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A realist evaluation of an antenatal programme to change drinking behaviour of pregnant women

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ABSTRACT

Objective: to use realist evaluation to describe and explain how and in what circumstances screening and alcohol brief interventions work in routine antenatal care.
Design: a realist evaluation incorporating systematic reviews and qualitative data.
Setting: NHS Lothian, which is one of the 14 Scottish health boards.
Participants: participants were recruited from two maternity units. In phase one, interviews were conducted with four participants responsible for policy implementation. These data were supported by two systematic reviews. In phase two, 17 pregnant women and 15 midwives participated in interviews, with a further six midwifery team leaders involved in a focus group.
Findings: training and resources provided to midwives as part of the programme acted as facilitating mechanisms that improved their skills and confidence to screen and deliver alcohol brief interventions. The programme elicited positive change in attitudes to drinking in pregnancy and possibly stimulated drinking behaviour change amongst pregnant women. However, the small numbers of pregnant women being identified for alcohol brief interventions meant delivery was infrequent and resulted in the programme not working as anticipated. The findings also revealed contextual issues around midwife–pregnant woman relationship and the challenges of negotiating the timing of screening and alcohol brief interventions delivery.
Conclusions: Drinking in pregnancy is an emotive issue, therefore delivering alcohol brief interventions at the first antenatal appointment when they are more likely to achieve the most benefits poses challenges. When training midwives to screen and deliver alcohol brief interventions, special attention is needed to improve person-centred communication skills to overcome barriers associated with discussing sensitive prenatal alcohol use and enhance early identification and delivery of alcohol brief interventions at the first antenatal appointment.

Introduction

Drinking alcohol during pregnancy can be a threat to the health of an unborn child, with extreme cases manifesting as fetal alcohol syndrome (Jones et al., 1973; Stratton et al., 1996; Damgaard et al., 2007). Screening and alcohol brief interventions (ABIs) – often described as a package – can reduce alcohol consumption and therefore contribute to the prevention of alcohol-related risk to the unborn child. Alcohol brief interventions are opportunistic in nature and are offered to individuals who are not directly seeking help for alcohol problem but have been identified by alcohol screening as drinking beyond recommended levels (Heather, 2012). They are described as behaviour change interventions that can range from a single 10–15 minutes session to several sessions (Heather, 2004; Vasilaki et al., 2006; Heather, 2012). The specific components of ABIs are debatable (Moyer et al., 2002). However, they usually include assessment, personalised feedback about drinking behaviour, goal setting, behaviour modification strategy and minimal follow-up reinforcement visits or ongoing support (Heather, 2004; Chang et al., 2005).

It has been estimated that about 25% of women in Scotland consume alcohol whilst pregnant (Ford, 2008). In 2008, the Scottish

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Government, as part of its wider plans to reduce alcohol-related harm in Scotland, implemented screening and ABIs in a number of health-care settings including antenatal care in an effort to protect the health and safety of the unborn child and improve subsequent health and developmental outcomes (McAuley, 2009; Scottish Government, 2011). Midwives who provide antenatal care received half a day face-to-face screening and ABI skills training as part of the initiative. The guidance for midwives is as follows. At the first antenatal appointment, they are asked to enquire about pregnant women's drinking behaviour. For pregnant women who indicate that they have consumed alcohol, further questions are then asked to ascertain their level and pattern of drinking (NHS Health Scotland, 2015). Women who choose to consume alcohol but at a level within the national guidance of not more than 2 units, once or twice a week are reminded of the current national guidance on drinking in pregnancy and advised that abstinence is the safest approach. However, for women who are currently drinking more than the national guidance, but who did not meet the criteria of alcohol dependence, an ABI should be delivered using the FRAMES approach (Feedback of risk, Responsibility of individual, Advice to change behaviour, Menu of options, emphatic interviewing and self-efficacy) (Bien et al., 1993; NHS Health Scotland, 2015).

The effectiveness of ABIs may vary by the setting and the population group. It is now established that, among primary care patients, screening and ABIs can reduce hazardous and harmful alcohol consumption (Bertholet et al., 2005; Kaner et al., 2009). However, evidence of their effectiveness in other settings for example, emergency departments and antenatal care seems inconclusive (Havard et al., 2008; Gilinsky et al., 2011). Public health interventions are often influenced by their context because populations differ by place, characteristics and time (Rychetnik et al., 2002; Bhopal, 2009). For example, the underlying characteristics, such as gender and age of patients attending primary care are different from women attending for antenatal care, and the reasons for attending these health-care services are also different. Therefore, screening and ABIs might work differently in various population groups and settings. In antenatal care setting, it is unclear how they work. Over the years, the focus of screening and ABI research has been on investigating their efficacy and effectiveness, but there is a need to understand how they work and how their effectiveness can be improved (Heather, 2010). Therefore the aim of this realist evaluation of the programme was to explain how and in what circumstances screening and ABIs work in routine antenatal care.

Methods

Theoretical approach

This study employed realist evaluation principles (Pawson and Tilley, 1997). Realist evaluation is a theory-driven approach to evaluation of social programmes, developed in response to recent interest in understanding how interventions or social programmes work rather than providing success or failure assessment of their effectiveness (Pawson and Tilley, 1997; Bonell, 2002; Mcevoy and Richards, 2003; Pawson, 2006). Pawson and Tilley (1997) argued that programmes are often introduced within complex social systems, which are in constant transformation, therefore evaluation needs to take account of the context within which they are implemented. As such, realist evaluation is useful in terms of understanding why an intervention produces dissimilar outcomes when implemented in different settings. It describes what mechanisms (how people interpret and act upon ideas and opportunities presented by the programme) cause which outcome (intended or unintended consequences) and in which context (social and cultural conditions external to the interventions) (Pawson and Tilley, 1997). This is often denoted as context (C) and mechanism (M) and Outcome (O) configurations. Wilson and Mccormack (2006) explained that mechanisms of causation always occur within a particular context and it is important to understand their relationship and how they influence outcomes. In order for realist evaluation to contribute to the improvement of programmes and offer greater external validity to their findings, it places emphasis upon what makes programmes work, for whom, how and under what circumstances (Pawson and Tilley, 1997; Pawson 2002; Wand et al., 2010).

Realist evaluation seeks to build initial programme theories, test and refine them. The initial sets of programme theories are propositions which span context, mechanism and outcome and drive the remaining aspects of the evaluation (Pawson and Tilley, 1997; Rycroft-Malone et al., 2010; Wand et al., 2011; Cheyne et al., 2013). Driven by these principles, this study proceeded in three key phases as depicted in Table 1.

Phase 1: Identifying programme theory

Data collection. Programme theory may be derived deductively, inductively or formulated from stakeholders mental models (Funnell and Rogers, 2011). Deductive development involves developing the programme theory from a review of the research literature on how the programme is understood or expected to work. Whereas, inductive development encompasses inferring the programme theory from how the programme operates in practice based on observations or interviews with staff. Formulation of programme theory from stakeholders' mental models involves drawing out the concepts of how they understood or anticipates the programme to work. Funnell and Rogers (2011) suggest that meaningful programme theory should be developed from an appropriate mix of these three elements. We formulated programme theories by undertaking semi-structured interviews with four policy stakeholders responsible for developing and overseeing the implementation of the screening and ABIs. The

Table 1
The realist evaluation process and data sources.

Phase	Source of data and activity
Phase 1 – Identification of programme theory or hypotheses about Context-Mechanism-Outcome (CMO) configurations	• Two systematic reviews • Interviews with four programme implementers/ policy stakeholders
Phase 2 – Testing the programme theory	• Interviews and a focus group with 21 midwives • Interviews with 17 pregnant women
Phase 3 – Refining the programme theory	• Analyses and interpretation • Refined Context-Mechanism-Outcome (CMO) configurations

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