

Supplementary Table SIII Excluded studies after full text review with reasons for exclusion.

Author	Year	Title	Journal	Reason for exclusion
Althabe, F <i>et al.</i>	2012	Antenatal corticosteroids trial in preterm births to increase neonatal survival in developing countries: study protocol	Reproductive Health	No relevant outcome. Focused on minimizing child abuse and increasing interconception time
Gong, R <i>et al.</i>	2010	A case-control study of the effects of pregnancy planning on neural tube defects and its primary preventive measures	Birth Defects Research	Not RCT. Case control
More, N.S <i>et al.</i>	2012	Community mobilization in Mumbai slums to improve perinatal care and outcomes: a cluster randomized controlled trial	PLoS Medicine/Public Library of Science	Included both pregnant and non-pregnant women
Shah More, N <i>et al.</i>	2013	Community resource centres to improve the health of women and children in Mumbai slums: study protocol for a cluster randomized controlled trial	Trials [Electronic Resource]	Not RCT. Study protocol
Morin, P <i>et al.</i>	2001	Concept analysis of pregnancy planning drawn from women of childbearing age	Health Promotion Practice	Not RCT. Literature review
McCreary, L.L <i>et al.</i>	2003	Context-based advocacy for HIV-positive women making reproductive decisions	Journal of the Association of Nurses in AIDS Care	Focused on family and pregnancy planning (mainly contraception) for HIV-positive women
Aljadir, L.P	1988	Dietary habits in transition to parenthood: Dietary habits before pregnancy, during pregnancy and in young families	Marriage & Family Review	Not RCT. Literature review
Opray, N <i>et al.</i>	2015	Directed preconception health programs and interventions for improving pregnancy outcomes for women who are overweight or obese	Cochrane Database of Systematic Reviews	Not RCT. Systematic review.
Petrofsky, J <i>et al.</i>	2010	The effect of an exercise and diet program on fitness, posture and self image in women	Journal of Applied Research	Did not meet population inclusion criteria. Compares post-partum exercise group, post-partum control group and pre-pregnancy group (non-moms)
Tu, N <i>et al.</i>	2014	Effect of animal-source food supplement prior to and during pregnancy on birth weight and prematurity in rural Vietnam: a brief study description	Food & Nutrition Bulletin	Did not meet population inclusion criteria. Focused on improving birth weight with improvement of malnutrition.
Elsinga, J <i>et al.</i>	2008	The effect of preconception counselling on lifestyle and other behaviour before and during pregnancy	Womens Health Issues	Did not meet population inclusion criteria. Focused on pregnant women.
Whitehill, K <i>et al.</i>	2013	The effectiveness of bundled health messages on recall	American Journal of Health Promotion	Did not meet outcome inclusion criteria
Winterbottom, J <i>et al.</i>	2009	The effectiveness of preconception counselling to reduce adverse pregnancy outcome in women with epilepsy: what's the evidence?	Epilepsy & Behavior	Not RCT. Systematic review
de Smit, D.J <i>et al.</i>	2015	Effects of a simple educational intervention in well-baby clinics on women's knowledge about and intake of folic acid supplements in the periconceptional period: a controlled trial	Public Health Nutrition	Focused solely on folic acid supplementation
Glueck, C.L <i>et al.</i>	2013	Effects of metformin-diet intervention before and throughout pregnancy on obstetric and neonatal outcomes in patients with polycystic ovary syndrome	Current Medical Research & Opinion	Not RCT. Prospective study
Jaffiol, C <i>et al.</i>	2000	[Evaluation of the benefits brought by pregnancy planning in type one diabetes mellitus]	Bulletin de l'Academie Nationale de Medecine	Focused on incidence of the preconceptional management of type one diabetes on outcome of pregnancy
H. Wang and Z. Li	1996	[Evaluation on the informed consent, effectiveness in improving the knowledge of congenital defects and use of vitamin among women in Mancheng County, Herbei province]	Chung-Hua Liu Hsing Ping Hsueh Tsa Chih Chinese Journal of Epidemiology	Not RCT. Survey of knowledge in vitamins and birth defect post education.
El-Kamary, S.S <i>et al.</i>	2004	Hawaii's healthy start home visiting program: determinants and impact of rapid repeat birth	Pediatrics	No relevant outcome. Focused on minimizing child abuse and increasing inter-conception time
Rana, R.B <i>et al.</i>	2012	Health improvement for disadvantaged people in Nepal—An evaluation	BMC International Health and Human Rights	No intervention group

Continued

Supplementary Table SIII *Continued*

Author	Year	Title	Journal	Reason for exclusion
Fischl, A.F <i>et al.</i>	2010	Impact of a preconception counseling program for teens with type one diabetes (READY-Girls) on patient-provider interaction, resource utilization, and cost	Diabetes Care	Participants had no immediate intention to become pregnant
Mahamed, F, <i>et al.</i>	2012	Impact of family planning health education on the knowledge and attitude among Yasoujjan women	Global Journal of Health Science	No relevant outcome and focused on pre-marital counseling, not preconception counseling
Hogan, V.K <i>et al.</i>	2013	The impact of social disadvantage on preconception health, illness, and well-being: an intersectional analysis	American Journal of Health Promotion	Not RCT. Longitudinal study.
Potdar, R.D <i>et al.</i>	2014	Improving women's diet quality preconceptionally and during gestation: effects on birth weight and prevalence of low birth weight—a randomized controlled efficacy trial in India (Mumbai Maternal Nutrition Project)	American Journal of Clinical Nutrition	Focused on micronutrients in diet supplementation
Turan, J.M <i>et al.</i>	2001	Including expectant fathers in antenatal education programmes in Istanbul, Turkey	Reproductive Health Matters	Participants were on men whose wives are pregnant (not pre-conception)
Charron-Prochownik, D <i>et al.</i>	2009	Innovative measure of knowledge associated with attitudes and behaviors regarding reproductive health in teens with diabetes	Canadian Journal of Diabetes	Participants had no immediate intention to become pregnant
Lu, M.C <i>et al.</i>	2010	Innovative strategies to reduce disparities in the quality of prenatal care in underresourced settings	Medical Care Research & Review	Not RCT. Literature review
Doyle, W <i>et al.</i>	1999	Interpregnancy nutrition intervention with mothers of low-birth weight babies living in an inner city area: a feasibility study	Journal of Human Nutrition & Dietetics	No relevant outcome.
Stern, J <i>et al.</i>	2013	Introducing reproductive life plan-based information in contraceptive counselling: an RCT	Human Reproduction	No relevant outcome.
Cena, E.R <i>et al.</i>	2008	Learner-centered nutrition education improves folate intake and food-related behaviors in nonpregnant, low-income women of childbearing age	Journal of the American Dietetic Association	No relevant outcome.
Heyns, C.F <i>et al.</i>	2008	Men's Health in Africa. Part I: Reproductive urogenital diseases and human immunodeficiency virus infection	Journal of Men's Health	Not RCT. Literature review
Chacko, M.R <i>et al.</i>	2003	Neural tube defects: knowledge and preconceptional prevention practices in minority young women	Pediatrics	Focused on micronutrient supplementation
Olds, D.L	2006	The nurse-family partnership: An evidence-based preventive intervention	Infant Mental Health Journal	Participants were pregnant women
Bogaerts, A <i>et al.</i>	2014	Obesity and pregnancy, an epidemiological and intervention study from a psychosocial perspective	Facts Views & Vision in Obgyn	Intervention done during pregnancy
Ruder, E.H <i>et al.</i>	2008	Oxidative stress and antioxidants: exposure and impact on female fertility	Human Reproduction Update	Not RCT. Literature review
Lassi, Z.S <i>et al.</i>	2014	Preconception care: caffeine, smoking, alcohol, drugs and other environmental chemical/radiation exposure	Reproductive Health	Not RCT. Systematic review
Hambidge, K. M <i>et al.</i>	2014	Preconception maternal nutrition: a multi-site randomized controlled trial	BMC Pregnancy & Childbirth	Focused on micronutrient supplementation
Lesko, J and Peaceman, A	2012	Pregnancy outcomes in women after bariatric surgery compared with obese and morbidly obese controls	Obstetrics & Gynecology	Not RCT. Chart review
Rono, K. <i>et al.</i>	2014	Prevention of gestational diabetes through lifestyle intervention: study design and methods of a Finnish randomized controlled multicenter trial (RADIEL)	BMC Pregnancy & Childbirth	Not RCT. Study protocol.
Laurence, K.M	1985	Prevention of neural tube defects by improvement in maternal diet and preconceptional folic acid supplementation	Progress in Clinical & Biological Research	Not RCT. Observational study. Focus on folic acid.
Kermack, A. J <i>et al.</i>	2014	A randomised controlled trial of a preconceptional dietary intervention in women undergoing IVF treatment (PREPARE trial)	BMC Women's Health	Focused on micronutrients

Continued

Supplementary Table SIII *Continued*

Author	Year	Title	Journal	Reason for exclusion
Watson, M.J <i>et al.</i>	1999	A randomized community intervention trial to increase awareness and knowledge of the role of periconceptional folate in women of child-bearing age	Health expectations	Focused on folate supplementation
Charron-Prochownik, D <i>et al.</i>	2008	Randomized efficacy trial of early preconception counseling for diabetic teens (READY-girls)	Diabetes Care	Participants had no immediate intention to become pregnant
Young, M.F <i>et al.</i>	2015	The relative influence of maternal nutritional status before and during pregnancy on birth outcomes in Vietnam	European Journal of Obstetrics, Gynecology, & Reproductive Biology	Not RCT Cohort study.
Rahman, S	1985	Role of village practitioners in family planning service delivery system	Malaysian Journal of Reproductive Health	Focused on contraceptive distribution and education
Fortney, J.A and Leong, M	2009	Saving mother's lives: programs that work	Clinical Obstetrics & Gynecology	Not RCT. Recommendations/guidelines
Quinlivan, J.A	2004	Teenagers who plan parenthood	Sexual Health	Not RCT. Literature review
Hilgers, T. W	1980	Two methods of natural family planning	American Journal of Obstetrics & Gynecology	Not RCT. letter to editor
Brieger, W.R	2001	West African Youth Initiative: outcome of a reproductive health education program	Journal of Adolescent Health	Focused on contraception
Tsagareli, V <i>et al.</i>	2006	Effect of a very-low-calorie diet on in vitro fertilization outcomes	Fertility and Sterility	Not RCT. Cohort study
Mutsaerts, M. A. Q <i>et al.</i>	2014	Effects of paternal and maternal lifestyle factors on pregnancy complications and perinatal outcome. A population-based birth-cohort study: the GECKO Drenthe cohort	Human Reproduction	Not RCT. cohort study
Koivusalo, S.B <i>et al.</i>	2016	Gestational Diabetes Mellitus Can Be Prevented by Lifestyle Intervention: The Finnish Gestational Diabetes Prevention Study (RADIEL) A Randomized Controlled Trial	Diabetes Care	Participants were pregnant women <20 weeks gestation.
Galletly, C <i>et al.</i>	1996	Improved pregnancy rates for obese, infertile women following a group treatment program an open pilot study	General Hospital Psychiatry	Not RCT. Cohort study
Crosignani, P. G <i>et al.</i>	2003	Overweight and obese anovulatory patients with polycystic ovaries: parallel improvements in anthropometric indices, ovarian physiology and fertility rate induced by diet	Human Reproduction	Not RCT. prospective study
M.-M. Huber-Buchholz, M.M <i>et al.</i>	1999	Restoration of Reproductive Potential by Lifestyle Modification in Obese Polycystic Ovary Syndrome: Role of Insulin Sensitivity and Luteinizing Hormone	The Journal of Clinical Endocrinology & Metabolism	Not RCT. Case control
Clark, A.M <i>et al.</i>	1998	Weight loss in obese infertile women results in improvement in reproductive outcome for all forms of fertility treatment	Human Reproduction	Not RCT. Case control
Clark, A.M <i>et al.</i>	1995	Weight loss results in significant improvement in pregnancy and ovulation rates in anovulatory obese women	Human Reproduction	Not RCT. Case control
Twigt, J.M <i>et al.</i>	2012	The preconception diet is associated with the chance of ongoing pregnancy in women undergoing IVF/ICSI treatment	Human Reproduction	Not RCT. Cohort study
Connor, K.A <i>et al.</i>	2014	Preconception health promotion among Maryland women	Maternal & Child Health Journal	Not RCT. Cohort study
Madsen, N.L <i>et al.</i>	2013	Prepregnancy body mass index and congenital heart defects among offspring: a population-based study	Congenital Heart Disease	Not RCT. Case-control study
Maconochie, N <i>et al.</i>	2007	Risk factors for first trimester miscarriage—results from a UK-population-based case-control study	Central European Journal of Public Health	Not RCT. Case-control study

Continued

Supplementary Table SIII *Continued*

Author	Year	Title	Journal	Reason for exclusion
Kalinka, J <i>et al.</i>	1996	Risk factors of intrauterine growth retardation: a study of an urban population in Poland	Central European Journal of Public Health	Not RCT. Case-control study
Hansen, D <i>et al.</i>	2001	[Serious life events and congenital malformations. A national study with a complete follow-up]	Ugeskrift for Laeger	Not RCT. Case-control study
Czeizel, A.E.	1999	Ten years of experience in periconceptional care	European Journal of Obstetrics, Gynecology, & Reproductive Biology	Not RCT. No control group.
Seneviratne, S <i>et al.</i>	2014	A randomized controlled trial on the effects of antenatal exercise on birth weight and neonatal body composition	International Journal of Pediatric Endocrinology	Conference presentation. No published paper
Asci, O <i>et al.</i>	2016	Effect of lifestyle interventions of pregnant women on their dietary habits, lifestyle behaviors, and weight gain: a randomized controlled trial	Journal of Health, Population & Nutrition	Participants were pregnant women <12 weeks gestation.
Huvinen, E <i>et al.</i>	2016	Heterogeneity of maternal characteristics and impact on gestational diabetes (GDM) risk-Implications for universal GDM screening?	Annals of Medicine	Participants were pregnant women <20 weeks gestation.
Jack B <i>et al.</i>	2015	Reducing Preconception Risks Among African American Women with Conversational Agent Technology	Journal of the American Board of Family Medicine	No relevant outcome.
Kermack, A.J <i>et al.</i>	2015	Nutritional supplementation and artificial reproductive technique (ART) outcomes	Reproduction, Fertility, & Development	Not RCT. Literature review
Koivusalo, S.B <i>et al.</i>	2016	Gestational Diabetes Mellitus Can Be Prevented by Lifestyle Intervention: The Finnish Gestational Diabetes Prevention Study (RADIEL): A Randomized Controlled Trial	Diabetes Care	Participants were pregnant women <20 weeks gestation.
LeBlanc, E.S <i>et al.</i>	2016	Prepare, a randomized trial to promote and evaluate weight loss among overweight and obese women planning pregnancy: Study design and rationale	Contemporary Clinical Trials	Study protocol
Legro R.S <i>et al.</i>	2016	Benefit of Delayed Fertility Therapy With Preconception Weight Loss Over Immediate Therapy in Obese Women With PCOS	Journal of Clinical Endocrinology & Metabolism	Not RCT. Comparison of two previous studies
Moran L.J <i>et al.</i>	2016	Altered Preconception Fatty Acid Intake Is Associated with Improved Pregnancy Rates in Overweight and Obese Women Undertaking in Vitro Fertilisation	Nutrients	Not RCT. secondary cohort analysis of previous study
Sahariah, S.A <i>et al.</i>	2016	A Daily Snack Containing Leafy Green Vegetables, Fruit, and Milk before and during Pregnancy Prevents Gestational Diabetes in a Randomized, Controlled Trial in Mumbai, India	Journal of Nutrition	Focused on micronutrients in diet supplementation
Skau, J.K.H <i>et al.</i>	2016	A complex behavioural change intervention to reduce the risk of diabetes and prediabetes in the pre-conception period in Malaysia: study protocol for a randomised controlled trial	Trials	Study protocol
Zhou, J <i>et al.</i>	2016	Maternal Prenatal Nutrition and Birth Outcomes on Malnutrition among 7- to 10-Year-Old Children: A 10-Year Follow-Up	Journal of Pediatrics	Participants were pregnant women

RCT, randomized controlled trial.