

Cervical Cancer Screening Practices Among Latino Women in Chicago

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Abstract Previous studies have determined that Latino women, especially Mexican women, have the lowest rates of cancer-screening practices of any racial and ethnic group in the United States (L. S. Caplan, B. L. Wells, & S. Haynes, 1992; L. C. Harlan, A. B. Bernstein, & L. G. Kessler, 1991). The purpose of this descriptive study was to identify factors associated with irregular Papanicolaou (Pap) screening among Latino women. The convenience sample consisted of 111 Mexican and Puerto Rican women ages 40 and older, recruited through two inner-city clinics, located in two major Latino communities in Chicago. The women were interviewed face-to-face by trained bilingual interviewers, using a structured questionnaire. Mexican ethnicity and older age were found to be associated with irregular cervical cancer-screening practices. These results suggest that interventions need to be developed for educating Latino women about the purpose and importance of Pap test-screening practices. Further research is needed to examine other barriers that impede these women from using cervical cancer-screening services.

INTRODUCTION

The Latino population is one of the fastest growing populations in the United States. For this reason, their preventive health care practices have begun to attract increasing concern. Given the risk factors for cervical cancer, which include young age at first intercourse, multiple sex partners, cigarette smoking, and infection with certain types of human papilloma viruses, Latino women may be at increased risk for this disease (American Cancer Society, 1996). However, Latino women are the least likely to utilize Papanicolaou (Pap) tests and other preventive health care services (Fox & Roetzheim, 1994; Suarez, 1994), (Marks, Garcia, & Solis, 1990). As a result, they are at greater risk for being diagnosed with cervical cancer at later stages, when symptoms such as abnormal vaginal discharge and abnormal bleeding present themselves. Thus, Latino women are often diagnosed at more advanced stages of cervical cancer when options for treatment are limited and optimum results are less likely.

BACKGROUND

Unlike most other types of cancer, cervical cancer is one of the most preventable and treatable chronic diseases today. According to the American Cancer Society, in 1996 an estimated 15,700 new invasive cases of cervical cancer were diagnosed, and 4,900 women died from cervical cancer. Although the incidence of cervical cancer has declined steadily since the introduction of the Pap test, some data suggest that the incidence of cervical cancer may be increasing for certain subgroups, including Latino, African American, and White women under 50 years of age (American Cancer Society, 1996).

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The most effective way to detect cervical cancer and thereby reduce the mortality rate of this disease is to obtain an annual Pap test (American Cancer Society, 1996). The importance of Pap smear screening cannot be overemphasized when discussing cervical cancer. Eighty-eight percent of cervical cancer patients survive 1 year after being diagnosed. The 5-year survival rate is 68%. Patients diagnosed early with local disease have a 5-year survival rate of 91%, whereas women diagnosed with distant disease have only a 14% survival rate (American Cancer Society, 1996). However, the Pap test is one of the most underutilized preventive care services used by minority women, especially older minority women (Council on Scientific Affairs, 1991; Saint-Germain & Longman, 1993).

In the United States, cervical cancer is the third most common cancer found among Latino women, and ranks sixth for White women (American Cancer Society, 1991). The 1987 National Health Interview Survey reported that Latino women aged 18 years or older were twice as likely as African American women and 3 times as likely as White women to have never had a Pap test. Of those women who were aware of the existence of preventive cervical cancer-screening measures, Latino women were the least compliant with the guidelines for those services (Harlan, Bernstein, & Kessler, 1991). In a recent study it was found that Latino women continue to obtain Pap tests at a lower ratio than White women. However, the data suggest that the difference between these two groups is starting to decrease (Anderson & May, 1995).

It is imperative to identify the barriers that discourage Latino women from obtaining preventive screening services on a regular basis. However, only a few studies have been undertaken to investigate these barriers. Latino women often have a fatalistic attitude that can make it difficult to encourage preventive behavior in this population. In one study it was found that Latino women who believed that they could not reduce their chance of getting cervical cancer were less likely to have been screened for cervical cancer in the last 3 years than were women who believed they could reduce their chance of getting cervical cancer (Suarez, Lloyd, Weiss, Rainbolt, & Pulley, 1994). Other researchers have also found that low levels of acculturation, income, and education and lack of health insurance were risk factors for decreased use of Pap tests and other preventive care services among Latinos (Harlan et al., 1991; Marks et al., 1987; Salazar, 1994; Solis, Marks, Garcia, & Shelton, 1990; Suarez, 1994; Suarez et al., 1994).

A recent study conducted among Latino women ($n = 308$) in Connecticut and Long Island found significant differences between English- and Spanish-speaking respondents. Women who had been interviewed in Spanish (46% of the 308) had lower rates of awareness and use of

Pap tests than women who were interviewed in English (Polednak, 1996).

METHODS

In June, 1995, a study of 114 Latino women was conducted to assess awareness of the Pap test, evaluate women's attitudes toward cervical cancer-screening services, and describe utilization of cervical cancer-screening services. The study targeted two major Latino communities in Chicago: Pilsen-Little Village and West Town Humboldt Park. These areas have the largest concentrations of Mexican and Puerto Rican women in Chicago. Over 50% of the populations are monolingual. Of the 114 interviews conducted, 111 were included in the analysis. Three were eliminated because key information concerning cervical cancer-screening practices and attitudes was not available.

Sample Selection

Subjects were recruited from two inner-city clinics. Women 40 years of age or older and of Mexican/Mexican American or Puerto Rican ethnicity were invited to participate. Of the women who were eligible, approximately 90% agreed to participate in our study. Eighty-one percent of the interviews were conducted in Spanish.

Data Collection and Analysis

Each in-depth interview required approximately 45 mins to complete. All interviews were conducted at the two inner-city clinics. The interview instrument consisted of five sections: demographics, acculturation, cervical cancer attitudes and practices, preventive screening practices, and a women's health history. The interviews were conducted by six trained, bilingual, and bicultural women who had previous experience interviewing Hispanic women on health issues.

The women were divided into two artificial groups based on self-reported history of Pap test screening over the last 5 years. Women who completed four or more Pap tests over the last 5 years were classified as regular Pap test users. All other women were classified as irregular Pap test users.

The chi-square test of association was used to compare groups with respect to nominal variables. For comparisons with respect to nonnominal variables with nonnormal distributions, the nonparametric Mann-Whitney test was done. Logistic regression was used to investigate multivariate relationships with Pap test history (consistent Pap test history = women having more than three Pap tests over the last 5 years versus inconsistent Pap tests history = women having three or fewer Pap tests over the last 5 years).

Instrument

1. Demographics: This portion asks for age, ethnicity, number of children, income, education level, place of birth, and length of time living in the United States (if born abroad).
2. Short Acculturation Scale (Marin & Sabogal, 1987): This instrument is a 12-item scale measuring acculturation based on language, media, and social relations. High levels of acculturation have been shown to be related to increased disease prevention practices in immigrant groups in the United States. The scale has been tested in all Latino subgroups with similar or better reliability and validity scores. Reliability is reported at .92 and validity at .65. A mean score of 2.99 or less on the 5-point scale classifies the individual as having low acculturation.
3. Cervical cancer attitudes and practices: This section asks for number of partners (in lifetime) and age at first intercourse. Pap test questions include the most recent, frequency (how often), and reasons for Pap test. Attitudes regarding nervousness/embarrassment level and preference for male or female examiner were also asked about in this section.
4. Preventive screening: This section asks for the most recent, frequency (how often), and reasons for having a mammogram.
5. Women's health history: This section asks about number of pregnancies and live births, prenatal care, menstrual cycle, and hysterectomy.

RESULTS

Demographics

Our final sample consisted of 111 women: 81 of Mexican origin and 30 of Puerto Rican origin. The mean age was 49.5 years. Sixty percent of the women were currently married, 30% were divorced, separated, or widowed, and only 9% described themselves as single. The education level of these women varied greatly. As Table 1 shows, 62% of the total study sample had an eighth grade or lower education level. Puerto Rican women tended to have higher

education levels than did Mexican women, and this difference was statistically significant by the nonparametric Mann-Whitney test ($p = 0.0013$).

Socioeconomic Status

Sixty-two percent of the 111 women were unemployed when the interviews were conducted, and 50% had no form of health care coverage. Household income ranged from \$500 to \$1000 per month, with an average household size of four persons.

Acculturation

The majority of our sample, 70%, had a low acculturation score of 2.4 or less on a 5-point scale. Overall, 54% and 22% of respondents stated they spoke only Spanish or Spanish more than English, respectively. In 61% of the sample the social circles of our respondents were primarily Latinos. Eighty-one percent described themselves as Catholic.

The majority of our sample were born outside the United States: 58% in Mexico and 26% in Puerto Rico, with only 16% in the United States. Puerto Rican women tended to have spent a larger percentage of their lives in the United States than did Mexican women (Mann-Whitney test, $p = 0.0072$), with an average of 57.7% of their lives in the United States for Puerto Rican women and 40.4% for Mexican women.

Risk Factors for Cervical Cancer

The risk factors for cervical cancer reported by the American Cancer Society (1996) include young age at first sexual intercourse, multiple sex partners, cigarette smoking, and infection with certain human papilloma viruses. In our sample the mean age for first sexual intercourse was 19.95 years. The range of total number of sexual partners during a woman's lifetime was 1-10 partners, with an overall average of 2.0 partners.

Attitudes Toward Cervical Cancer Screening

Approximately two thirds of respondents stated that the pelvic exam made them nervous or embarrassed, and 17%

TABLE 1. Education for Total Sample and Ethnic Subgroups

Education Level (years)	Overall ^a %	Mexican ^b %	Puerto Rican ^c %
0-3	22.5	25.9	13.3
4-8	39.6	45.7	23.3
9-12	19.8	16.0	30.0
12+	18.0	12.4	33.4

^a $n = 111$. ^b $n = 81$. ^c $n = 30$.

stated that their embarrassment or nervousness affected their frequency of examination. Thirty-four women (31%) stated that the sex of the examiner made a difference.

Cervical Cancer-Screening Practices

Ninety-five percent of the respondents had at least one Pap test in their lifetime. Over half of our sample (52%) reported having a Pap test within the last year. Seventy-two percent were inconsistent Pap test users.

There was no statistically significant relationship between Pap test history (consistent or inconsistent) and acculturation (high or low) by the χ^2 test of association ($p = 0.30$) in the aggregate measure. Puerto Rican women were more likely than Mexican women to have a consistent Pap test history (43% versus 22%), and this difference was statistically significant (χ^2 test of association, $p = 0.03$). Although place of birth did not have a statistically significant relationship with Pap test history, women born in the United States were 3.6 times more likely to have an inconsistent Pap test history than were women born outside the United States (χ^2 test of association, $p = 0.082$).

Women who were employed at the time of the interview were more likely to have consistent Pap test histories than were unemployed women (33% versus 25%); this difference was not statistically significant (χ^2 test of association, $p = 0.35$). Women with consistent Pap test histories tended to have spent a greater percentage of their lives in the United States ($M = 49.2\%$) than women with inconsistent Pap test histories ($M = 43.7\%$). However, this difference was not statistically significant (Mann-Whitney test, $p = 0.30$).

Inconsistent Pap test users tended to be older than regular Pap test users ($M = 50.7$ versus 46.5 years) (Mann-Whitney test, $p = 0.0061$) and to be younger at first sexual intercourse ($M = 19.5$ versus 21.1 years) (Mann-Whitney test, $p = 0.0182$). Women who reported having had a hysterectomy were more likely to have had an inconsistent Pap test history (90% versus 65%), and this difference was statistically significant (χ^2 test of association, $p = 0.0069$). The effect of a hysterectomy remained statistically significant ($p = 0.015$) when age was also taken into account by including both age and hysterectomy status in a logistic regression model for predicting Pap test history.

Stepwise (backward elimination and forward selection) logistic regression was done to examine multivariate rela-

tionships between the type of Pap test history (consistent or inconsistent) and the following variables: percentage of life spent in the United States, ethnic group (Puerto Rican or Mexican), interaction between ethnic group and percentage of life spent in the United States, age, acculturation (high or low), interaction between acculturation and percentage of life spent in the United States, employment status (employed or unemployed), education level, education level and health insurance (coverage or no coverage).

In Table 2, only two variables were kept in the final equation when backward elimination was done: ethnic group ($p = 0.0126$) and age ($p = 0.0063$). When forward selection logistic regression was done, the same final equation was produced. This equation allowed us to correctly classify 94% of the women with an inconsistent Pap test history but only 30% of the women with a consistent Pap test history. The overall correct classification rate was 75%.

Discussion

The findings of the present research suggest that Mexican ethnicity and older age are associated with irregular cervical cancer screening among the Latino women that were surveyed. These findings are consistent with other studies (Caplan, Wells, & Haynes, 1992; Harlan et al., 1991; Suarez et al., 1994) that have investigated similar variables.

Ethnic group differences were found with respect to employment status and health insurance coverage. Mexican-origin women had a lower health insurance rate than did women of Puerto Rican origin (42.5% versus 70.0%, respectively), and this difference was statistically significant (χ^2 test of association, $p = 0.0102$). Mexican women also had a higher unemployment rate than Puerto Rican women: 67.9% versus 56.7%, respectively (χ^2 test of association, $p = 0.2709$). Education level was lower for Mexican women than for Puerto Rican women as well. These differences suggest that Puerto Rican women may have had better access to and opportunities to acquire the resources, knowledge, and networks that make it easier to obtain Pap tests.

Nurse practitioners and nurse midwives serving low-income Latino women need to be aware of screening practice differences among Latino women subgroups. Programs need to be targeted for Latino women to increase the use of Pap tests (in this population), special emphasis should be placed on informing and educating Mexican-origin women

TABLE 2. Significant Variables in the Regression Model

Variable	Beta	SE	Standard Beta
Mexican	1.2477	0.5083	2.4546
Age	-0.0913	0.0361	2.5291

regarding the need for and benefits of consistent Pap tests, and the availability of these services should be ensured.

Results from this study are limited by age of participants (the women were over 40 years of age) and self report of cervical screening practices. In this study, it was found that Latino women need to be asked using the term "test de Papanicolaou" rather than "Pap test" or "Pap smear" because otherwise they might deny having had Pap tests. This information is also of importance for clinicians doing a health history on their clients. More research is needed on how to effectively provide access and care for Latino women, focusing on specific Latino subgroups.

RECOMMENDATIONS

As a result of this study, two basic recommendations have evolved. First, all women should be educated about the purpose and importance of yearly Pap test screening. Simply providing this information to Latino women is not enough, especially when many of these women are faced with barriers, such as language, length of time in the United States, and low education and income levels. Second, Pap tests should be provided as part of the woman's regular care, and making these tests cheaper and more convenient may increase their accessibility to Latino women who have not had access to these services in the past.

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