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A Qualitative Study of Postpartum Mothers' Intention to Smoke

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Abstract

Background—Many women stop smoking during pregnancy. Factors associated with relapse are known, but no intervention prevents the return to smoking among pregnant women. The objective of this study was to determine why women return to smoking after prolonged abstinence during pregnancy by examining mothers' intention to smoke at the time of delivery and the perceptions that shape their intention.

Methods—We conducted in-depth, semi-structured interviews during their postpartum hospital stay with 24 women who stopped smoking while pregnant. We asked participants whether they intended to resume smoking after pregnancy and why. Transcripts were analyzed using grounded theory-based qualitative methods to identify themes.

Results—Participants ranged in age from 18 to 36 years, and 63 percent were white. Three themes emerged from the interviews with the mothers: 1) they did not intend to return to smoking but doubted whether they would be able to maintain abstinence; 2) they believed that it would be possible to protect their newborns from the harms of cigarette smoke; and 3) they felt that they had control over their smoking and did not need help to maintain abstinence after pregnancy.

Conclusions—Although most participants did not intend to resume smoking, their intentions may be stymied by their perceptions about second-hand smoke and by their overestimation of their control over smoking. Further study should quantify these barriers and determine their evolution over the first year after pregnancy with the goal of informing more successful, targeted interventions. (*BIRTH* 39:1 March 2012)

Keywords

postpartum period; smoking; maternal behavior; qualitative research; behavior and behavior mechanisms

Twenty percent of women aged between 15 and 44 years in the United States smoke cigarettes. Forty percent stop smoking when they become pregnant, and abstain for much of the pregnancy (1–5). No other single life event induces so many smokers to stop. Smoking cessation has many health benefits for women and their infants (6–10). Unfortunately,

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approximately 75 percent of women who stop smoking during pregnancy resume smoking within 1 year after delivery, one-half within the first 6 months (1, 11, 12).

An important, unanswered question is how to help women who stop smoking in pregnancy to maintain abstinence after delivery. Some risk factors for relapse have been identified, but interventions that target these risk factors have had limited success in decreasing the number of women who resume smoking (4, 11, 13–16).

Studies have explored the perspectives of postpartum women, many of whom have already returned to smoking (17, 18). To our knowledge no studies have explored the perspectives of women still in the hospital right after the birth of their baby who have not returned to smoking. The objective of this study was to determine why women return to smoking after a prolonged abstinence during pregnancy by studying mothers' intention to smoke at the time of delivery and the perceptions that shape their intention. In other words, we sought to discover women's stated plan about smoking and what they felt might affect their ability to follow through with their plan. We hoped to learn more about why women return to smoking after pregnancy directly from women facing this issue. Our goal was to identify avenues for further exploration that might lead to successful intervention. We chose a qualitative research design so that we could listen to the voices of women immediately facing the prospect of smoking or not smoking during the postpartum period, and systematically process their ideas.

METHODS

Study Design and Sample

This study was conducted in the tradition of the qualitative method of grounded theory. That is, we sought to generate insights into the phenomenon of interest—intention to return to smoking during the postpartum period. Our study was grounded in the views expressed by study participants who were knowledgeable about this subject and were chosen using the technique associated with grounded theory research—purposeful sampling (19, 20). We recruited and interviewed women during their postpartum hospitalization at one inner-city teaching hospital in the Boston, Massachusetts, area from June to August 2009. Women were screened if they were 18 years or older, spoke English, and if the infant was cared for in the well newborn (Level 1) nursery. Screening took place during the daytime on weekdays. Women were eligible if they reported that they had stopped smoking for this pregnancy. Enrollment continued until theoretical saturation (redundancy of perspectives) was achieved (19, 21, 22).

Data Collection and Analysis

We conducted in-depth, semi-structured interviews during the postpartum hospitalization with women who stopped smoking during their pregnancies. We used the framing question: What are the intentions of women who stopped smoking during pregnancy about smoking cigarettes after pregnancy? We developed our initial interview questions using concepts from the Theory of Planned Behavior, a well-studied model of health-related behaviors that has been suggested by Gantt as a conceptual framework for understanding resumption of smoking after pregnancy (23–26). The refined interview guide included the key question prompt: “Many women who quit smoking during pregnancy return to smoking after the baby is born. What do you think will happen to you?”

Interviews were recorded using digital audio recorders and were transcribed by an independent transcription service that complied with the privacy requirements of the Health Insurance Portability and Accountability Act (HIPAA). After the interview each participant completed a form including demographic information and smoking history. The protocol

was approved by the Human Investigations Committee at Yale University School of Medicine, New Haven, Connecticut.

In the tradition of grounded theory, data were collected and analyzed using an iterative process. After three interviews were completed, a group of researchers (a doctoral researcher with expertise in qualitative research, a naturopathic doctor, an anthropologist, two medical students, and three pediatricians) met to begin identifying key concepts in the transcripts and to refine the questions in the interview guide. Three transcripts were reviewed line-by-line by all authors to establish consistency in coding using the constant comparative method (19, 20, 27). Each concept in the data was assigned a code to capture all concepts that emerged. Discrepancies in code assignment were discussed and reconciled. The final code structure was applied to all transcripts by two authors (Stephanie N. Nguyen and Isabelle Von Kohorn). When coding was complete, all authors met to analyze each code and to extract themes. Qualitative data analysis was facilitated by Atlas.ti 6.0 software (28). Descriptive statistics were calculated using SAS 9.1 software (29).

RESULTS

Description of the Sample

Of the 502 women who delivered from June to August 2009 at the participating hospital, 241 were screened. Of those screened, 35 (15%) women were eligible, and 24 (69%) of those eligible chose to participate. Participants were mostly white (63%) and primiparous (54%), with at least a high school education (87%). The average age of participants was 26 years (range=18–36 yr). Fifty-eight percent of participants reported having a partner who smoked cigarettes, and 63 percent reported living in a household with another smoker. Most participants (84%) planned some breastfeeding.

Themes

We discussed with each participant whether she thought she would return to smoking. Of the 24 participants, 19 reported the intent to remain abstinent, 3 reported the intent to return to smoking, and 2 were unable to state their intention. Three themes evolved from participants' descriptions about their intentions.

Theme 1: Doubt about being able to fulfill the intention to maintain abstinence

—The 19 participants who reported the intent to remain abstinent expressed that they would not, or would try not, to resume smoking; however, many expressed concern over their ability to fulfill this intention. One woman expressed general doubt:

I think it's going to be pretty hard to stay quit...Hopefully I don't [smoke again], but it is pretty hard not to go back. (#5)

Another woman said that her lack of confidence in her ability to avoid smoking in the future echoed the fact that her abstinence during pregnancy was externally motivated:

I want to quit for good, but I don't really have a lot of faith in myself about it. It's really bad because of all the things against me like, 1) I don't really want to deep down. I really like smoking; 2) I didn't really do it for myself. I did it for someone else. (#15)

One woman's intention was not to decide about smoking now but to wait and see whether she craved a cigarette in the future:

I can't say that in the future I won't ever have a cigarette again, not that I'm dying for one right now, but who knows in a couple of months if I may want one, you know? (#17)

Theme 2: Belief that it would be possible to protect the newborn from the harms of cigarette smoke—Eleven participants indicated that it would be possible to isolate their children from their smoking as a protective measure. One first-time mother felt that it was more important to avoid smoking around her baby than to avoid smoking altogether:

It's important, but it's not one of the biggest things for me personally not to smoke. It's just a big thing not to smoke around him [indicating baby]. (#14)

This mother went on to explain that it is acceptable for parents to smoke as long as they avoid smoking in proximity to children, so as to prevent causing a medical complication from secondhand smoke:

[Smoking] is [parents'] prerogative as long as they're not bringing it around their children, and they're not smoking in the car with their kid...secondhand smoke gives them asthma. It's just not a smart thing to do. (#14)

Another participant revealed that she and her partner hid their smoking from their children as a protective measure, indicating that parents who care about their children's welfare do not have to stop smoking completely:

We never smoked around our kids. None of our kids [has] ever seen us light a cigarette. We never smoked in our vehicles because of our kids. Same thing with our house, we don't smoke in our house because of our kids. We were very controlled and hidden smokers. (#6)

Theme 3: Feeling control over smoking and denying the need for help to maintain smoking cessation after pregnancy—Of the 17 participants who stated they were in control of their smoking, most said that they were not addicted to cigarettes. One mother echoed other participants when she said smoking cessation during pregnancy was evidence of her control:

If I didn't [have control], then I'd be smoking throughout the pregnancy that I had. I'm just really good. I don't smoke unless I want to. (#8)

Another participant said she was in control because she no longer felt urges to smoke:

I think I have full control because I don't want to smoke. Even talking about it a couple of months ago would have [made me think], "I want a cigarette," but I don't feel the need anymore to want one. (#23)

Eight participants said health care practitioners could not do anything to help them avoid smoking in the future. One participant said this was because she did not want lectures:

No, [health care practitioners] can't do nothing because I don't want them to do nothing. I don't want nobody telling me I shouldn't do this, shouldn't do that, because I already know. (#22)

Another participant indicated that her self-discipline was a better prescription to avoid smoking than one she could get from a health care practitioner:

I don't want to take medication. That's just one more thing I got to remember to do...I think it's just going to be my strong will, determination, staying away from certain things, certain people, certain areas. (#16)

DISCUSSION

We sought to understand better the phenomenon of women returning to smoking after a prolonged abstinence during pregnancy by studying mothers' intention to smoke at the time

of delivery and their salient beliefs shaping their intention. Three important themes with implications for intervention emerged from mothers' descriptions of their intentions.

First, we found that although most mothers did not intend to return to smoking, many expressed doubt about their intention. Our results lend credibility to Stotts et al's theory that prolonged smoking cessation during pregnancy should be considered the suspension of a behavior, rather than a permanent change in behavior (30). The data in our study also build on the literature indicating that women who stopped smoking during pregnancy were different from other former smokers (17, 18, 31–33). Researchers who have compared women who returned to smoking with those who did not suggest that the “real work” of smoking cessation begins after the baby is born (17, 34, 35). Our data imply that immediately after delivery women do not intend to return to smoking but have not yet begun the “real work” of *renewing the quit*, meaning to recommit to smoking cessation once the baby is born. Successful interventions may need to focus on helping women begin the transition from being a *pregnant* former smoker to a *permanent* former smoker.

Second, is the belief that it is possible for a mother to protect her children from the harms of her own cigarette smoke. This finding dovetails with the literature showing that mothers who smoke cigarettes try to limit the effect of their smoking on their children (12, 36, 37). It is critical for mothers who smoke to avoid exposing their children to secondhand smoke; however, it is not clear whether modification of smoking (e.g., smoking outside or in another room) really does protect children from the harms of exposure (38). Furthermore, the belief that it is possible for parents to limit the harm of their own smoking to their children may facilitate mothers' return to smoking. It is possible that knowing no amount or type of “safe” smoking exists could help motivate women to maintain cessation after pregnancy. Historical data support this idea. For example, the first report linking cigarette smoking to prematurity was published in 1957, cigarette packages began warning that smoking might complicate pregnancy in 1984, and indoor smoking bans became prominent after 2000 (39, 40). Concomitantly, the percentage of women who smoked during pregnancy decreased from 40 percent in 1967 to 18 percent in 2002 (2, 41). In the same way, refuting the idea that there are safe ways to smoke around children could decrease the number of mothers who return to smoking after pregnancy.

Third, participating mothers perceived that they had control over smoking and no need for help to avoid smoking after pregnancy. This sense of control has been described previously (34). We found, in addition, that participants' sense of control was intertwined with the belief that health care practitioners could not help them maintain abstinence. This finding differs from previous studies of postpartum women which found that participants wanted help to avoid smoking (17, 18). These previous studies, both of which used quantitative methods, were not conducted during the women's immediate postpartum stay. It is possible that the sense of control is particularly strong in women who have been abstinent for a prolonged period and who have just delivered their baby; women may desire help only after feeling cravings to smoke or returning to smoking.

This study has several limitations. Women were interviewed one time at a single hospital so that it may not be possible to generalize the findings to other settings. We did not confirm women's reported abstinence from smoking; however, the aim of this study was to understand the perspectives of self-identified women who stopped smoking during pregnancy. In addition, since participants were interviewed by health care professionals in a hospital, they may have responded in a way that they perceived as more socially desirable.

CONCLUSIONS

This study sheds light on the phenomenon of women returning to smoking after prolonged abstinence during pregnancy. Most participants did not intend to resume smoking, but fulfillment of their intentions may be impeded by the barriers we discovered in their descriptions. Further study could be aimed at quantifying these barriers with the goal of informing more successful, targeted interventions.

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