Social Science & Medicine 196 (2018) 96–105

Contents lists available at ScienceDirect

Social Science & Medicine

journal homepage: www.elsevier.com/locate/socscimed

Synthetic social support: Theorizing lay health worker interventions

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ARTICLE INFO

Keywords:
Social support
Risk work
Lay health workers
Health policy
Pregnancy
Postnatal depression

ABSTRACT

Levels of social support are strongly associated with health outcomes and inequalities. The use of lay health workers (LHWs) has been suggested by policy makers across the world as an intervention to identify risks to health and to promote health, particularly in disadvantaged communities. However, there have been few attempts to theorize the work undertaken by LHWs to understand *how* interventions work. In this article, the authors present the concept of *'synthetic social support'* and distinguish it from the work of health professionals or the spontaneous social support received from friends and family. The authors provide new empirical data to illustrate the concept based on qualitative, observational research, using a novel shadowing method involving clinical and non-clinical researchers, on the everyday work of 'pregnancy outreach workers' (POWs) in Birmingham, UK. The service was being evaluated as part of a randomized controlled trial. These LHWs provided *instrumental, informational, emotional* and *appraisal* support to the women they worked with, which are all key components of social support. The social support was 'synthetic' because it was distinct from the support embedded in spontaneous social networks: it was *non-reciprocal;* it was offered on a strictly *time-limited* basis; the LHWs were *accountable* for the relationship, and the social networks produced were *targeted* rather than spontaneous. The latter two qualities of this synthetic form of social support may have benefits over spontaneous networks by improving the opportunities for the cultivation of new relationships (both strong and weak ties) outside the women's existing spontaneous networks that can have a positive impact on them and by offering a reliable source of health information and support in a chaotic environment. The concept of SSS can help inform policy makers about how deploying lay workers may enable them to achieve desired outcomes, specify their programme theories and evaluate accordingly.

In this article, we present the concept of 'synthetic social support' (SSS) and critically appraise its value within healthcare systems. We illustrate the concept by documenting and theorizing the work done by lay health workers (LHWs) in maternity care (trained, but not professionally qualified, people known locally as 'Pregnancy Outreach Workers' or POWs) in the city of Birmingham in the UK. This intervention can be seen as part of a broader trend internationally to employ trained, lay (non-professional) people to support the achievement of health and other public policy goals, such as within housing, families and communities or security policy (Singh and Chokshi, 2013). The POW service was evaluated using a randomized controlled trial (RCT) to explore whether the introduction of a POW intervention in addition to usual maternity care would have an impact on attendance at antenatal clinics or on postnatal depression. However, interpreting the results of the trial and what the policy implications of it were was more challenging because of the lack of a defined programme theory on the part of the commissioners or providers of the service. It is common – and problematic - that complex interventions such as this remain a 'black box' (i.e. with unknown mechanisms) in effectiveness studies. Therefore, as part of the programme of research, we conducted a theoretically-informed qualitative investigation into the everyday work that the POWs undertook and have developed the concept of synthetic social support to theorize lay health work. We discuss the potential value of providing synthetic social support as an intervention to address poor health outcomes in (deprived) communities and invite future research to test and extend this middle range theory.

1. Background

1.1. The rise of lay/community health workers to deal with health risks and health inequalities

There have been calls to widen the public health and primary care workforce beyond health professionals (WHO, 1978; RSPH, 2015) and,

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https://doi.org/10.1016/j.socscimed.2017.11.012
Received 20 June 2016; Received in revised form 27 October 2017; Accepted 7 November 2017
Available online 08 November 2017

internationally, there has been a rise in the number of interventions that utilise LHWs to support people with poor health outcomes (Department of Health, 2004; Singh and Sachs, 2013). At the heart of many of these interventions are attempts to operationalise epidemiological knowledge about health risks, by identifying 'at risk' individuals or communities and attempting to reduce health inequalities, improve health outcomes or both, preferably at low cost (Singh and Chokshi, 2013). While a decade ago evidence of effectiveness of LHWs was considered 'promising' but low quality (Lewin et al., 2005; Rhodes et al., 2007), the evidence is now much stronger for 'childhood undernutrition, improving maternal and child health, expanding access to family-planning services, and contributing to the control of HIV, malaria, and tuberculosis infections' (Perry et al., 2014: 399) although there still many question unanswered about their role, effectiveness (Gilmore and McAuliffe 2013)and cost-effectiveness (Jack et al., 2017).

1.2. Social support and health outcomes

It is well established in the literature that there is a relationship between social support and mental and physical health outcomes, including both self-reported and objective health measures (Berkman et al., 2000; Christakis and Fowler, 2007; Cohen, 1988; Durkheim, 1951; White et al., 2009), although the mechanisms are still being explored (Uchino et al., 2012). The link has also been identified in studies related to childbearing and childrearing, with particular emphasis on the support a woman receives from her partner and family (Collins et al., 1993; Ma et al., 2015; Mirabzadeh et al., 2013; Morikawa et al., 2015; Oakley, 1992), although there is still much work to be done around specific outcomes, such as pre-term birth (Hetherington et al., 2015). Generally the literature cites the positive effects of social relationships and social integration, although there is also potential for negative social relationships (abuse, neglect, prejudice) and excessive social control (over-regulation and surveillance of individuals). It is not a straightforward process to measure social support, not least because there is a distinction between the subjective perception of social support and levels of 'objective' enacted support (Hogan et al., 2002). Decisions about what and when to measure social support may depend on whether the focus of the study is on proximate and psychological pathways to health or on the social-structural influences on health. During pregnancy, greater latent, perceived and received social support have been linked to better birth outcomes (Collins et al., 1993; Feldman et al., 2000) and so professional care is particularly valuable when community and family networks are poor (Perry et al., 2016). Most studies focus on embedded social networks, or 'social capital', theorizing social support (or lack of it) as something largely durable (Alvarez et al., 2017). It is much less clear from the literature whether providing additional social support (rather than professional care) as a time-bound 'intervention' can improve health outcomes and, if so, how and at what cost (Johnson et al., 2000; Rowe et al., 2005).

1.3. Risk society and the everyday practices of lay health workers

The guiding theoretical framework that we adopted for this study enabled us to explore non-professionalized work in a medically-dominated field of practice (i.e. public health in a high-income, Western society). Risk logics now dominate much of public policy (Beck, 1992, 2000; Giddens, 1991), including the public health system where prevention strategies based on epidemiological knowledge and evidence-based medicine prevail (Petersen and Lupton, 1996) and where notions of professional discretion have been replaced with administrative notions of control, efficiency and guidelines for practice. However 'risk' is a complex concept to grasp for both professionals and lay people (Adam et al., 2000; Lupton and Tulloch, 2002), and there is only limited theorization of the practice and tensions of real-life work that is shaped by the risk society, or 'risk work' (Horlick-Jones, 2005; Power, 2016; Veltkamp and Brown, 2017), and particularly how the disjunctions between population-based knowledge of health risk and the individual facing an uncertain future are managed by street-level workers (Gale et al., 2016).

Where there have been qualitative evaluations of social support interventions, these tend to focus on patient experience (e.g. Dadich et al., 2013; Finn et al., 2008; Kozhimannil et al., 2016), and there have been few studies that explicitly attempt to describe or theorize the nature of the work undertaken, despite policy calls for greater understanding of 'competencies' (Malcarney et al., 2017). Conducting this kind of research requires in-depth studies of practice in context and the development of middle range or substantive theories (Glaser and Strauss, 1967; Merton, 1968: 39) to help explain practices (Gale et al., 2016).

The terms 'lay', 'peer', 'community', 'outreach' are often used interchangeably to describe non-professionally trained health workers. LHWs occupy a liminal space between professional and peer. The perceived 'closeness' or 'identification' with the local community is often part of the characteristics desired for employment, making them better placed, it is argued, to mediate between 'the community' and health professionals (DH, 2004). Nevertheless, there is a distinction between paid work, and volunteer self-help or 'befriending' projects (Gray, 2002). Their closeness to the community raises questions about the scope of their work if it moves beyond the tight boundaries of implementing medical guidelines (Mathers et al., 2017).

In mental health, 'case management' has become a popular concept, that emphasizes the importance and challenge of proactive attempts by the case manager to *co-ordinate* the support from multiple professionals as well as family and community networks (Perry et al., 2016; Pescosolido et al., 1995). However, although there are a number of different models of case management, it is usually based around managing long-term conditions (Ross et al., 2011), rather than primary prevention.

Another important concept in this discussion is social capital, which has been used to frame interventions, and is often used as an:

> 'umbrella concept, in which social resources (social capital components) are grouped into dimensions: social networks, social contacts and participation belonging to the structural or objective aspects; and social support, sense of belonging and trust corresponding to the cognitive or subjective aspects. Moreover, depending on the directions of social ties, social capital is defined as bonding (intragroup ties between members sharing common characteristics), bridging (ties between heterogeneous groups) or linking (relationship between people who possess unequal wealth, power and status)' (Coll-Planas et al., 2017: 663).

However, this concept is too broad for our purposes and we felt that the concept of social support was more helpful for explaining tangible everyday practices. While we explore and critique the concept of social support in the findings below, it is useful to highlight that we drew on existing conceptual literature on social support, in particular its components (instrumental, emotional, appraisal and informational support) and its context (the social structure and climate), to direct our analysis (see below).

Our use of the adjective 'synthetic' to describe the type of social support practised by LHWs has a useful double meaning for our new concept. The meaning of a 'synthetic' product, substance or action is one that is not genuine but is made to imitate a natural product, but synthetic also means something that has taken components from elsewhere that have then been synthesized to create something new and more appropriate for the purpose required. In our study, we established that to a large extent the work that the POWs were being paid to do was 'social support' in a harsh social environment characterised by health inequalities but that this was different from the social support women received from their spontaneous and embedded networks of family and friends in important ways. We must be clear that we do not mean to imply by the term 'synthetic' that it is the opposite of 'authentic' and

that there was no emotional commitment by the POWs for the women. On the contrary, all stages of the relationships between the POW and the women they support can be stressful or rewarding for the POWs and, although it is beyond the scope of this article to consider this in depth, may require emotional labour (Hochschild, 1983).

2. Study context and purpose

The POW service was commissioned to provide support to pregnant women with 'high social risk' in Birmingham, with the broad aim of addressing the high levels of inequality in maternal and child outcomes identified within this group. The service was commissioned (i.e. planning, agreeing and monitoring services) by local primary care organisations (known at that time as Primary Care Trusts) from a third sector (non-profit) organisation. All care was delivered to women free at the point of use, via the National Health Service (NHS). To evaluate whether the POW service was effective an RCT was conducted to assess the impact of the addition of referral to the POW service compared to standard maternity care for women having their first baby. Engagement with antenatal care (number of visits) and maternal depression (using the Edinburgh Post-Natal Depression score) were selected by the research team as the primary outcomes: mortality or major morbidity outcomes would have required a much larger sample than was feasible (Kenyon et al., 2012). The study showed no significant difference between women receiving standard maternity care and those additionally referred to the POW service with respect to antenatal care engagement. For maternal depression, however, there was a significant difference in the powered sub-group of women with two or more social risk factors for those referred to the POW service (Kenyon et al., 2016). Additionally, mother-to-infant bonding scores were better overall for those referred to the POW service than those who were not (Kenyon et al., 2016). To aid understanding of the work undertaken by the POW, quantitative data were also collected on the intervention itself: process information about the components of their work, including the frequency, venue, duration, type of support offered, additional social risk disclosure and referrals to other agencies.

One of the problems that we expected to face in interpreting the findings of the RCT was that the theoretical basis of the intervention was not clearly articulated by either the commissioners of the service or the providers. This would make it more difficult for us to understand what was effective, or not, about the intervention and for policy-makers to design similar interventions adapted to their context as needed. The purpose of the POW service was variously described by commissioners as encouraging engagement with the health services, education for healthy lifestyles, providing social support around issues such as benefits, housing, mental health problems and well-being, and as an intervention to enhance self-efficacy. The providers described the service as supporting pregnant women, alongside other health and social care workers, with the aim of reducing factors that can cause infant mortality. The service was originally commissioned in 2006 and the research team became involved in 2007 when funding for an evaluation was being obtained as part of a larger national project, the UK National Institute for Health Research's Collaborations for Leadership in Applied Health Research and Care (CLAHRC), which aimed to reduce the second translational gap between applied research and implementation. We waited to publish this article until after the results of the RCT had been published (Kenyon et al., 2016).

We set out with a broad research question: 'What is the nature of the work that the POWs do?' in line with our guiding theory of risk work. Given that there was no clear programme theory for the intervention, we wanted to find out if a *post hoc* theory could be identified based on our empirical data (Dixon-Woods et al., 2011). Once we had analysed the data to describe the everyday work of the POWs, we interpreted our findings to ask what kind of 'social support' was being provided and thus whether it was theoretically plausible for this kind of intervention to have an effect on (maternity-related) health outcomes.

3. Study design and methods

Design: To understand the nature and context of the POWs' everyday work, we adopted a qualitative approach, with the explicit aim of developing a substantive, middle range theory, which we could then compare to and refine using existing theoretical literature (Charmaz, 2006; Goldkuhl and Cronholm, 2010). Commentators have called for a 'qualitative and contextual approach to the definition of social support', recommending qualitative methods 'to identify what is socially supportive in what circumstances' (Williams et al., 2004: 957) and the focus of this study was on 'social support' when it is used as a healthcare intervention. While the POWs' perspectives and subjectivity were of primary importance (Popay et al., 1998), we chose to avoid formal interviews because of the tendency in oral accounts of work to reproduce the 'theory' about the role, idealised accounts and retrospective explanations about action (Diefenbach, 2009; Pope, 2005). We wanted to investigate not what the POW role formally required of them, but what their work actually consisted of. In May/June 2011, we collected data using 'shadowing' techniques (McDonald, 2005; Quinlan, 2008) to study action-in-context and enable a more hermeneutic understanding of the POWs work. We were explicitly interested not only in the nature of the work, but also the nature of the workplace (Wibberley, 2013), including the way that physical and social spaces enabled or constrained them in their purpose. Fig. 1 provides an overview of our analysis (Pratt, 2009). Fig. 2 provides an overview of the women's journey through the service. Fig. 3 provides a list of the risk factors that midwives assessed the women for; the presence of any risk factor made them potentially eligible for the POW service.

Research team: The shadowing was carried out by NG, a sociologist (non-clinical) and an experienced qualitative researcher and LH, a clinical (midwifery) researcher. The team also consisted of SK, a professor of evidence-based maternity care (clinical), KJ a professor of public health (clinical) and CM a professor of maternal and child epidemiology (non-clinical) all of whom had both qualitative and quantitative research skills. All researchers had been undertaking research or clinical practice in the city for a number of years and so had some familiarity with the communities under study.

Setting: The POW service was originally commissioned in Birmingham, UK in 2006. A review of perinatal morality at the time showed high deprivation, high ethnic diversity and many recently arrived mothers, refugees and asylum seekers in the area (WMPI, 2007). We obtained ethical approval from South Birmingham Ethics Committee (10/H1207/23).

Access and Recruitment: Access to the POW team had previously been secured via the trial and POWs were filling in trial forms (detailing their activity) on a daily basis. POWs were recruited to the shadowing study through NG and LH attending team meetings, explaining the study and asking for volunteers. Written informed consent was obtained from each of the POWs that participated. All their current clients (women receiving the POW service) received a letter informing them that their POW may be accompanied by a researcher during a specific period of time and that they could opt out of these observations without giving a reason or it affecting the service that they received. Once the dates and times of our shadowing was confirmed, each POW verbally confirmed with the client that they had received the letter and that they consented to the researcher being present. A few clients declined during the time we were shadowing so we simply did not attend those meetings.

Sampling: From the volunteers, we selected two POWs from each of the three localities (parts of the city) where the POW service was operating. Each locality had different characteristics of deprivation: POW#1 and POW#2 were working in an inner city community with a large migrant population, POW#3 and POW#4 were working in a suburban area of the city, adjacent to a rural area, with a predominantly white working class population and POW#5 and POW#6 were working in an inner city community, with a more established multi-ethnic community. Three of the POWs were White British, and three were

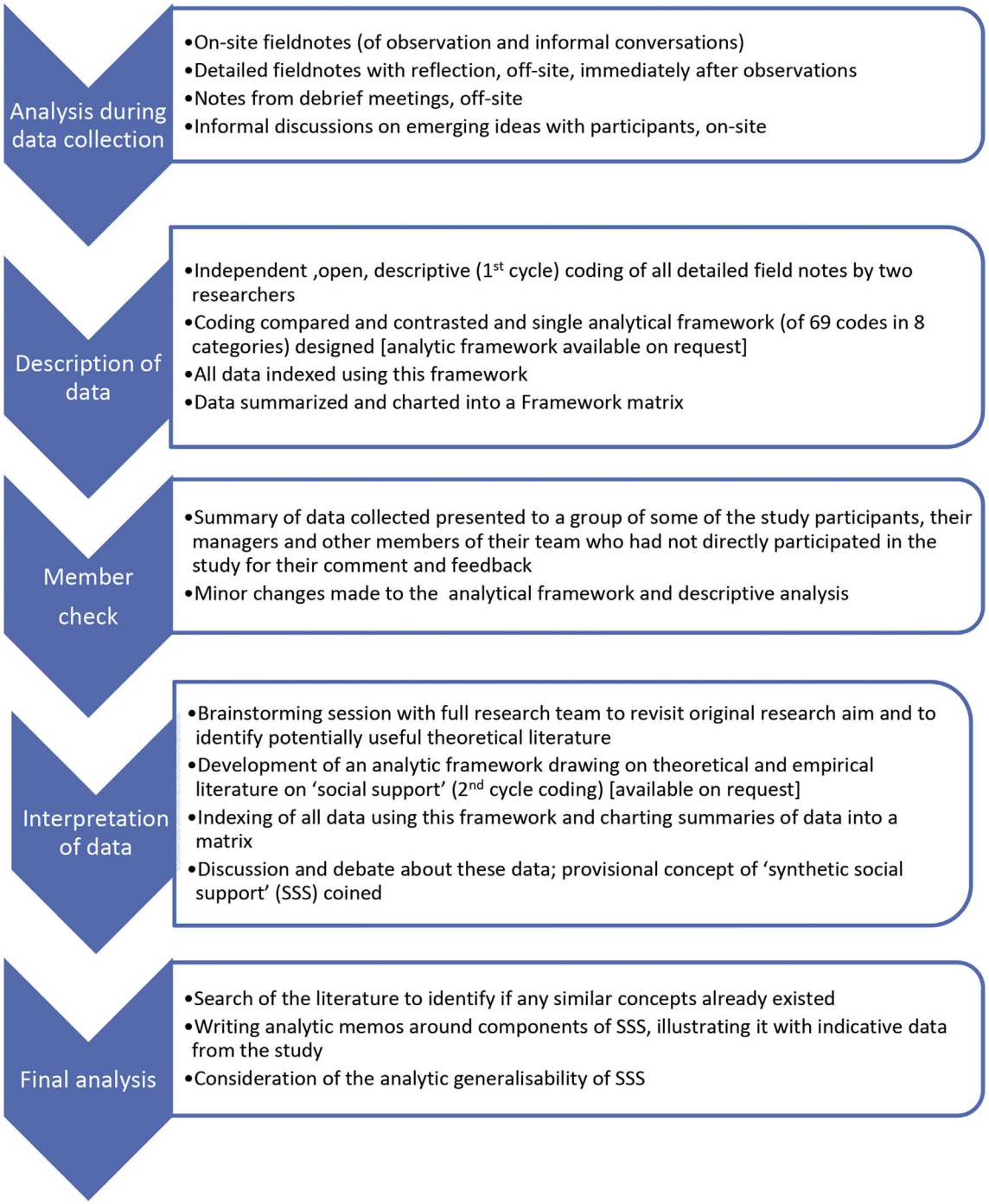

Fig. 1. An overview of data analysis.

from Black and Minority Ethnic (BME) groups. We spent 3 days with each of the 6 POWs, which amounted to 100 hours of observation. We ceased data collection once we were satisfied, based on our experience (see above for details of the research team) and discussions within the team that we had got an in-depth insight into the POWs' work, which we confirmed during the member check (see below for more detail on the analysis process).

Data collection: During the shadowing, NG and LH took fieldnotes recording (1) action-in-context, what was happening and in what social and physical environment; (2) the content of informal conversations with the POW we were shadowing and other POWs during 'down time' (Bartkowiak-Theron and Sappey, 2012) from contact with clients, such as when driving to meetings or over cups of tea, including asking the POW for her reflections on client meetings, or asking her to explain why she did something in a particular way, and (3) reflexive notes about our own impressions of the setting or events and our role and influence on any happenings. At the end of each day, we wrote up full, reflexive fieldnotes and shared them with each other. At the end of data collection at each location, we had a debrief meeting with SK and recorded additional reflexive notes. Although there was a great deal of ethnic and linguistic diversity in the community, all the POWs spoke English and usually communicated in English with their clients. We did not observe any cases of POWs speaking to a woman in her first (non-English) language, although the POWs reported that they occasionally did so.

Analysis: We adopted the Framework method (Gale et al., 2013) to conduct descriptive qualitative content analysis on our data. After

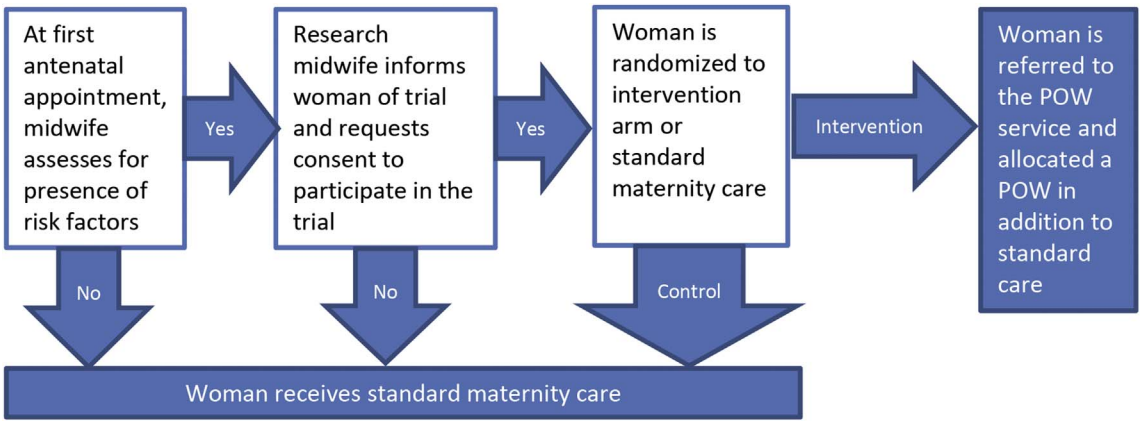

Fig. 2. Women's pathway to pregnancy outreach service.

familiarizing ourselves with each other's fieldnotes, NG and LH independently conducted open coding (Saldaña, 2009). We discussed our codes and through a process of merging and rationalizing them, developed a descriptive analytical framework of 69 codes, arranged in eight categories: characteristics of the POW; characteristics of the woman; nature of the POW/woman relationship; job role; the community interest company that delivers the service; working environment; context/the system; methodological issues [full analytical framework available on request]. A summary of this analysis was presented to the POWs and their managers. This 'member check' (Lincoln and Guba, 1985) worked well because of the rapport and trust that the research team had built over a considerable time with the POWs (the RCT had been underway for many months before the shadowing commenced and continued while the qualitative data were analysed); they received the interpretations warmly and debated the codes we had applied. As a result, some modifications were made to this first phase of analysis based on clarifications they made about aspects of their work. This stage was also important for ethical and reflexive reasons. LHWs occupy a tenuous position in the healthcare division of labour – they are not professional workers, with the associated power and authority but any new role has the potential to generate tensions about expertise with the division of healthcare labour (Bonner and Walker, 2004). In addition, this study was nested within an RCT evaluating their effectiveness – meaning the outcomes of the research could have a material effect on their continued employment. The member check ensured the trustworthiness of our descriptive data from the perspective of our participants, before we moved on to interpretation and theorization.

The full team then had a brainstorming session about potential theoretical frameworks to help refine our analysis. We conducted a second cycle of coding using an analytic framework [available on request] that we developed around the concept of social support drawing on the literature and our emerging interpretation. Based on the interpretation of our data, we developed the new concept of 'synthetic social support' (SSS). We then searched the literature and found that only once had a similar concept been used previously (to our knowledge): 'synthetic, professionally-based set of social network ties for individuals' (Pescosolido et al., 1995) in relation to case management

Fig. 3. List of risk factors that would trigger a referral by the midwife to the POW service.

models in mental health (see above). While our study has some unique characteristics, based on location, maternity care and length of SSS offered, we argue in the discussion that it is likely that this concept could be generalized to other LHWs, i.e. analytic generalisation (Polit and Beck, 2010), and would invite further research to validate it and explore the variation in how synthetic social support has been used. We would also argue that the concept could be used as the basis for designing an intervention or providing training for LHWs.

4. Findings

A woman having her first baby was referred to the POW service if her midwife identified her, through a systematic assessment, as having at least one risk factor (see Fig. 3), although in many cases multiple risks were present. In the trial, the women who were eligible for the service and consented to participate were randomized into the intervention or 'usual care' arms.

The POWs came from a range of backgrounds and has various career routes prior to applying for this role: all except one were women; they were from a range of ethnic backgrounds, they ranged in age from 20s to 40s. One POW explained, 'We reflect our communities'. She then looked around the room and indicated where the other POWs were sitting, 'Pakistani, Bangladeshi, Dominican. It makes a difference' (POW#1). For some it was their first job, for others they had previously worked for other community interest organisations, or in other sectors. They were paid modestly but above the living wage in the UK. Most were also mothers and some had previously experienced some of these 'risks' in their own lives, including domestic violence, being a teenage parent or being newly arrived in the UK. The POWs described the importance of 'engaging' the women and the first step involved making contact and arranging a meeting to introduce themselves and explain the service, then 'building trust over time' (POW#4). Not all women remained engaged, for instance POW#1 described a woman who disengaged once she realised that the POW had no influence over where she would be rehoused, and POW#6 noted that one woman stopped making contact after her mother-in-law became more involved.

The relationship was mediated through the POW documentation. This included a 'contract' for both the POW and the women to sign at the beginning, and forms for each meeting documenting their agreed respective tasks each time they met. The purpose of the documentation was for the trial team to understand more about what the POWs did in case people wanted to replicate the service, and for the management team to be able to record the activities POWs did to report to the commissioners. While there is not scope within this article to explore issues of an 'audit culture' in depth, it is important to recognise that issues of accountability are mediated through the local hierarchies of the organisation (Hull, 2012), that targets can produce certain forms of 'gaming' (Bevan and Hood, 2006; Chamberlain, 2010), and in the non-profit sector this can hold particular challenges (Owczarzak et al., 2016), such as the need to renew contracts on a regular basis as the POW service did. This situation made the POW service's involvement in the formal evaluation (via RCT) in collaboration with a prestigious local university, particularly valuable (especially when the results were positive), and reinforced the dominance of a biomedical science framing for the service.

4.1. Types of support

Emotional support 'involves the provision of caring, empathy, love and trust' (Langford et al., 1997: 96). The POWs took time on a regular basis to listen to the women about the things that were going on in their lives, 'having a good moan about the situation' (POW#5), laughing and joking to diffuse stressful situations, or talking to women about things they cannot talk to others about: 'one girl's nan died and she saw the midwife just before, but didn't tell her, then it was the first thing she said to me' (POW#3). The POWs talked about 'active listening' (POW#3) and being 'non-judgemental' (POW#2). Another tool is what the POWs referred to as 'wellbeing calls' where they call or text, sometimes daily, to check in with the woman to see how she is, rather than with a particular task in mind. One client said about POW#5: 'someone to talk to, she is there when I need her … If I call her about something or just want someone to talk to, she comes'. Of course, sometimes the women can disengage if they are struggling emotionally; POW#6 described a woman who she had had a lot of contact with during the pregnancy then the woman disengaged after a stillbirth, but then got back in contact weeks later to talk it through with her POW. POWs offered everyday reassurance to the women, who often lacked self-esteem and could be extremely anxious about the challenges they faced: 'tell me how it goes' (POW#1), or 'general upset is normal [when you don't know where you'll be living]' (POW#4). POWs were a confidential ear when the women were experiencing emotional issues related to their partners, family, friends, as well as health professionals or social services, thereby buffering some of the effects of negative social ties.

Appraisal support is the 'communication of information relevant to self-evaluation, rather than problem solving' (Langford et al., 1997: 97). It 'relates to help in decision-making, giving appropriate feedback, or help deciding which course of action to take' (Berkman et al., 2000: 848). The POWs provided this sort of support regularly by asking women about progress with certain goals, whether they had submitted forms, or if they had remembered they had antenatal appointments coming up. POW#5 explained that it was important not to tell people what to do, but to discuss it with them; 'the moment you start telling people what to do, they aren't going to want to know you'. The POWS congratulated their women on making small and big steps. For instance, one of POW#3's clients had agoraphobia, for which the POW had been giving her support. The woman said that she was doing OK and managing to get out with the pram [UK term: four-wheeled carriage for a baby, pushed by a person on foot] and her dog. She reported 'I've been shopping on my Jack Jones [UK slang: on my own]', and the POW asked 'What's changed?', the woman said 'Maybe its him [baby]', the POW responded, 'Maybe it's you', and when she was getting in the car to leave, said, 'You're doing really well, I'm not just saying that'. POW#2 described offering a woman assurances that the woman did not have to be 'like her mother', with whom the woman had a difficult relationship; the POW said that the 'cycle did not have to repeat'. The POWs at the member check event explained that they felt that they offered 'moral support' and differentiated it from emotional support, on lines that were similar to the definition of appraisal support we use here.

Instrumental support is the provision of financial aid, or tangible goods or services (Berkman et al., 2000) and involves the POW doing something so that the woman did not have to do it herself. This included practical tasks, such as making phone calls to the housing office (POW#2) or to Shelter [a homeless charity] (POW#1), doing research about tax credits outside of face-to-face contact with the woman (POW#3), faxing letters for a woman who was going through an immigration hearing (POW#1), writing a letter of support to the housing office (POW#3), helping a woman write her birth plan (POW#3), making shopping lists with a woman to help her spend her maternity grant and then going shopping with her (POW#4), going online to Gumtree/Freecycle [exchange websites] to advertise for cots or Moses baskets to give to the women (POW#4), or going to the police station with a woman whose family had been threatening and intimidating her since she announced her pregnancy (POW#6). The POWs recognised that although doing things for a woman or speaking in her behalf was sometimes necessary, there was a limit to the usefulness of this kind of support because it did not promote self-reliance: 'I want to empower her, but sometimes I need to speak on her behalf too' (POW#1); 'We give them little tasks, so they don't rely on you too much' (POW#5).

Informational support is information provided during times of stress (Langford et al., 1997) and we identified four different types. The first was signposting, which involves identifying other agencies or

individuals who can give the woman support. POW#1 said, 'This phone can make a difference … make links, make partnerships, do something where others don't bother'. The second was navigating, which was using their knowledge of, often chaotic, public systems, such as housing and benefits, to help the women find their way through them and to chase up unresponsive organisations. The POWs developed familiarity with the systems through experience and sometimes coached the women about how to manage meetings: 'remember to say you won't have a place to live in less than 28 days' (POW#3). The third was knowledge of the community, developed through time spent living and/or working in the local area, such as local media, reduced price furniture shops, churches and community groups. POW#1 told a newly arrived Christian client about a local church and explained, 'I understand how much community matters'. Fourth, POWs provided education/information to the women, such as entitlements to free milk, child tax credits, drug or alcohol use and specific training about weaning, healthy eating or parent craft. POW#4 described their role as 'myth-busters'.

4.2. Context of support

Each woman was embedded in her spontaneous social network of family, friends and other contacts that she had developed over time (Antonucci and Akiyama, 1987). The structure, content and connectedness of this network varied, but significant ties during the pregnancy rarely extended far beyond her home or the home of her parents or partner's parents. One POW commented that, 'it's the newly arrived ones in the country that really engage, the ones that are born here have a network of support' (POW#1). However, social ties are not always positive, and even those apparently surrounded by a partner (all *cis*-men within our observations), family and in-laws, could still be unsupported. There were cases of domestic violence (POW#1), bullying and intimidation by their own (POW#6) or their partner's family (POW#3). Some partners were unhelpful and obstructive: we observed one man who kept turning the volume on the television up while his girlfriend, who was eight and a half months pregnant, was trying to make a phone call to housing because they were sleeping on the floor at a friend's house (POW#1). Another who had been given a restraining order was harassing his ex-girlfriend with texts (POW#4). Others were abusive or had problematic relationships with family and in all these cases, there was significant isolation. POW#5 arranged to go shopping with a young woman to help her get used to the buggy and the woman commented, simply, that it was 'nice to have the company'. There were also more positive examples of networks and, in general, working mothers tended to have much more extensive and supportive spontaneous social networks.

Social climate is the 'character' of the social environment (Holahan and Moos, 1982). It fosters 'social comparison, competence and the exchange of … social support' (Langford et al., 1997). Many of the women's lives were chaotic and unstructured and the POWs had to be flexible. All the POWs would phone to confirm appointments with the women they supported because things would often change at the last minute. POW#1 explained 'In this community our support is needed … there is a gap, it is poverty, it means everything'. She gave the example of diet: 'it is fine to say 5 a day but a handful of grapes, how much does that cost? They are sleeping on the floor. That is not their priority'. The social climate also influenced social practices, such as breastfeeding: 'Women tend to do what their parents did' (POW#3). POW#5 noted that there were strong cultural norms around not breastfeeding in her local area, which was predominantly White and poor; she found that breastfeeding was much higher in the South Asian populations.

Social structures include wider macro-political structures, such as class, patriarchy or racism, and institutional structures, such as the welfare or health systems. The POWs did not talk explicitly about the former very often, although they were implicit in many of the discussions of violence, family dynamics and poverty. Institutional structures, however, were immediate and central to the experiences of the women and the POWs that supported them and the benefits and housing systems particularly were very confusing (hence the need for informational support to navigate them). Access was constrained by poverty: one near-term pregnant woman was at risk of losing her chance for a house because she had to 'bid' on at least 3 properties a week but did not have internet access at home (POW#3). Another POW commented that although there were free phones at the Job Centre, if the women had not been paid, they did not have the bus fare to get there (POW#1). While the women were often dependent on the social care system (e.g. housing, tax credits and benefits available to low income and vulnerable groups) to pay for their homes, food and basic living costs, they were relatively powerlessness within the system; POW#5 explained that it was good to be a 'witness' sometimes to meeting with agencies such as housing offices. For instance, one young woman she supported was dealing with someone at an agency who said that she had given the wrong National Insurance number, and 'was all ready to accuse her of fraud'. POW#5 intervened and said, 'No, I was in the room with her when she made that call and I know she gave the right number'; 'Maybe it was the accent', they agreed. The POW hinted at elements of racism and ageism in the interaction too.

4.3. The 'synthetic' nature of the social support

There were four characteristics to the social support given to the women that were 'synthetic' (i.e. *different* from more spontaneous, embedded forms of social support within women's existing networks and had been *constructed* within the intervention): (i) it was non-reciprocal, (ii) it was strictly time-limited, (iii) POWs were accountable for the relationship and (iv) the social networks were targeted (rather than spontaneous). Reciprocity is an important element of social support (Langford et al., 1997) and providing support, as well as receiving it, has been shown to be beneficial for health (Brown et al., 2003; Hether et al., 2014). In the SSS provided by the POWs, there is little or no reciprocal element; the support flows in one direction (a directed tie), from POW to woman. This is not to say that the relationship did not have a positive impact on the POW: they were paid for the work; they described it as rewarding ('It's about the women and I found it much more rewarding than I expected' (POW#2)); and it was a chance to give something back to their communities (POW#1 had experienced depression and domestic violence in the past and commented when she was at the Children's Centre, 'they know me really well here … I am who I am because of them'). However, during the observations we did not see any examples of the women providing support back to their POWs directly.

Social support within the context of a long-term social relationship is powerful: 'Perhaps even deeper than support are the ways in which social relationships provide a basis for intimacy and attachment' (Berkman et al., 2000: 848). However, the relationship was time-limited due to the structure of the service and commissioning arrangements. They were able to contact the women only after they had been referred by a midwife, and they kept contact until six weeks after the baby had been born. Over the nine months that the POW relationship lasts, there is some opportunity for development of understanding and deepening of trust. The POWs get to know the women and are able to observe changes over time (POW#3, for instance, noted how a woman's relationship with her partner had significantly improved since he had got a job). This potentially enables the POWs to provide more effective emotional and appraisal support and to have a better understanding of instrumental/informational support needs. The length of the relationship gives them more authority in intervening on behalf of the women. POW#1 was speaking to a housing charity and said, '[what] if the baby is born here on the floor … They can't rent … I know them, I've spoken to them almost every day, I know they aren't working, they don't have any money'. However, the end of the relationship can be stressful especially when the POW perceives that the woman is in need of continued support (POW#3).

The POWs were accountable for the relationship to their managers and ultimately the commissioner of the service, therefore a reliable source of support for the women even if other aspects of their lives were more 'chaotic'. The POWs were closely managed and required to fill in paperwork, described above, at every contact with the woman and for every task they carried out in relation to that woman. Each POW had to undertake data entry in the office after meeting with the women they supported and these records were checked regularly by their managers (and the trial team). The POWs largely accepted that this was a reasonable part of their job, although during our observations the POWs often show some resistance by mentioning the pressures of meeting their 'targets' and asserting even at the early stages of the design of the qualitative study that their everyday work involved more than could be captured in the documentation. POW#2 explained that it was important to remember 'these are not your friends' and that 'we're here to offer a good service'. She tellingly noted that, 'people only help other people that they like in life, but that is not the situation here' (POW#2). Whatever else is going on in the woman's life, the support of the POW can be counted on and even if a woman disengages, she can re-engage with the service at any time. These sorts of guarantees are not available in spontaneous friendships.

The POWs themselves were a key part of the women's social network during the pregnancy and often attempted to offer balance or an outlet for the women whose spontaneous social networks were having a negative impact on them. In some cases they tried to arrange to meet some of the women outside their home (POW#5), or offered appraisal support (see above) in an attempt to reconfigure social 'norms' for them and raise their expectations. POW#5 reflected, 'there is only so much you can do for people, you can see the potential, but the environment they are in … '. In a few cases, we observed attempts to build new, more positive social networks for the women. POW#5 for instance took one of her clients to a local 'Bumps-to-Babies' group and introduced her to another client, attending herself a few times to 'make sure she is engaged with it'. The POWs also ran group sessions, on healthy eating, smoking cessation and parentcraft, where women had the opportunity to meet others in their local area.

5. Discussion: the promise and limits of synthetic social support

We have documented and analysed the ways in which synthetic social support is provided in the context of maternity care. First, we sub-divided SSS into emotional, appraisal, instrumental and informational support for analytic clarity in line with the existing literature, although these groupings are not intended to be seen as mutually exclusive. Emotional support is valuable in all healthcare, including maternity (Tarkka and Paunonen, 1996) and the existence of emotional support appears to have a protective effect for postnatal depression (Milgrom et al., 2008). Appraisal support may nurture one's ability to cope (Cohen and McKay, 1984) and is related to self-efficacy because it can aid someone in doing something for themselves or deciding their own next steps, rather than simply being told what to do, or having someone do it for them. Instrumental support can secure resources for an individual, when they are unable to do it for themselves (Bloom, 1990). Dennis (2003) notes that in peer support interventions instrumental support is rarely present, so this may be a key difference between peer support and that of trained lay workers. It has been shown that non-professionals can deliver health promotion information although it is not clear whether they do more or less effectively than health professionals (Johnson et al., 2000). Other concepts may link into SSS, and this deserves further research attention. For instance, the POWs talked a lot about 'empowerment'. They saw instrumental support as counterproductive in attempts to empower their clients, but appraisal support could be helpful to help women articulate their goals and regularly review them.

Second, we explored the ways in which social support in this context (as an 'intervention') is different from spontaneous or natural forms of social support that are predominantly documented in the literature. We conceptualised this as 'synthetic' social support and highlighted its limitations and potential benefits for achieving policy outcomes (such as reducing poor maternity outcomes in deprived communities). The women do not get the psychological benefit of supporting the POW reciprocally (Brown et al., 2003; Hogan et al., 2002; Schwartz and Sendor, 1999) and the time-limited nature of the intervention means that the support is not enduring. The reciprocity in social support is important because it means that the 'receiver' of support can also sometimes be the 'giver', which builds self-esteem and a sense of worth and powerfulness (Cohen, 1988). Lifecourse models of social networks have demonstrated the benefits of support that endures over time (Antonucci and Akiyama, 1987).

The two other 'synthetic' characteristics of the support are more promising in terms of their potential health effects, and it has been shown that quality/function is important as well as quantity/structure when it comes to the health benefits of social networks (Aartsen et al., 2017; Windsor et al., 2015). First, POWs were *accountable* for the relationship to their managers and ultimately the commissioners of the service which meant that the women had a reliable source of social support and information throughout their pregnancy whatever happens in their lives. Second, the POWs were able to introduce the women in a *targeted* way to others that they may not have encountered without the intervention. This may lead to strong ties (close relationships with frequent contact), such as other mothers with whom they might build lasting friendships outside their family networks, or weak ties (more distant connections with infrequent contact), such as people in local services who may be able to offer support or advice after the intervention had finished. Weak ties (Granovetter, 1973) give access to information and insights from different fields of practice and so are crucial to enabling change. We did not observe this happening particularly frequently in our study as most of the support was provided one-to-one; however, a service may be more effective if it could work to develop these new networks (Dennis, 2003) so that when the service is withdrawn, the women still have more support than they did before.

To further understand the potential value of synthetic social support as a policy intervention, it is vital to understand that its deployment through the everyday practice of LHWs is embedded in social networks, and the social context and the structure of those networks matter as well as their support function. Infant and maternal health outcomes are linked to deprivation, migration, age, ethnicity and other social factors (Arntzen and Andersen, 2004; Hertz et al., 1994; Hummer, 1993). In the full sociological picture, lack of social support is a 'downstream' (Berkman et al., 2000) aspect of what is going on for pregnant women with social 'risk'. Providing SSS does not have any significant impact on the 'upstream' inequalities and structures that are causing the problem in the first place (Marmot, 2010). It is likely that, at best, SSS could have a protective effect on the individuals that received it, but it is unlikely to significantly influence health inequalities (Netherwood, 2007; Trayers and Lawlor, 2007). In short, SSS as a solution to poor health outcomes can only tackle structural inequality in a partial way.

Interventions must be matched to need (Hogan et al., 2002), but perceived need depends on the perspective of the analyst. Mismatch between the goals of LHW interventions and their actual likely effect can partly be explained through the political dominance of neo-liberal policies, that emphasize individual responsibility and targeting rather than structural change, and the dominance of the biomedical model in commissioning for health and wellbeing even at a community/population level (Starr, 2009; Teutsch and Fielding, 2013; Watt, 2007). The POW service was partly evaluated on the basis of whether it improved antenatal attendance which in turn was expected to improve maternal/infant outcomes. While it is widely accepted that there is a relationship between attendance and maternal/infant outcomes (although not universally (Oakley, 1992)), to perceive the attendance in itself as crucial is very medico-centric. It is likely to be an indicator of other social inequalities, such as poor housing, low income, harmful social

relationships (e.g. prejudice, isolation, abuse) or poor psychological states (Allen et al., 2014; Exworthy et al., 2003; Marmot et al., 2012).

In this study, we have documented and analysed the kind of social support given to women with high social risk expecting their first baby, by paid LHWs. Rather than relying on workers' accounts of their daily activities, we chose to collect observational data of action-in-context. During analysis we engaged with existing literature to improve analytic generalisation. We have demonstrated that, using (qualitative) methods that focus on close examination of everyday practices, is possible to move beyond identifying complex interventions as 'black boxes' in effectiveness studies and to be able to theorize them.

However, there are limits to the study. Methodologically, we did not explore what the social support meant to the women who received it because our focus was on the 'risk work' of the POWs, but this would be a useful complement to help understand the potential impact of the intervention. Related to this, it is possible that our use of observational methods may have meant we missed cases of difficult, unhelpful or judgemental interactions between women and their POWs as our presence may have influenced behaviour. There are also methodological limitations from the use of volunteer POWs who may differ from their peers who did not volunteer to be shadowed.

Conceptually, it would be useful to test the validity of SSS as an explanatory concept for everyday working practices in other lay social support interventions, such as youth or drug and alcohol services. Social support interventions can be (1) group vs. individual, (2) professionally-led vs. peer-provided, (3) focused on increasing network size vs. building social skills to facilitate support creation (Hogan et al., 2002) and so there may be elements which are not transferable (Polit and Beck, 2010). It may be that there are degrees to which social support is 'synthetic'.

6. Conclusion

The 'promise' of lay health workers to deliver improvements in health outcomes and reduction in health inequalities at low cost may be unrealistic, but that does not mean that they are without value in the system. Synthetic social support is not durable or reciprocal and therefore may not have the same health protecting effects as forms of social support embedded in spontaneous social networks. SSS is also a 'downstream' intervention that even if it has some health protective or promoting effect, does not tackle the underlying causes of inequality in health outcomes. The data clearly showed that women's social circumstances and poverty exerted huge constraints on their daily lives in ways that were beyond the gift of the POWs to ameliorate. However, from our observations many of the women seemed to value their relationship with their POW and the POWs worked hard to support those women, where often they had few other sources of social support. The accountability of the POWs in the relationship, their ability to provide reliable information. and the potential for them to introduce the women to new relationships outside their spontaneous social networks (both in terms of strong and weak ties) could potentially have important beneficial effects. Policy makers and commissioners should (a) be clear about the outcomes they want to achieve by using LHWs, (b) ensure an appropriate balance of the different types of support to meet the identified needs of the target population and the flexibility to adapt this for individuals, (c) enhance the potentially positive 'synthetic' effects of SSS (building new positive networks to enhance social climate and ensuring accountability and reliability of support) and (d) should evaluate accordingly considering context, process and outcomes.

Acknowledgements

This work was funded by the National Institute for Health Research (NIHR) through the Collaborations for Leadership in Applied Health Research and Care for Birmingham and Black Country (CLAHRC-BBC) and West Midlands (CLAHRC-WM) programme. The views expressed in this publication are not necessarily those of the NIHR, the Department of Health, NHS Partner Trusts, University of Birmingham or the CLAHRC-BBC/CLAHRC-WM Management/Steering Group. We thank the Sophie-Anna Dann for her contributions to the organisation of the project. We would like to acknowledge valuable conversations with colleagues undertaking work on social support in this and other lay worker contexts, particularly Rebecca Taylor who introduced us to some of the literature we draw on in this article. An early version of this paper was presented at 9th International Organisational Behaviour in Healthcare Conference in Copenhagen in April 2014 and we thank Justin Waring, the paper's discussant at the conference, for his insightful comments. We also thank the Health Services Management Centre's Writing Group for their support and critique of the paper, particularly Catherine Needham.

References

Aartsen, Marja, Veenstra, Marijke, Hansen, Thomas, 2017. Social pathways to health: on the mediating role of the social network in the relation between socio-economic position and health. SSM - Popul. Health 3, 419–426.
Adam, Barbara, Beck, Ulrich, Loon, Joost Van, 2000. The Risk Society and beyond: Critical Issues for Social Theory. Sage, London.
Allen, Jessica, et al., 2014. Social determinants of mental health. Int. Rev. Psychiatry 26 (4), 392–407.
Alvarez, Elena Carrillo, Kawachi, Ichiro, Romani, Jordi Riera, 2017. Family social capital and health – a systematic review and redirection. Sociol. Health Illn. 39 (1), 5–29.
Antonucci, Toni C., Akiyama, Hiroko, 1987. Social networks in adult life and a preliminary examination of the convoy model. J. Gerontology 42 (5), 519–527.
Arntzen, Annett, Andersen, Anne Marie Nybo, 2004. Social determinants for infant mortality in the Nordic countries, 1980-2001. Scand. J. Public Health 32 (5), 381–389.
Bartkowiak-Theron, Isabelle, Sappey, Jennifer Robyn, 2012. The methodological identity of shadowing in social science research. Qual. Res. J. 12 (1), 7–16.
Beck, Ulrich, 1992. Risk Society: towards a New Modernity. Sage, London.
Beck, Ulrich, 2000. Risk society revisited: theory, politics and research programmes. Risk Soc. Beyond Crit. Issues Soc. Theory 211–229.
Berkman, Lisa F., et al., 2000. From social integration to health: Durkheim in the new millenium. Soc. Sci. Med. 51 (6), 843–857.
Bevan, Gwyn, Hood, Christopher, 2006. What's measured is what matters: targets and gaming in the English public health care system. Public Adm. 84 (3), 517–538.
Bloom, Joan R., 1990. The relationship of social support and health. Soc. Sci. Med. 30 (5), 635–637.
Bonner, Ann, Walker, Annette, 2004. Nephrology nursing: blurring the boundaries: the reality of expert practice. J. Clin. Nurs. 13 (2), 210–218.
Brown, Stephanie L., et al., 2003. Providing social support may Be more beneficial than receiving it results from a prospective study of mortality. Psychol. Sci. 14 (4), 320–327.
Chamberlain, John Martyn, 2010. Portfolio-based performance appraisal for doctors: a case of paperwork compliance. Sociol. Res. online 15 (1), 8.
Charmaz, Kathy, 2006. Constructing Grounded Theory: a Practical Guide through Qualitative Analysis. Sage, London.
Christakis, Nicholas A., Fowler, James H., 2007. The spread of obesity in a large social network over 32 years. N. Engl. J. Med. 357 (4), 370–379.
Cohen, Sheldon, 1988. Psychosocial models of the role of social support in the etiology of physical disease. Health Psychol. 7 (3), 269.
Cohen, Sheldon, McKay, Garth, 1984. Social support, stress, and the buffering hypothesis: a theoretical analysis. Handb. Psychol. Health 4, 253–267.
Coll-Planas, Laura, et al., 2017. Social capital interventions targeting older people and their impact on health: a systematic review. J. Epidemiol. Community Health 71, 663–672.
Collins, Nancy L., et al., 1993. Social support in pregnancy: psychosocial correlates of birth outcomes and postpartum depression. J. Personality Soc. Psychol. 65 (6), 1243.
Dadich, Ann, Fisher, Karen R., Muir, Kristy, 2013. How can non-clinical case management complement clinical support for people with chronic mental illness residing in the community? Psychol. Health Med. 18 (4), 482–489.
Dennis, Cindy-Lee, 2003. Peer support within a health care context: a concept analysis. Int. J. Nurs. Stud. 40 (3), 321–332.
Department of Health, 2004. Choosing Health: Making Healthy Choices Easier. HMSO, London.
DH, 2004. Choosing Health: Making Healthy Choices Easier. Department of Health, London.
Diefenbach, Thomas, 2009. Are case studies more than sophisticated storytelling?: Methodological problems of qualitative empirical research mainly based on semi-structured interviews. Qual. Quantity 43 (6), 875–894.
Dixon-Woods, Mary, et al., 2011. Explaining Michigan: developing an ex post theory of a quality improvement program. Milbank Q. 89 (2), 167–205.
Durkheim, Emile, 1951. Suicide: a Study in Sociology (Translated by J.A. Spaulding and G. Simpson). The Free Press, New York.
Exworthy, Mark, Blane, David, Marmot, Michael, 2003. Tackling health inequalities in the United Kingdom: the progress and pitfalls of policy. Health Serv. Res. 38 (6p2),

1905–1922.
Feldman, Pamela J., et al., 2000. Maternal social support predicts birth weight and fetal growth in human pregnancy. Psychosom. Med. 62 (5), 715–725.
Finn, L., et al., 2008. Improving Indigenous access to cancer screening and treatment services: descriptive findings and a preliminary report on the Midwest Indigenous Women's Cancer Support Group. Australas. Med. J. 2, 1–21.
Gale, Nicola, et al., 2013. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Med. Res. Methodol. 13 (1), 117.
Gale, N.K., Thomas, G.M., Thwaites, R., Greenfield, S., Brown, P., 2016. Towards a sociology of risk work: a narrative review and synthesis. Sociol. Compass 10 (11), 1046–1071.
Giddens, Anthony, 1991. Modernity and Self-identity: Self and Society in the Late Modern Age. Stanford University Press, CA.
Gilmore, Brynne, McAuliffe, Eilish, 2013. Effectiveness of community health workers delivering preventive interventions for maternal and child health in low-and middle-income countries: a systematic review. BMC Public Health 13 (1), 847.
Glaser, Barney G., Strauss, Anselm L., 1967. The Discovery of Grounded Theory. Routledge, London.
Goldkuhl, Göran, Cronholm, Stefan, 2010. Adding theoretical grounding to grounded theory: toward multi-grounded theory. Int. J. Qual. methods 9 (2).
Granovetter, Mark, 1973. The strength of weak ties. Am. J. Sociol. 78 (6), l.
Gray, Benjamin, 2002. Emotional labour and befriending in family support and child protection in Tower Hamlets. Child Fam. Soc. Work 7 (1), 13–22.
Hertz, Erica, Hebert, James R., Landon, Joan, 1994. Social and environmental factors and life expectancy, infant mortality, and maternal mortality rates: results of a cross-national comparison. Soc. Sci. Med. 39 (1), 105–114.
Hether, Heather J., Murphy, Sheila T., Valente, Thomas W., 2014. It's better to give than to receive: the role of social support, trust, and participation on health-related social networking sites. J. Health Commun. 19 (12), 1424–1439.
Hetherington, Erin, et al., 2015. Preterm birth and social support during pregnancy: a systematic review and meta-analysis. Paediatr. Perinat. Epidemiol. 29 (6), 523–535.
Hochschild, Arlie Russell, 1983. The Managed Heart: Commercialization of Human Feeling.
Hogan, Brenda E., Linden, Wolfgang, Najarian, Bahman, 2002. Social support interventions: do they work? Clin. Psychol. Rev. 22 (3), 381–440.
Holahan, CharlesJ., Moos, RudolfH., 1982. Social support and adjustment: predictive benefits of social climate indices. Am. J. Community Psychol. 10 (4), 403–415.
Horlick-Jones, Tom, 2005. On 'risk work': professional discourse, accountability, and everyday action. Health Risk Soc. 7 (3), 293–307.
Hull, Elizabeth, 2012. Paperwork and the contradictions of accountability in a South African hospital. J. R. Anthropol. Inst. 18 (3), 613–632.
Hummer, Robert A., 1993. Racial differentials in infant mortality in the US: an examination of social and health determinants. Soc. Forces 72 (2), 529–554.
Jack, Helen E., et al., 2017. Impact of community health workers on use of healthcare services in the United States: a systematic review. J. General Intern. Med. 1–20.
Johnson, Zac, et al., 2000. Community mothers programme-seven year follow-up of a randomized controlled trial of non-professional intervention in parenting. J. Public Health 22 (3), 337–342.
Kenyon, S., Jolly, K., Hemming, K., Ingram, L., Gale, N., Dann, S.A., Chambers, J., MacArthur, C., 2012. Evaluation of Lay Support in Pregnant women with Social risk (ELSIPS): a randomised controlled trial. BMC Pregnancy and Childbirth 12 (1), 11.
Kenyon, S., Jolly, K., Hemming, K., Hope, L., Blissett, J., Dann, S.A., Lilford, R., MacArthur, C., 2016. Lay support for pregnant women with social risk: a randomised controlled trial. BMJ open 6 (3), e009203.
Kozhimannil, Katy B., et al., 2016. Disrupting the pathways of social determinants of health: doula support during pregnancy and childbirth. J. Am. Board Fam. Med. 29 (3), 308–317.
Langford, Catherine Penny Hinson, et al., 1997. Social support: a conceptual analysis. J. Adv. Nurs. 25 (1), 95–100.
Lewin, S.A., et al., 2005. Lay Health Workers in Primary and Community Health Care: a Systematic Review of Trials. World Health Organization, Geneva.
Lincoln, Y.S., Guba, E.G., 1985. Naturalistic Inquiry. Sage, Beverly Hills, C.A.
Lupton, Deborah, Tulloch, John, 2002. 'Risk is part of your life': risk epistemologies among a group of Australians. Sociology 36 (2), 317–334.
Ma, Jian, et al., 2015. Parental health and social support in the first trimester of pregnancy and the risk of oral clefts: a questionnaire-based, case-control study. Plastic Reconstr. Surg. 135 (1), 212–218.
Malcarney, Mary-Beth, et al., 2017. The changing roles of community health workers. Health Serv. Res. 52, 360–382.
Marmot, Michael, 2010. Fair Society, Healthy Lives: the Marmot Review.
Marmot, Michael, et al., 2012. WHO European review of social determinants of health and the health divide. Lancet 380 (9846), 1011–1029.
Mathers, Jonathan, Taylor, Rebecca, Parry, Jayne, 2017. Measuring the impact of Health Trainers Services on health and health inequalities: does the service's data collection and reporting system provide reliable information? J. Public Health 39 (1), 139–144.
McDonald, Seonaidh, 2005. Studying actions in context: a qualitative shadowing method for organizational research. Qual. Res. 5 (4), 455–473.
Merton, Robert K., 1968. Social Theory and Social Structure. The Free Press, New York.
Milgrom, Jeannette, et al., 2008. Antenatal risk factors for postnatal depression: a large prospective study. J. Affect. Disord. 108 (1), 147–157.
Mirabzadeh, Arash, et al., 2013. Path analysis associations between perceived social support, stressful life events and other psychosocial risk factors during pregnancy and preterm delivery. Iran. Red Crescent Med. J. 15 (6), 507.
Morikawa, Mako, et al., 2015. Relationship between social support during pregnancy and postpartum depressive state: a prospective cohort study. Sci. Rep. 5.
Netherwood, Maggie, 2007. Will health trainers reduce inequalities in health? Br. J. Community Nurs. 12 (10), 463–468.
Oakley, Ann, 1992. Social Support and Motherhood. Blackwell, Oxford.
Owczarzak, Jill, Broaddus, Michelle, Pinkerton, Steven, 2016. Audit culture: unintended consequences of accountability practices in evidence-based programs. Am. J. Eval. 37 (3), 326–343.
Perry, B.L., Pullen, E., Pescosolido, B.A., 2016. At the intersection of lay and professional social networks: how community ties shape perceptions of mental health treatment providers. Glob. Ment. Health 3.
Perry, Henry B., Zulliger, Rose, Rogers, Michael M., 2014. Community health workers in low-, middle-, and high-income countries: an overview of their history, recent evolution, and current effectiveness. Annu. Rev. Public Health 35, 399–421.
Pescosolido, Bernice A., Wright, Eric R., Sullivan, William Patrick, 1995. Communities of care: a theoretical perspective on case management models in mental health. Adv. Med. Sociol. 6, 37–80.
Petersen, Alan, Lupton, Deborah, 1996. The New Public Health: Health and Self in the Age of Risk. Sage Publications, Inc.
Polit, D.F., Beck, C.T., 2010. Generalization in quantitative and qualitative research: myths and strategies. Int. J. Nurs. Stud. 47 (11), 1451–1458.
Popay, Jennie, Rogers, Anne, Williams, Gareth, 1998. Rationale and standards for the systematic review of qualitative literature in health services research. Qual. Health Res. 8 (3), 341–351.
Pope, Catherine, 2005. Conducting ethnography in medical settings. Med. Educ. 39, 1180–1187.
Power, Michael (Ed.), 2016. RISKWORK: Essays on the Organizational Life of Risk Management. Oxford University Press, Oxford.
Pratt, Michael G., 2009. From the editors: for the lack of a boilerplate: tips on writing up (and reviewing) qualitative research. Acad. Manag. J. 52 (5), 856–862.
Quinlan, Elizabeth, 2008. Conspicuous invisibility shadowing as a data collection strategy. Qual. Inq. 14 (8), 1480–1499.
Rhodes, Scott D., et al., 2007. Lay health advisor interventions among Hispanics/Latinos: a qualitative systematic review. Am. J. Prev. Med. 33 (5), 418–427.
Ross, Shilpa, Curry, Natasha, Goodwin, NIck, 2011. Case Management: what it is and How it can Best be Implemented. The King's Fund. .
Rowe, Alexander K., et al., 2005. How can we achieve and maintain high-quality performance of health workers in low-resource settings? Lancet 366 (9490), 1026–1035.
RSPH, 2015. Rethinking the Public Health Workforce. Royal Society for Public Health.
Saldaña, Johnny, 2009. The Coding Manual for Qualitative Researchers. Sage, London.
Schwartz, Carolyn E., Sendor, Rabbi Meir, 1999. Helping others helps oneself: response shift effects in peer support. Soc. Sci. Med. 48 (11), 1563–1575.
Singh, Prabhjot, Chokshi, Dave A., 2013. Community health workers—a local solution to a global problem. N. Engl. J. Med. 369 (10), 894–896.
Singh, Prabhjot, Sachs, Jeffrey D., 2013. 1 million community health workers in sub-Saharan Africa by 2015. Lancet 382 (9889), 363–365.
Starr, Paul, 2009. Professionalization and public health: historical legacies, continuing dilemmas. J. Public Health Manag. Pract. 15 (6), S26–S30.
Tarkka, Marja-Terttu, Paunonen, Manta, 1996. Social support provided by nurses to recent mothers on a maternity ward. J. Adv. Nurs. 23 (6), 1202–1206.
Teutsch, Steven M., Fielding, Jonathan E., 2013. Rediscovering the core of public health. Annu. Rev. Public Health 34, 287–299.
Trayers, Tanya, Lawlor, Debbie A., 2007. Bridging the gap in health inequalities with the help of health trainers: a realistic task in hostile environments? A short report for debate. J. Public Health 29 (3), 218–221.
Uchino, Bert N., et al., 2012. Psychological pathways linking social support to health outcomes: a visit with the "ghosts" of research past, present, and future. Soc. Sci. Med. 74 (7), 949–957.
Veltkamp, Gerlieke, Brown, Patrick, 2017. The everyday risk work of Dutch child-healthcare professionals: inferring 'safe' and 'good' parenting through trust, as mediated by a lens of gender and class. Sociol. Health Illn. http://dx.doi.org/10.1111/1467-9566.12582. (Early View).
Watt, Richard Geddie, 2007. From victim blaming to upstream action: tackling the social determinants of oral health inequalities. Community Dent. Oral Epidemiol. 35 (1), 1–11.
White, Ann Marie, et al., 2009. Social support and self-reported health status of older adults in the United States. Am. J. Public Health 99 (10), 1872–1878.
Wibberley, Gemma, 2013. The problems of a 'dirty workplace'in domiciliary care. Health Place 21, 156–162.
Williams, Philippa, Barclay, Lesley, Schmied, Virginia, 2004. Defining social support in context: a necessary step in improving research, intervention, and practice. Qual. Health Res. 14 (7), 942–960.
Windsor, Tim D., et al., 2015. Structural and functional social network attributes moderate the association of self-rated health with mental health in midlife and older adults. Int. Psychogeriatrics 28 (1), 49–61.
WHO, 1978. Declaration of Alma-Ata. In: International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September 1978. World Health Organization.
WMPI, 2007. Reducing Perinatal Mortality Project (HOB PCT Data). West Midlands Perinatal Institute. http://www.perinatal.nhs.uk.