Attitudes Towards Cervical Cancer Screening: A Study of Beliefs Among Women In Mexico

Myriam Leyva, Theresa Byrd, Patrick Tarwater

The University of Texas School of Public Health

Abstract

Pap smear testing continues to be the single most effective tool in reducing deaths due to cervical cancer (Watkins, Gabali, Winkleby, Gaona & Lebaron, 2002). Despite the creation of a national cervical cancer screening program, more than 4,000 women die every year in Mexico from this disease. This study explored the knowledge, attitudes, and behaviors of Mexican women regarding cervical cancer screening, and identified beliefs and barriers that may influence cervical health. All analyses compared women who had ever had a Pap test in their lives ("ever") with women who had never had a Pap test ("never"). In bivariate analyses, the following variables were significantly associated ($p<0.05$) with ever having a Pap test at least once in their life: being given information on Pap test by their doctor, number of pregnancies, knowing someone who has been diagnosed with cervical cancer, education level, age, and type of healthcare facility used most often. The surprisingly high rate of ever screening in this sample (85%) was an unexpected finding in this study. More research is needed in order to understand the cultural beliefs and screening behaviors of this unique population. Future interventions must address the barriers cited by the women in our sample by tailoring interventions specifically to Mexican women and their belief system.

Keywords: cervical cancer, screening, Mexico, women

Introduction

Cervical cancer is the second most common cancer among females in the world and the most common in developing countries (Lazcano-Ponce et al., 1999). The total number of deaths worldwide is 235,000 annually. The highest rates have been reported in Central America and Mexico (Lazcano-Ponce et al., 2001). Secondary prevention, achieved through Pap smear testing, is the single most effective tool in reducing deaths due to cervical cancer (Watkins, Gabali, Winkleby, Gaona, & Lebaron, 2002). Despite the creation of a national cervical cancer screening program, more than 4,000 women die every year in Mexico from this disease. Even though cervical cancer has historically been one of the most treatable cancers, it continues to be a major public health concern which results in a death every 2 hours in Mexico alone (Hernadez-Avila, Lazcano-Ponce, DeRuiz, & Romieu, 1998). Specifically, in 2002, the mortality rate in Mexico was 16.9 per 100,000. That same year, the mortality rate in Ciudad Juarez was 27.7 per 100,000. However, rates have decreased over the years and are highest in the southern states of Veracruz, Morelos, Oaxaca, Chiapas, Campeche, and Yucatan (Panorama Epidemiologico, 1998-2002).

Background and Public Health Significance

A critical way to prevent cervical cancer is to have Pap tests to detect cervical cell changes. Most invasive cervical cancers are found in women who have not had regular Pap smears. Half of women diagnosed with cervical cancer are between the ages of 35-55 (American Cancer Society, 2004) .Watkins and associates (2002) state that between 20-60% of all cervical cancer deaths could be avoided by improving screening programs.

In most industrialized countries, mortality rates from cervical cancer have decreased markedly through early detection programs that stress the use of Pap tests (Lazcano-Ponce et al., 1999). However, in Mexico, it is estimated that over 62,000 deaths from cervical cancer have occurred in the past 15 years. Cervical cancer continues to be the leading cancer killer among women over the age of 35 (Agurto, Bishop, Sanchez, Betancourt & Robles, 2004).The state of Nayarit has the highest cervical cancer incidence rates in the country (Agurto, Bishop, Sanchez, Betancourt, & Robles, 2004). This is despite the fact that a cervical cancer screening program (CCSP) has been in place since 1974.

The Health Ministry of Mexico regulates the CCSP within the National Health System. The Pap test is offered to women in each of the 32 states of the Mexican republic. In Mexico, the guidelines (as of 1996) recommend one Pap test per year for women after they have become sexually active, and do not establish an upper age limit (Lazcano-Ponce, Moss, de Ruiz, Castro, Hernandez-Avila, 1999). The cervical cancer mortality rate for Mexico is 14.7 per 100,000 women (Hernandez-Avila, Lazcano-Ponce, De Ruiz & Romieu, 1998), the highest in the world, compared to a mortality rate of 3.7 per 100,000 for Hispanics in the U.S. (American Cancer Society, 2003). In Chihuahua, the mortality rate associated with cervical cancer is 8.3 per 100,000 women (Chihuahua state government, 2002).

Reasons cited in the literature for low rates of Pap testing include low education, low acculturation, lower cognitive scores, and other demographic, social and psychological factors (Wu, Black, & Markides, 2001). Factors associated with low effectiveness of screening in Mexico are quality and coverage (Lazcano-Ponce et al., 1999). For example, the quality of the actual sample is often deficient and the false negative rate for Pap smears is between 10 and 54%. In addition, coverage is low, with about 64.2% of women in Mexico City having a history of Pap. This is in stark contrast to the 30% of women in rural areas that have a history of Pap (Lazcano-Ponce et al., 1999). Factors related to cervical cancer mortality include lack of formal education, low socioeconomic level, unemployment, rural residence, and insufficient access to healthcare (Palacio-Mejia, Rangel-Gomez, Hernandez-Avila, & Lazcano-Ponce, 2003).

There is a clear need to delve deeper and explore the underlying beliefs and attitudes of Mexican women that are leading to such low rates of cervical cancer screening, even with the existence of a national screening program. Further exploratory research may add to the knowledge base and contribute to current prevention efforts, with the overall goal of decreasing mortality rates from cervical cancer. It is important to take into account the beliefs, barriers and expectations of the women at risk in order to understand more about the factors associated with low screening rates. Only then can appropriate interventions be developed.

Most literature has focused on screening rates and factors related to low screening rates in other parts of Mexico, mainly rural areas. Not much has been researched about the city of Juarez, Chihuahua, which boasts a population of 1.2 million, most of whom have no formal education (Mexico Census, 2000). In addition, the *maquiladora* businesses in Juarez lure hundreds of young women from other areas of Latin America each month (Landau, 2002). Maquiladoras are assembly-oriented manufacturing plants that are generally foreign-owned (Hernandez, 2004). These foreign industries offset the high cost of labor in their own countries by hiring cheaper labor in countries like Mexico (Verghese, 2004). The fact that these factories permeate Mexican economics and employ such a large number of women presents a favorable opportunity to learn more about their beliefs, attitudes, and barriers regarding cervical cancer screening in order to respond with appropriate interventions and ultimately reduce Mexico's mortality rate due to low screening rates.

Methods

Study Design and Study Population

The study population was women over the age of 18, who currently reside in Cd. Juarez, Mexico. This population yielded a random

sample by utilizing Geographic Information Systems (GIS) technology to randomly select block groups from which to sample women. We chose 10 houses from each of 15 randomly selected block groups out of the 461 block groups identifiable with *colonias*. Interviewers went door-to-door, starting in the middle, until they found 10 women in each block group (150 women) willing to participate. Selecting block groups as opposed to streets addressed the issue of excluding homes on streets with no names.

All women over the age of 18, who currently reside in Ciudad Juarez, were eligible to take part in the study. No men and women under 18 were allowed to participate in this study.

Data Collection Instrument and Procedures

The survey instrument was based on a variety of theories and models, most notably the Health Belief Model (HBM) and the Theory of Planned Behavior (TPB). Survey questions were based upon the following constructs: perceived susceptibility, perceived seriousness, perceived benefits, perceived barriers, self-efficacy, attitudes, subjective norms, perceived behavioral control, and intention.

Interviewers were trained promotoras employed by FEMAP. Each interviewer approached each house in the chosen block group and asked to speak to a woman in that house over 18 years of age. If there was more than one woman over 18 in a home, the woman with the latest birthday was asked to participate. Selection in each block group continued until 10 women had been interviewed.

Given the low literacy levels in the area, interviewers asked the survey questions verbally, in Spanish. All participants were asked to sign a consent form before they were interviewed. Each woman was given a $10 gift certificate after the interview was completed, as a token of appreciation for her time and cooperation.

The survey contained questions on knowledge, attitudes and behaviors regarding cervical cancer screening. In addition, the survey elicited responses about belief systems and barriers that may influence cervical health among Mexican women. Questions to determine frequency of Pap smears and history of screening were also included in the survey.

Data were entered into and analyzed using the SPSS database program version 10.1.0. Independent variables in this study consisted of demographic variables and Health Belief Model (HBM) construct scale scores, including perceived susceptibility, perceived severity, benefits, barriers, and self-efficacy. Theory of Planned Behavior (TPB) constructs (behavioral intention, attitudes, subjective norm, and perceived behavioral control) also served as independent variables. For example, one barrier measure was “It is too expensive to have a Pap test”. An example of a subjective norm measure was “My husband or partner thinks I should have regular Pap tests”. Responses used Likert-type scaling, ranging from 1 (strongly agree) to 5 (strongly disagree). Scores were obtained by summing responses to each statement on the scale.

The outcome of interest was whether a study participant reported having had at least one Pap smear, which was treated as a dichotomous variable (yes/no).

Data Analysis

Researchers computed descriptive statistics including frequencies and means and standard deviations for discrete and continuous study variables, respectively. Cronbach’s alpha coefficient was computed to test internal consistency reliability of the HBM construct scales.

This study was based on a cross-sectional design and the objective of the data analysis was to test the association of demographic characteristics and certain theoretical constructs on Pap smear utilization.

Bivariate tables were used to summarize the association of independent and dependent variables. Fisher’s exact test was computed for each of the discrete predictor measures since contingency table cells frequently contained

fewer than five responses. We compared those women who had never had a Pap smear to those who had ever had a Pap smear, for all variables (demographic, HBM constructs, and TPB constructs).

Results

The final sample consisted of 150 females between the ages of 18 and 74. Appendix A summarizes characteristics of the study participants. Overall, 84.7% had ever had a Pap test and 68.7% reported having some kind of health care coverage, including private insurance, Seguro Social, ISSTE, or other health coverage. The majority (69.3%) were currently married and almost half (48.3%) of the participants had a monthly household income of less than 2000 pesos (approx. 180 US dollars). In addition, only 14% reported having completed high school. Approximately 75% of the sample had ever been given information on the Pap test from their healthcare provider.

Cronbach's alpha coefficients were computed to test internal consistency reliability of the HBM construct scales. The benefits, barriers, and self-efficacy subscales indicated reliable alphas of 0.76. The subjective norm scale produced a Cronbach's alpha of 0.71. The susceptibility and severity alphas were a bit smaller, indicating less reliable scales (susceptibility= 0.44, severity= 0.595).

All analyses compared women who had ever had a Pap test in their lives ("ever") with women who had never had a Pap test ("never"). In bivariate analyses, the following variables were significantly associated ($p<0.05$) with ever having a Pap test at least once in their life: being given information on Pap test by their doctor, number of pregnancies, knowing someone who has been diagnosed with cervical cancer, education level, age, and type of healthcare facility used most often.

Regarding age, the majority (55.1%) of the women who had ever received a Pap test were 36 years or older. Those who had never had a Pap test were more likely to be in the "less than 25 yrs" age group. Those women who had experienced more pregnancies were more likely to have ever had a Pap test ($p=0.002$). Regarding healthcare access, those women who had ever had a Pap test were more likely to use the Instituto Mexicano del Seguro Social (IMSS) clinic most often, whereas the women who had never had a Pap test were more likely to use a doctor's office for healthcare services. Interestingly, when considering education level, the women who reported having had a Pap test were more likely to have completed up to elementary school, while those in the "never" group were more likely to have completed up to middle school.

Of those who had never had a Pap test or who hadn't had one in more than three years, the most important reasons for not doing so were never thinking about it, not having any problems, and putting it off. Conversely, of those who had ever had a Pap, the most cited reasons that encouraged them were a reminder from the doctor, an ad on TV, and self-referral.

Perceived susceptibility responses were compared across both outcome groups ("ever" vs. "never"). Overall, those in the "never" group had higher susceptibility scores than the "ever" group. That is, a larger percentage of the "never" group either agreed or strongly agreed with the positive statements about susceptibility. However, when comparing responses on individual susceptibility items, a full 65.2% of those in the "never" category either agreed or strongly agreed that compared to other women, they are at a lower risk for cervical cancer, as compared to 59.5% of those in the "ever" category ($p=0.04$).

When it came to perceived severity, both groups equally agreed that there are effective treatments for cervical cancer and that cervical cancer is not as serious as other types of cancers. However, twice as many women in the "ever" group believed that cervical cancer is easily cured, although this result was not statistically significant.

There was a significant association between believing a Pap test can be done quickly and ever having had a Pap test ($p<0.001$). Of those women who agreed with this statement, 93.7%

had ever had a Pap test, as compared to 63.7% in the "never" group. This suggests that perhaps those women who had never had a Pap test believe it takes too much time, thus creating a barrier for them.

None of the questions assessing subjective norm proved to be statistically significant, although there was a trend towards significance regarding the item "I try to do what my doctor thinks I should do" (p=0.056). The overall findings suggest that, for these women, subjective norm is not a very good predictor of ever having had a Pap test. That is, they do not seem to perceive social pressure to perform or not perform the behavior (getting a Pap test).

Of the women in our sample, those who had ever had a Pap test were more likely than those who had not to say they felt very sure or completely sure they could have a discussion with their healthcare provider regarding the test (82.4% vs. 78%), they could get a Pap test even if they were worried that it will be painful (74% vs. 57%), and that they could get a Pap test even if they were worried that it would be embarrassing (49.6% vs. 22%). In contrast, those who had never had a Pap test were more likely than those who had to say they felt sure or completely sure that they could make an appointment to have a Pap test (87% vs. 84%) and that they would be able to reschedule if an appointment were missed (95.5% vs. 90%), which was the only statistically significant finding (p=0.031).

Perceived barriers were also assessed with this sample. When comparing responses between the women who had had the Pap test and those who had not, three of the items proved to be statistically significant: Pap test being painful (p<0.001), Pap test being too expensive (p=0.009), and not knowing where to go for a Pap test (p=0.048). In addition, when comparing women who had ever had a Pap test with those who had never had a Pap test, more women in the latter group cited the following barriers: worry, painful test, being examined by a male provider, fear of test results, embarrassment, not knowing where to go for a Pap test, assumptions that the woman is having sex, not believing it is important for a woman their age, and distrust of labs that assess the tests. Only two of these differed significantly: fearing a painful test and not knowing where to go for a Pap test (Appendix B).

Discussion

The surprisingly high rate of ever screening in this sample (85%) was an unexpected finding in this study. Compared to one study by Byrd (2004), this rate is high. Byrd found that 69% of Hispanic women along the U.S.-Mexico border had ever had a Pap test. In addition, more women in that study agreed with the barrier statements and the agreement with barriers statements was more often associated with never having had a Pap test. However, it is worth noting that the women in that study were restricted to 18-25 years of age.

Our results are not consistent with findings from other studies done in Mexico. A study in Mexico City showed that only 64.2% of women had a history of Pap test; that number is even lower in rural areas (Lazcano-Ponce, Moss, de Rufz, Castro & Avila, 1999). The lower prevalence of screening in younger women in our study is consistent with a study by Lazcano-Ponce et al. (2002).

Federacion Mexicana de Asociaciones Privadas (FEMAP) foundation, the Mexican entity we worked with in this study was recently funded by the Paso del Norte Health Foundation to deliver cancer screening tests to the population they serve. Their outreach into the communities may explain this relatively high rate of screening. This foundation's mission is to raise the quality of life among people living in poverty in Mexico, through a variety of health, economic, and social services. The foundation is equally committed to improving conditions on both sides of the border, through the support of many programs. Through a Family Hospital, they have helped to build sustainable health programs, which focus on disease prevention, immunization campaigns, family planning, drug and alcohol-abuse prevention, and HIV/AIDS prevention. It is possible that the foundation has already raised awareness of the need for testing in the majority of communities in Ciudad Juarez.

Overall, the women in our study understood their susceptibility to and the severity of cervical cancer. Those who had never had a Pap test perceived themselves to be less susceptible (at a lower risk for cervical cancer) than other women their age. This is consistent with the Health Belief Model and its hypothesis that actors feel more susceptible than non-actors do.

The women overwhelmingly agreed that numerous benefits exist to screening. They agreed that regular Pap tests would give them peace of mind, find a problem before it develops into cancer, are necessary even if there is no family history or cancer, and are very accurate tests for cancer.

A notable percentage of women in our study (32%) agreed that being examined by a male provider would discourage them from getting a Pap test, which is also important when considering what could be done to reduce these barriers. In addition, 36% agreed that if a woman has not had sex, a Pap test will take away her virginity, which points to the need for correcting misperceptions about the Pap test. Similarly, 38% agreed that if a young, unmarried woman goes for a Pap test, everyone will assume she is having sex. Being worried about the test and feeling embarrassed appear to be valid barriers to screening and should also be addressed in future interventions.

Overall, the majority of the women agreed that their husbands think they should have regular Pap tests; however, fewer women agree that they try to do what their partner wants them to do. In contrast, almost all of the women try to do what the doctor thinks they should do. A full 89% of the women reported that they planned to have a Pap test in the next six months, which is very promising. Self-efficacy did not appear to be a contributing factor in getting a Pap test. Both groups appeared to feel confident that they could perform the behavior.

When looking at differences between both comparison groups (ever had a Pap test vs. never had a Pap test), women who had never had a Pap test were more likely to use a private doctor's office, as opposed to women who had ever had a Pap test, who were more likely to use the IMSS clinic (Mexican social security system). One possible reason for this is that those using private doctors may be receiving care less often if they have to pay for care, and so they may not be exposed to the messages or are not being encouraged to be screened. The results corroborate this, as one of the variables that was significantly associated with ever having a Pap test was being given information on the Pap test by a doctor. This demonstrates the grave need for the physician to be active in communicating to women the importance of the Pap test.

There was not much difference between groups in perceived benefits other than the quickness of the test, which the women in the "never" group did not perceive as a benefit. However, this may be a result of them never actually having gone through the test so they do not have an accurate perception of how long it actually takes.

When considering subjective norm, nothing seemed to be close to significance except for the item that assessed whether women do what the doctor thinks they should do. Once again, this demonstrates that the doctor is an important vehicle for information exchange. Previous literature cited negative social pressure from male partners (Lazcano-Ponce et al., 1999) as a barrier to screening; however, we did not find this in our study. When comparing groups on self-efficacy measures, significantly more women in the "ever" group reported being more sure that they could find time in their schedule for the appointment.

The fact that the barrier "Pap test is painful" remained significant in further analyses speaks to its importance. Access to healthcare and issues of cost also seemed to be notable barriers for many women. However, this might be an indicator that many women are not aware that the national screening program provides free or very low-cost Pap tests to all Mexican women.

This study yielded barriers that have also proven significant in previous studies, including access (Agurto, Bishop, Sanchez, Betancourt & Robles, 2004); cost and not being told of the test by their

doctor (Fernandez-Esquer, Espinoza, Torres, Ramirez & McAlister, 2003); pain and embarrassment (Lazcano-Ponce et al. 1999); and education level (Lazcano-Ponce et al. 2002).

Other barriers that have been cited in the literature which were not found to be significant in this study include fear of results (Agurto, Bishop, Sanchez, Betancourt & Robles, 2004), fatalism, opposition by male partner, and being examined by male providers (Lazcano-Ponce et al. 1999).

Strengths

The paucity of research in this area and with this population indicates a need for further research. This study serves as an impetus for future researchers to replicate the study with a larger sample size, thus adding to the knowledge base and bringing us a step closer to understanding screening practices and barriers to screening in this population. Interventions could easily be developed using the findings of the study. Pre-testing the instrument with this smaller sample of women enables researchers to make improvements to the study design and research process, thereby improving the internal validity of the study.

Limitations

The high rate of screening found in this study may very well be because some of the women in our sample may not have felt comfortable reporting such sensitive material to the lay health workers that visited their homes, thus introducing self-report bias. Perhaps they were hesitant to disclose this personal information to the interviewers, some of which had become close friends by means of other work they had done in the community. Lack of training may also have contributed to the interviewers not administering the survey correctly, thus compromising the validity of the results.

Conclusions & Recommendations

Cervical cancer continues to be a major public health problem in Mexico, despite the national screening program that has been in existence since 1974. Current screening guidelines are ambiguous at best. An annual Pap test is recommended for women after they have begun sexual relations, but there is no age limit (Lazcano-Ponce et al., 1998). Numerous studies have documented the lack of effectiveness of the program and attributed its suboptimal success to factors associated with quality of care and coverage (Lazcano et al., 2002). Perhaps coverage could be improved by raising awareness of the program and its benefits, including the free services. The high rate of screening in our study is hopeful, as it may be a sign of already increased coverage of the program in Juarez.

More research is needed in order to understand the cultural beliefs and screening behaviors of this unique population. It is important to target younger females when developing future interventions, as women younger than 25 years old were less likely to have had a Pap test. In addition, it would be wise to develop interventions to raise awareness, involve doctors, and place more ads on television, perhaps during Mexican *telenovelas* (soap operas).

It is also evident that doctors must play a more active role in disseminating information and advising their female patients to undergo the Pap test. According to Austin, Ahmad, McNally, and Stewart (2002), physician recommendation is one of the most important cues to action. There is a greater need for better communication between the provider and the patient, particularly because if the doctor is the persuader of the recommendation, the likelihood of accepting the importance of this screening is increased. Physicians and healthcare personnel alike must work to reduce the anxiety of women concerning their worries about painful test and embarrassment if we are to begin to work toward the ultimate goal of increased screening.

Future interventions must address the barriers cited by the women in our sample by tailoring interventions specifically to Mexican women and their belief systems. In addition, given that barriers proved to be important determinants of screening with this sample, perhaps they could be explored further by means of qualitative research, including focus groups and direct interviews. This would enable us to corroborate

the findings of the current study, and work towards planning successful interventions specifically tailored to this population, while contributing to the knowledge base.

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Author Information
Myriam Leyva
1885 El Paseo, #814
Houston, TX 77054
Ph. 915-241-8841
E-Mail: Myriam.E.Leyva@uth.tmc.edu

Theresa Byrd, DrPH, Associate Professor
1100 N. Stanton
Ph.: 915-747-8504
E-Mail: Theresa.L.Byrd@uth.tmc.edu

Patrick Tarwater, PhD, Associate Professor
1100 N. Stanton
Ph.: 915-747-8277
E-Mail: Patrick.M.Tarwater@uth.tmc.edu

Appendix A

Demographic and health characteristics of the study population, by history of Pap test.

Characteristic	Total (%) N=150	Ever (%) N=127	Never (%) N=23	*p*-value
Highest educational level attained				0.028
Elementary School	44.0	52.8	28.6	
Middle School	32.0	30.6	61.9	
High School	14.0	16.7	9.5	
More than High School	10.0	9.3	0.7	
Has health care coverage				0.051
Yes	68.7	72.4	47.8	
No	30.0	26.0	52.2	
Ever had Pap test				
Yes	84.7	--	--	
No	15.3	--	--	
Perception of current health status				0.367
Excellent	2.7	3.1	0.0	
Very Good	11.3	9.4	21.7	
Good	32.7	34.6	21.7	
Fair	49.3	48.8	52.2	
Poor	4.0	3.9	4.3	
Ever been pregnant				0.628
Yes	94.0	94.5	91.3	
No	6.0	5.5	8.7	
Ever heard of cervical cancer				0.422
Yes	91.3	92.1	87.0	
No	8.7	7.9	13.0	
Marital Status				0.759
Never married	13.3	14.2	8.7	
Married	69.3	67.7	78.3	
Separated	9.3	8.7	13.0	
Divorced	2.7	3.1	0.0	
Widowed	4.7	5.5	0.0	
Last month's household income				0.301
Less than 2000 pesos	48.3	49.5	42.1	
Between 2000 and 4000 pesos	38.3	35.6	52.6	
More than 4000 pesos	13.3	14.9	5.3	
Age group				0.001
Less than 25 yrs	17.3	11.8	47.8	
25-35 yrs	32.7	33.1	30.4	
36-45 yrs	28.0	30.7	13.0	
46+	22.0	24.4	8.7	
Ever smoked cigarettes				0.821
Yes	44.7	44.1	47.8	
No	55.3	55.9	52.2	

Appendix B

Description of Perceived Barriers responses and comparison across "Ever had Pap smear" and "Never had Pap smear" via Fisher's Exact Test.

Perceived Barriers	Ever (%) N=127	Never (%) N=23	*p*-value
Getting a Pap test would only make me worry.			0.117
Strongly agree	2.4	8.7	
Agree	13.4	17.4	
Undecided	7.1	17.4	
Disagree	72.4	52.2	
Strongly disagree	4.7	4.3	
The Pap test is painful.			0.000
Strongly agree	2.4	0.0	
Agree	8.7	17.4	
Undecided	3.2	34.8	
Disagree	77.8	39.1	
Strongly disagree	7.9	8.7	
It is too expensive to have a Pap test.			0.009
Strongly agree	0.8	0.0	
Agree	9.4	0.0	
Undecided	3.1	21.7	
Disagree	78.0	65.2	
Strongly disagree	8.7	13.0	
Being examined by a male provider would discourage me from getting a Pap test.			0.931
Strongly agree	7.9	13.0	
Agree	23.0	21.7	
Undecided	3.2	0.0	
Disagree	77.1	56.5	
Strongly disagree	8.7	8.7	
If I don't have any discomfort or pain, I don't need a Pap test.			0.350
Strongly agree	13.4	4.3	
Agree	14.2	17.4	
Undecided	0.8	4.3	
Disagree	66.1	65.2	
Strongly disagree	5.5	8.7	
I would not get a Pap test because of fear of test results.			0.367
Strongly agree	3.1	4.3	
Agree	4.7	13.0	
Undecided	2.4	0.0	
Disagree	83.5	73.9	
Strongly disagree	6.3	8.7	
It is too embarrassing to have a Pap test.			0.953
Strongly agree	3.1	4.3	
Agree	18.9	21.7	
Undecided	4.7	4.3	
Disagree	65.4	65.2	
Strongly disagree	7.9	4.3	

Perceived Barriers	Ever (%) N=127	Never (%) N=23	*p*-value
If a woman has not had sex, a Pap test will take away her virginity.			0.568
Strongly agree	12.7	14.3	
Agree	25.4	17.4	
Undecided	18.3	17.4	
Disagree	38.9	56.5	
Strongly disagree	4.8	4.3	
I don't know where I could go if I wanted a Pap test.			0.048
Strongly agree	9.4	13.0	
Agree	7.1	26.1	
Undecided	2.4	4.3	
Disagree	73.2	52.2	
Strongly disagree	7.9	4.3	
My partner would not want me to have a Pap test.			0.815
Strongly agree	8.7	13.0	
Agree	10.3	4.3	
Undecided	4.0	4.3	
Disagree	68.3	73.9	
Strongly disagree	8.7	4.3	
If a young, unmarried woman goes for a Pap test, everyone will assume she is having sex.			0.726
Strongly agree	11.8	4.3	
Agree	26.0	34.8	
Undecided	11.8	8.7	
Disagree	45.7	52.2	
A Pap test is not important for a woman my age.			0.489
Strongly agree	14.2	21.7	
Agree	9.4	13.0	
Undecided	1.6	4.3	
Disagree	65.4	52.2	
Strongly disagree	9.4	8.7	
Pap test results cannot be trusted because some labs do the test better than others.			0.767
Strongly agree	8.7	4.3	
Agree	6.7	21.7	
Undecided	11.9	8.7	
Disagree	55.6	52.2	
Strongly disagree	7.1	13.0	
I worry that if have a Pap test, I will need an operation.			0.111
Strongly agree	2.4	0.0	
Agree	29.9	13.0	
Undecided	7.1	21.7	
Disagree	55.1	56.5	
Strongly disagree	5.5	8.7	