

ORIGINAL RESEARCH

Talking about weight in pregnancy: An exploration of practitioners' and women's perceptions

Penny J. Furness¹, Madelynne A. Arden¹, Alexandra M. S. Duxbury¹, Susan M. Hampshaw², Carrie Wardle², Hora Soltani *¹

¹Sheffield Hallam University, Collegiate Crescent Campus, Sheffield, United Kingdom

²Doncaster Metropolitan Borough Council, Civic Office, Waterdale, Doncaster, United Kingdom

Received: September 25, 2014 **Accepted:** November 16, 2014 **Online Published:** December 1, 2014
DOI: 10.5430/jnep.v5n2p89 **URL:** <http://dx.doi.org/10.5430/jnep.v5n2p89>

Abstract

Prevalence of maternal obesity is increasing, with health risks for mother and infant. Effective health promotion depends on sufficient knowledge and appropriate communication skills. We aimed to explore women's, midwives' and health visitors' perceptions of current practice in helping women manage their weight and supporting healthy behaviour change during pregnancy, and their perceived training needs. A modified grounded theory methodology was adopted, based upon critical realist assumptions. Following consultation events with fifty six practitioners to inform data collection tools, twenty (different) practitioners and nine women participated in focus groups. Comparative analysis generated four themes: A core theme, "Discouraging discourses", described health professionals' negative beliefs and reactive approach to communicating about weight. "Staff resources" identified limitations in and requirements for practitioner knowledge, skills and tools for effective communication. "Contextual influences" were social factors, which hindered practitioners' efforts to achieve healthy behaviour change. "Communicating as a Team" identified the importance of and challenges to a team approach. Findings have implications for weight management in pregnancy, practitioner resources, teamwork, and national health promotion campaigns.

Key Words: Pregnancy, Midwifery, Obesity/overweight, Health care professionals, Health promotion, Communication

1 Introduction

Obesity has reached epidemic levels in many parts of the world.^[1] The rising level of obesity, replicated in the pregnant population, is presenting new challenges for maternity health professionals. In the UK, around one fifth of pregnant women are obese^[2] and more than two thirds of obese women gain excessive weight during pregnancy.^[3] The risks of obesity and excessive gestational weight gain (GWG) are well documented, including short and long-term complications for mothers and infants.^[4-7] Additionally, GWG is the most consistent predictor of maternal postnatal weight retention^[8-10] and a risk factor for future obesity development

in the offspring.^[11]

Life and priority changes make pregnancy an ideal time for women to alter embedded habits and adopt new activities^[12] and, therefore, for obesity interventions with mothers and their families. Pregnancy has been characterised as a 'teachable moment' for weight control and obesity prevention.^[13] In the UK, midwives provide care for women in liaison with obstetricians, during pregnancy and early postpartum. Health visiting teams, whose remit is broader, provide support during pregnancy but have increased involvement after discharge from maternity care until the child reaches school age. Midwives have the advantage of building a close

*Correspondence: Hora Soltani; Email: H.Soltani@shu.ac.uk; Address: Centre for Health & Social Care Research, Sheffield Hallam University, 32 Collegiate Crescent, Sheffield, United Kingdom.

relationship with women throughout pregnancy, and act as the primary source of information for them.^[14] In addition to information-giving, health professionals are increasingly charged with health promotion and behaviour change during pregnancy.^[15] Little evidence exists on the training needs of practitioners regarding weight related health care provision.

Effective health promotion necessitates being well informed about health issues, and skilled in communication, behaviour change and motivational techniques. Evidence indicating a lack of information and support for women before and after birth regarding weight management^[16,17] suggests health professionals might not be adequately resourced for this task. Despite National Institute for Health and Care Excellence^[18] recommendations, midwives describe lacking skills and confidence to discuss public health issues, such as weight and lifestyle, with pregnant women, for which more training is needed.^[19,20] Identifying maternity health care providers' training needs for communicating health behaviour change particularly related to dietary and physical activity would help tackle this growing public health challenge.

2 Method

2.1 Grounded theory

This study was based within a critical realist paradigm. Originating in the work of Roy Bhaskar,^[21] critical realism has been described as an approach which combines post-positivist ontological realism with an epistemological constructivist approach.^[22] Critical realism assumes that real mechanisms exist in the external physical and social world, independent of human consciousness, which shape human events and actions, but which people can only partially or imperfectly perceive. People construct and apply meaning to what they experience, rendering their understanding of reality a subjective, distorted and limited one. Similarly, as social scientists, we can develop theories of social phenomena which, as they grow in sophistication, become more accurate and closer to the 'truth', but will never encompass the complete picture.^[23]

Critical realism does not prescribe methodological approaches; indeed it has been argued by some that alignment with a specific methodology is unnecessary among researchers whose aims are pragmatic and determined by the question under study.^[24] Methodologies described in the literature and demonstrated through research as potentially consistent with critical realist philosophy and assumptions include ethnography, action research and grounded theory. Grounded theory is considered compatible due to its flexibility. Described originally by Glaser and Strauss,^[25] it has been developed in varying directions by these authors and others. Grounded theory can be applied by researchers whose epistemological and ontological assumptions range from the positivist to the constructivist,^[26] and has been de-

scribed as 'an umbrella covering several different variants, emphases and directions - and ways to think about data'.^[27]

Oliver^[28] delineates the particular ways in which the critical realist researcher can apply grounded theory: Due to assumptions regarding reality and fallibility, critical realist grounded theory aims to address both real world processes or events and individual meanings. The initially inductive approach of grounded theory allows researchers to move beyond what critical realism identifies as the limitations of existing understandings of phenomena to discover new leads in the gathered data. However, critical realism assumes researchers will have pre-existing knowledge, which they can use as a starting point rather than as a restraint in understanding the new data. This in keeping with contemporary grounded theory approaches which have moved beyond the purely inductive towards 'abductive reasoning',^[29] whereby theoretical perspectives can be applied to understand and interpret products of inductive analysis. Hence, in keeping with the assumptions of critical realism, grounded theory findings result from a combination of participant data plus researcher knowledge, assumptions and expectations.^[30]

We applied a modified grounded theory methodology in this study. We used the constant comparative method of data analysis,^[31] open, axial and selective coding techniques,^[32] and sought to understand relationships between participant meanings and perspectives and the social contexts within which they operate.^[22] Other aspects were modified, largely for pragmatic concerns and limitations regarding resources, availability and ethical permissions. Although two data collection phases occurred, between which analysis was conducted, true iterative data collection and analysis processes associated with characteristic of grounded theory were not used. Additionally, participants were recruited purposively for their knowledge, experience and differing perspectives with a view to developing theory, in keeping with critical realist assumptions; however a true grounded theory approach would have employed theoretical sampling - recruitment of new participants or additional data collection from existing ones following data collection to support theory development. Rather than taking memos, we met immediately following data collection and regularly during analysis to discuss our experiences and emerging ideas; these meetings were highly influential upon the resulting framework, and arguably performed a similar function to the memo-taking typically carried out by grounded theorists.

2.2 Aims

Our aim in this qualitative study was to explore women's, midwives' and health visitors' perceptions of current practice in helping women manage their weight and support healthy behaviour change during pregnancy and their perceived need for education and training.

2.3 Research questions

- How do midwives and health visitors help women manage their weight and support healthy behaviour change during pregnancy?
- What are women's experiences of their interactions with and support from midwives and health visitors in weight management and healthy behaviour change in pregnancy?
- How do midwives, health visitors and women view the strengths, weaknesses and effectiveness of current practice in supporting weight management and healthy behaviour change?
- What are the perceptions of midwives, health visitors and women regarding needs for education and training for practitioners responsible for supporting weight management and healthy behaviour change in pregnancy?

2.4 Setting

The study was carried out in Doncaster, which is situated in the North East of England, United Kingdom, and has a high level of socio-economic deprivation. A number of indicators of ill-health are worse than the England average:^[33] Life expectancy (77.6 years vs. 78.9 for men and 81.7 vs. 83 for women); mortality rates (66.9 vs. 53.5 of those aged 75+ per 100,000 population), infant deaths (4.6 vs. 4.3 per 1000 live births), deaths from smoking (267 compared to the England average of 201 per 100,000 population aged 35+ between 2009-2011) and prevalence of diabetes (6.9 vs 5.8 of those aged 17+ registered with GPs). Rates of smoking during pregnancy are significantly above the England average (22.5% vs. 12.7%). The latest excess weight data from 326 local authorities reports that this town has the second highest percentage of adults with a BMI above 25kg/m² at 74.4%, compared to the England average of 63.8% in 2012.^[34]

Doncaster has been used as a model of good practice in developing a maternal obesity management service (the 'Monday clinic').^[35] Our previous work in this town has identified women's need for unambiguous advice regarding healthy lifestyles in pregnancy and midwives' difficulties in communicating with their clients about their weight.^[19]

Population diversity, high rates of obesity and variations in maternal obesity service provision led us to choose this area as a starting point for exploration of professionals' and women's experiences in maternal obesity management and identification of the requirements for practitioners in dealing with this rising public health challenge.

2.5 Data collection

Data were collected in two stages: 1) Consultation events; 2) Focus groups. We held consultation events to affirm the need for an explorative study from the relevant stakeholders and to inform semi-structured focus group and interview

schedules. Focus group and interview data were thematically analysed. Research governance approval was granted by the local Hospital NHS Foundation Trust.

2.6 Consultation events

We presented the rationale and aims of this exploratory study verbally to all attendees at two practitioner training days. Attendees were invited to participate in targeted discussions during the training day to help us develop detailed focus group and interview schedules; discussions focused on current practices in addressing public health issues, barriers to effective discussion, and perceived need and appetite for additional training.

There was no obligation to share views, so attendees could decline participation in group discussions or remain silent if they wished. In the event, all attendees agreed to share their opinions with the research team. Flipchart bullet point-style notes were taken during discussions by research team members.

Two consultation events took place with a convenience sample of 56 attendees, comprising 39 health visitors (HVs) and 17 community midwives (CMW). An HV is a qualified nurse or midwife with post-registration experience who has undertaken further training and education in child health, health promotion, public health and education. HVs work as part of a primary healthcare team, assessing the health needs of individuals, families and the wider community. They aim to promote good health and prevent illness by offering practical help and advice. The role involves working within a community setting, often visiting people in their own homes. It primarily involves supporting new parents and pre-school children. Working as an HV may also include tackling the impact of social inequality on health and working closely with at-risk or deprived groups. In the UK, Midwives (MWs) are the lead professional responsible for antenatal, intra-partum and postnatal care of women, up until 28 days after the birth and focus on normalising birth rather than medical intervention. After completing the standard 3 or 4 year midwifery degree, CMWs specialise in providing care in the community including the antenatal appointments with pregnant women (Children's Centre or GP practices), postnatal care in the home and attending home births, compared with hospital based MWs who predominantly work on labour or postnatal wards.

We shared flip chart notes from all group discussions with attendees and used them in our development of interview and focus group schedules.

2.7 Focus groups

Following consultation events and the development of focus group and interview schedules, we invited a purposive sample of professionals and women, selected for their experience of local maternity services, to participate in focus

groups. We emailed information and invitations to all relevant professional groups, including around 50 MWs (including CMWs and Specialist Midwives (SMWs) and 90 HVs / Community practice educators (CPEs)). A CPE is an HV who has undertaken a post-graduate teaching diploma or further education at Masters level and registered as a practice teacher with the Nursing and Midwifery council. CPEs lead the teaching and development of practice in the practice setting and will have management responsibilities of both resources and teaching strategy. The education role is undertaken alongside the management of a caseload, professional development of colleagues and supervision of students. SMWs are community or hospital MWs who have a special interest and usually further training in their area, for example teenage pregnancy, diabetes, smoking cessation, substance misuse, bereavement, mental health, safeguarding, infant feeding.

Women were recruited from 'Baby play' sessions at a Children's Centre. Session organisers provided details to attendees about the study. Attendance varied from week to week and no record was taken of numbers present when information was given.

Twenty nine people responded to invitations and participated, comprising 9 women and 20 professionals. Women varied in terms of weight before conceiving and weight gain during pregnancy; all had experienced local maternity services during a recent (first) pregnancy and were between 6 weeks and 9 months postpartum. Professionals included 7 HVs, 5 PEs, 5 SMWs and 3 CMWs. We ran eight small focus groups (comprising 5 HV; 2 HV; 3 PE; 2 PE; 3 SMW; 2 SMW; 2 CMW; 9 women respectively) and 1 individual interview (1 CMW) (because of unavailability for the CMW focus group).

We developed focus group schedules for each participant type, guided by both consultation event data (flip chart notes) and relevant literature. For example, consultation event attendees identified that *"it's our job"* but referred to the challenges of raising weight-related issues with women, *"compared with other issues, like smoking"*. Challenges included the need for *"respect, sensitivity and slow relationship building"*, their *"lack of time"* and need for *"resources and knowledge"*, which, combined, resulted in *"not directly addressing weight issues with mum (unless she raised it)."* Notes from the event helped us devise comprehensive interview schedules. Questions addressed participant perceptions regarding the importance of and opportunities for raising weight and other health issues during pregnancy; experiences of talking about weight and healthy lifestyles; perceived challenges, barriers to and facilitators of effective discussions; and perceptions of training needs. Schedules each comprised eight main questions, supported by prompts and follow-up questions. Items included *"How important is weight in pregnancy, compared to other issues, like smoking and alcohol?"* (Women's schedule); *"Can you describe an*

experience you have had where you have discussed a pregnant woman's weight or lifestyle with her?" and *"What (if any) training would you like to support you in communicating about and discussing lifestyle issues with women in pregnancy?"* (Practitioners' schedule).

We ran focus groups and the interview in local Council seminar rooms (practitioner focus groups) or a local Children's Centre (women's group). For pragmatic reasons of availability, time and resources, most focus groups and interviews (all those utilising Council premises) were conducted over the course of a single day, by different team members; the remaining focus group took place several days later. Refreshments and reimbursement for travel and expenses were offered. Discussions varied in length from 45-60 minutes and all were audio-recorded, professionally transcribed and anonymised for analysis.

2.8 Data analysis

We used an inductive thematic analysis,^[36] to identify patterns in the data. This form of analysis was based upon the careful, systematic constant comparative approach suggested by Glaser and Strauss in their development of grounded theory, and followed a process of open, axial and selective coding. In the first instance, open coding involved a process of familiarising ourselves with the data through careful reading and re-reading of all transcripts; coding data segments based on aspects of interest; and grouping of coded data into working themes - axial coding - according to apparent patterns, similarities and differences between data segments. Four of our team carried out these analyses separately across the whole dataset and then met to compare individual findings. Our discussion resulted in a framework of fourteen themes, plus sub-themes. For example, one theme, "health care practitioner resources", included sub-themes relating to time, documentation and tools, and another, "weight is a difficult topic", included sub-themes relating to weight stigma, topic sensitivity, and emotions. To ensure all relevant data were properly represented, we met as a full team to carry out a final analytic exercise. Flip charts marked with each theme were posted around the room; we each took responsibility for a section of the dataset, and using scissors and tape, identified sections of data which fitted the themes and applied these to the relevant flip chart. We discussed occasions where relevant data extracts appeared to be unaccounted for by themes or where the fit was not clear, with a view to either create a new theme or refine an existing one to incorporate new data extracts. In the event, existing themes were sufficient, but a few were refined. For example, we refined the theme "weight is a difficult topic" to include the notion expressed within the dataset of weight as being less acceptable to women than other health topics, and altered its title to "weight is an especially difficult topic", adding "spectrum of acceptability" as a component category. Once we were happy that the themes

and subthemes fully represented all relevant data, we discussed how to collapse the fourteen themes with their sub-themes into broader, overarching thematic categories. This was a process akin to Glaser's selective coding,^[31] and resulted in four key themes - one of which was identified as a core concept, and each of which was described by a range of sub-themes to reflect the complexity and richness of component data. As Braun and Clark identify,^[36] analysis often continues during the writing process. The initial report of

findings was disseminated to team members to ensure that the ordering and descriptions of themes and sub-themes accorded with team discussions and met with their approval.

3 Results

Our analysis generated four key thematic categories, including a core theme and three explanatory themes. These themes are set out for ease of reference in Table 1.

Table 1: Thematic findings

Themes	Sub-Themes
Discouraging Discourses: Core Theme	Weight is an Especially Difficult Topic
	Risking the Relationship
	Women are not Motivated
	Taking a Reactive Approach
Staff Resources for Effective Communication	Knowledge and Awareness: Addressing Weight in Pregnancy
	Time and Priorities
	Professional Philosophies and Communication Confidence
	Training Needs
Contextual Influences on Communication	Supporting Tools and Documentation
	Social Awareness and National Healthcare Guidance
	Social Norms, Family Pressures and Care Expectations
Communicating as a Team	Weight is Everyone's Business
	Who Takes the Lead?
	Passing it on: Making Referrals

“Discouraging Discourses” the core theme described health professionals’ negative beliefs and reactive approach to communicating about weight with the women in their care. Three other thematic categories “Staff Resources”, “Contextual Influences” and “Communicating as a Team” referred to the personal, social and team environment within which these discussions occurred and constituent subthemes helped explain the reactive approach identified in “Discouraging Discourses”. “Staff Resources” referred to how knowledge, skills and other resources affected practitioners’ approach toward or ability to undertake weight-related communication. “Contextual Influences” described how social awareness, guidance, norms and expectations influenced conversations between healthcare professionals and pregnant women. “Communicating as a Team” reflected a perception that maternal obesity is a shared responsibility, and evidence of role confusion. Verbatim data extracts are provided to illustrate and demonstrate relevance of themes.

3.1 Discouraging discourses

Talking about weight and weight management with women was regarded as a challenging aspect of practitioners’ role. Weight was a difficult topic which risked damaging their developing relationship with women. Participants perceived women as mostly unmotivated to manage their weight in pregnancy, and most described taking a reactive rather than

proactive approach to obesity.

3.1.1 *Weight is an especially difficult topic*

Among other health issues raised by health professionals, weight was considered highly sensitive and low on the spectrum of acceptability because of its implications, beyond maternal health, for the woman’s appearance, attractiveness and self-image. Concerns about the sensitivity of this topic have also been raised in previous research.^[19,37] In comparison, health behaviours such as smoking and alcohol use were considered more acceptable and easier for the MW or HV to discuss with women in their care:

I think I would probably find it more difficult than some of the other subjects, yeah. I think there’s a worry about causing offence to somebody, suggesting that they’re overweight in some way; however you dress it up and diplomatically say it (CMW).

Concerns were expressed about causing offence, anger, emotional upset and depression in the woman and, potentially, in other family members present during the consultation. Indeed, some participants described difficult encounters, including angry outbursts and threats of making complaints, which naturally caused distress for the professional

and resulted in rapid withdrawal from the topic of weight: *"She was very upset and angry and shouting because I'd raised the issue of weight ... I didn't try and tackle it, I have to admit, there was little point at the time"* (SMW).

3.1.2 Risking the relationship

Concerns about the individual impact of weight-related discussions extended to fears for the important relationship between the health professional and pregnant woman. Where a negative response was anticipated, developing trust and empathy with women was perceived as more important than discussing weight: *"We have a relationship to build up as well... and that can be perhaps a fish to fry another day"* (HV). Some participants noted that emotional responses wouldn't stop them discussing obesity, its risks and management with pregnant women; however these were typically very experienced, SMWs; there was a perception that less experienced CMWs lacked confidence to do so. In keeping with professional perceptions, women viewed weight as an uncomfortable topic and agreed that they might initially feel judged, labelled, angry or upset: *"I think I'd've took offence probably at first, then I'd have gone away, discussed it with my husband, calmed down, then changed"* (Woman).

However, as indicated here, some women believed that these uncomfortable discussions would prompt reflection and, ultimately, change. The women felt that professionals didn't pay sufficient attention to their weight and diet, which should be *"discussed more"*, to address the *"myths out there"* and women given *"support"*. Rather than damaging her trust, one believed it did in fact *"create a better relationship between [us] because I felt like she was actually talking to me about something that mattered"* (W).

3.1.3 Women are not motivated

Motivation was a key aspect of the negative discourse. There was a clear perception that women were *"just not bothered"* (CMW) about their weight, had other priorities, expected to gain weight in pregnancy so were unmotivated to change behaviour to manage this. Some groups were seen as less motivated than others: ethnic groups, such as the Roma community, were characterised as having less weight-related anxiety, and MWs variously identified both the morbidly obese (BMI 40+) and those in the obese category (BMI 30-40) as difficult to motivate: *"It tends to be the ones that are considerably overweight are happy with it and not bothered about changing at all... the ones that are grossly overweight just accept it"* (CMW).

Most professionals here shared a belief that taking the risk of raising the issue of weight with the women in their care would be unsuccessful because of the problem of motivation, although a few identified success stories. Women's responses were complex: they expressed concerns about feeling judged or upset but, in contrast to health professional opinions, described being keen to avoid gaining ex-

cess weight; however it seemed that motivation to manage weight was often gained in retrospect: *"I ate what I wanted during pregnancy and after pregnancy I was regretting it, definitely regretting it"* (woman). These findings mirror those made by previous research,^[19,38,39] which revealed poor perceptions of women's motivation among staff and varying levels of motivation among women themselves. Women's views in this study supported professional perceptions that weight is difficult to discuss, requires a careful and supportive approach, and that motivation is an issue. Nonetheless, they were clear that MWs and HVs should talk about diet, weight and healthy eating with them.

3.1.4 Taking a reactive approach

The perception of weight as an emotive issue, fear of causing offence and complaints, concerns about damaging trust, alongside the construction of women as unmotivated combined to create a discouraging discourse among health professionals, especially MWs, which limited their attempts to communicate about weight with pregnant women.

Her mum's big and her sister's big, and I think that just becomes what they are. She worked in a chip shop, she wouldn't even get her GTT done, she just did not see it as a problem; it's very difficult when you get experiences like that to even try and have a conversation about diet (SMW).

Both key professional groups represented in this study seemed to adopt a reactive approach to weight management. When required by their professional duties and documentation to talk about weight, MWs described minimising their engagement with the topic. For example, at an initial booking visit, a woman might be shown her BMI and left to draw her own conclusions: *"You pass [the BMI chart] onto the woman... so you don't have to say any of those uncomfortable words, you just let her read the facts for herself"* (SMW). When referring women with a BMI above 40 to the SMW, some appeared to take a similar approach, so that women sometimes attended their appointment without a clear understanding of why they had been referred:

I'll look on the referral form: leaflet given ticked. Did your midwife tell you what you're coming here for? And they'll kind of say, it's about my weight. Did she explain anything more than that? No, she said you'd talk about it. So you know there are conversations that should be had, but it really varies (SMW).

HVs described being happy to discuss a woman's weight and its management, but only if she expressed concerns. They were guided by a philosophy which emphasized woman-centred rather than medically-driven care: *"It has to be driven by them, because if we go in and say, actually*

we feel you need to lose weight, it's going to be the quickest way for somebody to disengage" (HV).

HVs discussed waiting for cues and signals from the woman that she might be receptive to input, "*listening for change talk" (HV).* They believed that discussion on this topic had to be initiated by the woman and her priorities, but acknowledged that it was rare for the woman to be proactive, except perhaps postnatally, when she might be concerned to return to pre-pregnancy weight. Women's comments lent support to the evidence of professionals' reactive approach: "*I saw two midwives . . . the first one didn't really talk to me about anything . . . the second one, she didn't seem uncomfortable, but she didn't say much unless I asked her" (woman).*

Thus health professionals tended to wait for women to mention their weight or, if they were obliged to address it, preferred to skirt around the topic rather talking directly; furthermore women suggested that taking the initiative themselves didn't always result in satisfactory conversations with health professionals. This reactive, avoidant approach seemed to be the natural consequence of professionals' negative discourse surrounding obesity. The remaining three thematic categories described the context within which these discouraging attitudes operated.

3.2 Staff resources for effective communication

Professional perceptions and behaviours were influenced by a number of personal and professional resources, including awareness of the importance of addressing weight in pregnancy, time and priorities, care philosophies, communication skills, training, and supporting tools and documentation.

3.2.1 Knowledge and awareness: Addressing weight in pregnancy

Participants seemed reasonably aware of the prevalence of obesity in pregnancy and its risks for mother, unborn baby and birth, albeit less so than other issues:

You will know the smoking, you will know the alcohol perhaps, but [we're not] as aware of the NICE guidelines on healthy eating in pregnancy or diet in pregnancy (HV).

SMWs were best informed; these participants felt that MW motivation to discuss weight with women and refer for additional support was improved following targeted training, suggesting scope remains to increase knowledge and awareness.

In the first instance we had lots of barriers from midwives rather than from women [to specialist clinic], in that midwives didn't have a good knowledge of what the problems were in pregnancy with obesity, and if they didn't know

that they found it difficult to convey that to the women . . . once we'd done better training with the women . . . we had much better compliance with referrals (SMW).

Similar suggestions have arisen in previous studies with MWs.^[38] Participants saw pregnancy as a great opportunity to tackle health behaviours because of the woman's focus on her and her baby's health and wellbeing.

They certainly come with motivation, sometimes it wavers, sometimes it stays, and I suppose that's all about the service you're offering as well and keeping that enthusiasm up, but it does definitely seem like a good time to change (SMW).

Both women and health professionals felt that, despite the low perceived motivation surrounding weight, pregnant women typically prioritised health issues, were keen for information and more likely to follow professional advice than at other times in their life. Various potentially effective intervention points were identified, such as existing appointment times; and some commented that a "*drip-drip-drip" approach of talking throughout about health issues, worked best.*

3.2.2 Time and priorities

Despite awareness of pregnancy as an ideal time for health promotion and for communicating the risks of obesity, participants described the volume and variety of topics they had to address, among which, for some, weight was considered low in their list of priorities: "*For me, weight would be bottom of the pile . . . smoking in pregnancy and alcohol in pregnancy would be, by my perception, a greater risk" (HV).* Others observed that they would ideally like to run support groups or to offer information, advice and support with weight management; however, lack of time prevented these things. Women also described how MWs were rushed and sometimes stressed during consultations. Given the lack of time, its low priority and professionals' sense that raising the topic would be difficult and ineffective, it is hardly surprising that the issue of weight might be overlooked or avoided.

3.2.3 Professional philosophies and communication confidence

There were interesting differences between MW and HV participants in their approach to maternity care and communication. MWs focused on addressing clinical aspects of pregnancy, checking physical indicators of health and giving information: "*It's called a team pack. . . it's got lots of information in there about healthy eating, housing support, benefits, just lots of general information, and about*

the kind of service we offer" (SMW). HVs described taking a holistic approach, focusing on emotional, psychological and social issues. They saw their role as supporting the woman in maintaining self-esteem, identifying personal priorities and meeting her own goals. Broadly speaking, MWs seemed to operate according to a medical model of care and the HVs a social model; indeed this distinction was suggested by some of the HVs in this study and has arisen in discussion with MWs elsewhere.^[38] In achieving behaviour change around issues like weight, HVs believed their broader, woman-centred approach was more effective than simply giving information:

It's a medical approach that focuses on health education and nothing much else, i.e. I've told you how you need to behave to be more healthy, so it's quite simple, all you've got to do is just go and do it. But we know it's far more complex than that. I think there is scope for training all the health practitioners in some of those techniques (HV).

Some MWs were mindful of this distinction and that aware that information alone is ineffective: "I think it's about motivating, isn't it, and I don't think we are good at motivating people" (CMW). These professional philosophies seemed to underpin variations in communication preparation and confidence. HVs noted: "we're supported more in our communication methods than the midwifery staff have been." They described receiving training in communication skills, motivational interviewing and cognitive behavioural therapy, which supported their holistic approach and, they believed, provided them with "Those skills to open up that conversation and ascertain what that person's motivations are" (HV). MWs agreed that their professional confidence as communicators could be improved:

I think some midwives would benefit from learning how to ask open questions [rather than], you're okay then, aren't you, and you don't need any support, do you, and everything's going to be alright, isn't it? And they're ticked before the woman's even had chance to say, no it's not, so I think there are some very experienced midwives who, as you said [addressing another focus group participant], don't know how to communicate (SMW).

SMWs had greater confidence – "I haven't got a problem with discussing anything with any of them" (SMW). Experience, additional training and daily exposure to associated challenges were the key facilitators in their enhanced communicative abilities and willingness to engage.

3.2.4 Training needs

Practitioners identified a need for additional evidence-based information, e.g. in the form of "annual updates" (SMW), but most also wanted to be given training in effective communication of sensitive issues, such as weight: "I would like something on the lines of appropriate words, how to broach the subject without offending people" (CMW).

Suggestions about specific communication-related training included cognitive behavioural principles and motivational interviewing. In terms of training delivery, general consensus was that e-learning would be unpopular and that poor engagement would render it ineffective: "I've never met anyone who enjoys e learning" (HV). Instead, interactive sessions were considered most useful and participants described positive previous experiences with this format: "You do lots of scenarios, you do a lot of role play, you do that kind of stuff, so I found it beneficial" (SMW).

It was also suggested that maternity teams could make most efficient use of resources by utilising the most experienced, well informed, specialist staff to share their training, knowledge and experience with more junior members of staff and also, thereby, strengthen team relationships: "I think that, because we're working with the more challenging ladies all the time, then we could share our experience of the training with the community midwives" (SMW). Finally, to support and reinforce these efforts, some practitioners suggested that training could be accompanied by a guide or "toolkit" (SMW), which might include scenarios, potential cues and prompts for communication, and examples of effective communication strategies.

3.2.5 Supporting tools and documentation

In a healthcare service where everything is documented and audited, participants described how their paperwork supported health-related conversations. They viewed current documentation as very thorough, with tick-boxes and sections to record all measurements and conversations: "There's a section in the handheld notes that you tick to say if you've given them a leaflet, and they're ticked to say that you've discussed caffeine intake, alcohol, folic acid and everything like that" (CMW). Participants also described using tools to prompt information-giving about health issues, such as BMI charts (weight) and carbon monoxide monitors (smoking) and bemoaned the lack of up-to-date resources around weight management.

In theory, tools and forms gave professionals opportunities to discuss relevant points with women; however examples such as those above - the BMI being shown rather than discussed; closed and leading questions to limit communication on complex issues - suggests that these resources aren't always used optimally: "The booking notes are very much closed, you can ask, any problems in the last 4 weeks, do you feel down, depressed, hopeless, no? That's it then, but

it's whether or not you continue with that" (SMW). Analysis suggested that it is not a lack of tools which limits conversation around tricky issues like weight. Tackling the demotivating discourses which result in a reactive approach, the lack of time, low priorities and communication skills seems more likely to improve professionals' engagement and confidence in communicating sensitive issues. However, it is too easy to blame the individual healthcare provider; the broader social context and the ways in which teams work together had a significant impact on weight-related communication.

3.3 Contextual influences on communication

Communication about weight in pregnancy occurs in a broad social context. Social awareness and existing guidance regarding weight in pregnancy, social norms, family pressures, and expectations of care each influenced conversations between healthcare professionals and pregnant women.

3.3.1 Social awareness and national healthcare guidance

Participants perceived an increasing societal focus on obesity and health: *"It's extremely important at the moment; it's one of the main drives to try and help women with their weight"* (CMW); however, compared with social awareness about smoking and drinking in pregnancy, they considered that there was as yet little information in the public arena about the risks of maternal obesity: *"It's not out there ... there hasn't been in the past a national awareness of all the things that obesity can cause so I don't think they come with that knowledge"* (HV). Low social awareness was exacerbated by mixed messages about healthy types and quantities of food, levels of physical activity, plus a lack of clear guidance in the UK regarding healthy weight gain for professionals to inform themselves and their clients. As a result, women had relatively little understanding of the risks of obesity for themselves, their baby, the pregnancy and birth:

I think women see smoking very much as a risk in pregnancy. I don't think being overweight in pregnancy, from the majority of women that I work with, they do not see that as a risk, and I don't know if that's because the information's not readily available about that. We don't sell that enough in pregnancy as health professionals. I would say it's very much an accepted norm that, yes, it's risky to smoke. Being overweight I don't think is out there as much with people (HV).

3.3.2 Social norms, family pressures and care expectations

Increasing prevalence of obesity in the UK was seen to create a social environment in which obesity is no longer unacceptable but instead has, in some communities, become the norm. Participants believed this reduced women's sense of their weight as problematic and their motivation for behaviour change. Social norms, along with little related guidance and health promotion, also meant that in contrast to smoking and alcohol, women did not expect health professionals to raise the issue of weight, and were surprised and affronted if MWs or others did so. Participants perceived an expectation in some that care would adapt to and accommodate their needs as an obese woman, rather than requiring them to change their behaviour:

If you say, has anybody ever talked to you about weight management or seeing a dietician, and they will look at you and say, no, why? They don't see having a BMI of 40 or over as being a problem, because their peers are all large. I had a woman (who said) why can't you just plan my caesarean section? And it all seemed to be so logical that we're all geared up now for dealing with larger people and the solutions are there (SMW).

The narrower social context of family and friends was also seen by participants as highly influential. Accepted family norms of behaviour (i.e. smoking, takeaways, and obesity) and anecdotal accounts of their perceived consequences (having a healthy baby nonetheless) were considered particularly meaningful for the woman. Getting the family's support and including them in consultations and education initiatives could allow the health professional to use their influence positively in encouraging the woman with healthy behaviours. Conversely, socialisation and family norms could result in unhealthy learned behaviours which were resistant to change. Where the two conflicted, women were considered to place greater trust in family experiences, advice and support than those of health professionals:

If they have friends, family who live nearby, or they live with their mum, this sort of thing, they are more of an influence on them than we will ever be, to be honest; they trust their advice and support much more than they do us (CMW).

Social norms, family influence and expectations of care exacerbated professionals' sense of futility in tackling health issues with their clients: *"I don't really know the way around it: you can talk and talk, you can show them, it's just really difficult"* (SMW).

3.4 Communicating as a team

Health professionals form part of a maternal/child health team, which might consist of a GP, obstetrician, MW, HV, dietician, support worker and children's centre. Data revealed a shared perception that maternal obesity is everyone's business, not only that of the MW, but also some confusion about roles and responsibilities.

3.4.1 *Weight is everyone's business*

MWs perceived that they had a key role in talking about weight with women, and HVs also recognised this fell increasingly within their remit. Participants agreed that everyone in the team should take ownership but also must provide consistent advice: *"It's all of us, isn't it? It's everybody who necessarily comes into contact with that woman, to be honest, at any point in her pregnancy, but it needs to be everybody singing from the same hymn sheet"* (CMW). There was a perception that medical colleagues sometimes let the team down, by not coming for training, failing to take advantage of discussion opportunities, communicating insensitively, or giving inconsistent, inaccurate information. For example, one participant described how a locum obstetrician told women to avoid worrying about her weight until after the birth and to ignore health visitors' advice to "diet"; HVs described having given advice about healthy eating not "dieting", positive input which they considered damaged by apparently contradictory medical advice. Previous research suggests GPs suffer with similar anxieties about offending women and, like MWs, prefer to use less emotive euphemisms when discussing weight.^[40] The role of medical staff was seen as particularly important because of the trust women placed in advice from doctors, compared with other health professionals.

3.4.2 *Who takes the lead?*

There was evidence of some confusion about professional roles, and the nature and timing of advice. Participants identified that MWs initially measure BMI at the booking visit; however, as mentioned above, this might not prompt a proper discussion. Nonetheless, HVs, caring for women later in pregnancy, felt that MWs were best placed to initiate discussions. They might then raise the issue if the MW documented any concerns. They described being unsure exactly what conversations the woman might have had with MWs and consultants so were reluctant to interfere without clear documented prompts to do so.

We're unsure really of what discussions women have had, at what point they're at; I think they go to some groups if their BMI is 40 or above. We're unsure of what those women are doing with the midwifery team (HV).

Where no concerns are documented, HVs stated they would only discuss the issue if raised by the woman. They mentioned the importance of good team communication and the passing on of information between team members to avoid missing important issues and opportunities; however they also described making the "assumption" that MWs would already have tackled the issue. In addition, as mentioned earlier, HVs here believed that MWs were less well-resourced in terms of time, skills and training, to have those discussions with women. Data suggests both greater clarity and sharing of responsibilities between roles, expectations and input of the two groups of professionals could make weight-related communication more consistent, reliable and thorough.

3.4.3 *Passing it on: Making referrals*

Team roles seemed clearer where BMI was in excess of 40. Here, the midwives' responsibility was to refer the woman to the specialist midwives for targeted information, advice, support and monitoring. As mentioned above, the specialists described how some community midwives sometimes avoided explaining exactly what the service involved and why the woman was being referred. It was not clear from the data what happens with other women, including those with high BMIs but below the referral threshold, whose care falls under the remit of the community midwives: *"It's alright having the healthy lifestyle midwives but they only see a certain proportion of these obese women, the majority of obese women are looked after by community midwives"* (SMW).

There were conflicting opinions regarding MWs' capability to meet their needs: *"I think some will do a very thorough job and some probably will pass it on"* (SMW). If confidence and motivation depends on the individual MW, as suggested earlier, those who refer women to specialists without a proper discussion might simply avoid the issue altogether where paperwork does not require a tick-box referral. This suggests, as participating women indicated, that many possible opportunities to discuss and support women to manage their weight through healthy behaviour change are not taken up. There is evidence from recent literature that this is indeed the case: Brown and Avery found that two thirds of their admittedly small NCT sample reported being given no information or advice about weight management and weight gain, with no difference according to BMI;^[16] Wiles's study of overweight maternity service users similarly found that around half of women received no advice; those who had tended to receive nutritional advice rather than help with weight management.^[41]

4 Discussion

4.1 Findings

In summary, the health professionals in this study tended to engage in discouraging discourses about discussing weight

with the pregnant women in their care, based on awareness of its sensitivity, fears about damaging the professional relationship, and beliefs in women's low motivation to change, which resulted in an avoidant or reactive approach to weight management in pregnancy. These attitudes and actions were influenced by perceived individual resources, the social environment, and team context. As individuals, professionals had reasonable awareness of obesity as an important risk factor for pregnant women, but wanted more information and training. Tools and documentation could act to prompt discussion; however participants perceived that, often, boxes were ticked without proper engagement with the topic. There were variations in communication confidence, and CMWs, who have the greatest responsibility for antenatal care provision and more opportunities to advise on weight-related matters seemed to be in greater need of skills, confidence and training. The social environment, with low awareness of the risks of obesity, lack of clear guidance, acceptance of obesity as normal and unhealthy family habits, made the health professional's attempts to alter attitudes and change behaviour seem very difficult. Finally, data showed a common perception that obesity was the responsibility of everyone in the healthcare team; however lack of clarity around professional roles and activities, assumptions, and an apparent role - resource mismatch meant the team approach wasn't perceived as always effective.

Women in this study, as elsewhere,^[16,41] considered it important to get information about weight and reported receiving little advice and support about this; however they also suggested here that, in previous pregnancies, their motivation to manage their weight didn't really kick in until after birth, when they made efforts to return to their pre-pregnancy weight. Previous findings have also demonstrated a lack of information about weight management and varying levels of motivation among women during pregnancy.^[19,37,39] On the other hand, without weight-related information from the health professionals who act as their key source of information and in a social environment where risks of obesity in pregnancy are not well advertised or understood, a lack of motivation in pregnancy does not seem surprising.

Three key requirements were identified by professionals for effective weight-related discussions: first, clear information and guidelines about diet, exercise, appropriate weight gain and the risks of obesity in pregnancy; second, confidence and skills in communication and behaviour change; third, sufficient time and opportunity for sensitive discussions, without which other "more pressing" issues would be prioritised over weight management. There is evidence from these data that MWs do not feel as well informed about weight in pregnancy compared with other health issues, might not be as well prepared in communication, motivational and behaviour change techniques compared with other professional groups (although better aware of related

clinical guidelines), and are short on time because of the volume of information and advice they need to address during short consultations. The issue of time poverty and pressures is not a novel finding.^[37,42] This combination of factors means that the clinically significant issue of weight is simply not being raised adequately with the pregnant woman by her healthcare professional team. Although professionals believe they discuss weight and nutrition,^[43] surveys of women suggest that fewer than half are receiving weight management advice.^[16,41] Pregnant women encounter and develop a relationship with a range of professionals, including the doctor, MW and HV, and the professional arguably best placed to have these conversations during the nine months of pregnancy is the MW.^[43,44] Study findings suggest there are limitations in terms of resources in terms of time, information, guidance and training for midwives and other healthcare professionals.

4.2 Implications

These findings are in keeping with a growing body of evidence^[19,37,38] suggesting that MWs in particular but also others in the team, should be better prepared for and supported in this important aspect of their work.

Ideally, practitioners need to be fully informed about the risks, but also need to have the time and appropriate communication training to address this with women. Additional training naturally has cost implications and would require extra investment: previous research^[38] has highlighted the implications of releasing MWs from their duties for training in an already overstretched service, as well as the practicality of incorporating education around weight management and training communication skills in already overloaded mandatory training days. On the other hand, it could be argued that better trained professionals would save obesity-related costs for the UK's NHS.

This study suggests that greater clarity regarding best use of team time and skill resources might facilitate more effective shared responsibility for tackling this issue in a direct, proactive way, given its importance to the short- and long-term health of mother and child. Findings from this study and several others^[19,38,40,45] demonstrate that health professionals, including MWs, doctors and HVs tended to avoid using direct, potentially offensive, terms, such as "obese", and are likely to skip quickly over or skirt around weight-related topics, rather than tackling them properly and in depth. This suggests there is scope for all professionals (not just MWs) to receive better preparation for communicating about weight.

The study also implies that the broader environment within which weight-related communication occurs should be addressed, for example, by increasing social and family awareness of obesity risks, initiating national health information and promotion campaigns and developing clearer guidelines

for MWs to inform themselves and their women. Arguments for the development of national UK guidelines for healthy GWG are growing and have been discussed elsewhere.^[2,18,46] Findings from Canadian research studies, where MWs are provided with clear GWG guidelines, however, suggest guidelines for GWG are not sufficient to solve the problems.^[47] Most healthcare providers believed they had discussed appropriate weight gain with their patients, yet a far smaller proportion of women reported receiving this information. Similar findings were made in a U.S. study of advice received by pregnant women regarding GWG.^[48] It could be assumed that health professionals are overestimating or misremembering what they have discussed or might, as identified here, have “skirted around” the issue because of its sensitivity. Another explanation is that women had forgotten or misremembered the information given. Indeed, MWs and women in the present study described the vast amount of information which has to be provided, discussed - and remembered by women - during the initial consultation. Either way, guidelines do not preclude the need for appropriate time and skills resources to engage in sensitive discussions. This study suggests that maternity service practitioners require additional support to feel confident and act effectively in supporting pregnant women with weight management and healthy behaviour change.

4.3 Limitations

These findings are based on subjective perceptions of a small, geographically limited sample of health professionals. As part of our purposive sampling strategy, we unsuccessfully attempted to recruit and gain perspectives from obstetricians. While we aimed to explore the perspectives of a range of stakeholders, full representativeness was not within the remit of this qualitative study; however findings made here will be used to develop a large scale survey to test these findings within a larger, more varied population. Consultation events were invaluable in developing the focus group schedule, but attendees’ data could have contributed more explicitly to and helped saturate final themes, had we also recorded and analysed these discussions. There is also as yet little empirical evidence for the use and validity of consultation events in research, so it is difficult to identify to what extent our use of this approach could be regarded as strength or weakness.

As a research team, we acknowledge pre-existing practice and research experience and theoretical knowledge of this field; hence it is very likely that data collection and analysis were influenced by these, although we also strove to take an open-minded, inductive approach to both, in which participant perspectives were central; however our knowledge and experience were highly valuable in helping to interpret and analyse data.

There have been many and varied accounts regarding rigour, validity and trustworthiness in qualitative research. A four

component model was proposed by Lincoln and Guba,^[49] which remains popular and relevant,^[50] and focuses on the credibility, transferability, dependability and confirmability of qualitative research studies. Credibility - accuracy in description or interpretation of accounts - was supported by the team approach to analysis, the constant comparative method, and the detailed write-up in which thematic categories and constituent data are presented for the reader. Transferability - the extent to which these findings might be considered applicable to other people - was supported by careful description of the context and participants involved in our research. Dependability - reliability and clarity of methods and decisions - was supported by careful description of the processes of recruitment, data collection and analysis, and by taking a team approach, which necessitated at all stages accounting for and working with the range of perspectives within the team. Confirmability - reflectivity and awareness - was supported by making a conscious effort to ensure participant perspectives were represented, whilst acknowledging our existing knowledge and perspectives.

5 Conclusion

This study suggests that pregnant women may not always be offered the advice and support they need in managing their weight by maternity health professionals. These data suggest this arises from a combination of factors, including the perceived sensitivity of the topic, beliefs around women’s low motivation for change, a lack of training, confidence and opportunity for weight-related discussions relative to other health topics, increased acceptability of obesity, low social awareness of risks of overweight in pregnancy, assumptions and communication issues prevalent within the healthcare team. Findings suggested professionals would value a higher social awareness and prioritisation of weight as a health issue in pregnancy, as well as better teamwork to enhance consistency and effectiveness of message. Above all, however, professionals wanted more effective preparation in terms of information awareness and communication confidence for this important aspect of their role.

Acknowledgements

We would like to express our sincere thanks to all our participants, without whom this research would not have been possible, and to Doncaster Metropolitan Borough Council for supporting and releasing staff to be engaged in the project. We would also like to acknowledge help and support from the following individuals: Deirdre Fowler, Head of Midwifery, Doncaster and Bassetlaw Hospitals NHS Trust, Debby McKnight, Community Midwifery Manager, Doncaster and Bassetlaw Hospitals, Christina Harrison, Assistant Director Children, Young People and Families, Rotherham Doncaster and South Humber Foundation Trust. We would like to acknowledge and thank Doncaster Metropolitan Borough Council and South Yorkshire Collab-

oration for Leadership in Applied Health Research and Care [CLAHRC-SY] for funding this project. NIHR CLAHRC for South Yorkshire acknowledges funding from the National Institute of Health Research. The views and opinions expressed are those of the authors, and not necessarily those of the NHS, the NIHR or the Department of Health. CLAHRC SY would also like to acknowledge the partici-

pation and resources of our partner organisations. Further details can be found at www.clahrc-sy.nihr.ac.uk.

Conflicts of Interest Disclosure

The author declares that there is no conflict of interest statement.

References

- [1] Obesity and overweight [Internet]. 2003. Available from: http://www.who.int/dietphysicalactivity/media/en/gfsfs_obesity.pdf[http://shulinks.shu.ac.uk/?sid=Refworks%3ASheffield%20Hallam%20Universi&charset=utf-8&__char_set=utf8&genre=article&aulast=World%20Health%20Organisation%20\(WHO\)&date=2003&volume=2014&issue=02%2F07&atitle=Obesity%20and%20Overweight&au=World%20Health%20Organisation%20\(WHO\)%20&](http://shulinks.shu.ac.uk/?sid=Refworks%3ASheffield%20Hallam%20Universi&charset=utf-8&__char_set=utf8&genre=article&aulast=World%20Health%20Organisation%20(WHO)&date=2003&volume=2014&issue=02%2F07&atitle=Obesity%20and%20Overweight&au=World%20Health%20Organisation%20(WHO)%20&)
- [2] Heslehurst N, Rankin J, Wilkinson J, Summerbell C. A nationally representative study of maternal obesity in England, UK: Trends in incidence and demographic inequalities in 619 323 births, 1989–2007. *Int J Obes*. 2010; 34(3): 420–8. PMID:20029373 <http://dx.doi.org/10.1038/ijo.2009.250>
- [3] Carmichael S, Abrams B, Selvin S. The pattern of maternal weight gain in women with good pregnancy outcomes. *Am J Public Health*. 1997 Dec; 87(12): 1984–8. PMID:9431288 <http://dx.doi.org/10.2105/AJPH.87.12.1984>
- [4] Watkins ML, Rasmussen SA, Honein MA, Botto LD, Moore CA. Maternal obesity and risk for birth defects. *Pediatrics*. 2003; 111: 1152–8. PMID:12728129
- [5] Weiss JL, Malone FD, Emig D, Ball RH, Nyberg DA, Comstock CH, et al. Obesity, obstetric complications and cesarean delivery rate—a population-based screening study. *Obstet Gynecol*. 2004; 190(4): 1091–7. PMID:15118648 <http://dx.doi.org/10.1016/j.jajo.2003.09.058>
- [6] Confidential Enquiries into Maternal and Child Health (CEMACH). Saving mothers' lives: Reviewing maternal deaths to make motherhood safer. The seventh report of the confidential enquiries into maternal deaths in the United Kingdom. Findings of a National Enquiry: England, Wales and Northern Ireland. CEMACH: London; 2007.
- [7] Sebire NJ, Jolly M, Harris JP, Wadsworth J, Joffe M, Beard RW, et al. Maternal obesity and pregnancy outcome: A study of 287,213 pregnancies in London. *Int J Obes*. 2001; 25: 1175–82. PMID:11477502 <http://dx.doi.org/10.1038/sj.ijo.0801670>
- [8] Gunderson EP, Abrams B, Selvin S. The relative importance of gestational gain and maternal characteristics associated with the risk of becoming overweight after pregnancy. *Int J Obes*. 2000; 24(12): 1660–8. <http://dx.doi.org/10.1038/sj.ijo.0801456>
- [9] Siega-Riz AM, Evenson KR, Dole N. Pregnancy-related weight gain—A link to obesity? *Nutr Rev*. 2004; 62(s2): S105–11. PMID:15387475 <http://dx.doi.org/10.1111/j.1753-4887.2004.tb00079.x>
- [10] Walker LO. Managing excessive weight gain during pregnancy and the postpartum period. *JOGNN*. 2007; 36(5): 490–500. PMID:17880322 <http://dx.doi.org/10.1111/j.1552-6909.2007.00179.x>
- [11] Oken E, Taveras EM, Kleinman KP, Rich-Edwards JW, Gillman MW. Gestational weight gain and child adiposity at age three years. *Am J Obstet Gynecol*. 2007; 196(4): e1–e8. PMID:17403405 <http://dx.doi.org/10.1016/j.jajo.2006.11.027>
- [12] Wiles R. I'm not fat, I'm pregnant. In: Wilkinson S, Kitzinger C, editors. *Women and Health: Feminist Perspectives*. London: Taylor Francis; 1994; 33–48.
- [13] Phelan S. Pregnancy: A “teachable moment” for weight control and obesity prevention. *Obstet Gynecol*. 2010; 202(2): 135. e1–e8.
- [14] Clarke PE, Gross H. Women's behaviour, beliefs and information sources about physical exercise in pregnancy. *Midwifery*. 2004; 20(2): 133–41. PMID:15177856 <http://dx.doi.org/10.1016/j.midw.2003.11.003>
- [15] Department of Health. *Midwifery 2020: Delivering expectations*. London: Chief Nursing Officers of England, Northern Ireland, Scotland and Wales, Department of Health; 2010.
- [16] Brown A, Avery A. Healthy weight management during pregnancy: What advice and information is being provided. *J Hum Nutr Diet*. 2012; 25(4): 378–87. PMID:22339766 <http://dx.doi.org/10.1111/j.1365-277X.2012.01231.x>
- [17] Women's experiences of maternity care in England: Key findings from the 2010 NHS trust survey [Internet]. 2010. Available from: <http://www.cqc.org.uk/maternitysurvey2010.cfm>http://shulinks.shu.ac.uk/?sid=Refworks%3ASheffield%20Hallam%20Universi&charset=utf-8&__char_set=utf8&genre=article&aulast=Royal%20College%20Midwives&date=2010&atitle=%C2%A0Women%E2%80%99s%20experiences%20of%20maternity%20care%20in%20England%3A%20Key%20findings%20from%20the%202010%20NHS%20trust%20survey.%C2%A0http%3A%2F%2Fwww.cqc.org.uk%2Fmaternitysurvey2010.cfm.&au=Royal%20College%20Midwives%20&
- [18] NICE. *Dietary interventions and physical activity interventions for weight management before, during and after pregnancy*. London: National Institute for Health and Clinical Excellence; 2010. Report No. PH27.
- [19] Furness P, McSeveny K, Arden M, Garland C, Dearden A, Soltani H. Maternal obesity support services: A qualitative study of the perspectives of women and midwives. *BMC Preg Childbirth*. 2012; 11(1): 69. PMID:21982306 <http://dx.doi.org/10.1186/1471-2393-11-69>
- [20] Oteng-Ntim E, Pheasant H, Khazaezadeh N, Mohidden A, Bewley S, Wong J, et al. Developing a community-based maternal obesity intervention: A qualitative study of service providers' views. *Brit J Obstet Gynaecol*. 2010; 117(13): 1651–5. PMID:21125707 <http://dx.doi.org/10.1111/j.1471-0528.2010.02730.x>
- [21] Bhaskar R. *A realist theory of science*. Hemel Hempstead: Harvester Wheatsheaf; 1975.
- [22] Altheide DL, Johnson JM. Reflections on interpretive adequacy in qualitative research. In: Denzin NK, Lincoln YS, editors. *The SAGE Handbook of Qualitative Research*. 4th ed. Thousand Oaks, CA: Sage; 2011; 581–94.
- [23] Houston S. Prising open the black box: Critical realism, action research and social work. *Qual Soc Work*. 2010; 9(1): 73–91. <http://dx.doi.org/10.1177/1473325009355622>
- [24] Danermark B, Ekstrom M, Jakobsen L, Karlsson J. *Explaining Society: Critical Realism in the Social Sciences*. London: Routledge; 2002.
- [25] Glaser B, Strauss A. *Discovery of Grounded Theory: Strategies for Qualitative Research*. Mill Valley, CA: Sociology Press; 1967.

- [26] Charmaz K. *Constructing Grounded Theory*. 2nd ed. London: Sage Publications Ltd; 2014.
- [27] Charmaz K. *Shifting the Grounds: Constructivist Grounded Theory Methods*. In: Morse JM, Stern PN, Corbin JM, Bowers B, Clarke AE, editors. *Developing Grounded Theory: The Second Generation*. Walnut Creek, CA: University of Arizona Press; 2009; 127-54.
- [28] Oliver C. Critical realist grounded theory: A new approach for social work research. *Brit J Soc Work*. 2012; 42: 371-87. <http://dx.doi.org/10.1093/bjsw/bcr064>
- [29] Charmaz K. *Grounded Theory Methods in Social Justice Research*. In: Denzin NK, Lincoln YS, editors. *The SAGE Handbook of Qualitative Research*. 4th ed. Thousand Oaks, CA: Sage; 2011; 359-80.
- [30] Corbin J, Strauss A. *Basics of Qualitative Research*. 3rd ed. Thousand Oaks, CA: Sage Publications; 2008.
- [31] Glaser B. *Doing Grounded Theory: Issues and Discussions*. Mill Valley, CA: Sociology Press; 1998.
- [32] Lichtman M. *Qualitative Research for the Social Sciences*. Thousand Oaks, CA: Sage Publications Ltd; 2014.
- [33] EHealth profile 2012 Doncaster OCOE [Internet]. 2012. Available from: http://www.apho.org.uk/resource/item.aspx?RID=117063http://shulinks.shu.ac.uk/?sid=Refworks%3ASheffield%20Hallam%20Universi&charset=utf-8&__char_set=utf8&genre=article&aualast=The%20Association%20of%20Public%20Health%20Observatories&date=2012&volume=20%2F01%2F2014&atitle=HeHealth%20Profile%202012%20Doncaster%20OCE&au=The%20Association%20of%20Public%20Health%20Observatories%20&
- [34] Local authority adult excess weight prevalence data (2012) [Internet]. 2014. Available from: [http://www.noo.org.uk/visualisationhttp://shulinks.shu.ac.uk/?sid=Refworks%3ASheffield%20Hallam%20Universi&charset=utf-8&__char_set=utf8&genre=article&aualast=Public%20Health%20England&date=2014&volume=2014&issue=02%2F07&atitle=Local%20Authority%20Adult%20Excess%20Weight%20Prevalence%20Data%20\(2012\)&au=Public%20Health%20England%20&](http://www.noo.org.uk/visualisationhttp://shulinks.shu.ac.uk/?sid=Refworks%3ASheffield%20Hallam%20Universi&charset=utf-8&__char_set=utf8&genre=article&aualast=Public%20Health%20England&date=2014&volume=2014&issue=02%2F07&atitle=Local%20Authority%20Adult%20Excess%20Weight%20Prevalence%20Data%20(2012)&au=Public%20Health%20England%20&)
- [35] The Monday clinic: Implementing a maternal obesity service [Internet]. Available from: [http://www.nice.org.uk/usingguidance/sharedlearningimplementingniceguidance/examplesofimplementation/eximpresults.jsp?o=410http://shulinks.shu.ac.uk/?sid=Refworks%3ASheffield%20Hallam%20Universi&charset=utf-8&__char_set=utf8&genre=article&aualast=National%20Institute%20for%20Clinical%20Excellence%20\(NICE\)&volume=2014&issue=02%2F07&atitle=The%20Monday%20Clinic%3A%20Implementing%20a%20maternal%20obesity%20service.%20&au=National%20Institute%20for%20Clinical%20Excellence%20\(NICE\)%20&](http://www.nice.org.uk/usingguidance/sharedlearningimplementingniceguidance/examplesofimplementation/eximpresults.jsp?o=410http://shulinks.shu.ac.uk/?sid=Refworks%3ASheffield%20Hallam%20Universi&charset=utf-8&__char_set=utf8&genre=article&aualast=National%20Institute%20for%20Clinical%20Excellence%20(NICE)&volume=2014&issue=02%2F07&atitle=The%20Monday%20Clinic%3A%20Implementing%20a%20maternal%20obesity%20service.%20&au=National%20Institute%20for%20Clinical%20Excellence%20(NICE)%20&)
- [36] Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychology*. 2006; 3(2): 77-101. <http://dx.doi.org/10.1191/1478088706qp063oa>
- [37] Olander EK, Atkinson L, Edmunds JK, French DP. The views of pre-and post-natal women and health professionals regarding gestational weight gain: An exploratory study. *Sex Reprod Healthcare*. 2011; 2(1): 43-8. PMID:21147458 <http://dx.doi.org/10.1016/j.srhc.2010.10.004>
- [38] Heslehurst N, Russell S, McCormack S, Sedgewick G, Bell R, Rankin J. Midwives perspectives of their training and education requirements in maternal obesity: A qualitative study. *Midwifery*. 2013; 29: 736-44. PMID:22951422 <http://dx.doi.org/10.1016/j.midw.2012.07.007>
- [39] Olander EK, Atkinson L. Obese women's reasons for not attending a weight management service during pregnancy. *Acta Obstetrica et Gynecologica Scandinavica*. 2013; 92: 1227-30. PMID:23763541
- [40] Tailor A, Ogden J. Avoiding the term 'obesity': An experimental study of the impact of doctors' language on patients' beliefs. *Patient Educ Couns*. 2009; 76(2): 260-4. PMID:19167856 <http://dx.doi.org/10.1016/j.pec.2008.12.016>
- [41] Wiles R. The views of women of above average weight about appropriate weight gain in pregnancy. *Midwifery*. 1998; 14(4): 254-60. [http://dx.doi.org/10.1016/S0266-6138\(98\)90098-5](http://dx.doi.org/10.1016/S0266-6138(98)90098-5)
- [42] Heslehurst N, Lang R, Rankin J, Wilkinson J, Summerbell C. Obesity in pregnancy: A study of the impact of maternal obesity on NHS maternity services. *Brit J Obstet Gynaecol*. 2007; 114(3): 334-42. PMID:17261124 <http://dx.doi.org/10.1111/j.1471-0528.2006.01230.x>
- [43] Farrar D, Butterfield G, Palethorpe R, Jones V, Syson J. Nutrition advice in pregnancy. *Pract Midwife*. 2013; 16(9): 13-7. PMID:24358595
- [44] Patel C, Atkinson L, Olander EK. An exploration of obese pregnant women's views of being referred by their midwife to a weight management service. *Sex Reprod Healthcare*. 2013; 4: 139-40. PMID:24216042 <http://dx.doi.org/10.1016/j.srhc.2013.10.006>
- [45] Arden M, Duxbury AMS, Soltani H. Responses to gestational weight management guidance: A thematic analysis of comments made by women in online parenting forums. *BMC Preg Childbirth*. 2014; in press. PMID:24981024 <http://dx.doi.org/10.1186/1471-2393-14-216>
- [46] Fitzsimons KJ, Modder J. Setting maternity care standards for women with obesity in pregnancy. *Semin Fetal Neonatal Med*; Elsevier; 2010.
- [47] Ferraro ZM, Boehm KS, Gaudet LM, Adamo KB. Counseling about gestational weight gain and healthy lifestyle during pregnancy: Canadian maternity care providers' self-evaluation. *Int J Women Health*. 2013; 5: 629. PMID:24109200 <http://dx.doi.org/10.2147/IJWH.S49422>
- [48] Stengel MR, Kraschnewski JL, Hwang SW, Kjerulff KH, Chuang CH. "What my doctor didn't tell me": Examining health care provider advice to overweight and obese pregnant women on gestational weight gain and physical activity. *Women Health Iss*. 2012; 22(6): e535-40. PMID:23122213 <http://dx.doi.org/10.1016/j.whi.2012.09.004>
- [49] Lincoln Y, Guba EG. *Naturalistic Inquiry*. Beverly Hills, CA: Sage; 1985.
- [50] Thomas E, Magilvy JK. Qualitative rigor or research validity in qualitative research. *J Specialists Pediatr Nurs*. 2011; 16: 151-5. PMID:21439005 <http://dx.doi.org/10.1111/j.1744-6155.2011.00283.x>