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Cultural Acceptability of a Smoking Relapse Prevention Intervention for Pregnant Women in Puerto Rico: Providers' Feedback

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Abstract

Hispanic women are more likely than non-Hispanic women to quit smoking during pregnancy, indicating that relapse-prevention interventions may benefit this population. We conducted qualitative interviews with health care providers in Puerto Rico who serve pregnant women regarding the cultural acceptability of *Libres Para Siempre Por Mi Bebé y Por Mi* (transcreated from the English version, *Forever Free for Baby and Me*), a smoking relapse-prevention booklet series. Providers praised the overall quality of the content, interactive activities, vignettes, and partner booklet. Recommendations included condensing the content, and distributing the booklets during one-on-one counseling and via “*charlas*” (community themed presentations). Overall, these smoking relapse-prevention materials are culturally acceptable among health care providers, yet there is a need to attend to local cultural preferences for delivering the intervention.

Keywords

smoking; relapse; pregnancy; Puerto Rico; intervention

Most cigarette smokers report a desire to quit (Centers for Disease Control and Prevention, 2002; Gallup, 2008). Unfortunately, the vast majority of cessation attempts end in relapse, generally within days to months (Hughes, Keely, & Naud, 2004). Brief interventions delivered by nurses, physicians and other healthcare providers (HCPs) in medical health care settings can play a critical role in assisting patients in quitting smoking and maintaining abstinence (i.e., relapse prevention). Clinical practice guidelines, updated in May 2008 (Fiore et al., 2008), recommend that HCPs follow the 5A's model of brief intervention: 1) ask whether patients smoke, 2) advise all smokers to quit, 3) assess interest in quitting smoking, 4) assist smokers with obtaining treatment, and 5) arrange for follow-up to monitor progress. To reinforce brief advice delivered in the office setting, HCPs may distribute self-help materials that may be reviewed in patients' homes. Previous research has demonstrated

the efficacy and cost-effectiveness of a self-help smoking relapse-prevention booklet series, entitled *Forever Free* (Brandon, Collins, Juliano, & Lazev, 2000; Brandon et al., 2004). Identifying segments of the population most at risk for smoking relapse is a key task in public health prevention efforts, especially to prevent relapse during pregnancy and postpartum (United States Department of Health and Human Services, 2000).

In this study, our goal was to expand dissemination efforts and to assess the cultural acceptability of a Spanish version of *Forever Free* tailored to pregnant women, by interviewing HCPs living and practicing in Ponce, Puerto Rico. Efforts were part of an ongoing National Cancer Institute (NCI)-funded collaboration between the Moffitt Cancer Center (MCC), an NCI-designated cancer center, and Ponce School of Medicine (PSM) for the purpose of fostering research and outreach collaborations aimed at reducing cancer-related disparities in minority populations and to provide education, training, and career development opportunities for minority scientists.

Smoking during pregnancy is related to multiple adverse maternal conditions and pregnancy outcomes, including placenta previa, stillbirth, fetal growth restriction, and preterm birth (Tong, Jones, Dietz, D'Angelo, & Bombard, 2009; CDC, 2004; Cnattingius, 2004; Haskins et al., 2008). Heightened public awareness about the effects of smoking on pregnancy has resulted in a greater number of pregnant women quitting smoking. Unfortunately, the vast majority of women resume smoking later in their pregnancy or within three months postpartum (Fang et al., 2004; Stotts, DiClemente, Carbonari, & Mullen, 2000). Smoking relapse among pregnant and post-partum women can be attributed to several unique pregnancy-related factors, such as increased stress due to caring for a newborn, a desire to return to their pre-pregnancy weight, hormonal changes that may lead to post-partum depression, and the drop in social support following delivery (Quinn et al., 2006; Ripley-Moffitt et al., 2008). At the point of smoking cessation, women may be highly motivated to quit smoking to protect the health of their unborn baby; however, a return to smoking postpartum may occur because they do not appreciate the harmful effects of secondhand smoke exposure on their children (Fang et al., 2004). Interventions that focus on preventing smoking relapse must take these unique postpartum factors into account (Ripley-Moffitt et al., 2008).

Although general population statistics suggest a lower prevalence of smoking among Hispanic women compared with their non-Hispanic counterparts (CDC, 2005), a higher prevalence of smoking is observed among some subgroups of Hispanic women. For example, higher rates of smoking during pregnancy have been documented among Puerto Rican women as compared to other Hispanic subgroups (e.g., Mexican, Central and South American) (CDC, 2007). The literature also suggests that Hispanic women are more likely to try to stop smoking during pregnancy, making them an ideal population for relapse prevention materials (Yu, Park, & Schwalberg, 2002).

The *Forever Free* booklet series covers a range of relevant topic areas, including smoking urges, weight gain, managing stress and mood, lifestyle balance, and social support. Recently, a version of the *Forever Free* series tailored to pregnant women, entitled *Forever Free for Baby and Me (FFBM)*, was developed and was tested in a clinical trial (Lopez et al., 2008). The *FFBM* booklet series contains 10 booklets, including one booklet designed

specifically for the woman's partner (for booklet titles, see Table 1). The content of the *FFBM* series was informed by cycles of formative evaluation and learner verification (Quinn et al., 2006). Preliminary data (Simmons et al., 2009a) indicated that women who received the *FFBM* booklets were more likely to be abstinent at eight months post-partum than women who received usual care only; however, consistent with previous research with pregnant women, this effect was no longer significant at 12 months. Additionally, women who received the *FFBM* booklets reported significantly greater partner support at follow-up than those in the usual care condition, and there was a significant positive correlation between perceived partner support at baseline and efficacy of the booklets.

Studies indicate that health education efforts, particularly those with a focus on promoting behavior change, are more successful when "transcreated" and available to the target population in their native language (Solomon et al., 2005). Transcreation in health education is the process of adapting not only the text of written materials, but infusing culturally relevant context, photos, and themes. In transcreated materials, the text is not merely translated into another language; it is reconstructed to meet the health literacy and informational needs of the target audience (Quinn, Hauser, Bell-Ellison, Rodriguez, & Frias, 2006; Solomon et al., 2005). There are currently few self-help materials available in Spanish and tailored to Hispanic smokers. To fill this gap, the *FFBM* relapse-prevention booklets were transcreated into Spanish (*Libres Para Siempre Por Mi Bebé y Por Mí, LSBM*) using a multi-stage qualitative approach with mainland US Hispanic women (Simmons et al., in press) (for *LSBM* titles, see Table 1).

As previously stated, the goal of the current study was to expand dissemination efforts and to assess the cultural acceptability of the *LSBM* booklets with HCPs in Puerto Rico. Qualitative methods were used to achieve two primary objectives: 1) describe the attitudes and behaviors of HCPs in Puerto Rico with respect to smoking during and after pregnancy, and 2) obtain feedback from HCPs on the *LSBM* booklets, including suggestions for culturally appropriate dissemination and implementation. Given that, in Puerto Rico, pregnant women and their HCPs generally share a common cultural background compared with Hispanic pregnant women and their HCPs in the mainland US, it was believed that interviewing HCPs in Puerto Rico would present a unique opportunity to explore how use of the *LSBM* booklets could be integrated into patients' care in a manner that is both meaningful and culturally acceptable to Puerto Rican patients.

Method

Participants and Procedures

Eligible participants included HCPs, defined as individuals who provide direct care to pregnant women, in Ponce, Puerto Rico and surrounding towns who had direct contact with pregnant women. HCPs working in a variety of settings (e.g., private OB-GYN offices, hospitals, Ponce School of Medicine, Head Start) were approached for participation. Potential participants were identified via phonebook listings of local OB-GYN offices. The authors also invited faculty from other PSM departments who provided services to pregnant women (e.g., Family Medicine Department) to participate. HCPs were approached in person in their offices and were asked if they would be willing to review a series of booklets

designed to help pregnant women remain smoke-free (i.e., *LSBM booklets*). If they agreed, they were also asked to participate in an interview at a later time during which they would offer feedback regarding the booklets' appropriateness and answer some general questions regarding tobacco use in Puerto Rico. HCPs who agreed (few refused, and those who did cited lack of time or other similar factors) were given a copy of the *LSBM* booklets and scheduled for an individual interview within one week. They were offered the option of completing the interview in either English (by EBL) or Spanish (by AR). HCPs received a \$25 giftcard to a local department store as compensation for completing the interviews, which lasted between 20–30 minutes.

Measures

Demographic questionnaire—Providers completed a brief demographic form in Spanish that included single items to assess their gender, race, ethnicity, their place of birth, the primary language spoken in their home, and the number of years they had lived in the mainland United States (i.e., outside Puerto Rico)

Interview guide—Two versions (English and Spanish) of a semi-structured interview guide were developed to stimulate discussion. Providers were asked about how they typically assess for smoking behavior and what type of advice they offer regarding smoking cessation for their pregnant patients, the cultural appeal (e.g., “do you think the booklets are appealing and culturally appropriate for women in Ponce”?) and general appropriateness of the *LSBM* booklets (e.g., photos, layout, content, reading level, quality of translation), how the *LSBM* booklets compare to other health-related materials provided to pregnant patients, recommendations for how to disseminate the booklets, challenges for Puerto Rican individuals in remaining smoke-free, and their opinions regarding Puerto Ricans' preferred relapse prevention intervention format.

Data Analysis

Basic demographic and clinical characteristics were summarized using descriptive statistics. Interviews were audio-taped and professionally transcribed verbatim. Interview data were analyzed using a combination of hand coding and ATLAS.ti 6. Members of a bilingual study team identified key themes as they read through the interview transcripts. Content analysis via hand coding was conducted using an “intuitive” or “immersion/crystallizing” analysis plan, whereby the researcher reviews all of the data and culls out those aspects most relevant to the objectives (Aita, McIlvain, Susman, & Crabtree, 2003). Codes were continually refined and defined until consensus was established among the study team. Additionally, transcripts were coded by three members of the study team for independent comments offered by participants for each of the stimulus questions. Comments were analyzed for frequency (i.e., how often the topic was mentioned) and extensivity (i.e., how many participants referred to the topic). A coding manual was developed to facilitate the coding of themes. Following the hand coding, verbatim transcripts and the codes were entered into ATLAS.ti. Each interview transcript was entered as an individual unit and responses were segmented, by interview questions, to allow for the extraction of themes and a comparison of participants. The process of using both hand-coding and qualitative software is

recommended in smaller studies as an opportunity for triangulation of the data and reduction of coder bias (Coffey, Holbrooke, & Atkinson, 1996).

Results

Participant Characteristics

The final sample of participants included 19 HCPs: 1 surgeon, 2 OB-GYN physicians, 3 physicians in other relevant specialties (e.g., family medicine), 9 nurses, and 4 *secretarias* (secretaries). A *secretaria* in Puerto Rico is an individual working in a physician's office who serves both an administrative role (i.e., receptionist) and an HCP role similar to a nurse, assisting doctors with tasks such as interviewing patients and performing some procedures. Twelve providers chose to complete the interview in Spanish, six in English, and in one interview both languages were spoken in approximately equal proportions. The majority of participants were female (84%) with an average age of 44.0 years ($SD = 11.6$, range 23–61). All HCPs self-identified as Hispanic, 84% were born in Puerto Rico, and 63% had lived on the mainland US for less than 1 year or never. Sixty-three percent reported that they only or mainly spoke Spanish in their home, whereas 37% spoke English and Spanish about equally or mainly English.

Smoking Cessation and Relapse in Puerto Rico

Assessment of smoking in pregnant women and recommendations regarding cessation—The majority of providers indicated that they assessed for current smoking behavior in pregnant women. Assessment was generally via direct questioning during patient interviews, although some providers used questionnaires. Importantly, only a few providers specifically mentioned that they inquired about past smoking behavior if patients denied current smoking. Most providers also recommended smoking cessation. Their advice regarding cessation focused almost exclusively on the risks of continued smoking, with only two providers mentioning benefits of quitting:

“I advise them to quit because it causes problems such as low birth weight, premature birth, and also the babies have problems that affect the lungs, and for [the mother] also, they have difficulty in breathing.”

“I tell them: ‘stop smoking,’ [and they say] ‘No, no I haven’t been able to, I have been intending to, I smoke one, two a day and I want to stop so the baby turns out well.’”

Perceptions of relapse risk factors in Puerto Rico—When asked what they believed were the biggest challenges for Puerto Rican individuals in remaining smoke-free (including both pregnant women and the general population), providers cited alcohol, stress, anxiety and other emotional problems, and the social environment (i.e., other smokers’ in the home, peer pressure):

“Probably the same as in any other part of the world. The constant propaganda. The situations in which they find themselves. You know, an entire household smokes. You know, normal habits. Their friends smoke. Everything, their daily activities. You know, if that’s what they see, that’s what they are going to continue doing.”

“I think the challenges are one’s life, stress, problems, the economy, you know? The large amount of problems, marriages, violence, domestic violence. If we are talking about women, single mothers, you know, there are a lot.” (Translated from Spanish)

One source of stress specific to Puerto Rico, though not necessarily culturally specific, that may contribute to relapse was identified:

“I think that the largest factor for Puerto Ricans, the Puerto Rican that smokes, who knows the danger and is dealing with stress, the economy in Puerto Rico has been difficult. For us to have a difficult economy at this time, it is cost effective for those who study, those who become professional now in Puerto Rico; It’s been difficult. Then, those who don’t become [professional] say: ‘I have a lot of stress. My easiest way of dealing is with the cigarette.’” (Translated from Spanish)

Feedback Regarding LSBM Booklets

Praise—Providers praised the overall quality and content of the booklets. For example, nearly all providers expressed that the booklets were visually appealing:

“The colors are very good because they are very bold, some of the booklets call attention to... to the cover that has children and when people see these little things here that have children, well it gets their attention and they will begin to pick them up and read them.”

“Yeah, I think the photos are appropriate, and looking there’s a couple of ones that are very good, or that are like, with them put like touching, you know, trying to get the emotional component of the mother that is trying to quit smoking so I think that is good...”

“The booklets are very good, beautiful, and visually appealing.” (Translated from Spanish)

“From what I am observing, they look very important. They have a lot of important information for pregnant women, because [they cover] stress, the habit of overeating, fatigue, et cetera.” (Translated from Spanish)

Providers also thought that the vocabulary and content were culturally appropriate for the Puerto Rican population:

“The language? Oh yeah. I was concerned of the translation because usually what, the books that we order here are in Spanish, is a translation that is not Puerto Rican. And is not really understood too well. I thought that it was going to be more Mexican, but it’s perfect Spanish. Perfect Puerto Rican Spanish.”

“The booklet has information, has information that is very readable. It’s in a clear format, a select vocabulary, that is, I believe that a person who is 15 years old would be able to read and understand it.” (Translated from Spanish).

Providers also commented positively on more specific aspects of the booklets’ format:

“I saw that they had real stories [vignettes]. And that is very good because sometimes one will read it, and that is good because [they] learned [from it]. But sometimes when you listen or read a real story, you think you are experiencing the same thing. Sometimes it’s like it reaches you more. And that’s very good.”

(Translated from Spanish)

“I like the fact that they can jot down notes and that’s probably something they would like. A patient likes that.”

“And what I like most is that it has some kind of interactive exercises, that they have some kind of questions for the patients to answer them. That’s very good.”

Finally, providers stated that the *LSBM* booklets were superior to other health-related self-help materials (e.g., breast self-exam pamphlets) they had distributed to patients. The *LSBM* booklets were described as more comprehensive, understandable, and useful. Providers also appreciated that the booklets were written in Spanish, as many complained that only English materials are generally available.

Criticism—Although most providers stated that the reading level was appropriate, a few providers believed that booklets’ content was too “sophisticated” or complex for the general population:

“I like them. They worry me a little bit. Probably for the less educated people. I don’t want to say anything that would sound bad, but some... a person that probably isn’t as educated, probably they won’t understand them or take them as important...”

“The other thing you can change. Sometimes we make the mistake of thinking that all the population that we have of smokers or [patients] in general, we think they can read the material and we don’t assess the [literacy] of the person. So, I think that’s one limitation, that we can help [simplify] the information.” (Partially Translated from Spanish)

The primary criticism that HCPs had about the booklets concerned the large amount of information they contain, which they believed their patients might not want to or be able to take advantage of for a variety of reasons:

“Honestly, I had the time, you know, a little time, and I looked at it and it’s overwhelming. Okay. Maybe it’s just too much for such a short period of time, okay. Lots of women would, you know, if you only had one child, and that child is sleeping, I’m not going to say, you know, they wouldn’t take and read it. And maybe even take notes. You see, but a mother who is, you know, just going there [to doctor’s office] because my kid is sick is vomiting, has fever, really wouldn’t want to talk to me about this right now. My attention span is so short because all I really want to know about is my child.”

“In some of these booklets, you can have less information. Because, there are people, I’m being honest, like myself who don’t like to read. Sometimes it’s better with less writing. They are people who like to read and others who don’t.”

(Translated from Spanish)

Suggestions for modifications to LSBM booklets—Providers were candid in offering suggestions for changes to the *LSBM* booklets to increase their appeal and the likelihood that women would use them. Given their feedback about the amount of information contained in the booklets, providers' primary recommendation was to reduce the booklets' length and/or quantity:

"All of them are different, I checked them and they're fine, but I feel these booklets... it's too much information, like it's better to have one booklet with concise information because like, this is elaborate. But that is the only thing I didn't like about the booklets."

"The only thing I would say is you should reduce [the content] to the most important. You should summarize completely and have less information."
(Translated from Spanish)

Other recommendations included adding more real-life stories, a list of additional resources, such as phone numbers and websites, and adding more graphic photos and information that emphasize the negative consequences of smoking:

"Put...a story about a person, anecdotes like that [what helped]; that would be good." (Translated from Spanish)

"Sometimes I have seen – It's been awhile since I've seen it but I know I have seen it – that they show you how the lungs start deteriorating from cigarettes. And that is impactful. Perhaps if there was something visual in the book like how things deteriorate, or like I don't know, the skin. Things that cigarettes deteriorate little by little..." (Translated from Spanish).

Distribution of booklets—Providers stated that they would recommend the *LBSM* booklets to their patients and suggested that the booklets could be distributed in a variety of settings, including doctors' offices (OB-GYN, pediatricians, family medicine, internal medicine), Head Start and WIC, hospitals (e.g., emergency room), and schools. Providers were divided on whether the booklets would best be distributed all at once in a single bundle or gradually as they were originally intended:

"So if you try to give it to them all at once, they might not read all of it, but if you try to give them one at a time, they might not come back so they wouldn't get the complete set."

"I'll tell you...it's a lot. But, since there are nine months of pregnancy, there is time to read them. When you feel stressed and want to take [the time], you can take out a [booklet] and start reading. I think it's better that way, to divide the information. If you make one thick booklet only, the patient will not read it because [she] get tired." (Translated from Spanish)

Providers also emphasized the value of "person to person" contact in Puerto Rican culture and indicated that this value applied to the communication of health information as well. *Charlas*, health-related presentations and discussions open to the community that are popular in Puerto Rico, were identified as an effective means for disseminating information.

More generally, HCPs believed that the booklets should be distributed within the context of the provider-patient relationship:

“...I like to see my patients and I like to see their faces when I ask the questions.”

“You have to tell [them the information], you cannot just put them out there so they can just pick it up. And ask them in the next visit if they have the time to look over, to read it.”

Intervention Preferences

Given their comments about the quantity of information contained in the booklets and Puerto Ricans’ cultural value for interpersonal contact, a broader theme emerged that booklets may not be sufficient as a standalone intervention for this population. Rather, providers indicated that the booklets would be best used in conjunction with or in addition to other intervention formats, such as *charlas*, TV and video, the Internet, and support groups.

“...Like I said, many people don’t like to read. They pick it up, look at it, and throw it in the trash. And what’s most important is what I have told you: *charlas*, TV, and video.”

“I would say that Puerto Ricans are very visual, so something that gets their attention or something very emotive, emotional, very emotional, you can combine that and maybe that’s gonna grab their attention, like gonna stick in their mind.”

“Sometimes it’s good to view them by CD, because there are many people that do not like to read. They do not like to stay seated two or three minutes reading, [but] if you give them information by CD or by video...” (Translated from Spanish)

“...At times, when you want to stop smoking, it can be a vice. There are persons that do not like being told that, and a *charla* is a way to emphasize it.” (Translated from Spanish)

Other General Themes

Difficulty understanding the distinction between cessation and relapse prevention—As noted previously, the *LSBM* booklets are a relapse prevention intervention—that is, they are designed for use by pregnant and post-partum women who have *already quit* smoking. During the interviews, interviewers emphasized the distinction between interventions for initial smoking cessation versus relapse prevention. However, as has been the case with previous research (Lopez et al., 2008, Simmons et al., 2009a), providers had difficulty understanding this distinction. Therefore, many of their comments and suggestions for intervention format and content were geared towards preventing smoking initiation or motivating initial cessation (e.g., TV commercials, public service announcements, posters and flyers). For example, some providers suggested that the booklets should be given to women before they get pregnant, with the implication that the booklets would motivate them to quit smoking:

“[The right time] should be before they get pregnant. It is best if the patient is not pregnant but is thinking about having a baby. There it is better if they get the

booklets and are counseled. Then she will have more conscience and she will think about it more before smoking cigarettes.”

Other providers indicated that they thought the booklets should be given to pregnant smokers (rather than pregnant ex-smokers):

“Yeah, yeah, because you know that smoking risk [during pregnancy] is serious and [the risks] start right away, and some of these patients if they look at the booklets maybe two or three weeks after they know that they are pregnant maybe there is some risk already.”

“Right, and I want my patients to stop smoking. I want them to stop now. If I send them to read one per month, it’s like 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 months (counting booklets).”

Youth and Prevention—Following from the previous theme, providers often attempted to steer the discussion towards primary and secondary tobacco use prevention (i.e., preventing initiation as well as progression to daily smoking and dependence), believing that youth pregnancy and youth smoking were more urgent and pervasive problems in Puerto Rico:

“I know that these are designed for ladies that are quitting smoking or relapsing after pregnancy but I would think that you have to be, um, the hard core, you can probably design this in another way and use it also for prevention.”

“Maybe in the schools because I [run] campaigns for prevention of pregnancy. They may have students that they may be doing secondary or tertiary prevention but that’s the place where [youth] start smoking and it’s more hard for them as adolescents to quit smoking [compared] to an adult patient.”

Discussion

The prevention of smoking relapse during pregnancy and the post-partum period is a critical public health need (USDHHS, 2000). Brief interventions delivered by health care providers (HCPs) in medical settings, as well as self-help materials, may contribute to reducing relapse rates (Brandon et al., 2000; Brandon et al., 2004; Fiore et al., 2008). Hispanic women represent an important population to target, given Hispanics’ high fertility rate (Federal Interagency Forum on Child and Family Statistics, 2008), high smoking rates among certain subgroups (e.g., Puerto Ricans) (Roberts-Clarke et al., 2002), and persistent disparities in access to care and health outcomes for Hispanic Americans (USDHHS, 2009). Recently, a self-help smoking relapse prevention booklet series targeted to pregnant women, entitled *Forever Free for Baby and Me (FFBM)*, based on the efficacious *Forever Free* series for the general population, was transcreated into Spanish (*Libres Para Siempre Por Mi Bebé y Por Mí, LSBM*) for Hispanic women (Simmons et al., in press). To expand dissemination efforts and to assess the cultural acceptability of the booklets with Puerto Ricans living in Puerto Rico, in the current study qualitative semi-structured interviews were conducted with HCPs in Puerto Rico. Overall, findings from this study demonstrate the cultural acceptability of the

LSBM relapse prevention materials among community-based HCPs in Puerto Rico, while also suggesting a need to tailor the format and modality to local cultural preferences.

HCPs Assessment and Advice Regarding Tobacco Use

In the present study, HCPs indicated that they routinely assessed pregnant women for current smoking behavior, generally via face-to-face direct inquiry. Notably, most HCPs did not explicitly mention asking about past smoking behavior if current smoking was denied. In addition, because smoking during pregnancy is socially unacceptable, women may falsely report abstinence in response to a direct question. This is problematic as many women successfully quit smoking upon learning that they are pregnant, but remain at high risk for relapse, especially in the early post-partum period (CDC, 2009; Stotts, DiClemente, Carbonari, & Mullen, 2000). Furthermore, given that the *LSBM* booklets were designed for pregnant women who have already quit smoking due to pregnancy, HCPs are missing an important window of opportunity to provide a relapse prevention intervention.

Interestingly, HCPs' advice regarding smoking cessation focused almost exclusively on the risks of continued tobacco use for the baby and the woman herself. Whereas this practice may serve as beneficial during pregnancy, it may be less effective during the post-partum period when stress and other external factors may trigger relapse. Furthermore, findings from a recent study (Simmons et al., 2009b) suggest that patients may have a preference for information framed in a more positive, balanced manner that emphasizes risks of smoking and benefits of cessation equally. Overall, our results suggest that HCPs in Puerto Rico may benefit from additional education and training in tobacco use assessment and brief intervention.

HCPs Feedback Regarding *LSBM* Booklets

All HCPs demonstrated an overall positive impression of the *LSBM* booklets and expressed that they would recommend the *LSBM* booklets to their patients. Booklets were praised for their overall quality and visual appeal and HCPs confirmed that the choice of colors and photos was culturally appealing and appropriate. Also, HCPs approved of the booklets' content, including the topics covered, the reading level, the quality of the translation (i.e., vocabulary appropriate for Puerto Rico), and more specific components, including the vignettes and interactive activities. For example, HCPs stressed the importance of the partner/support person booklet as valuable in a culture where *familismo* (loyalty to extended family versus individual needs) and *respeto* ("respect," expectations for deferential behavior based on positions of authority, age, gender, and socioeconomic status) are socially ingrained (Antshel, 2002; Buki, Salazar, & Pitton, 2009). Given that preliminary results with the English version of the series indicated a key moderating effect of partner support (Simmons et al., 2009a), this factor may prove to be even more important with a Hispanic population.

HCPs' main criticism of the booklets was their quantity and length. They were concerned that the *LSBM* booklets may be underutilized given that many of their patients would be unable (i.e., because they don't have time) or unwilling (i.e., because they don't like to read) to take advantage of them. They recommended that the number of booklets and/or the length

of the booklets be shortened considerably. It is interesting to note that booklet length was also a concern of HCPs regarding the original *Forever Free* series, which were later found efficacious when tested in clinical trials (Brandon et al., 2000; Brandon et al., 2004). Further empirical research is needed to test the efficacy of the *LSBM* booklets versus alternative, shorter formats.

Despite their overall approval of the *LSBM* booklets, HCPs' comments suggested that, from a Puerto Rican cultural perspective, booklets may not represent an ideal modality for a standalone intervention in this population. HCPs' expressed that the booklets would be most effective if used under close supervision by HCPs and/or as a supplement to more visual and/or interactive interventions. In particular, HCPs' emphasized the importance and value of interpersonal ("person to person") contact as a means for distributing information in Puerto Rican culture, including within patient-provider relationships. For example, they suggested that the booklets could be distributed following *charlas* (health-related themed presentations open to the community). *Charlas* are a popular medium for providing health education in Puerto Rico that are designed to both disseminate information and motivate individuals for positive behavioral change. Consistent with this suggestion, previous research has demonstrated the short-term efficacy of *promotoras* (i.e., lay health advisors who have existing relationships in the community) for delivering smoking interventions to Hispanics (Woodruff, Talavera, & Elder, 2002).

Importance and Causes of Smoking Relapse in Puerto Rico

Additionally, HCPs were queried regarding their opinions as to the unique challenges experienced by ex-smokers in remaining smoke-free. Very few responses were considered specific to Puerto Rico, with the exception of economic problems related to the current time period. However, smoking relapse associated with economic stress is not specific to Puerto Rican culture and could occur in any region experiencing a recession. Instead, in addition to financial burden/poverty, HCPs identified availability of cigarettes, psychosocial stressors, and peer pressure as primary catalysts of relapse, similar to factors found in other general population studies (Zhou, Nonnemaker, Sherrill, Gilseman, Coste, & West, 2009; Brandon, Tiffany, Obremski, & Baker, 1990; Shiffman, Paty, Gnys, Kassel, & Hickcox, 1996; West, McEwen, Bolling, & Owen, 2001).

Limitations

The current study had several limitations that must be acknowledged. HCPs had a limited amount of time (generally 1–7 days) to review the booklets prior to the interviews because of the time frame of the study funding and investigator travel. Some HCPs admitted that they did not have time to read every booklet thoroughly. Another limitation was that although the booklets were developed to be culturally and linguistically appropriate for multiple Hispanic populations, this study was limited to Puerto Ricans. Also, in the current study only HCPs were interviewed. We chose to interview HCPs because it is intended that they will be primarily responsible for distributing the booklets. Also, we believed that they could offer valuable feedback regarding how the *LSBM* booklets would be received by the range of patients typically seen. Nevertheless, future research should also include the perspectives of individual pregnant women, specifically Puerto Ricans. Finally, despite the

interviewers' repeated attempts to clarify the difference between interventions targeting prevention of smoking initiation vs. smoking cessation vs. smoking relapse prevention, HCPs had difficulty understanding these distinctions, indicating a potential dissemination barrier. Moreover, HCPs responses' implied they believed other issues, such as the prevention of smoking among youth and prevention of youth pregnancy, were more important, urgent problems requiring intervention in Puerto Rico than prevention of post-partum relapse. Additional research on smoking rates and post-partum relapse rates among Puerto Rican women is needed to assess the accuracy of HCPs' perceptions and determine whether HCPs may benefit from education to increase awareness of the problem of post-partum relapse.

Conclusion

In summary, the *LSBM* booklets were generally well-received by a sample of HCPs on the island of Puerto Rico. Strengths of the self-guided intervention identified by HCPs included the quality of the transcreation, comprehensiveness, and focus on prolonged behavioral health change. Nevertheless, HCPs also suggested some possible changes to the booklets' format and content that they believed would improve their appeal and effectiveness, as well as some culturally-specific dissemination ideas. Additional research is needed to test the efficacy of the booklets for reducing smoking-relapse and to further examine the importance of utilizing culturally appropriate modalities (e.g., charlas) for disseminating health interventions, and ultimately producing behavior change. In general, however, findings indicated that these Spanish smoking relapse-prevention booklets for pregnant and post-partum women will address a need in Puerto Rico. Taking into account the recommendations and feedback received by the HCPs, the booklets appear to be ready for dissemination and efficacy evaluation.

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Table 1

English and Spanish Booklet Titles

Booklet Number	<i>Forever Free for Baby & Me</i> (English version)	<i>Libres Para Siempre Por Mi Bebé y Por Mi</i> (Spanish version)
1	An Overview	Información general
2	Partner Support	Apoyo del compañero
3	Smoking Urges	Impulsos de fumar
4	Smoking & Health	Fumar y salud
5	A Time of Change	Tiempo de cambios
6	What If You Have a Cigarette?	¿Qué ocurre si se fuma un cigarillo?
7	Smoking, Stress & Mood	Fumar, el estrés y los estados de ánimo
8	Lifestyle Balance	Estilo de vida equilibrado
9	Smoking & Weight	Fumar y el peso
10	Life Without Cigarettes	La vida sin cigarillos