

Conduct and reporting of acceptability, attitudes, beliefs and experiences of pregnant women in randomised trials on diet and lifestyle interventions: A systematic review

E. Adela A. Hamilton^{a,b,*}, Ann K. Nowell^b, Angela Harden^c, Shakila Thangaratnam^{a,b}

^a BARC Barts Research Centre for Women's Health, Queen Mary University of London, London, United Kingdom

^b Barts Health NHS Trust, The Royal London Hospital, London, United Kingdom

^c University of East London, London, United Kingdom

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ABSTRACT

Objective: To evaluate the conduct and reporting of views of pregnant women on the acceptability, attitudes, beliefs and their experiences in randomised trials on diet and lifestyle interventions.

Study design: We undertook a systematic review of literature of randomised trials identified from our previous search in major electronic databases (until February 2017) without language restrictions. We included trials on diet and lifestyle interventions that reported acceptability, attitudes, beliefs and experiences of pregnant women. The quality of papers was evaluated using the Critical Skills Appraisal Programme (CASP) framework. Data were extracted for the following domains: acceptability, intention, behaviour, attitudes and factors influencing participation. The proportion of studies that reported the various components in each domain was reported in percentages.

Results: Of the 110 trials on diet and lifestyle in pregnancy, 24 reported on views of pregnant women. Acceptability of the provided information to the woman was reported in 84% (20/24), compared to 12% (3/24) on acceptability to partner or to family. Mother's intention to adhere to intervention in pregnancy was reported in 68% (17/24) of studies vs. only 16% (4/24) on family's intentions to support adherence. Changes in mother's behaviour were reported for consuming specific components of diet such as nuts (8%, 2/24), olive oil (12%, 3/24) and fruit (40%, 10/24) vs. 16% (4/24) of trials reporting changes in family's behaviour. While knowledge of food ingredients (72%, 18/24), and attitude to gestational weight gain were commonly reported (66%, 16/24) in over two-thirds of studies, only half assessed attitude to participation in research (45%, 11/24). All studies reported facilitators for uptake of intervention such as personalised support (100%, 24/24), with half (52%, 13/24) on beliefs about weight, and less than 10% (2/24) about baby's health.

Conclusion: The focus on studies is mainly on the mother, and less on family. Further studies are needed with a holistic approach to ensure that such interventions when implemented are accepted by women and their families.

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Introduction

The global obesity epidemic has led to an increasing number of studies on diet and lifestyle interventions in pregnancy to assess their effects on gestational weight gain and pregnancy outcomes [1,2]. Although individual studies on lifestyle interventions vary in the magnitude of benefit, ^{1,3,4} overall they are beneficial in reducing weight gain in pregnancy, and improving pregnancy outcomes. Adherence to the intervention in pregnancy is crucial for improved

outcomes [2,4,5]. Dietary adherence depends on the acceptability of the recommended diet. The most pressing question is not whether the diet will work but whether it is sustainable.

Many practitioners and researchers have concerns about the participant's capacity to understand and adhere to the proposed diet. In addition to the women's preferences, numerous logistical factors affect uptake and adherence of intervention. Group sessions, one-to-one support, family or peer support or lack of this, and continuous or one-off input affect the acceptability and the adherence to an intervention. Social support, motivational techniques and flexibility are keys to acceptability and adherence. Process evaluation and qualitative data are essential to identify the role of these key elements in studies. Often, randomised trials include a qualitative evaluation component to assess women's

* Corresponding author at: Barts Research Centre for Women's Health, Queen Mary University of London, London, E1 2AB, United Kingdom.

E-mail address: A.E.A.Hamilton@qmul.ac.uk (E. A.A. Hamilton).

experience, and obtain their partners' views to improve the uptake of a healthy lifestyle in pregnancy [6].

The impact of mixed-methods research is maximised when the quantitative and qualitative aspects of a trial are integrated [7]. There is an acknowledged gap in the integration of the qualitative and the trial findings [7,8]. We undertook a systematic review to evaluate the conduct, and reporting of research on acceptability, attitudes, beliefs and experiences on pregnant women in randomised trials of diet and lifestyle interventions.

Literature search

The 2012 Health technology Assessment (2012) [9] report identified citations from the main databases: Medline, Embase, LILACS, BIOSIS, Science Citation Index, Cochrane Database of Systematic reviews (CDSR), Cochrane Central Register of Controlled Trials (CENTRAL) and Psychinfo. Database Abstracts of Reviews of Effects (DARE) and the Health Technology Assessment database (HTA) were also used. Relevant unpublished studies and grey literature was sought using Inside Conferences, Systems for Information in Grey Literature (SIGLE), and general Internet search engines such as Google. The search terms encompassed the notion of pregnancy and weight. Integrated MeSH, free text and word variants included pregnancy, childbirth, weight, overweight, BMI, and randomised controlled trial. No language restrictions were applied in their search which was carried out from inception to 2012. The search was further updated from 2013 to 2017 to identify new studies using the same search technique [10].

Study selection included randomised controlled trials that evaluated any dietary or lifestyle interventions with potential to influence maternal weight during pregnancy and outcomes of pregnancy. Inclusion Criteria: Randomised controlled trials on diet and physical activity (one or other, or both), or interventions with behavioural change components. Exclusion Criteria: studies that only included women with gestational diabetes at baseline, studies which involved animals, studies which reported only non-clinical outcomes and studies on women who were underweight

This review includes 88 citations from the above HTA report (2012) [9] and the 22 additional citations from the 2017 search [10]. These randomised controlled trials were then reviewed for any qualitative component.

Study selection and quality assessment

Two reviewers (AH and AN) independently assessed the identified randomised trials for potential qualitative components. Full manuscripts of all randomised trials were obtained, and studies that contained a qualitative component or any reporting of research on acceptability, attitudes, beliefs and experiences of pregnant women were included. We excluded research which did not include a nested qualitative component, quality of life evaluation or which did not contain any participant or clinician input or opinion. When there was more than one publication of the same trial, we selected the version that contained the largest sample size in qualitative evaluation, and those which contained the most detailed component regarding research on acceptability, attitudes, beliefs and experiences on pregnant women. Two

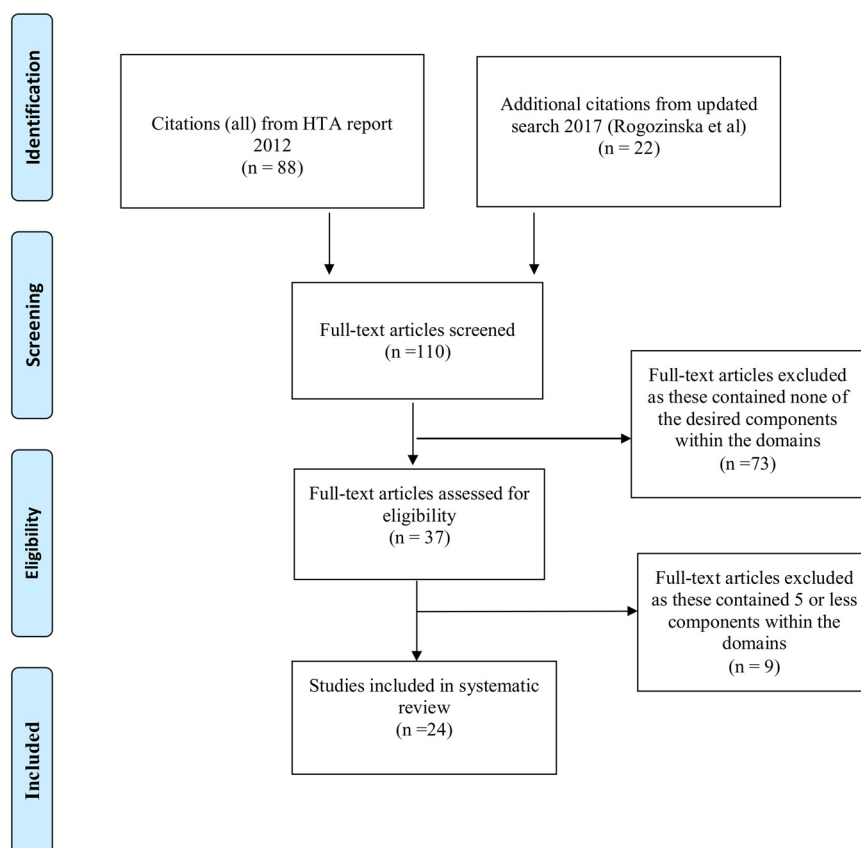


Fig. 1. Flow-diagram describing the process of study selection about diet and lifestyle in pregnancy, based on PRISMA guideline (2009).

HTA Report: Thangaratnam S, Rogozinska E, Jolly K, Glinkowski S, Duda W, Borowiack E, et al. Interventions to reduce or prevent obesity in pregnant women: a systematic review. *Health Technol Assess* 2012;16 (31).

Updated search of: Rogozinska E, Marlin N, Yang F, Dodd JM, Guelfi K, Teede H, et al. Variations in reporting of outcomes in randomized trials on diet and physical activity in pregnancy: A systematic review. *J Obstet Gynaecol Res*. 2017.

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