National Institute of Aging and the Houston Health Service Research and DEvelopment Center of Excellence **Country:** USA **Setting:** Medical Center **Comments:** **Authors name:** Naik **Institution:** Houston Health and Development Center of Excellence **Email:** anaik@bcm.edu **Address:** 2002 Holcombe, Houston, TX 77030, USA
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Comment: block randomization of 10
Allocation concealment (selection bias)	Low risk	Comment: assignment was blinded using sequencially numbered and Sealed evelopes
Blinding of participants and personnel (performance bias)	High risk	Comment: Selfreported outcome - no blinding. Only affects the important outcome though
Blinding of outcome assessment (detection bias)	Low risk	Comment: outcome either selfreported or objective
Incomplete outcome data (attrition bias)	Low risk	Comment: attrition was described, equal drop-out rates was seen
Selective reporting (reporting bias)	Low risk	Comment: this is discussed
Other bias	Low risk	Comment: older male veterans. No oother sources of bias

Smith 1997

Methods	
Participants	
Interventions	
Outcomes	
Identification	
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Comment: randomized, method not indicated
Allocation concealment (selection bias)	Unclear risk	Comment: Not described
Blinding of participants and personnel (performance bias)	Low risk	Comment: unblinded but objective outcomes
Blinding of outcome assessment (detection bias)	Low risk	Comment: assessment were conducted by trained technicians blind to Group assignment
Incomplete outcome data (attrition bias)	High risk	Comment: Relatively large dropout and unclear why only 16 and not 22 were used. Originally 22 randomized..
Selective reporting (reporting bias)	Low risk	Comment: no trial protocol but also only a protocol study. No reason to be selective in reporting.
Other bias	Unclear risk	Comment: different rate of excercise, recorded calories and glucose monitoring

Welch 2011

Methods	**Study design:** Randomized controlled trial **Study grouping:** Parallel group **Open Label:** **Cluster RCT:**
Participants	**Baseline Characteristics** intervention ● *age*: 54.9(9.3) ● *gender (% females)*: 57.9 ● *diabetes duration (yrs)*: 9.0(7.3) ● *HbA1c (%)*: 9.1(1.5) control ● *age*: 54.4(10.3) ● *gender (% females)*: 62.1

	● *diabetes duration (yrs)*: 7.1(5.8) ● *HbA1c (%)*: 8.8(1.3) **Included criteria:** type 2 diabetes, age 30-70, HbA1c >= 7.5% **Excluded criteria:** major complications, pregnancy, psychiatric disorders, mental retardation or other problem affecting the completion of questionnaires
Interventions	**Intervention Characteristics** intervention ● *education and intervention*: Diabetes self-management education and support in 4 sessions,3 of these were followed by 30 min motivational interviewing control ● *education and intervention*: Diabetes self-management education and support in 4 sessions,
Outcomes	*Continuous*: ● HbA1c (%) ● QoL (EuroQoL) ● QoL (VAS) ● self rated Health ● self efficacy (diet) ● Self efficacy (physical) ● Depression score *Dichotomous*: ● frafald ● komplikation ● CVD
Identification	**Sponsorship source:** none indicated **Country:** USA **Setting:** Baystate Medical Center **Comments:** **Authors name:** Garry Welch **Institution:** Department of Behavioreal Medicine Research, Baystate Medical Center.

	Email: garry.welch@baystatehealth.org, garry.welch@bbs.org **Address:** Baystate Medical Center., 140 High Street, Room 2104, Springfield,MA 01105, United States
Notes	**Identification:** **Participants:** **Study design:** **Baseline characteristics:** **Intervention characteristics:** **Pretreatment:** **Continuous outcomes:** **Dichotomous outcomes:** **Adverse outcomes:**

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Comment: method not indicated
Allocation concealment (selection bias)	Unclear risk	Comment: not indicated
Blinding of participants and personnel (performance bias)	High risk	Comment: Neither physicians nor patient could be blinded to the intervention assigmment
Blinding of outcome assessment (detection bias)	Low risk	Comment: biochemical parametres was maesured in random samples, mediators of possible change in HbA1c were self-reported
Incomplete outcome data (attrition bias)	Low risk	Comment: large but equal drop-out rate (32.8-43.1%). Mean change in HbA1c was not significantly different comparing completers and drop-outs
Selective reporting (reporting bias)	Low risk	Comment: few studies in the litteratur show different results, selective outcome reporting therefore nor likely
Other bias	Low risk	Comment: Different educational status at baseline was discussed as possible bias

West 2007

Methods	
Participants	
Interventions	
Outcomes	
Identification	
Notes	

Risk of bias table

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Comment: randomization done within races, method not indicated
Allocation concealment (selection bias)	Low risk	Quote: "using a sequentially num- bered, closed-envelope procedure."
Blinding of participants and personnel (performance bias)	Low risk	Comment: Probably not but outcome is objective
Blinding of outcome assessment (detection bias)	Low risk	Comment: Outcome assesors not involved in patients care
Incomplete outcome data (attrition bias)	High risk	Comment: intervention group was significantly more compliant to group sessions16/108 and 6/109. A little skewed dropout. Intention to treat should have been done!
Selective reporting (reporting bias)	Unclear risk	Quote: "NCT00007800, clinicaltrials.gov." Comment: No outcomes provided in protocol?
Other bias	Low risk	Comment: Selected group (overweight women), but this will affect indirectness.

Footnotes

Characteristics of excluded studies

Barcelo 2010

Reason for exclusion	Wrong patient population

Browning 2011

Reason for exclusion	method paper

Cooper 2009

Reason for exclusion	Wrong comparator

Heinrich 2010

Reason for exclusion	Wrong comparator

Hill Briggs 2011

Reason for exclusion	Wrong comparator

Jansink 2013

Reason for exclusion	Wrong comparator

McGowan 2011

Reason for exclusion	

Naik 2011a

Reason for exclusion	Wrong comparator

RosenbekMinet 2011

Reason for exclusion	Wrong patient population

Surwit 2002

Reason for exclusion	

Weinger 2011

Reason for exclusion	Wrong patient population

Welschen 2013

Reason for exclusion	

Footnotes

Characteristics of studies awaiting classification

Footnotes

Characteristics of ongoing studies

Footnotes

Summary of findings tables

Additional tables

References to studies

Included studies

Chen 2012

Chen SM, Creedy D, Lin HS, Wollin J. Effects of motivational interviewing intervention on self-management, psychological and glycemic outcomes in type 2 diabetes: a randomized controlled trial.. International journal of nursing studies 2012;49(6):637-44. [DOI: http://dx.doi.org/10.1016/j.ijnurstu.2011.11.011]

D'Eramo Melkus 1992

D'Eramo-Melkus GA, Wylie-Rosett J, Hagan JA. Metabolic impact of education in NIDDM. Diabetes Care 1992;15(7):864-9.

Goderis 2010

Goderis G, Borgermans L, Grol R, Van Den Broeke C, Boland B, Verbeke G, et al.. Start improving the quality of care for people with type 2 diabetes through a general practice support program: a cluster randomized trial.. Diabetes Research & Clinical Practice 2010;88(1):56-64. [DOI: http://dx.doi.org/10.1016/j.diabres.2009.12.012]

Gregg 2007

Gregg JA, Callaghan GM, Hayes SC, Glenn-Lawson JL. Improving diabetes self-management through acceptance, mindfulness, and values: a randomized controlled trial. J Consult Clin Psychol 2007 Apr;75(2):336-343. 2007;75(2):336-43.

Naik 2011

Naik AD, Palmer N, Petersen NJ, Street RL,Jr, Rao R, Suarez-Almazor M, et al. Comparative effectiveness of goal setting in diabetes mellitus group clinics: randomized clinical trial.. Archives of Internal Medicine 2011;171(5):453-9. [DOI: http://dx.doi.org/10.1001/archinternmed.2011.70]

Smith 1997

Smith DE, Heckemeyer CM, Kratt PP, Mason DA. Motivational interviewing to improve adherence to a behavioral weight-control program for older obese women with NIDDM. A pilot study. Diabetes Care 1997 Jan;20(1):52-54. 1997;20(1):52-4.

Welch 2011

Welch G, Zagarins SE, Feinberg RG, Garb JL. Motivational interviewing delivered by diabetes educators: does it improve blood glucose control among poorly controlled type 2 diabetes patients?.. Diabetes Research & Clinical Practice 2011;91(1):54-60. [DOI: http://dx.doi.org/10.1016/j.diabres.2010.09.036]

West 2007

West DS, DiLillo V, Bursac Z, Gore SA, Greene PG. Motivational interviewing improves weight loss in women with type 2 diabetes. Diabetes Care 2007;30(5):1081-7.

Excluded studies

Barcelo 2010

Barcelo,A.; Cafiero,E.; De Boer,M.; Mesa,A. E.; Lopez,M. G.; Jimenez,R. A.; Esqueda,A. L.; Martinez,J. A.; Holguin,E. M.; Meiners,M.; Bonfil,G. M.; Ramirez,S. N.; Flores,E. P.; Robles,S.. Using collaborative learning to improve diabetes care and outcomes: The VIDA project.. Primary Care Diabetes 2010;4(3):145-153. [DOI: http://dx.doi.org/10.1016/j.pcd.2010.04.005]

Browning 2011

Browning,C.; Chapman,A.; Cowlishaw,S.; Li,Z.; Thomas,S. A.; Yang,H.; Zhang,T.. The Happy Life Club study protocol: a cluster randomised controlled trial of a type 2 diabetes health coach intervention.. BMC Public Health 2011;11(Journal Article):90. [DOI: http://dx.doi.org/10.1186/1471-2458-11-90]

Cooper 2009

Cooper,H.; Booth,K.; Gill,G.. A trial of empowerment-based education in type 2 diabetes-Global rather than glycaemic benefits.. Insulin 2009;4(1):61-67. [DOI: http://dx.doi.org/10.1016/S1557-0843%2809%2980006-7]

Heinrich 2010

Heinrich, E.; Candel, M. J.; Schaper, N. C.; de Vries, N. K.. Effect evaluation of a Motivational Interviewing based counselling strategy in diabetes care. Diabetes Research and Clinical Practice 2010;90(3):270-278. [DOI: http://dx.doi.org/10.1016/j.diabres.2010.09.012]

Hill Briggs 2011

Hill-Briggs,F.; Lazo,M.; Peyrot,M.; Doswell,A.; Chang,Y. -T; Hill,M. N.; Levine,D.; Wang,N. -Y; Brancati,F. L.. Effect of problem-solving-based diabetes self-management training on diabetes control in a low income patient sample.. Journal of General Internal Medicine 2011;26(9):972-978. [DOI: http://dx.doi.org/10.1007/s11606-011-1689-6]

Jansink 2013

Jansink,Renate; Braspenning,Joz; Keizer,Ellen; van,der Weijden; Elwyn,Glyn; Grol,Richard. No identifiable Hb1Ac or lifestyle change after a comprehensive diabetes programme including motivational interviewing: A cluster randomised trial. Scandinavian journal of primary health care 2013;31(2):119-127. [DOI: 10.3109/02813432.2013.797178]

McGowan 2011

McGowan,P.. The efficacy of diabetes patient education and self-management education in type 2 diabetes.. Canadian Journal of Diabetes 2011;35(1):46-53. [DOI:]

Naik 2011a

Naik, A. D.; Teal, C. R.; Rodriguez, E.; Haidet, P.. Knowing the ABCs: a comparative effectiveness study of two methods of diabetes education. Patient Educ Couns 2011;85(3):383-9. [DOI: 10.1016/j.pec.2011.01.010]

RosenbekMinet 2011

Rosenbek Minet, L. K.; Wagner, L.; Lonvig, E. M.; Hjelmborg, J.; Henriksen, J. E.. The effect of motivational interviewing on glycaemic control and perceived competence of diabetes self-management in patients with type 1 and type 2 diabetes mellitus after attending a group education programme: A randomised controlled trial. Diabetologia 2011;54(7):1620-1629. [DOI: http://dx.doi.org/10.1007/s00125-011-2120-x]

Surwit 2002

[Empty]

Weinger 2011

Weinger, K.; Beverly, E. A.; Lee, Y.; Sitnokov, L.; Ganda, O. P.; Caballero, A. E.. The effect of a structured behavioral intervention on poorly controlled diabetes: a randomized controlled trial. Archives of Internal Medicine 2011;171(22):1990-9. [DOI: http://dx.doi.org/10.1001/archinternmed.2011.502]

Welschen 2013

Welschen,L. M.; van Oppen,P.; Bot,S. D.; Kostense,P. J.; Dekker,J. M.; Nijpels,G.. Effects of a cognitive behavioural treatment in patients with type 2 diabetes when added to managed care; a randomised controlled trial.. Journal of Behavioral Medicine 2013;36(6):556-566. [DOI: http://dx.doi.org/10.1007/s10865-012-9451-z]

Studies awaiting classification

Ongoing studies

Other references

Additional references

Other published versions of this review

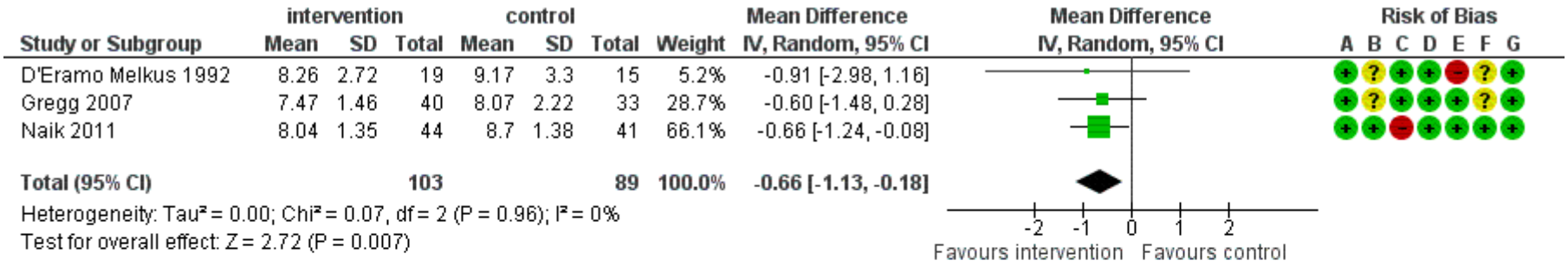
Data and analyses

1 intervention vs control

Outcome or Subgroup	Studies	Participants	Statistical Method	Effect Estimate
1.1 HbA1c (%) < 1 year	3	192	Mean Difference (IV, Random, 95% CI)	-0.66 [-1.13, -0.18]
1.2 HbA1c (%) >= 1 year	2	2580	Mean Difference (IV, Random, 95% CI)	-0.22 [-0.78, 0.34]
1.3 Self-efficacy, 3 months	2	157	Std. Mean Difference (IV, Random, 95% CI)	0.58 [0.26, 0.90]
1.4 dropout end of study	4	2717	Risk Ratio (IV, Random, 95% CI)	0.69 [0.56, 0.87]

Figures

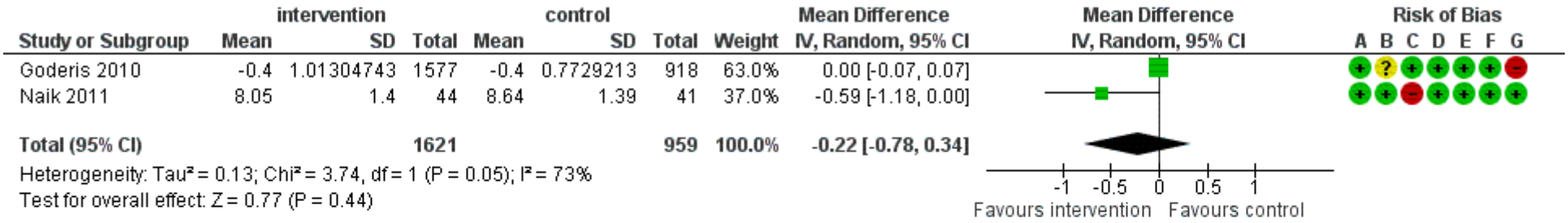
Figure 1 (Analysis 1.1)



Risk of bias legend
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

1 intervention vs control, outcome: 1.1 HbA1c (%) < 1 year.

Figure 2 (Analysis 1.2)



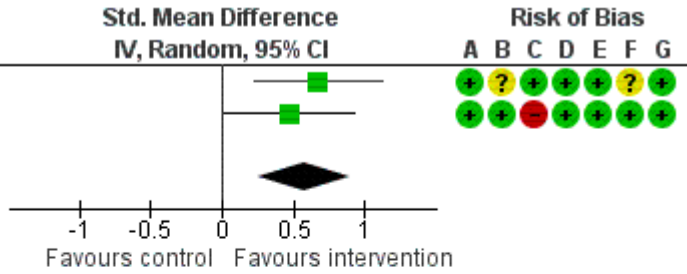
Risk of bias legend
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
(**E**) Incomplete outcome data (attrition bias)
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

1 intervention vs control, outcome: 1.2 HbA1c (%) >= 1 year.

Figure 3 (Analysis 1.3)

Study or Subgroup	intervention Mean	SD	Total	control Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Gregg 2007	5.83	5.52	43	1.62	6.84	38	50.8%	0.68 [0.23, 1.12]
Naik 2011	0.84	1.56	39	0	1.939	37	49.2%	0.47 [0.02, 0.93]
Total (95% CI)			**82**			**75**	**100.0%**	**0.58 [0.26, 0.90]**

Heterogeneity: Tau² = 0.00; Chi² = 0.38, df = 1 (P = 0.54); I² = 0%
Test for overall effect: Z = 3.53 (P = 0.0004)



Risk of bias legend
(**A**) Random sequence generation (selection bias)
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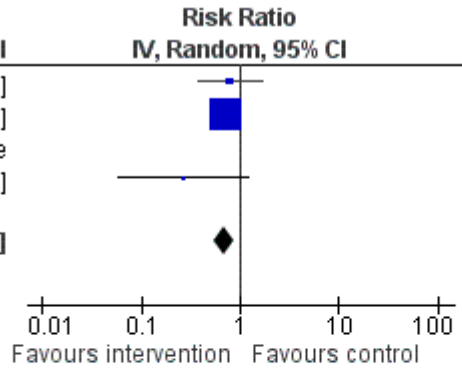
(**F**) Selective reporting (reporting bias)
(**G**) Other bias

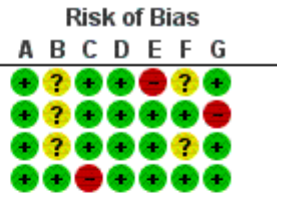
1 intervention vs control, outcome: 1.7 Self-efficacy, 3 months.

Figure 4 (Analysis 1.4)

Study or Subgroup	intervention Events	Total	control Events	Total	Weight	Risk Ratio IV, Random, 95% CI
D'Eramo Melkus 1992	8	26	11	28	9.2%	0.7832 [0.3745, 1.6381]
Goderis 2010	134	1577	111	918	88.6%	0.7027 [0.5539, 0.8916]
Gregg 2007	0	43	0	38		Not estimable
Naik 2011	2	45	7	42	2.2%	0.2667 [0.0587, 1.2122]
Total (95% CI)		**1691**		**1026**	**100.0%**	**0.6949 [0.5554, 0.8694]**
Total events	144		129			

Heterogeneity: Tau² = 0.00; Chi² = 1.65, df = 2 (P = 0.44); I² = 0%
Test for overall effect: Z = 3.18 (P = 0.001)





Risk of bias legend
(**A**) Random sequence generation (selection bias)
(**B**) Allocation concealment (selection bias)
(**C**) Blinding of participants and personnel (performance bias)
(**D**) Blinding of outcome assessment (detection bias)
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(**F**) Selective reporting (reporting bias)
(**G**) Other bias

Forest plot of comparison: 1 intervention vs control, outcome: 1.4 dropout end of study.