Perspectives of youth-support professionals on encouraging healthy eating in adolescent pregnancies

SOLTANI, Hora <http://orcid.org/0000-0001-9611-6777>, MARVIN-DOWLE, Katie and BURLEY, Victoria

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Professor Hora Soltani[1] BSC, MMedSci, RM, PGDip, PGCert, PhD Katie Marvin-Dowle[2] BMedSci, PGCert, MPH, PhD Dr Victoria Burley[3] BSc, MSc, PhD.

1. Professor in Maternal and Infant Health, Centre for Health and Social Care Research, Sheffield Hallam University, Collegiate Crescent, Sheffield, S10 2BP. H.soltani@shu.ac.uk
2. Midwifery Researcher, Centre for Health and Social Care Research, Sheffield Hallam University, Collegiate Crescent, Sheffield, S10 2BP. K.marvin-dowle@shu.ac.uk
3. Consultant in Nutritional Science, c/o Centre for Health and Social Care Research, Sheffield Hallam University, Collegiate Crescent, Sheffield, S10 2BP. vburleynutr@gmail.com

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Abstract

Background. Nutrition during pregnancy has been identified as an important modifiable factor to reduce adverse outcomes in adolescent pregnancies. Young women are supported during their pregnancies by a variety of professionals with both clinical and non-clinical roles. Professionals with a non-clinical support role provide practical and emotional support for young women and often have longer lasting professional relationships with their clients. For this reason, this study aims to explore the perspectives of these professionals on how young women can be encouraged to improve their diet during pregnancy.

Ethics. Ethical approval for this study was granted by Sheffield Hallam University Ethics Committee in July 2016.

Methods. This exploratory, qualitative study recruited eight youth-support professionals to take part in semi-structured interviews. Recruitment and interviews were conducted by the lead author during February 2017, with project supervision and triangulation of data completed by the other two authors. Interviews were audio-recorded and transcribed. Interview transcripts were loaded into NVivo 11 software to facilitate analysis and emerging themes identified.

Results. Five overarching themes were identified from the data: perceptions of dietary pattern; connection with baby; family and social stability; building relationships; and service availability. Youth-support professionals felt that young women encountered numerous complex barriers to eating healthily during pregnancy. Their lives are frequently chaotic and lack a stable partner and family relationships. They suggested that young women often needed specific practical support to make improvements, such as being accompanied to health appointments. There was also some concern that further cuts to services for this group would make it more difficult for vulnerable young women to access help.

Conclusions. A higher level of consistent, holistic support delivered by joined-up networks of professionals is needed to help young women achieve healthier pregnancies. Further research is necessary to understand the context of young women's lives, how this relates to their experiences of pregnancy, and what type of interventions or resources would have the biggest impact in supporting healthy behaviours.

Keywords: Adolescent, pregnancy, nutrition, healthy eating, youth work, evidence-based midwifery

Introduction

Pregnancy during the adolescent years (age 19 and under) has often been associated with higher rates of adverse outcomes for mother and baby compared with women aged 20-35. This is the case both in terms of social issues, such as isolation and poverty (Cook and Cameron, 2015), and clinical outcomes, such as low birthweight and prematurity (Tyrberg et al, 2013; Gilbert et al, 2004). Women aged over 35 also face age-related pregnancy challenges, particularly in clinical outcomes (Kenny et al, 2013), however this is not the focus of the current paper.

Under-18 conception rates in England and Wales have been declining steadily with a 5.3% decrease between 2016 and 2017 to 17.9 conceptions per 1,000 women aged 15 to 17 years. However, the proportion of rapid repeat pregnancies (defined as a second birth within two years of a previous birth) in this group is high, between 12-25% (Public Health England, 2018) and those who become pregnant at a young age are most likely to be vulnerable to poor social outcomes (Whitaker et al, 2014).

Work to assess the mechanisms by which early pregnancy increases the risk of poor outcomes has suggested that maternal nutrition may be an important modifiable factor. A systematic review by Gibbs et al (2012) looking at the relationship between adolescent pregnancy and pregnancy outcomes found that very young maternal age had a negative effect on fetal growth and infant survival. The authors suggested that there may be competition between the baby and the mother, who is also still growing, resulting in babies with low birthweight or who are small for their gestational age.

A further systematic review of nutrient intakes and nutritional biomarkers in adolescent pregnancies found that intakes of energy, fibre and a number of key micronutrients were below recommended levels (Marvin-Dowle et al, 2016). Assessment of nutritional biomarkers also suggested there may be some cause for concern with regard to iron and selenium status.

Assessment of the dietary patterns of pregnant adolescents in the Born in Bradford cohort (Marvin-Dowle et al, 2018a) found that young women had higher intakes of snack and processed foods, which were high in salt, sugar and saturated fats, compared with older pregnant women. The study also found that adolescents had higher intakes of sugar-sweetened cola and lower intakes of fruit, vegetables and nutritional supplements.

The evidence presented suggests that pregnant adolescents are likely to have a diet that is nutritionally poor and also that this may have an impact on the health of their unborn baby. It is therefore important to understand more about the nature of adolescent diets and how they can be supported to make positive changes during pregnancy, including assessing the barriers and conflicting priorities faced by women in this group.

One survey of young women and healthcare professionals (HCPs) regarding dietary habits and supplementation practices during pregnancy (Soltani et al, 2017) found that young women did report making some positive changes to their diet during pregnancy, citing the impact on fetal development as the primary reason.

The same study also collected responses from HCPs, including midwives, family nurses and health visitors, regarding their discussions with young women around diet and nutrition during pregnancy. Family nurses were more likely to discuss nutrition in greater depth with young women due to time constraints on midwife and health-visitor appointments. Young women stated that they mostly prefer receiving advice and information from HCPs, with mixed responses for other sources including websites and apps, leaflets, family members or parenting classes. HCPs reported that young women often struggled to access Healthy Start vouchers or vitamins. Pregnant adolescents with otherwise uncomplicated pregnancies in the United Kingdom (UK) will receive standard National Health Service (NHS) antenatal care as a minimum (NICE, 2008). Additional services for this population are commissioned locally and therefore vary among NHS Trusts. The area in which this research has been conducted has previously had both teenage pregnancy specialist midwives and family-nurse partnership services; however these services have been decommissioned at the time of writing.

HCPs are not the only people who have a role in supporting young women during pregnancy in the UK. Pregnant adolescents are at increased risk of being socially isolated or experiencing difficulties with housing or access to education and training (Cook and Cameron, 2015). They are also more likely to have experienced being cared for by a local authority (Craine et al, 2014). This means that a significant proportion of young women who become pregnant will have contact with professionals such as youth workers and support advisors who are likely to spend more time with young women than HCPs, whose appointment times are limited. These relationships are largely voluntary on the part of young people and some young women will have difficulties accessing support services, meaning that this type of additional support is far from universal. That said, professionals who work in these roles have a unique insight into the experiences of young women during pregnancy and how they may be best supported to have healthy pregnancies. It is therefore this group who are the target for this study.

There is increasing recognition that there are a number of wider determinants beyond the availability of healthy food and the food environment that affect the diets of individuals, including socio-economic deprivation, housing, employment, education and physical and mental health (Baumann and Kaiser, 2018). This suggests that for pregnant adolescents the barriers to healthy eating are multi-faceted and require broad consideration. For this reason, while the focus of the present study is adolescents' diet during pregnancy, the study also aims to consider the broader context of young women's lives, which also has an impact on their ability to achieve a healthy diet.

Aims

The two research questions this study aimed to address were: 'What do youth-support professionals perceive to be the barriers and facilitators to healthy eating for pregnant adolescents?' and 'How do youth-support professionals think young women can be best supported to have a healthy diet during pregnancy?'

Methods

Design

This exploratory, qualitative study used semi-structured interviews to gather information from professionals with a role in providing social or practical support to young women during pregnancy. Professionals whose main role was clinical, such as midwives and health visitors, were excluded, as the views of these professionals, alongside those of young women, have been sought previously (Rundle et al, 2018). All participants worked in Sheffield, which is a large city in northern England. The interviews took place locally at a time and location convenient to the participants.

Characteristics of the research team

This study was undertaken as part of a PhD programme of work. All of the recruitment and interviews were conducted by the lead author during February 2017, with project supervision and triangulation of data completed by the other two authors.

Participants and recruitment

Participants were recruited via email invitations sent to relevant agencies, hard-copy flyers distributed to services, social media, and word of mouth. As this was intended to be an exploratory piece of work, eight to 10 participants were deemed adequate to assess the issues considered to be most important by participants. Individuals were eligible to take part if they had a professional role supporting young people and had some experience of working with young women (aged ≤19) during pregnancy. Participants were contacted prior to the study, after having expressed interest in taking part, in order to arrange appointments to meet. Participants were aware that the study was part of a PhD programme and that the focus was on supporting healthy pregnancies in adolescents.

Ethical considerations

Participants were self-selected by responding to recruitment materials circulated in their place of work. The purpose and scope of the project was explained to participants both at the time of recruitment and immediately prior to the interview, ensuring that the consent they provided was fully informed. Participants were given a participant information sheet and the opportunity to ask any questions at least 24 hours

Table 1. Participant characteristics

	Job role	Gender	Age group	Highest qualification	Number of children	Individual or shared interview
P1	Parenting-support worker	Female	26-35	A-level or equivalent	0	Shared
P2	Parenting-support worker	Male	Not reported	Not reported	Not reported	Shared
P3	Youth-support worker	Female	26-35	Degree or equivalent	1	Shared
P4	Education officer	Female	36-45	Degree or equivalent	2	Shared
P5	Youth-project manager	Female	46-55	Degree or equivalent	4	Individual
P6	Youth-support advisor	Female	36-45	Degree or equivalent	2	Individual
P7	Youth-support worker	Female	36-45	A-level or equivalent	1	Individual
P8	Perinatal-support co-ordinator	Female	36-45	A-level or equivalent	3	Individual

ahead of being asked to sign a consent form. Interviews were audio recorded and transcribed verbatim with any identifying information removed, following which the audio files were destroyed. This process ensures that individuals are not identifiable from the data and their confidentiality is maintained. Consent forms containing participant's personal details have been stored securely and will be destroyed when they are no longer needed. Ethical approval for this study was granted by Sheffield Hallam University Ethics Committee in July 2016.

Data collection

Semi-structured interviews were carried out either on a one-to-one basis or with two participants together who worked in the same agency (two interviews). Participants were also asked to complete a brief demographic questionnaire.

A topic guide was developed that was informed by previous quantitative work carried out during the PhD study. This work has been published elsewhere (Marvin-Dowle et al 2018a, Marvin-Dowle et al 2018b, Marvin-Dowle 2016) but, in brief, the results suggested that the dietary patterns and nutritional status of pregnant adolescents is likely to be poorer than that of adult women. They are also more likely to experience higher levels of poverty, lower education and their babies may be at higher risk of adverse outcomes. The topic guide for this study therefore covered these main topic areas. The topic guide is detailed as Appendix 1. Interviews were audio recorded with participants' consent.

Data analysis

Audio recordings of interview data were transcribed verbatim and transcripts anonymised with participants being allocated a participant number for identification purposes. Transcripts were loaded into NVivo 11 software to facilitate analysis. Data analysis was carried out inductively using thematic analysis which involved familiarisation with the data, generation of initial codes, assigning coded data into related categories and developing overarching themes (Braun and Clarke, 2006). Initial analysis was conducted by one researcher and codes and themes verified by a second researcher to enhance inter-reliability.

Results

Participant characteristics

A total of eight participants took part in six interviews; four of the interviews were individual and two interviews took place with two colleagues from the same agency at the same time. Characteristics of the participants are shown in Table 1. The majority of participants were female, aged 26-45 and had experience of being parents.

Analysis of interview transcripts identified five over-arching themes within the data: perceptions of diet; connection with baby; family and social stability; building relationships, and service availability. Sub-themes were also reported where these added clarity and depth to the data.

Perceptions of diet

Concerns over poor diet

All participants discussed the content of young women's diet during pregnancy and expressed concern over the dietary patterns they observed within their client group. Participants perceived the majority of young women ate a large amount of fast/junk food, snacks that are high in salt, sugar and fat alongside sugary and/or highly caffeinated drinks and very little fresh produce or home cooked meals.

P5: "And they're overeating, every pregnant girl we see has just got energy drinks and chocolate and you know their diet is so phenomenally bad."

P3: "...their diets weren't particularly fantastic, it was just eat whatever, you know, junk food."

Concern over poor dietary patterns was a common theme across all of the interviews. Some participants did mention young women who ate more healthily or made a particular effort to change their eating habits, however these young women were singled out as unusual or as an exception to the rule.

P7: "I've got my lady who just had a baby a few weeks ago, took the health of herself and the unborn child really seriously, she had low iron so made sure she bought really high iron foods, and really got that link, so it's a bit hit and miss."

P6: "…one is super health-conscious and she'll make home-cooked food, beautiful food as well, and the other one's like, meh, whatever."

Lack of sufficient knowledge or information

One participant said that young women were often confused about which foods should be avoided during pregnancy, and also mentioned that they did not have sufficient knowledge or reliable information on this subject.

P5: "Then, when they do come to places like this, they're asking questions like: 'Can I eat mayonnaise?' There's still confusion."

There was a sense that young women were less knowledgeable and less prepared for the pregnancy than older women in terms of diet and nutritional supplements to support the pregnancy. This was presented almost as a dichotomy by one participant who suggested the older women would have significantly more knowledge than adolescents.

P4: "It's not like for older women getting pregnant and knowing exactly what you're supposed to be eating, what you're not supposed to be eating, take your folic acid and all of that…"

Connection with baby

All participants talked about their perceptions of young women's readiness or motivation to make changes to improve their own health and that of their baby. A key theme related to behavioural change was the importance young women gave to healthy eating. The majority of participants reported that they didn't think the young women they worked with felt their nutrition was important.

P3: "I don't feel I'm discussing with them that they feel that's [diet] important at all."

P4: "We used to go through what they should be eating, what was going to be good for them and the baby… it wasn't on the top of their priority list."

There was a regular theme across the data which suggested that the participants felt that some young women struggled to see their baby as really there before the birth. This meant that these young women did not necessarily connect their behaviours with the health of their unborn baby, particularly with reference to diet.

P8: "It's a hard one because we've come across mums who don't actually see baby as being there until the baby is actually in their arms."

P5: "Breastfeeding and healthy eating… I don't think that connection is there at all."

This was linked to ideas put forward by several participants that the young women they worked with were not always emotionally mature enough to make decisive changes or to accept the significant changes that were happening to them as a result of the pregnancy. As with the comments on diet content, however, there were exceptions where participants spoke of young women they had worked with who had made positive changes, but these were much less common than references to young women who either did not try to make changes or who struggled to do so.

P1: "There's some 17-, 18-year-old mums we've worked with [who are] really switched [on]…but I think sometimes that a big barrier to a healthy pregnancy is a willingness and acceptance that things have to change."

P2: "Somebody who's a bit older might be more emotionally ready, and ready to make those changes… I think sometimes, with not all but some, it's the maturity of focusing and thinking: 'Right, I need to do that.'

Family and social stability

The majority of young women that the participants were involved with faced significant challenges, both in terms of their historical family situations and current living arrangements.

Family support and growing up in care

A number of the participants spoke about the difficult family backgrounds their clients had come from, including high levels of poverty, unstable families and that a significant proportion of the young women they worked with had spent time being looked after in local authority care.

P6: "A lot of the issues for our young people are because they've not had any positive parenting in their formative years, so they've not grown up with good routines, they've come from abused backgrounds, so they don't always understand what a good parent is and what they should do."

P7: "Most of these kids don't have stable families and as a mum myself I know you need your family when you have a baby."

It was also suggested that experiences of being removed from families and being placed in local authority care may influence young women's willingness to seek or accept support, particularly from social services, for fear that their own children may be removed from their care.

P8 "Remember these young people have been removed from their families; their automatic fear is that you're there to do the same."

It was also discussed how unstable family situations may have contributed to a lack of knowledge and skills around healthy eating and cooking, in that young women may not have had role models available to them or have been taught how to prepare and cook healthier meals.

P1: "They've probably not built those skills up to care for themselves in a heathy eating sort of way."

Housing and poverty

Young women's current living situation was also a common theme with the majority of participants talking about young women living in poverty and experiencing housing issues. Being able to provide a safe and appropriate home for their baby was discussed as being clearly important to young women and a significant source of stress.

P7: "I've just had a lady who gave birth about four weeks ago and she moved house two weeks before she gave birth. I was there until seven or eight o'clock at night helping her get everything ready, and as soon as, she'd moved in and got everything sorted, the baby arrived."

The situation of living in poverty was also considered a barrier to eating well by some participants, as healthy food was considered to be prohibitively expensive.

P5: "How are they supposed to eat healthily if they've got no extra money, have you seen the price of fruit? You know, it's ridiculously overpriced."

One participant also suggested that promotions on less healthy foods made it difficult for young women to make healthier choices.

P5: "Our teenage parents will come in with all kinds of rubbish and you think 'Jeez', but when they're offering four doughnuts for a pound, why wouldn't you?"

Social support and isolation

Difficult personal relationships, particularly with partners/baby's father were discussed by all of the participants. Young women were described as being very heavily influenced by their partners. Young fathers were described as either a negative, controlling influence or as absent.

P4: "Their boyfriends are a massive influence on them, on the decisions they make about breastfeeding, stopping smoking, getting their figure back, starting to have sex again. They're very dominated by their partners."

P1: "With breastfeeding, so many of the girls I worked with weren't going to try it at all because their partners were very much 'you don't feed the baby, your breasts are a sexual thing.'"

P5: "I could probably count on one hand the ones that have stayed with their partners out of 350 girls… After six weeks the girls are left on their own."

Similar issues were described with young women losing friends after having a baby as their priorities changed, leading to new mothers becoming increasingly isolated and without support.

P5: "It's the age-old you know… all my friends are going to come round and visit… You know that after six weeks your friends will disappear and so will your boyfriend."

Isolation and mental health issues – compounded by this lack of support – were very prominent themes identified from the data. Some participants spoke about how many of their clients had mental health issues that were present before pregnancy and which clearly had an effect on their wellbeing and ability to cope with a pregnancy.

P3: "Most had complex needs in terms of their health and mental health already that weren't being addressed."

For others, the stress and pressure of the pregnancy and parenthood, connected to the difficult living situations the young women were in, meant that mental health issues were almost inevitable.

P8: "A lot of the ladies that I work with are single mums with no family, no support and are very isolated… to think if you are pregnant at 16, 17, 18, 19 it's quite scary not having anybody there."

There was a sense that young women actually do incredibly well to cope with pregnancy and motherhood in the context of chaotic lives, and that often more is expected of young parents than is possible given the reality of their situation.

P7: "I think we expect these young people that have got post-traumatic stress disorder or, you know, lots of really significant abuse in their life, to just function as an everyday parent in life. And a lot of them do, don't get me wrong, I've got loads of success stories, but sometimes they're tired and just need a break."

Building relationships

The participants spoke extensively about their own roles in supporting young women, how they worked with other agencies and where they felt services were lacking or falling short of providing what is necessary. The participants generally saw their role as separate to that of clinical health professionals, but that didn't mean they were not concerned with the health of the pregnancy.

P5: "We're not social workers or midwives, we're youth workers and we come from a different perspective."

Building relationships with young women was considered central to their work, and it was suggested that this may be more challenging due to young women's backgrounds.

P2: "They've got to build up that trust in professionals and people that are trying to support them… someone who's never had that ability to have a trusting relationship with an adult; you've got to build that trust."

P3: "Often, it's about relationships, hand-holding, transition and actually getting to places."

Most of the participants also spoke about providing practical support, particularly in facilitating young women to attend health appointments, which were often missed, leading to potential consequences for the health of the pregnancy.

P3: "We make assumptions they've got access to services – therefore they access them… some of those health needs we assume are being addressed, but they're not because, just on a basic level, they're not accessing appointments."

P4: "I think our role mainly is to ensure that they're getting access to the services that they should be getting."

Service availability

There was also a significant amount of discussion in every interview about the need for more resources and the impact of cuts to existing services. All of the participants considered that cuts to services had a detrimental effect on young women's health during pregnancy.

P5: "They used to have, several years ago, specialists that, once a girl found out she was pregnant, was put straight on to her. First round of cuts… that was the first thing that went."

P6: "I mean the family-nurse partnership… they were quite key in supporting the girls and building that relationship with them, and they used to refer them to us, and now they've gone."

When asked about whether additional resources would be helpful the majority agreed that an information resource that gave universal information and also provided local signposting would be useful, and that this would need to be provided in multiple formats.

P3: "It would definitely be helpful, if we had some kind of, like we used to have at the young women's unit, a place where young pregnant women could drop in and get the support and the advice."

P4: "I think you'd need to cover all of those [formats], I mean definitely use technology, something they could easily download on their phone or they could come in here and have somebody sit and go through with them like a physical paper pack."

Overall, the overwhelming message from the data was that the participants recognised the importance of supporting healthy eating as part of a healthy pregnancy and supported young women to do their best in often particularly difficult circumstances. There are significant concerns, particularly around young women's mental health, and dedicated, specialised services are needed for any significant improvements to be made.

P7: "It would be nice to have a central point we can tell: 'I've got a pregnant mum, this is what we need to do."

P4: "If you could just ask to get a new service for pregnant teenagers back that'd be great, that's all we want, that'd be really good."

Discussion

Key findings

This study is novel in that it seeks to gather the perspectives of a professional group that has not been consulted before on the topic of improving health in adolescent pregnancies. Integrated models of care that bring together social support services and primary healthcare in the UK are rare. One example of such a service is the Well Centre in South London (Hagell and Lamb, 2016), which is designed to be a 'one-stop-shop' for adolescents. Evaluation has shown that young people were accessing the services who were not engaged with any other service, particularly those with mental health needs. This suggests that collaborative work between primary care services and youth-work providers may facilitate the most vulnerable young people to access and engage with the services they need; although the effectiveness of such services requires robust independent evaluations.

In this research, nutrition was a topic that was generally considered to be important by youth-support professionals, however they perceived that this view was not necessarily shared by the young women they worked with. The majority of participants in the present study perceived that the young women in their care ate large amounts of take-away and processed foods and sugary drinks, and little fruit or vegetables. This is largely consistent with existing literature suggesting that adolescent's diet during pregnancy is often poor (Marvin-Dowle et al, 2016; Marvin-Dowle et al, 2018a; Northstone et al, 2008; Scholl and Hediger, 1995). While the present study was only able to report the thoughts and perceptions of youth-support workers, the findings of larger, quantitative studies suggest that the perceptions of the participants have been empirically confirmed. The latest wave of the National Diet and Nutrition Survey (NDNS) produced by Public Health England (2018) from the 2014/15 to 2015/16 surveys found adolescent girls reported consuming an average of 2.8 portions of fruit and vegetables a day compared with 4.2 portions for adult women. Young women also consumed almost twice the amount of sugar-sweetened beverages compared with adult women (183g and 100g respectively). This suggests that it is not just pregnant adolescents but in fact the majority of young women who have a poor diet. While the immediate consequences may be more apparent for young women who are pregnant, this does suggest population-wide interventions are needed to improve nutrition in all adolescents.

Reasons suggested for poor diet in pregnant young women were varied and included lack of interest or belief that nutrition makes a difference, lack of knowledge and skills, and the price of healthier choices. Participants spoke about how they believed young women often didn't make the connection between themselves and their baby until after the baby was born, particularly with reference to how their dietary intake might affect the developing foetus. Previous research has shown that a mother's emotional connection with her child during pregnancy can have a significant impact on her health behaviours. The theory of maternal-fetal attachment (MFA) proposed by Cranley (1981: 282) is defined as "the extent to which women engage in behaviours that represent an affiliation and interaction with their unborn child" and the validated tool has been used to explore connections between attachment and maternal health behaviours. One study exploring correlations between MFA and comprehensive measures of pregnancy health behaviours (including balance of rest and exercise, safety measures, nutrition, avoiding use of harmful substances, obtaining healthcare, and obtaining information) in low-income urban women (Alhusen et al, 2012) found an overall positive association between women's scores on the two measures. This suggests that improving women's emotional connection to the developing fetus may in turn improve health behaviours.

Psychosocial stability, lack of social support and isolation were themes which emerged clearly from this data set as barriers to achieving a healthy diet. Mental health needs are likely to be high in this population as they are associated with neglect or abuse during childhood (Mills et al, 2013), which is a likely contributor to young women being looked after in local authority care. This suggests that pregnant and parenting adolescents are at higher risk of experiencing mental health problems compared with older mothers (Siegel and Brandon, 2014). This is an important observation in the context of this study due to the impact that poor mental health may have on young women's ability to eat well and look after their own wellbeing.

Poor diet has also been correlated with poor mental health in adolescents (Kulkarni et al, 2015; O'Neil et al, 2014) suggesting that improvements to young women's mental health may in turn help them to improve their diet.

The price of healthy food such as fruit was cited as a significant barrier to eating well and that young women favoured cheap, high-energy density snack foods that were often subject to price promotions. There is significant evidence to suggest that socioeconomic deprivation is associated with poorer nutritional status, particularly in adolescents. One study looking both at the attitudes and behaviours of adolescents towards healthy eating found that while participants had similar attitudes to healthy eating, regardless of socio-economic position, those from more deprived areas were more likely to report higher intakes of fast foods and sugar-sweetened soft drinks (Utter et al, 2011).

Recommendations

It has been suggested that collaborative work between primary care services and youth-work providers may facilitate the

most vulnerable young people to access and engage with the services they need; however the effectiveness of such services requires robust independent evaluations. Further work including the perspectives of other professionals working with young people, such as teachers and social workers, would help to develop a more complete picture of the support available for young women.

There is a significant lack of evidence in the literature evaluating whether young women make connections between their diet during pregnancy and the health of their baby, suggesting that this is an important area for further research. One small study (Whisner et al, 2016) reported that the majority of pregnant teenagers recognised that diet during pregnancy was important, but that this did not necessarily translate into making positive changes. A further recent study (Rundle et al, 2018) found that the desire to deliver a healthy baby was a prime motivator for pregnant young women and therefore that the benefits of making dietary changes should be framed in those terms. This study also reported young women making some small positive changes to their diet despite barriers to doing so.

Further, more in-depth, work to examine how young women view health during pregnancy, and the factors that would support or motivate them, is essential to our understanding of how to improve outcomes for young mothers and their babies.

The main message regarding improving the health and wellbeing of young women during pregnancy gained from this study was that more targeted support services are needed to meet the needs of a vulnerable population. While physical resources were considered a useful tool for health promotion, having somebody to talk to with a holistic view of health and wellbeing was considered to be the key to making improvements. This, along with greater levels of consistency in the messages that young women receive regarding how to make positive changes to their diet, are key in developing practical strategies to support young women.

There is a wealth of research addressing approaches to sexual health promotion and preventing teenage pregnancies (Mezey et al, 2017; Sorhaindo et al, 2016; Oyedele et al, 2015), including the prevention of second pregnancies (Aslam et al, 2015), however, evidence looking at strategies to support the health of young women during their pregnancy is severely lacking in the academic literature.

Limitations and risk of bias

This study is limited by the small number of participants. However, the use of qualitative methods means that the depth of the data is central to the research design. This study also does not include the perspective of pregnant young women themselves. This study was designed to complement a programme of work in which the opinions of pregnant young women and young mothers have been explored (this has been reported elsewhere (Soltani et al, 2016; Rundle, Soltani and Duxbury, 2018).

There was a potential risk of bias in that participants volunteering to take part in the study were likely to have a particular interest in the subject. The option for colleagues to take part in joint interviews, while maximising the number of participants, may have influenced the responses of the four participants who took part in joint interviews.

It is also important to note that the researcher conducting the interviews was herself pregnant at the time of data collection. While every effort was taken to disguise the pregnancy until after interviews had taken place, the possibility that participants may have suspected the interviewer was pregnant may have affected their responses.

Conclusion

This study adds to the body of work exploring how young women's pregnancy outcomes could be improved through dietary changes. The findings suggest that for many young women in this population there are numerous, complex factors that have an impact on their ability to have healthier pregnancies. A higher level of consistent, holistic support delivered by joined-up networks of professionals is needed to help young women achieve healthier pregnancies. Further research is necessary to understand the context of young women's lives, how this relates to their experiences of pregnancy and what type of interventions or resources would have the biggest impact in supporting health behaviours.

Appendix 1: Interview topic guide

What do you think are the main issues for pregnant young women in relation to their health?
Describe how you see your role in supporting young women to have healthy pregnancies.
What do you think are the key barriers for young women?
What do you think are motivating factors?
How important do you think nutrition is to pregnancy health?
How important do you think young women feel what they eat is?
How confident do you feel giving advice to young women on health topics? On nutrition?
Are there any areas you would like additional training/information on to improve your confidence?
What format would you like to receive information in?
Anything to add?

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