

# Knowledge and Perceptions of Reproductive Health Among Latinas

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## Abstract

**Objectives:** The purpose of this study was to assess potential relationships among reproductive health knowledge, preventive health behaviors, perceived severity and risk of breast cancer, cervical cancer, and sexually transmitted infections and selected demographical variables and characteristics related to acculturation among Latina immigrants. **Methods:** A total of 204 Latinas from a Midwestern city in the United States consented to participate in the study. Health interviews were conducted using semi-structured interviews and convenience sampling. Interviews were conducted in the participants' choice of language by trained bilingual administrators at a variety of Latino associated locations. **Results:** Characteristics associated with acculturation, such as English skill, play a role in preventive health behaviors – in this case, self breast exams and likelihood of getting Pap tests. Perception of risk and severity may be affected by acculturation characteristics such as barriers to access as well as perception of severity which appear to be higher among Latinas with lower education levels. **Conclusion:** Culturally appropriate efforts to assess the health needs of emerging Latino communities will contribute to preventive health education for women.

## Introduction

Ethnic and racial diversity in any community can provide people with opportunities to share and learn from one another. It also provides a rich source of possibilities for the health educator to engage in community level needs assessment, planning, implementation, and evaluation of programs supportive of healthy lifestyles. As the United States has become more diverse, one community growing at a fast pace is the Latino community. According to the

2005-2007 American Community Survey, 44,019,880 people identified as being Hispanic or Latino, approximately 15% of the United States (U.S.) population. The Latino population is the largest and fastest-growing ethnic group in the country, with a population growth of 17.0% from 2002 to 2004 (in comparison to the nation at 4.3%) (U.S. Census, 2005). "Hispanic or Latino origin refers to people of Mexican, Puerto Rican, Cuban, Central or South American, or other Hispanic origin" (U.S. Census, 2007, p. 1). The Hispanic/Latino population in the U.S. in 2005 was younger than the country as a whole with median ages reported at 27.2 and 36.2 years, respectively (U.S. Census, 2007).

Latinas account for approximately 6% of the total U.S. population and just under half of all Latinos with a ratio of 105 males per 100 females (Spragins, 2005). They are the youngest female population in the U.S. with a mean age 27.6, vs. 37.8 for all U.S. females, and 45% of Latinas being under 25 years of age (U.S. Census, 2006). In some regions of the United States, such as the Southwest, there are historically established Latino communities that are still in need of educational programs to address the needs of this population. There are four census defined geographical areas in the U.S., these are the Northeast, Midwest, South, and West. Areas like the Midwest and the South are also experiencing recent and rapid growth (U.S. Census, 2006). The Midwest region, which includes Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas, experienced the second largest rate of growth for Latino populations between 2000 and 2006. In this time period, the Midwest Latino population grew from 2.7% to 26.1% of the total population in the region. This percent change is only higher in the Southwest region of the country, where it changed from 8.5% to 31.2% (U.S. Census, 2006). The first in-depth description of demographics, acculturation, and health needs of the Latino community in the Ohio tri-state area of the Midwest also reflected this trend of growth; over 90% of Latinos reported coming to the United States since 1987 and almost 60% since 2000 (Health Foundation of Greater Cincinnati, 2006).

Molina, Molina, and Zambrana, (2001) suggest that in order to address the needs of Latina women, additional research is needed. Despite the growing numbers of Latinas, they are still underrepresented in the research literature. Research should be conducted to gain a more thorough understanding of Latina health, particularly reproductive issues such as breast and cervical health, and sexually transmitted infections (Molina et al., 2001).

## Reproductive Health

Women's reproductive health concerns include, among others, breast cancer, cervical cancer, and sexually

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transmitted infections (STIs). Breast cancer is the second leading cause of cancer deaths for women (after lung cancer). It is estimated that there will be 40,610 breast cancer deaths in women in 2009 (American Cancer Society [ACS], 2009). Breast cancer is the leading cause of cancer death in Hispanic women, with approximately 1,700 deaths in 2006 (ACS, 2006). The comprehensive screening model for breast cancer includes the breast self examination, clinical breast exam, and the mammogram. These assessment tools are a fundamental part of overall breast healthcare maintenance as well as breast cancer screening detection strategies. Although MRIs and mammograms can detect breast cancer in its earliest stages before clinical symptoms develop, the mammogram is more often performed. Breast cancer is less likely to be diagnosed in its earliest stage in Hispanic women, likely due to differences in mammography utilization and delayed follow-up (ACS, 2006). Hispanic women have lower mammography rates than non-Hispanic White women, (58% and 67.4% among women over 40, respectively) (Centers for Disease Control and Prevention, [CDC], 2007). They also tend to seek and attain health care services less frequently than other ethnic groups (Ramirez et al., 2000). The five-year survival rate for non-Hispanic White women with breast cancer is 85% while for Hispanic women it is 76% (Gilliland, Hunt, & Key, 1998).

Cervical cancer was once the leading cause of death for women in the United States. Incidence and mortality rates have decreased steadily over the past five decades, largely due to the widespread use of the Papanicolaou laboratory test (Pap smear) which detects cervical cancer and pre-cancerous lesion (National Cancer Institute [NCI], 2005). Although overall rates for cervical cancer are declining, the rates for Hispanic women (30 and older) are increasing (CDC, 2002). Hispanic women who were diagnosed with cervical cancer were more likely than other women to be diagnosed at an advanced stage (CDC, 2002). Regardless of the state of disease at diagnosis, incidences for Hispanic women are about twice those for non-Hispanic women (ACS, 2006). The death rate from cervical cancer is about 50% higher in Hispanic women than in non-Hispanic white women (ACS, 2006).

The Human Papillomavirus (HPV) is associated with at least 80 percent of invasive cervical cancer cases (Lowy & Schiller, 2006). Some STIs, especially syphilis and gonorrhea, are far more common among African Americans and Latinos than among Caucasians. According to the CDC, the gonorrhea prevalence rate among Latinos was nearly twice the rate among whites (34.7 cases per 100,000 population) and the chlamydia prevalence rate was three times higher than that of whites (162.3) in 2007. Further, the prevalence rate of primary and secondary syphilis increased 22.9% among Latinos from 3.5 to 4.3 per 100,000 population between 2006 and 2007 (CDC, 2009). Based on the literature (ACS, 2006, 2007; Gilliland, Hunt, & Key, 1998; Ramirez et al., 2000), health disparities exist among women in the United States, with Latinas having higher mortality rates for both breast and cervical cancers. Understanding the health

risks and concerns of Latinas will help to provide insight to solutions for eliminating health disparities.

## **Acculturation**

The degree to which an individual adopts the culture of the predominant culture is known as acculturation (Dawson, Crano, & Burgoon, 1996). The process of acculturation can be measured in many different ways including language use, place of birth, and length of stay in the United States. The English language proficiency amongst Hispanics often correlates with the levels of self-reported acculturation in the United States which in turn also may influence the rates of health screening participation as these are often available only in English. Researchers have found that culturally related beliefs about the etiology of cervical cancer play a significant role in the decision of Latina women to obtain Pap smears (McMullin, DeAlba, Chavez & Hubbell, 2005). In a 2004 study among Hispanic women, those with a lower level of acculturation were more likely than highly acculturated Hispanic and non-Hispanic white women to report personal barriers (which included fear of finding cancer, fear of finding diseases other than cancer, and the embarrassment of participating in a physical exam) as reasons for not getting an initial or subsequent screening exam (Coronado, Thompson, Koepsell, Schwartz, & McLerran, 2004). A study by Larkey found that culturally aligned education programs using community health advisors that emphasized social support among participants improved primary preventative measures and selected screening behaviors (2006). Based on these statements, it appears as if gaining greater understanding of the perceptions and behaviors of Latinas is essential in developing effective community health education interventions for Latinas.

The purpose of this study was to assess potential relationships among reproductive health knowledge, preventive health behaviors, perceived severity and risk of breast cancer, cervical cancer and sexually transmitted infections and selected demographical variables and characteristics related to acculturation among Latina immigrants. In 2002, inquiries with local and state-wide health agencies, health departments, and organizations revealed a dearth of information about Latinas in general, but also their reproductive health knowledge, beliefs, or perceptions of risk or severity from reproductive related illnesses. One such instance revealed that at the local level, health departments were only gathering disease surveillance data with demographical characteristics limited to three race categories only: Black, White, and Other. Ethnicity characteristics were not available thus significantly limiting the ability of health educators to assess health needs of minority communities such as Latinos (K. Simon, personal communication, November, 2002). Health education programs that take into account culturally competent strategies, and that are based on reliable data about the community for which they are being developed, are a critical step toward reducing health disparities (Perez & Luquis, 2008).

## Methods

Respondents for this study were recruited using a variety of strategies and sites, specifically from community health care centers (n = 75), community social services centers (n = 19), religious/spiritual gatherings (n = 23), community markets (n = 28), community social events (n = 41), and evening English classes (n = 14). Participants received a study information sheet and an oral explanation of the study procedures and rights as research participants, followed by a request to consent to participate. Structured health interviews lasting between 25 and 30 minutes in duration were conducted in either English or Spanish, depending upon the self-selected language preference of the participants (71.1% selected Spanish). Trained community members and graduate students, all of whom were culturally cognizant, bilingual (English and Spanish), and/or bicultural (Latin American/U.S.) assisted in this program. During a six-month period, 214 women were invited to participate; 204 accepted, resulting in a participation rate of 95%. Study participants received gift certificates to local grocery stores in the amount of \$5.00 in appreciation for their participation in the study. All data analyses were conducted using the Statistical Package for the Social Sciences version 14.0 for Windows. All procedures and instruments were reviewed and approved by the Institutional Review Board at the University of Cincinnati.

### Instrumentation

The instrument was developed based on a review of related literature and the extensive experience of the principal investigator with the Latino community. Reviews by a subject matter expert, a measurement design expert, and two Latina women from the community were conducted to evaluate content and face validity. The Flesch-Kincaid readability measurement reading level was found to be at the 4th grade reading level. Translation and *back translation* (English to Spanish and back to English) were conducted. During the pilot phase (n = 12), a test-retest method was utilized to establish reliability. Overall, the instrument showed good test-retest reliability with  $r = .69$  ( $p = .05$ ).

The survey instrument included demographics such as age, Latino self identity, country of birth and of familial origin, educational attainment, and employment status. Selected measures of acculturation (i.e. language preference, cultural comfort, English proficiency, and place of birth) were also recorded based on self-report. Items to assess perceived risk and severity, level of concern about reproductive health issues, barriers to health care access, as well as questions on cervical cancer, breast cancer, and sexually transmitted infections knowledge were also included. The instrument format incorporated dichotomous, scale, ordinal, and categorical items (e.g. true/false, select all that apply, multiple choice, and Likert type scale) as well as open-ended questions.

Knowledge levels were based on true/false, yes/no,

and open ended questions. For example, true/false items included: "The Pap smear test can detect cervical cancer" and "Sexually transmitted infections have obvious symptoms." The knowledge levels were computed by calculating the number of correct responses on the subscales for cervical cancer, breast cancer, and sexually transmitted infections respectively. Correct answers were coded as 2 points and incorrect as 1 point, thus the higher the value after summation, the higher the knowledge level. The possible range of scores was 12-24.

Risk perception scores were based on the question "How would you rate your risk of developing/getting [name of condition]? (cervical cancer; breast cancer; a sexually transmitted infection)." Item answer choices for risk items were: very high (5), high (4), moderate (3), low (2), and very low (1). Scores in each of the three items were summed to create a scale score, with a possible range of 3-15. The reliability alpha coefficient for the risk perception scale was calculated to be .70. Severity perception scores were based on the question "If you did happen to develop [name of condition] how serious/severe would it be? (i.e. cervical cancer; breast cancer; or sexually transmitted infection)." Severity item answer choices were: very serious (5), serious (4), moderate (3), slightly serious (2), and not serious (1). Scale scores had a possible range of 3-15. The reliability alpha coefficient for the perceived severity perception scale was found to also be acceptable (alpha = .87). Scale scores were obtained by summing across all items in each of the subscales.

The barriers subscale was based on the self-reported identification of eleven potential problems encountered when trying to obtain health services. Items included, for example, "I don't speak English," "I do not have health insurance," and "The doctor is not sensitive to cultural issues." An open ended choice of Other was also available. The scale score was obtained by summing the total number of barriers selected by the participant with a possible range of 11-22. Lastly, the following independent item was utilized to measure participant's level of concern about reproductive health: "Overall, what is your level of concern about reproductive health issues?" The scale answer choices for this question were: very high (5), high (4), moderate (3), low (2), and very low (1).

### Data analysis

Raw data were evaluated for accuracy in data entry and ensure consistency of how data were handled across the sample (e.g. all missing data were coded as 99). Descriptive statistics were used to analyze frequency and central tendency characteristics of data gathered (e.g. frequency of barriers to accessing health care and risk and severity perception item means). An examination of the skewness and kurtosis statistics for the observed variables showed that the distributions were not normal (kurtosis statistics were often more than two times greater than the standard error). Thus non-parametric statistical analyses were utilized

to identify correlations (Spearman's rho) and measures of significant difference of the means (Kruskal-Wallis chi square). Statistical significance was set at the 95% confidence interval level ( $\alpha = .05$ ). It was also necessary to collapse "self reported English skill" into two categories, 1 = well/very well and 2 = some/poorly/very poorly. Income reporting items were incomplete in 49.5% of interviews (missing data), thus income comparisons were not possible.

### Results

A total of 204 Latinas 18 to 59 years of age ( $M = 29.5$ ,  $SD = 9.41$ ) participated in the study. The mean level of educational attainment was 9.8 years ( $SD = 4.15$ ). The majority of participants were born outside the U.S. (89.4%) and reported not having legal immigrant status (61.0%) (Table 1). Several Latin American countries were represented in the sample, however the majority (57.3%) was of Mexican familial origin. Other countries, in sequential order, included Peru, Guatemala, and the Dominican Republic. Regarding marital status, one-third (37.3%) were married, one-fourth (26.7%) lived with a partner and the remainder lived alone or with family/friends. A minority reported full-time employment (36.7%), while 55.8% reported part-time employment at the time of the survey. Table 1 presents complete demographical details. The majority (76.7%) preferred speaking Spanish over English, 48.1% reported speaking English *well* or *very well*. Less than 5% of participants reported feeling more comfortable with the American culture. (See Table 2 for detail on acculturation characteristics.) Additionally, 42.1% women reported lack of health insurance and 43.9% reported having had difficulties accessing services.

### Cervical and Breast Cancer Screening Behaviors

Table 3 displays descriptive details of behaviors. Comparisons were carried out to identify relationships between

Table 1

*Demographic Characteristics of Latina Participants*

| Characteristic     | N  | %    |
|--------------------|----|------|
| Born in U.S. (yes) | 21 | 10.6 |
| Age                |    |      |
| 18-19 (Teens)      | 19 | 9.5  |
| 20-29              | 97 | 48.2 |
| 30-39              | 54 | 26.9 |
| 40-49              | 23 | 11.4 |
| 50-59              | 8  | 4.0  |

Note: N = 204. Missing data values excluded.

Table 2

*Selected Measures of Acculturation Level of Latinas*

| Characteristic                              | N   | %    |
|---|-----|------|
| How well do you speak English?              |     |      |
| Very well                                   | 33  | 16.8 |
| Well  | 42  | 21.3 |
| Some  | 32  | 16.2 |
| Poorly                                      | 39  | 19.8 |
| Very poorly                                 | 51  | 25.9 |
| What language do you prefer to speak?       |     |      |
| Spanish                                     | 145 | 76.7 |
| English                                     | 17  | 9.0  |
| Other                                       | 12  | 6.3  |
| Both Spanish and English equally            | 15  | 7.9  |
| What culture are you more comfortable with? |     |      |
| Hispanic/Latino                             | 85  | 42.3 |
| American                                    | 9   | 4.5  |
| Both American and Hispanic equally          | 107 | 56.2 |

Note. N = 204. Missing values excluded.

frequency of self-breast examination, mammography and Pap tests in prior 12 months and demographical characteristics including age and years of education. Acculturation characteristics such as English skills, language preference and cultural comfort level, and country of birth were also compared to preventive reproductive health behaviors.

#### Self breast examination.

There was a significant relationship between educational attainment and frequency of self-breast examination (Kruskal-Wallis chi square = 32.918,  $p = .017$ ) with higher levels of education being associated with higher levels of self-breast examination. Self breast exam frequency was found to be significantly correlated with (a) country of origin (Spearman  $r = .157$ ,  $p = .029$ ) and (b) English skill level (Spearman  $r = .177$ ,  $p = .031$ ). Mexican and Peruvian women reported higher rates of self-breast examination as did women who reported speaking English *well* or *very well*.

#### Mammograms.

Kruskal-Wallis testing also revealed that women in their 30s or older were more likely to report having had a

Table 3

*Selected Secondary Prevention Behaviors*

| Characteristic                      | Yes |      | No  |      |
|-------------------------------------|-----|------|-----|------|
|                                     | n   | %    | n   | %    |
| Papanicolaou test in last 12 months | 126 | 65   | 68  | 35.1 |
| Ever had a mammogram                | 37  | 19.9 | 141 | 80.1 |
| For women 40 or older               | 21  | 70   | 9   | 30   |
| Monthly self breast exam            | 110 | 55.6 | 88  | 44.4 |

*Note.* Thirty one women were 40 years of age or older. Missing values excluded. Yes = 1, No = 2.

mammogram (chi square = 95.693,  $p = .000$ ). Having ever had a mammogram was found to be significantly correlated with country of origin (Spearman  $r = -.226$ ,  $p = .002$ ) with Mexican women being the least likely to report having a mammogram. Lastly, having had experienced difficulty accessing health care services was negatively correlated with having performed self breast examination (Spearman  $r = -1.97$ ,  $p = .006$ ). That is to say, women with higher levels of difficulty accessing health care services were less likely to report self breast examination.

#### **Pap testing.**

A relationship was also found between (age and having had a Pap test in the last 12 months (Kruskal-Wallis chi square = 53.990,  $p = .021$ ; women above the mean age of 29.5 were less likely to report having had a Pap test in the prior year. Similarly, having had a Pap test in the last 12 months was correlated with both country of origin and English skill. Spearman rho coefficients were .153 ( $p = .036$ ) and -1.77 ( $p = .014$ ) respectively. Women from Mexico, Guatemala and Peru reported higher rates of HPV screening and women with lower English skill reported twice the rate of HPV screening.

#### **Knowledge**

The level of knowledge for each condition (cervical cancer, breast cancer and STI) was assessed by adding the number of correct answers for each subscale. Cervical cancer scores ranged between 3 and 6 ( $M = 6.90$ ,  $SD = .748$ ), breast cancer scores ranged between 4 and 8 ( $M = 5.29$ ,  $SD = .720$ ), STI knowledge scores ranged between 5 and 10 ( $M = 8.39$ ,  $SD = 1.05$ ). Higher scores indicated higher knowledge as correct answers were coded 2 and incorrect answers were coded 1.

A Kruskal-Wallis test was conducted to determine whether knowledge scores differed by varying levels of educational attainment or history of ever having had

difficulties accessing health care. Cervical cancer knowledge scores (chi square = 9.64,  $p = .047$ ) and STI knowledge scores (chi square = 19.29,  $p = .002$ ) were significantly different by years of education; higher level of education was correlated with higher knowledge scores. Additionally, results revealed that a higher likelihood of having had difficulties in health care access was associated with lower STI knowledge scores (Kruskal-Wallis chi square = 7.422,  $p = .006$ ). No other observed variables had a statistically significant relationship with knowledge.

#### **Perceived Severity**

Severity scores for each condition (cervical cancer, breast cancer and STI) ranged from 3 to 15 and had a mean score of 12.7 ( $SD = 2.95$ ). Spearman rho correlation analysis was conducted to identify relationships between perceived severity and (a) self-reported English skill, (b) being U.S. born, and (c) years of educational attainment. Kruskal-Wallis chi square correlation tests were performed to find potential differences between perceived severity scores and (a) age, (b) having ever had difficulties accessing health care, (c) country of birth/familial origin, and (d) level of higher cultural comfort (Latino or U.S. culture). Kruskal-Wallis analyses revealed that as the level of difficulty accessing services increased, so did the perceived severity (chi square = 10.584,  $p = .001$ ). There was a significant correlation between perceived severity scores and English skill level (Spearman rho =  $-.166$ ,  $p = .035$ ) in that as English skill increased, severity scores decreased. Additionally, there was in inverse correlation between educational attainment and perceived severity scores (Spearman rho =  $-.177$ ,  $p = .027$ ). As educational level increased, perceived severity decreased.

#### **Perceived Risk**

Risk scores for each condition (cervical cancer, breast cancer, and STI) also ranged from 3 to 15 and had a mean

score of 7.37 (SD = 2.64) with higher values representing higher perceived risk. Spearman rho correlation analysis was conducted to identify relationships between perceived risk and (a) self-reported English skill, (b) being U.S. born, and (c) years of educational attainment. Kruskal-Wallis chi square correlation test were performed to find potential differences between perceived risk scores and (a) age, (b) having ever had difficulties accessing health care, (c) country of birth/familial origin, and (d) level of higher cultural comfort (Latino or U.S. culture). There was a significant negative correlation between perceived severity scores and English skill level (Spearman rho =  $-.201$ ,  $p = .010$ ), in that lower English skill was correlated with higher perceived severity. No other statistically significant results were computed.

## Discussion

Overall the sample represented a young Latina population, mostly foreign born and Spanish speaking, with an average education level around the 9th ninth grade level. Six of every ten participants reported Mexican ancestry, four of ten were married, and just over one quarter were single. Most were employed (56%) with just over one third working full-time. A small percentage (4.5%) of the study participants reported being “more comfortable” with “American” culture, 42.3% reported being more comfortable with Latino culture, and 53% reported being equally comfortable with both cultures. The demographic and acculturation characteristics reported in this study demonstrate the importance of primary preventive reproductive health measures that must be developed and implemented while also fostering culturally appropriate educational materials or information for the Latina women in the region of the country.

Among study participants, a comparison of Pap testing in the 12 months prior to the study showed that older women reported lower rates of testing. Overall, only 7 out of 10 participants reported having a Pap test. The women who participated in this study reported that just over half were between the ages of 18 and 29 and only 12% of participants were over the age of 40. Other studies show that Latinas, particularly new immigrants, are less likely to get Pap smear tests after age 40 (Molina et al., 2001). Mammogram rates were also associated with age in the present study where 20% of participants reported having had a mammogram (of which 57% were 40 or older). This age relationship is to be expected, however the rate is lower than the rate for the majority of women in the U.S. (66%) participating in yearly mammograms (Fernández-Esquer, Espinoza, Ramirez, & McAlister, 2003). It is important to note that 43% of women who reported having had a mammogram were under the age of 40. Although an explanation for this cannot be offered, a closer look at this subgroup revealed that they had higher average years of education (10.8 vs. 9.8) than the whole sample and they reported lower levels of difficulty obtaining health care services (28.6% vs. 43.9%).

Higher educational attainment was associated with higher rates of self breast examination. For the subgroup

of women from Mexico and Peru, higher self breast exam rates were also associated with lower English skill levels and fewer reported barriers. Women from those countries also were more likely to report having had a mammogram. Women who reported fewer barriers to health care access had higher self exam rates.

Results indicate that higher cervical cancer and STI knowledge scores were associated with higher levels of education. Additionally, having had difficulties in health care access was associated with lower STI knowledge scores. Although health knowledge does not necessarily translate into positive health behaviors, associations between higher disease knowledge and preventive health behaviors have been identified in the literature (Cottrell, Girvan & McKenzie, 2009).

Perceived severity scores were higher for Latinas with lower levels of education and higher for those who reported fewer difficulties in accessing health care. Similarly, lower levels of English skill were associated with higher severity scores, that is, women who did not speak English well were more likely to perceive the severity of reproductive illnesses higher than those who had higher English skills.

Several studies have found that self-reported acculturation rates influence health and behavior (Detjen, Nieto, Trentham-Dietz, Fleming, & Chasan-Taber, 2007; Gorman, Madlensky, Jackson, Ganiats, & Boies, 2007), but some have questioned the relevance of simple acculturation scores (Castro, 2007). The results in the present study illustrate that characteristics associated with acculturation, such as the level of one’s English skill, are associated with preventive health behaviors such as conducting self breast exams and getting Pap tests. Additionally, perception of risk and severity may be affected by acculturation characteristics such as barriers to access which are more likely to be reported by immigrant women (Aday, 2001) as well as perceptions of severity which appear to be higher among Latinas with lower education levels (Shi & Stevens, 2005).

This is the first study to look at reproductive health knowledge and preventive behaviors specific to immigrant Latino women in the Greater Cincinnati area, and the findings provide a starting point for local health educators. In addition, the findings are important to allied health practitioners and educators throughout the Midwestern region where the second fastest rate of growth for the Latino community has been found (U.S. Census, 2005). With the increasing numbers of Latina women needing access to healthcare and healthcare screenings, additional research must be conducted in order to understand how to best serve this steadily or progressively growing and diverse population. Assessing this population’s perceptions and beliefs is a first step in this important process.

Limitations of this study include the relatively small convenience sample as well as the use of self-reported responses on potentially sensitive issues which may have led some participants to offer socially desirable answers. The monothematic nature of the structured interview may have, inadvertently, resulted in a response set bias in some

participants. Although extensive efforts were made to recruit participants from different Latino backgrounds and geographical regions in the Midwest, as well as varied types of locations, findings are representative of Latinas residing in a limited Midwestern metropolitan area and thus are not generalizable to Latinas nationwide.

Within the context of the present study and the limitations presented above, specific recommendations include the continuation and expansion of health education efforts that are culturally appropriate and address differences in educational attainment, health knowledge, culturally related associations with risk and severity of disease. Collaborative efforts are also recommended in order to help minimize existing barriers to accessing health promotion and education and other health care services in the Greater Cincinnati Area. Although these findings are not generalizable to all Latina immigrants, the results of this study have helped to shape programs particularly for this community. Future studies are needed to provide additional health information about this population, specifically studies that would identify efficient and effective strategies for reaching this population through health education research and programs.

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### Founder's Column: Keeping the Dream Alive (continued)

And then Bob accepted the assignment of writing the constitution and by-laws, so that “for want of a nail, the kingdom would not be lost.” Needing academic autonomy, health education had to have its own honorary and professional society on the campuses of America. And so the dream began. Following the death of Warren Schaller, first president, Bob, then Vice-President, became the second president of the honorary, again leading the proverbial fledging “kingdom” on to a decade of continued expansion and leadership.

Bob's leadership also enhanced the honorary with less formal ways throughout his career. Here are a few examples. While attending her first national Eta Sigma Gamma conference, held in conjunction with the American School Health Association, Kelly Bishop Alley was introduced to Dr. Robert Synovitz. Recently quoted in “Their Dreams and Own Vision” Kelly noted that “Bob made it a priority to engage not only the students from his chapter, but encouraged the involvement of all students attending the national conference. He was quick to ensure that Gammans from each chapter met those from other chapters. His passion for the profession was contagious, as he mentored the next generation of leaders, a role he had happily assumed. Anyone who knows Bob appreciates his dedication to Eta Sigma Gamma and our profession, along with his smiles, hugs, and laughter. For more years than he may care to admit, Bob has provided inspiration, encouragement, and levity in building the *standards, ideals, competence, and ethics* of Gammans nationwide.” In another example, Wayne Payne, now a lifetime member, was studying biology at Ball State University and had the opportunity to take a personal health class from Bob. He said, “I was so impressed with Bob's unique teaching style and his enthusiasm and energy that I gravitated into the department for much of my course work.” Wayne Payne went on to become a faculty member in the Department of Physiology Science at Ball State University and now is enjoying the experience of retirement. Both of these examples could be likened to the “nails in the shoe” of our honorary.

Perhaps the single greatest contribution of Eta Sigma Gamma has been providing opportunities to young people. As noted by Dr. Bob in the 40th anniversary issue of our Journal, “Eta Sigma Gamma focuses on giving opportunities to be better than you could be otherwise.” When asked, Have the aspirations of the founding fathers been achieved? Bob said emphatically, “Yes...absolutely. Time and again, and I think it's going to continue.”

Finally, to put these remarks in perspective, are the inspirational words of Godfrey M. Hochbaum, reminded us “When one generation feels proud and superior...it should be remembered that it can look down on its forefathers only because it stands on their shoulders.”

To your health,  
William Bock, Ph.D. Co-Founder