Barriers to smoking cessation in pregnancy: a qualitative study

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The impact of smoking in pregnancy is well documented. Effects include increased risk of miscarriage, perinatal mortality, low birth weight, sudden infant death syndrome (SIDS), respiratory disease, glue ear and cognitive impairment (Naeye and Peters, 1984; Strachan et al, 1989; Royal College of Physicians, 1992; Blair et al, 1996; Health Education Authority, 1997). A target of the policy document Smoking Kills (Department of Health, 1989), was to reduce the percentage of women who smoke in pregnancy from 23% to 18% by 2005 and 15% by 2010.

In 1999, funding allowed health authorities to develop specialist smoking cessation services. The services are generic but have a responsibility to certain priority groups, for example, pregnant women. The exact nature of the services that have been developed and provided varies between health districts. They can include a range of interventions, for example, one-to-one and group services, advertising and smoking cessation training. Additional money was provided in 2002 to fund specialists working specifically with pregnant women who smoke.

The South Yorkshire Coalfields (SYC) is a deprived area of England with high levels of smoking, smoking-related ill health and health inequalities (Graham, 1976; Bentley et al, 2002). The specialist smoking cessation services in these areas have made a significant impact on smoking rates. Across the SYC, 3433 people accessed the smoking cessation services between April 2000 and March 2001. Of these, 1976 (58%) were successful at quitting at 4 weeks. However, routine monitoring data reveals that there is a very low uptake of smoking cessation services among pregnant women. In one of the three South Yorkshire districts only 10 pregnant women accessed the service between January and December 2000. One succeeded in quitting.

This study builds on a body of social science research that has explored women’s smoking behaviour and the meaning smoking has for women. Seminal research conducted by Graham (Graham, 1976, 1987) highlighted the role of smoking in helping women from low-income households cope with the everyday stresses of poverty and caring. The assumptions that women continued to smoke due to ignorance of the risks or because they are irresponsible were also refuted (Graham, 1976). More recent research has re-emphasized the influence of social and psychological factors on expectant women’s smoking behaviour (Haslem et al, 1997; Gillies and Willig, 1997).

Recent systematic reviews from the Cochrane Collaboration have highlighted the important role nurses have in smoking cessation activity (Rice and Stead, 2002). As the largest health professional group, nurses have the greatest potential to assess, advise and follow up patients in stopping smoking. A recommendation was made for concise smoking cessation training of health professionals such as nurses, alongside the organizational change necessary to allow them to deliver this intervention (Lancaster et al, 2002). Regarding smoking cessation in pregnancy, Lumley et al (2002) called for smoking cessation practices to be integrated into all maternity and antenatal care. Relapse prevention and the avoidance of victim-blaming were advocated as crucial components of successful programmes.

This health action zone (HAZ)-funded research...
project was conducted to provide local data for the SYC smoking cessation services. It sought to explore why pregnant women who smoke do not quit and do not access the smoking cessation service. The results are compared with those of previous studies. The intention is to use this data in developing the newly-funded specialist services, provide locally accessible and acceptable services and explore ways for health-care professionals to work together in delivering successful services.

Methods

Methodology

The aim of this study was to explore and explain barriers to smoking cessation in pregnancy. A naturalistic approach was, therefore, adopted. This approach emphasizes naturally-occurring data, exploring a phenomenon from the perspective of the participants and acknowledging social and cultural influences (Ritchie and Spencer, 1994; Bowling, 1997).

Design

Qualitative methods were used to identify the range of issues which may prevent or facilitate pregnant women in quitting smoking and accessing the smoking cessation services. Semi-structured interviews and framework analysis techniques were employed.

Setting

The study was conducted in Barnsley, Rotherham and Doncaster, the three areas that make up the SYC HAZ. Local ethics committee approval was obtained.

Sample and selection

The sample was drawn from pregnant women who smoke and who were known to the maternity services in the study area. Recruiting pregnant smokers to a research project such as this has certain ethical and practical difficulties. Recruitment was anticipated to be a challenge because of the risk that women may think they were being judged for smoking or be given unwanted smoking cessation advice as a result of participation. The participant information sheet was carefully worded to prevent false expectations and avoid any implication of blame.

Ethically, the researcher could not obtain contact details of potential participants unless their consent for this was granted. Midwives were therefore approached and agreed to introduce the study to women on their caseload. Three hundred information sheets were printed and distributed to the midwifery services. Each service took a different approach to recruitment depending on their local practice and service arrangements. Some distributed the study information to all pregnant women as part of the booking-in information, non-smokers as well as smokers. Other midwives approached smokers personally, introduced the study and supplemented the written information with a verbal explanation. The latter approach was more successful in recruiting participants and, where possible, would be recommended for future studies. If women were interested in participating, they returned a reply slip to the researcher in a stamped, addressed envelope provided.

From the 300 sheets, only 18 reply slips were returned to the researcher. Many forms would have been distributed to non-smokers, but three other problems contributed to recruitment difficulties. First, the problem some midwives had in broaching the subject of the research, either due to difficulty in discussing smoking, because of lack of time or the fact it was lost among other booking-in information. Second, there is a theoretical argument that pregnant smokers are a hard-to-reach group in terms of research, because of real or perceived blame or judgement. Finally, the fact that women had to return a reply slip may have created an obstacle to participation as they may have mislaid the form or forgotten to return it.

From the initial sample of 18, 11 pregnant women who smoked were interviewed. The remaining seven could not be contacted. The initial intention had been to select purposively to ensure the required range of characteristics. Due to the low response rate, the final sample could only be described as a convenience sample, a term used to describe a sample dictated by ease of access (Bowling, 1997). The risk of convenience sampling is that the participants may not be sufficient to illuminate the area of study. This may be due to the small size of the sample, a lack of the required diversity and range within the sample or a selection bias towards a particular characteristic. Use of a convenience sample can jeopardize the transferability of the results. This risk is discussed in relation to this study following the presentation of the results.

Despite these hazards, the sample did provide a good range in terms of age, location (rural and urban mix), number of pregnancies, marital status, smoking history and attempts to quit. Although small, the sample did provide sufficient data to meet the study aim. The sample characteristics are shown in Table 1.

Women were included if they were over 16 years of age, able to give informed consent, were able to participate during the study period and had smoked during their pregnancy.
Data were collected between October and December 2001. Semi-structured interviews were conducted using an interview schedule compiled using previous literature regarding smoking in pregnancy (Graham and Hunt, 1994; Bolling and Owen, 1997; Lumley et al., 2002). The schedule included a selection of open and closed questions on smoking history and behaviour, obstetric history, factors influencing uptake or rejection of smoking cessation services, knowledge and beliefs regarding smoking and pregnancy and preferences for future services. The questions were framed to avoid any implication of judgement regarding smoking.

Participants were offered a choice of location for the interview, including a telephone interview. The telephone option proved most convenient for all 11 women. Reasons given for this included childcare and household commitments. Data collected via telephone interviews may not be as detailed as those from face-to-face interviews (Garbett and McCormack, 2001). Despite this disadvantage, the approach brings many benefits, for example, low cost and researcher convenience. In addition, as telephone interviews were less intrusive they were probably less threatening for the women. Most significantly to this study, however, the use of telephone interviews allowed the inclusion of hard-to-reach individuals from populations of high socioeconomic deprivation. Without telephone interviews, these women would not have been able to participate. Consent to participate was verified by the researcher before the interview. Issues relating to confidentiality, anonymity and voluntary participation were emphasized.

The interviews took 20 minutes. The interviews were recorded on tape and field notes taken. Following transcription the tapes were destroyed. The transcripts were anonymized and pseudonyms used throughout.

Data analysis

Data analysis was performed using framework analysis, a pragmatic approach to qualitative data analysis that emerged from applied policy research (Ritchie and Spencer, 1994). Framework analysis involves five stages of analysis with associated methods of data ordering. These are: familiarization; developing a thematic framework; indexing; charting; and mapping and interpretation.

This clearly defined analytical structure added to the transparency and validity of the results. The criteria of ‘trustworthiness’ were used for verification of the accuracy and appropriateness of the data interpretation (Lincoln and Guba, 1985). These criteria of credibility, transferability, dependability and confirmability were used as tools of reflection by the researcher in order to check for inappropriate interpretation and bias (Table 2). Emerging issues were checked and clarified with the participant during the interview using feedback techniques. Initial analysis and interpretation was tested in subsequent interviews.

Results

The results reveal, from the perspective of the participants, why women who smoke have such difficulty quitting or wanting to quit during pregnancy. All the participants were aware of some of the major risks of smoking in pregnancy.

‘I know that like there’s chance of low birth weight, cot death, all sorts. Bleeding in your pregnancy. Yeah all sorts. Asthma in the baby when it’s born.’

(Participant 1)

In fact, many women were haunted by feelings of guilt and worry in case their baby had been harmed in some way.

‘If I look at the books and see the pictures… 29 weeks and he’s nicotine in his system. Then, it does knock me sick to me stomach and I feel ever so guilty, you know.’

(Participant 2)
This knowledge and concern had led to huge efforts by the women to address their smoking behaviour. All had cut down their cigarette intake. Despite this, barriers were identified to explain why the participants continued to smoke in pregnancy. The barriers fell into five categories: willpower; the role and meaning of smoking; influence of family and friends; service issues; and interpretation and understanding of the facts.

**Willpower**
The women described their smoking in a context of addiction or dependency.

‘I’ve been smoking so long, it’s habit and it’s hard to kick. I would love to stop.’
(Participant 4)

‘I smoke now because I’ve got to… Unfortunately I can’t stop. I wish I could.’
(Participant 2)

Some participants would not have considered quitting if they had not been pregnant. For these women, stopping smoking or cutting down in pregnancy was only seen as a temporary state for the benefit of the baby. They were planning to resume smoking after the birth:

‘Had I not fallen pregnant, it wouldn’t have entered my head to stop smoking… I can’t say I don’t enjoy it because I do.’
(Participant 2)

Whether they intended to relapse or to try to permanently quit, all the participants described a belief that the ability to successfully stop smoking lay within the power of the individual smoker. The possession of willpower by an individual was seen to be essential. The ability to mobilize that required willpower was perceived as the key factor of success. The prevailing experience running through the interviews was that this willpower was not within their grasp.

‘If I said I didn’t enjoy a cig[arette] I’d be lying because I do. But if I had the willpower at this very minute, I would.’
(Participant 11)

While all the women had cut down, they described how the essential extra strength necessary to quit was beyond them often because of the pressures and stresses of life:

‘I think it’s down to myself in the long run. It’s down to myself. I’ve got to really want to stop. People can tell you whatever and … but I think at the end of the day it’s down to you.’
(Participant 1)

‘I think your family circumstances and

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**Table 2. Establishing ‘trustworthiness’**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Explanation</th>
<th>Techniques used to meet the criteria</th>
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<tbody>
<tr>
<td>Credibility</td>
<td>The ‘truth value’ or the level of credibility of the results for the participants.</td>
<td>Peer debriefing. Ongoing discussions regarding interpretation of data.</td>
</tr>
<tr>
<td>Transferability</td>
<td>The extent to which the results can be transferred and applied to other populations and contexts.</td>
<td>Testing emerging interpretations in subsequent interviews. Reflection and feedback within the interview.</td>
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<tr>
<td>Dependability</td>
<td>The extent to which the results would be repeated if the study was to be replicated.</td>
<td>Maintaining a study journal and field notes.</td>
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<tr>
<td>Confirmability</td>
<td>The extent to which the results are derived from the participants and not due to bias or misinterpretation by the researcher.</td>
<td>Self-reflection by the researcher to maintain awareness of risk of bias. Comparing and integrating results of previous studies in the later stages of analysis.</td>
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Compiled with reference to Lincoln and Guba (1985)
everything… It all knits into one, you know, if you’re sort of having a stressful time or whatever, you just don’t have the willpower to give up.’

(Participant 11)

The enjoyment women experienced from smoking and its role in their lives further promoted lack of willpower.

‘But to be quite honest, I don’t want to stop, you know what I mean. If I really, really wanted to stop, I’d do it, but … you know what I mean. Sometimes I think, “Just give me a fag”.’

(Participant 6)

What emerged from the participants’ stories was a picture where lack of willpower made failure to quit a self-fulfilling prophecy. Relapse was seen to be inevitable, so it happened. This was clearly described by participants who had tried and failed to stop smoking in previous pregnancies.

‘But I used to be able to stop and start all the time, then I got to the stage where I couldn’t stop.’

(Participant 6)

The role and meaning of smoking
The women described the significant role cigarettes played in their lives. This role meant continuing to smoke in pregnancy was perceived as the preferred, and at times the safest and healthiest, course of action. Examples include the use of smoking to relieve the stress of housework, childcare, financial anxieties and relationships.

‘I’ve known about all the risks and everything… as you’re hearing these things, you’re thinking, “Oh good god, yeah.” But it’s like… like I say with having so much problems with me daughter it’s… you forget all that and then you just… automatically reach for a cigarette… It’s comfort really.’

(Participant 4)

Smoking was also described as a buffer to protect women’s mental health and help them cope with the burden of caring for other children.

‘I had depression before I got pregnant. It’s a nerves thing as well… with me nerves, you know,’

(Participant 4)

For those mothers of a newly-born first baby, the new caring role presented bewildering demands.

Smoking was a familiar and necessary tool to cope.

‘When my husband went back to work and I was left on my own with her, it was just like… when we were having like the bad moments, it was just like, “Oh my god, what’s happening,” and things like that. And it’s just gradually, you know… went back on to them.’

(Participant 5)

The role of smoking in controlling appetite was not just motivated by a wish to control their weight. Women with financial problems admitted to smoking as a way of controlling hunger and saving on food. Personal sacrifice was made on food in order to afford cigarettes, which helped them cope with their caring role.

‘I’ve found that when I’m hungry if I go for a cig it sort of like knocks me hunger off.’

(Participant 11)

The influence of family and friends
The negative influence of having a partner who smoked was explained. For some, if motivation to quit and willpower is low, they reported a risk that there would be a mutual tendency to relapse:

‘We’ll stop for a couple of days and then he’ll come home and I’ve got a cigarette in my hand and he’ll say, “Oh have you not managed?” And I’ll say, “No.” So then he’ll have a cigarette as well. He’ll say, “I’m glad you said that, I’m dying for one.”’

(Participant 1)

It was not just the smoking behaviour of the partner that created a problem. Another factor was the increased likelihood of the temptation of a limitless supply of cigarettes.

‘Because my husband smokes… if he’s working away then I buy myself 10 cigs and they’ll have to last me 2 days instead of the, you know, the 200 we buy and put on the side.’

(Participant 2)

For all the participants smoking was prevalent in their social setting. This contributed to the social and cultural acceptability of the behaviour.

‘I stopped for about a year and then I just started up again and that was because I was around people that were smoking.’

(Participant 11)

Service issues
The negative effect of advice given in a judgemental manner was accentuated in pregnancy.
‘There was a belief that the additional willpower required to move from cutting down to quitting was out of reach. The role smoking played in women’s lives, and its social prevalence, made smoking appear inevitable.’

“It wasn’t the right time because… my Down’s Syndrome test had come back and it was quite… and the first thing he laid into me was, “Had I stopped smoking?” and I didn’t need it because I was there because I didn’t know whether, you know, I was having a Down’s baby and this, that and the other and it was the wrong time to mention it. I was quite upset about it.”

( Participant 6)

Discussion

Limitations of the study

The limitations of this study should be recognized and considered before discussion of the results. The main limitations were the small sample size and the reliance on telephone, rather than face-to-face, interviews. Both of these are features of the fact that pregnant smokers are a hard-to-reach group in terms of research. The participants themselves provided reasons for this. Wariness in discussing smoking behaviour was reported because of previous bad experiences of being judged. In addition, the reasons women found it hard to access smoking cessation services also made it difficult to participate in research or attend an interview, for example lack of transport and the demands of childcare. While a 20-minute telephone interview restricted the opportunity for in-depth probing, it provided the only way of harnessing the views of women whose opinions are rarely represented.

It is important to note that this was a policy-related piece of qualitative research on an issue about which a certain amount is already known. As such, the aim was to illuminate and expand understanding of the local context and population, not to generate theory. The study therefore differed from much grounded theory or phenomenological research where little or nothing is known about the topic under investigation and theory generation is the goal. So, while a larger sample and face-to-face interviews would have allowed a more in-depth exploration of how the barriers operated, this sample was sufficient to identify a range of factors influencing smoking behaviour in the local participants. In addition, the resonance the results had with other studies adds to their transferability, particularly to other areas experiencing significant deprivation.

Smoking cessation in pregnancy

In summary, the study illustrates how big a challenge stopping smoking in pregnancy can be to women, especially for those with socioeconomic stresses or a large caring burden. There was a belief that the additional willpower required to move from cutting down to quitting was out of reach.
The role smoking played in women’s lives, and its social prevalence, made smoking appear inevitable. Some women had encountered communication, attitude and location difficulties with the existing smoking cessation and health services. The way women constructed the nature and validity of the case against smoking helped to justify continuing to smoke in pregnancy.

The results strongly reflect the findings of previous research, adding to their strength and transferability. As with the work of Graham (1976, 1987), assumptions that smoking in pregnancy was due to irresponsibility or ignorance were refuted. What Graham (1987) referred to as the complex relationship between caring, poverty and smoking in disadvantaged communities, is re-emphasized here. For services to ignore the extent of this influence creates the potential to set unrealistic goals. Relapse will then become inevitable, with guilt and impaired self-esteem the final result.

Gillies and Willig (1997) suggested that for services to concentrate on the discourse of addiction may be counterproductive. The more an individual is convinced by the notion of addiction, the less likely they are to try to give up or believe in their ability to give up. These South Yorkshire participants support this interpretation. The willpower necessary to move from cutting down to giving up was viewed as absent.

The link between an affiliation with ‘internal’ barriers (such as lack of willpower) and the ability to change health behaviour has been identified elsewhere (Zeibland et al, 1998). Those who report internal barriers as more influential than ‘external’ ones (such as transport and finance) were less likely to change their behaviour for the better.

The importance of the partner in helping women to quit smoking is raised (Haslem et al, 1997; Graham and Derr, 1999). Their contribution lies not just in terms of offering support and encouragement, but also removing the temptation of a limitless supply of cigarettes.

**Implications for community nursing**

What then are the implications of these findings for smoking cessation services and community nursing? The issues raised in this study highlight the importance of primary care working in an integrated way with smoking cessation services. It is clear that if specialist services are to make an impact on the issue of relapse and reduction of smoking in partners, they need to be integrated with nurses and others working in primary care. Smoking cessation and midwifery services have an episodic relationship with women. However, community and primary care nurses offer more continuity. The health visitor and practice nurse will continue to see women and their partners when midwifery services are no longer present. They are better placed then, to detect the tendencies or intentions to relapse that were revealed by this study population. Motivational interviewing may provide an answer in tackling the expectations and beliefs surrounding relapse and willpower. If not able to deliver the intervention themselves, community nurses may be the first to detect the need and be instrumental in timely referral.

In addition to the assessment, advice and referral of patients, community nurses have been involved in the delivery of innovative interventions to promote smoking cessation. Examples of these have recently been described by Gaze (2002). As health visitors move towards a more overt public health role, they may be best placed in the future to work with smoking cessation services in providing accessible services for pregnant women in deprived communities (Department of Health, 2001).

Those working in primary care are also in a position to engage the partner in smoking cessation via opportunistic screening, brief interventions and referral, as appropriate.

Adequate training of community nurses and the implementation of excellent communication between them and smoking cessation services are essential. Training for community health professionals should not be restricted to nurses, but should also include general practitioners as:

‘Nursing intervention that reinforces or complements advice from physicians or other health providers is likely to be an important component in helping smokers to quit.’

(Rice and Stead, 2002)

The responses and experiences of the participants of this study emphasized the need for training to help health-care staff to understand the complexity of the issues related to smoking cessation, including the social, cultural and stress implications. It should equip them to first, have realistic expectations of patients and provide empathic help and second, understand the importance of not inducing guilt in patients (Haslem et al, 1997).

The potential role of community nursing is great, however the words of warning voiced by Lancaster et al (2002) need to be remembered. They stated that smoking cessation training alone will not impact on smoking rates ‘unless it is linked to organizational changes which facilitate the intervention’.

‘The responses and experiences of the participants of this study emphasized the need for training to help health-care staff to understand the complexity of the issues related to smoking cessation, including the social, cultural and stress implications.’
The specialist smoking cessation service has the potential to be instrumental in realizing that organizational change in the following ways:

- Undertaking efficient self-publicity among primary care staff and disseminating information about what services they offer and how healthcare personnel, patients and the public can access them.
- Implementing efficient and swift referral systems to services that are acceptable and accessible to local populations.
- Advising and assisting primary healthcare services in implementing ‘manual or computerized reminders’ (Lancaster et al., 2002). An example would be an electronic prompt for staff in general practice to provide smoking assessment and advice to women, and partners, who smoke and have consulted them on a pregnancy-related issue. The improvement of information systems in the National Health Service and the development of electronic patient records will facilitate the initiation of such tools, while protecting patient confidentiality.
- Contributing to the development and delivery of pertinent and concise training programmes.

Conclusion

The issue of smoking in pregnancy is a complex one, especially in an environment of socioeconomic need. It is essential, therefore, for services to work together to try and maximize their success and help women overcome the challenge encapsulated by one participant: ‘To be able to stop, you’ve got to have a… a bloody good life.’

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KEY POINTS

- The role of smoking in helping women cope with the stress associated with financial and caring burdens are illustrated. The similarity with previous studies in this area, adds to the transferability of these findings.
- Affiliation to internal barriers in stopping smoking (e.g. lack of willpower) created a self-fulfilling prophecy of failure. Women saw relapse as inevitable or failed to move from cutting down to quitting.
- The importance of community nurses working in an integrated way with smoking cessation services is highlighted.
- Training of community nurses, and their colleagues, should help them understand the complexity of the issue, including the social, cultural and stress implications.