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Understanding Sociodemographic and Sociocultural Factors that Characterize Tobacco use and Cessation during Pregnancy among Women in the Dominican Republic

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Abstract

Background—Tobacco use and exposure are serious public health problems that threaten to undermine improvements in maternal and child health, and add to already existing poor pregnancy outcomes in many low- and middle-income countries. The purpose of this study is to explore

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Competing Interests

None Declared.

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factors that characterize tobacco use and cessation during pregnancy among women in the Dominican Republic.

Methods—This study was part of a larger trial and includes a sample of women who participated in baseline surveillance and community assessments (N=613). Descriptive, bivariate, and multivariable analyses were conducted.

Results—Overall, 93.31% (n=572) of women experienced a past/current pregnancy and 22.44% (n=127) smoked during a past or current pregnancy. Among women who had smoked, 34.13% (n=43) stopped smoking due to a pregnancy, and 46.03% (n=58) were advised by a health care provider to quit smoking because of pregnancy. Women who were older, Catholic, and had a mother who used tobacco were three times more likely to smoke during a past or current pregnancy. Inability to read or write was also significantly associated with smoking during pregnancy. Women who were able to read and write and were from a tobacco growing community were three times more likely to quit smoking during pregnancy.

Conclusion—This study provides a preliminary understanding of factors influencing tobacco use and cessation among pregnant women in the Dominican Republic. It also informs a critical area for public health research and intervention, indicating opportunities to engage the health care provider community in intervening with pregnant women and their families.

Keywords

Global Maternal and Child Health; Tobacco Use and Cessation during Pregnancy; Pregnancy Health Behavior and Risk Factors

INTRODUCTION

Tobacco use continues to be the global leading cause of preventable morbidity and mortality among men, women, and children[1,2]. According to the most recent report on the global tobacco epidemic by the World Health Organization (2011), tobacco currently kills nearly 6 million people a year and this is expected to increase to over 8 million by the year 2030, with over 80% of these premature deaths occurring in low- and middle-income countries (LMICs)[1]. Although the global tobacco epidemic is in slow decline for men in some countries, tobacco use prevalence among women is increasing at alarming rates. Approximately 9% of all women smoke worldwide and by 2025 the prevalence is expected to increase to approximately 20%[3–5]. Recent findings from the Global Youth Tobacco Survey (GYTS) from 1999 through 2008 indicate that historical gender differences in smoking uptake and prevalence among girls (ages 13–15) are changing, with evidence suggesting increased smoking among girls[6]. These findings serve as further evidence of the expected increase of tobacco use among women in the 21st century and the sense of urgency to focus on gender-specific risks within the tobacco control framework.

Pregnancy and Tobacco Use

Research to understand, prevent and reduce tobacco use and exposure among women, including pregnant women, has been conducted primarily in high income countries, with few studies addressing these issues in LMICs. In addition, due to the stigma associated with

tobacco use among women in many LMICs, the true prevalence may be underestimated in existing studies[7,8]. Smoking prevalence for women in Latin American and the Caribbean (LAC) has been estimated at 22%[9]. This prevalence varies greatly, and is especially high for many countries in South America, ranging from 25% in Argentina and 26% in Cuba to 34% in Chile [8]. A recent study examining pregnant women's tobacco use and second-hand smoke exposure in five countries in Latin America found the prevalence of tobacco use to be <1% in Ecuador and Guatemala, 6% in Brazil, 10% in Argentina and 18% in Uruguay[10]. Secondhand smoke exposure was also high, ranging from 13% in Ecuador and Guatemala to 27% in Uruguay, and 30% in Argentina and Brazil[10]. Our recent study from one city in the Dominican Republic estimated tobacco use prevalence among pregnant women to be 3%, with exposure to secondhand smoke estimated at 16%[11]. This study also reported that 7% of pregnant women stated an intention to resume or begin smoking within the next year[11].

Smoking during pregnancy has an adverse effect on pregnancy outcomes, with women experiencing an increased risk of miscarriage, premature rupture of membranes, placental abruption, placenta previa, and preterm delivery[12,13]. Breastfeeding is also less common or of shorter duration, and milk production is lower among women who smoke compared to their non-smoking counterparts[12, 14]. Infants born to mothers who smoke during pregnancy can suffer from low birth weight, fetal retardation restriction, stillbirth, neonatal death, and sudden infant death syndrome[12,13]. Additionally, exposure to secondhand smoke during pregnancy increases the risk of low birth weight by 20% and is a known cause of lower respiratory tract illness, middle ear disease and sudden infant death syndrome in infants and children[15,16]. Although the adverse effects of tobacco use and exposure during pregnancy have been demonstrated and continue to become increasingly clear as research continues, the potential effects of non-cigarette tobacco products during pregnancy have not been as well researched[7]. These other types of tobacco products (e.g. self-rolled tobacco, smokeless tobacco, waterpipes, cigars, and pipes) are becoming increasingly popular among women, including pregnant women in many LMICs, and assessing them is critical but also a challenge given the variability that exists among these products. The purpose of this study is to understand sociocultural factors that characterize tobacco use and cessation during pregnancy among women in 6 economically disadvantaged communities in the Dominican Republic.

METHODS

Overview of Study

This study was part of a larger trial funded by the National Institutes of Health/Fogarty International Center initiative linking experienced investigators from North America with partners in LMICs. The goals of this project were to understand the landscape of tobacco use, establish and evaluate tobacco control and cessation activities, and build research capacity in the Dominican Republic both on a local and national level[17]. The larger study selected six economically disadvantaged and underserved communities in the Dominican Republic. Communities included two each of rural, peri-urban (areas with urban characteristics in remote settings) and small urban regions, which were selected to provide

matched pairs based on geographic characteristics, tobacco growing status, and health care services[17]. Some common characteristics of these communities were high unemployment rates, and limited access to electricity, running water, telephone service, post-primary education, paved roads and public transportation. Health care resources varied from a rural clinic usually staffed by one “medico pasante” (physician completing a year of medical rotation/residency), a nurse (licensed or often times auxiliary), a drug dispensary (“botica” which sold government subsidized drugs from a limited supply which was not consistently stocked by the government) employee, and an occasional voluntary public health worker (“promotora de salud”) to a tertiary public hospital (including medical specialists, inpatient and emergency services)[18,19]. Baseline quantitative assessments (surveillance, community, and smoker cohort surveys) were implemented from April –August 2004 to understand community-wide sociodemographic data, health status, tobacco use prevalence, and tobacco use related knowledge, attitudes, and practice[17]. Additionally, qualitative rapid assessment procedures (RAPs) were implemented to gain a more in-depth understanding about the sociocultural factors that contribute to the landscape of tobacco use among these communities[18–19]. Subsequently, both baseline assessments were used to develop and evaluate tobacco control and cessation activities in these communities. For the current study, baseline data from the surveillance and community surveys were used to explore sociocultural factors that characterize tobacco use and cessation during pregnancy among women in these 6 Dominican Republic communities.

Approval for this study was granted via Intuition Review Boards (IRB)/Institutional Ethics Committee (IEC) both in the US and Dominican Republic. In the US, the University of Rochester IRB approved this study. In the Dominican Republic, two different review processes were needed in order to meet both the Dominican Republic and US standards of approval. To meet Dominican Republic requirements, the project was approved by the Consejo Nacional de Bioética en Salud (CONABIOS), the national IEC established by the Dominican Republic government to monitor all international research collaborative projects being implemented in the country. To meet US requirements and the US Office of Human Research Protection (OHRP) IRB standards, the project was also approved by the IEC at the Universidad Autónoma de Santo Domingo (UASD)[20].

Study Sample

The sample for this study was drawn from a larger sample of women, ages 18 and older, who participated in both the baseline household surveillance and community assessments described previously (N=613)[17]. Briefly, approximately 175 households were randomly selected from each community for the surveillance survey and one adult member was randomly selected from each household for the community survey (total N= 1048 and 2331 for surveillance and community surveys, respectively). Participants were excluded from the present set of analyses if they did not experience a pregnancy (past or current). This yielded a final sample size of 572 women who reported having experienced a past or current pregnancy, of whom 127 reported smoking during a past or current pregnancy.

Measures

For this analysis, tobacco use related descriptive characteristics among pregnant women include smoking during a past or current pregnancy, quitting because of a past or current pregnancy, ever received advice to quit because of pregnancy from a health care provider (HCP), type of tobacco products used during pregnancy, and current smoking status. Sociodemographic variables include age, marital status, education, ability to read and write, and employment. Sociocultural factors include religion, parental tobacco use, and community type (tobacco growing versus non-tobacco growing).

Data Analyses

Bivariate analyses (χ^2) were conducted to explore differences between women who smoked and did not smoke during a past or current pregnancy. Multivariable analysis (logistic regression) was performed to characterize women who smoked during a past or current pregnancy and those who did not. Among the subsample of women who had ever smoked during a past or current pregnancy, bivariate (χ^2) and multivariable analyses were conducted to explore determinants of cessation due to pregnancy.

RESULTS

Tobacco Use Descriptive Characteristics among Pregnant Women

Table 1 presents tobacco use related descriptive characteristics among pregnant women. Overall, 93.31% (n=572) of women had experienced a pregnancy during their reproductive lives and 22.44% (n=127) smoked during a past or current pregnancy. Among women who had smoked during a past or current pregnancy, about one-third (34.13%; n=43) stopped smoking due to a pregnancy, and 46.03% (n=58) were advised by a health care provider to quit smoking because of their pregnancy. Tobacco products used during pregnancy varied; 52.46% (n=64) smoked cigarettes, 20.49% (n=25) smoked self-rolled cigarettes (called “pachuché”), 15.57% (n=19) smoked tobacco with a pipe (called “cachimbo”) and 11.48% (n=14) smoked cigars (total add up to more than 100% because women could report smoking more than one type of tobacco product). Among the overall sample of women, who had ever been pregnant, 22.44% self-reported being a current smoker compared to 73.23% among women who smoked during a past or current pregnancy.

Sociodemographic and Sociocultural Variables Associated with Tobacco Use during Pregnancy

Bivariate analyses are presented in Table 2 and explore the difference between women who smoked during a past or current pregnancy versus those who did not. Smoking during pregnancy was reported more often by older women ($\chi^2(1) = 39.95$, $p < .0001$), women with no partner ($\chi^2(1) = 4.21$, $p < .05$), women with an elementary education or less ($\chi^2(2) = 36.07$, $p < .0001$), and women who do not read or write ($\chi^2(1) = 26.63$, $p < .0001$). Women who smoked during a past or current pregnancy were also more likely to report a Catholic religious affiliation ($\chi^2(1) = 8.98$, $p < .005$), and a mother ($\chi^2(1) = 51.97$, $p < .0001$) or father who smoked ($\chi^2(1) = 6.34$, $p < .05$). No significant differences were found by employment status or tobacco growing community status.

A stepwise logistic regression was conducted to characterize women who smoked during a past or current pregnancy versus those who did not, entering the above significant variables. Older age (OR=3.37, 95% CI 1.98, 5.74), Catholic religious affiliation (OR=2.97, 95% CI 1.13, 7.84), and having a mother who used tobacco (OR=3.60, 95% CI 2.31, 5.62) were each associated with approximately a three-fold increase in odds of smoking during a past or current pregnancy. In addition, ability to read or write (OR=.51, 95% CI 0.31, 0.84) was associated with decreased odds of smoking during a past or current pregnancy. Results are presented in Table 3.

Sociodemographic and Sociocultural Variables Associated with Cessation during Pregnancy

Table 4 presents a secondary series of bivariate analyses to characterize women who stopped smoking during a past or current pregnancy versus those who did not. Women who stopped smoking were more likely to be able to read and write ($\chi^2(1) = 8.38$, $p < .005$) and to be from tobacco growing communities ($\chi^2(1) = 6.59$, $p < .05$).

A stepwise logistic regression entering the above variables was conducted to characterize women who stopped smoking during a past or current pregnancy versus those who did not. Women who were able to read and write (OR=3.08, 95% CI 1.17, 8.14) and were from tobacco growing communities (OR=2.83, 95% CI 1.14, 7.01) were about three times more likely to quit smoking during pregnancy. Results are presented in Table 5.

DISCUSSION

This study expands on a limited body of research examining tobacco use and cessation during pregnancy in LMICs like the Dominican Republic. Overall, one fifth of women who had ever been pregnant reported smoking during a past or current pregnancy. The prevalence reported in this study is relatively high compared to most recent national and regional rates of 3% [11, 21]. This discrepancy could be attributed to the retrospective nature of this study, which could have reduced the social stigma associated with tobacco use during pregnancy and allowed for more accurate self-report data. It may also reflect a change in smoking rates over time, though deception rates in more recent cohorts may have also increased if awareness about the risks of tobacco use and social stigma of tobacco use during pregnancy has increased over time.

According to the World Health Organization (WHO), 76% of the population in the Dominican Republic have access to health services located less than 2km from their home, and the percentage of women with access to prenatal care is estimated at 98.5%, with an average of four prenatal check-ups during the course of the women's pregnancy [22]. However, it is important to note that access to quality prenatal care can vary throughout the country due to significant income disparities and the rural nature of many regions in the Dominican Republic. Also as discussed previously, the health care resources ranged from a rural clinic to a tertiary public hospital in the communities for this study, which can affect access to prenatal care for women in this study [18]. Despite national data that supports having access to prenatal care, our study shows that only one third of women ever quit because of pregnancy and fewer than half received health care provider advice to quit

smoking because of pregnancy. The health care provider community has been identified as playing a critical role in reducing tobacco use and exposure among girls and women, including pregnant women[7,8], and the low rates of intervention represent a missed opportunity for care. Lack of awareness about the health risks of tobacco use and exposure for pregnant women and their children, and inadequate training are barriers for health care providers to effectively intervene with their patients[7,8]. Data from interviews conducted with health care workers (HCWs) in the 6 communities, in the larger study, support these data and show that HCWs did not have an accurate understanding of risks associated with tobacco use, had not ever had training in regards to tobacco-related risk factors or cessation strategies, and the majority were not proactive in the assessment of tobacco use among their patients[19]. Therefore, effective strategies are needed to address this gap and provide health care providers with the necessary tools to intervene with pregnant women and their families.

The type of tobacco products used by women who smoked during pregnancy varied and included cigarettes, self-rolled tobacco, cigars and pipe. Although the majority of women smoked cigarettes (52%), approximately half of the women reported smoking other types of tobacco products during a past or current pregnancy. Non-cigarette tobacco products are usually less expensive in the Dominican Republic relative to cigarettes, and are thought to be less harmful than commercial cigarettes by community members[18, 23–24]. Research indicates that these non-cigarette products can result in nicotine addiction[25]. Although evidence of the effects of non-cigarette tobacco products during pregnancy is limited and more research is needed to determine causality, some data suggest it causes a reduction in birth weight and height, and increases the risk of preterm delivery and stillbirth[25].

Prior research on factors that contribute to smoking before, during and after pregnancy suggest that women with less education, an absent partner, and unemployed status (indicating lower SES) are more likely to smoke during pregnancy[4, 26–28]. This study shows that women who could not read and write (an indicator of lower SES) were more likely to smoke and less likely to quit during pregnancy. Previous research also shows that parents who smoke are more likely to have children who smoke, with the influence of maternal smoking being slightly greater for female offspring[29]. In this study, women who reported having mothers who smoked were three times more likely to smoke during pregnancy. This study also found a high prevalence of current smokers among the overall sample (22%) of women and even higher prevalence among the subsample of women who smoked during pregnancy (73%). These data suggest high levels of nicotine addiction and/or postpartum smoking relapse. Prior research has shown postpartum smoking relapse rates ranging from 70–85% among women who smoke, with disadvantaged women being among the most susceptible to relapse[30]. Postpartum relapse prevention represents another important window of opportunity for effective public health intervention in efforts to reduce tobacco use among pregnant women.

Reports from numerous studies suggest that religiousness in different faiths is associated with lower tobacco use[31]. In this sample, being of Catholic religious affiliation was significantly associated with smoking during pregnancy. Differences in religious based restrictions and practices could be a contributing factor to this finding. Anecdotal evidence from participating communities in the current trial suggests that non-Catholic religions

(primarily Seventh Day Adventist and Evangelical) are more likely to specifically prohibit smoking among congregation members. The extent to which this anecdotal explanation and/or other factors can explain the observed relationship between religion and tobacco use requires additional systematic research.

Finally, the current study found greater likelihood of quitting due to pregnancy for women in tobacco growing communities in the Dominican Republic. It is not clear from this study why this is the case. It is possible that the higher overall smoking prevalence in tobacco growing communities[17] made the health effects of tobacco use more visible and motivated abstinence during pregnancy. Further research is needed to better understand these potential differences in tobacco use among pregnant women within the context of tobacco growing communities versus non-tobacco growing communities.

Widening the lens, study findings can also be viewed within a larger context of the Dominican Republic as an island country, which may influence tobacco use and exposure of pregnant women in at least several ways. Most island nations face challenges including depleting natural resources, changes in demand for limited exports that have a direct impact on revenue streams for the country, lack of a communication infrastructure, inadequate numbers of trained professionals (i.e. health care workers, teachers, engineers), and poverty[32]. Common to other island countries, the Dominican Republic also increasingly grapples with rising seas and harsh hurricanes that tax the national infrastructure[32] and may divert resources from preventive measures such as tobacco control. A key economic driver in many island countries is tourism[32] and in the Dominican Republic specifically 100% smokefree hotels are rare or nonexistent purportedly because of perceptions that doing so risks alienating tourists who smoke. The result is that service workers, including pregnant women, across the country are exposed to secondhand smoke at the worksite. Finally, its relative isolation as an island community may limit the influence of other Latin American and Caribbean countries, such as Uruguay, that have implemented evidence-based national tobacco control programs[33]. This relative isolation, combined with these other island specific factors, may at least partly explain why the Dominican Republic is the only country in the LAC region not to have signed on to the global Framework Convention on Tobacco Control (FCTC), a landmark international treaty negotiated under the auspices of the World Health Organization in 2003 to identify evidence-based steps for comprehensive national tobacco control implementation to reduce to toll of tobacco use. To our knowledge, outside of our project, there is no national tobacco control program in the Dominican Republic, no infrastructure for providing a trained workforce or resources for tobacco intervention, no national awareness campaigns regarding risks of tobacco use and benefits of quitting, and no organized enforcement of clean indoor air regulations – all of which results in limited protection against tobacco use and exposure to secondhand smoke among pregnant women in the Dominican Republic.

Results from this study should be viewed with caution because they are based on a of retrospective self-reported tobacco use status and under-reporting or hidden smoking may occur differentially across the age groups and communities[10, 18]. Also, among women who reported using tobacco during a past or current pregnancy, approximately 83% were among the older cohort, and differences in access to prenatal care and changes in social

acceptability of smoking during pregnancy might be contributing factors to observed differences based on age among this sample. Biochemical verification to determine the accuracy and reliability of such self-reports was not feasible in this study. In addition, though this study did not allow for an in depth examination of the sociodemographic and sociocultural factors associated with tobacco use and cessation during pregnancy, it does provide as a preliminary understanding of this issue among three types of communities (urban, peri-urban, and rural) in the Dominican Republic.

CONCLUSION

Overall, the current study begins to identify sociodemographic and sociocultural factors associated with tobacco use and cessation among pregnant women in six economically disadvantaged communities in the Dominican Republic. With disproportionate increases in smoking prevalence in countries like the Dominican Republic, maternal tobacco use and exposure during pregnancy will continue to grow and the consequences will extend beyond health-related outcomes, and play a crucial role in families financial and overall well-being. Reliable and systematic data are needed in low- and middle-income countries to develop a comprehensive understanding of the sociocultural context of tobacco use, exposure to secondhand smoke, and cessation among pregnant women and their families. Such data can help identify barriers that women face in regards to their health and aid in the development of effective gender-specific intervention and policies that can enhance current tobacco control and prevention efforts[34].

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Table 1

Tobacco Use Descriptive Characteristics of Pregnant Women

	N	%
Women who have ever been pregnant	572 ¹	93.31
Women who smoked during a past or current pregnancy	127 ²	22.44
Women who ever stopped smoking due to a pregnancy	43 ³	34.13
Women who ever received advice to quit because of pregnancy by HCP	58 ³	46.03
Type of tobacco used during pregnancy ⁴		
Cigarettes	64 ⁵	52.46
Self-rolled (pachuché)	25 ⁵	20.49
Pipe (cachimbo)	19 ⁵	15.57
Cigar	14 ⁵	11.48
Current Smoking Status		
Among overall sample	127 ²	22.44
Among women who smoked during past/current pregnancy	93 ⁶	73.23

¹ Out of total sample N=613

² Denominator=566, reflecting 6 missing cases

³ Denominator=126, reflecting 1 missing case

⁴ Total adds up to more than 100% because women reported smoking more than one type of tobacco product

⁵ Denominator=122, reflecting 5 missing cases

⁶ Denominator=127

Table 2

Sociodemographic and Sociocultural Variables Associated with Tobacco Use during Pregnancy

Variable	Did not smoke during past or current pregnancy (N=439)	Smoked during past or current pregnancy (N=127)	Overall (N=566)
<i>Sociodemographic Variables</i>			
Age***			
18–39	210 (90.91)	21 (9.09)	231 (40.81)
40–60+	229 (68.86)	106 (31.64)	335 (59.19)
Marital Status*			
Without partner	173 (73.31)	63 (26.69)	236 (41.70)
With partner	266 (80.61)	64 (19.39)	330 (58.30)
Education***			
Elementary	252 (69.81)	109 (30.19)	361 (63.89)
JHS+ HS+ Voc.	135 (88.82)	17 (11.18)	152 (26.90)
University	51 (98.08)	1 (1.92)	52 (9.20)
Ability to Read/Write***			
No	59 (58.42)	42 (41.58)	101 (17.97)
Yes	378 (82.00)	83 (18.00)	461 (82.03)
Employment ^I			
No	332 (75.97)	105 (24.03)	437 (77.21)
Yes	107 (82.95)	22 (17.05)	129 (22.79)
<i>Sociocultural Variables</i>			
Religion**			
Catholic	359 (74.79)	121 (25.21)	480 (87.59)
Non-Catholic	62 (91.18)	6 (8.82)	68 (12.41)
Parental Tobacco Use			
Mother Smoked***	141 (62.11)	86 (37.89)	227 (40.11)
Father Smoked*	228 (73.55)	82 (26.45)	310 (54.77)
Community Type ^I			
Tobacco Growing	208 (76.75)	63 (23.25)	271 (59.30)
Non-Tobacco Growing	141 (75.81)	45 (24.19)	186 (40.70)

Proportions are column percentages. All data are N(%).

^I Variables are not significant at p>.10

* p<.05;

** p<.005;

*** p<.001

Table 3

Determinants of Smoking during Past or Current Pregnancy

Variable	Odds Ratio	95% CI
Age (18–39* vs. 40–60+)	3.367	(1.98, 5.74)
Religion (Catholic vs. Non-Catholic*)	2.973	(1.13, 7.84)
Ability to Read/Write (Yes vs. No*)	0.507	(0.31, 0.84)
Mother Tobacco Use (Yes vs. No*)	3.603	(2.31, 5.62)

* Indicates reference group

Table 4

Sociodemographic and Sociocultural Variables Associated with Cessation during Pregnancy

Variable	Stopped smoking in a past or current pregnancy (N=43)	Did not stop smoking in a past or current pregnancy (N=83)	Overall(N=126)
<i>Sociodemographic Variables</i>			
<i>Age^I</i>			
18–39	8 (38.10)	13 (61.90)	21 (16.67)
40–60+	35 (33.33)	70 (66.67)	105 (83.33)
<i>Marital Status^I</i>			
With partner	21 (32.81)	43 (67.19)	64 (50.79)
Without partner	22 (35.48)	40 (64.52)	62 (49.21)
<i>Education^I</i>			
Elementary	37 (34.26)	71 (65.74)	108 (85.71)
JHS	6 (33.33)	12 (70.59)	18 (14.29)
<i>Ability to Read/Write^{**}</i>			
Yes	36 (43.37)	47 (56.63)	83 (66.94)
No	7 (17.07)	34 (82.93)	41 (33.06)
<i>Employment^I</i>			
Yes	9 (40.91)	13 (59.09)	22 (17.46)
No	34 (32.69)	70 (67.31)	104 (82.54)
<i>Sociocultural Variables</i>			
<i>Religion^I</i>			
Catholic	42 (83.33)	78 (65.00)	120 (95.24)
Non-Catholic	1 (16.67)	5 (6.02)	6 (4.76)
<i>Parental Tobacco Use^I</i>			
Mother Smoked	6 (30.23)	60 (69.77)	86 (68.25)
Father Smoked	31 (37.80)	51 (62.20)	82 (65.08)
<i>Community Type[*]</i>			
Tobacco Growing	28 (44.44)	35 (55.56)	63 (58.88)
Non-Tobacco Growing	9 (20.45)	35 (79.55)	44 (41.12)

Proportions are column percentages. All data are N(%).

^I Variables are not significant at p>.10

* p<.05;

** p<.005

Table 5

Determinants of Cessation during Past or Current Pregnancy

Variable	Odds Ratio	95% CI
<i>Ability to Read/Write (Yes vs. No [*])</i>	3.08	(1.17, 8.135)
<i>Tobacco Growing Community (Yes vs. No [*])</i>	2.83	(1.14, 7.01)

*
Indicates reference group