2013

Country of origin, culture, self-esteem and intimate partner violence among community dwelling Hispanic women

Amber Vermeesch
University of Portland, vermeesc@up.edu

Rosa M. Gonzalez-Guarda

Aubrey L. Florom-Smith

Brian E. McCabe

Nilda P. Peragallo

Abstract

The purpose of this study was to explore variations in demographics, culture, self-esteem and intimate partner violence among Hispanic women according to country of origin, and to identify factors that are associated with differences in intimate partner violence. Baseline data from a randomized control trial testing the efficacy of an HIV prevention program was used. Path analyses were conducted to describe relationships between variables and identify potential mediators. Differences between Colombian women and women from other Central/South American countries were noted for intimate partner violence. Self-esteem was the only factor that was associated with these differences. Interventions that address the unique needs of Hispanic sub-groups and promote self-esteem are needed.

Key words: Hispanic Women, IPV, Culture, Hispanic Stress, Machismo, Acculturation, Violence

Country of origin, culture, self-esteem and intimate partner violence among community dwelling Hispanic women

Introduction

Intimate Partner Violence (IPV), a far-reaching public health problem affecting all populations across socioeconomic classes and cultures, can be particularly devastating among Hispanic women lacking access to or knowledge of relevant social services (Kelly, 2009). There is conflicting evidence regarding whether Hispanics living in the U.S. experience IPV more frequently than other racial and ethnic groups. The U.S. Department of Justice's Bureau of Justice Statistics (2002) reports no significant differences in IPV rates between Hispanic and non-Hispanics; however, studies utilizing population based samples rather than criminal statistics note Hispanics are at higher risk for IPV than other racial/ethnic groups (Caetano, Field, Ramisetty-Mikler, & McGrath, 2005; Kantor, Jasinski, & Aldarondo, 1994; Tjaden & Theonnes, 2000). There is also conflicting evidence on whether socioeconomic status accounts for these differences. While some researchers have noted that differences in IPV rates across race and ethnicity disappear once socioeconomic factors are controlled for (Kantor et al., 1994; Tjaden & Theonnes, 2000), others have found that Hispanics and Blacks experience more than twice the incidence of IPV than non-Hispanic Whites, even when socioeconomic variables are taken into account (Caetano et al., 2005).

In addition to the challenge of establishing the incidence and prevalence of IPV among Hispanic women in the U.S. and determining the role that socioeconomic factors play, is the difficulty of differentiating these rates among Hispanic women of various countries of origin. Few studies investigating IPV among women request information on culture beyond *Hispanic* or *non-Hispanic* ethnicity (Aldarondo, Kantor, & Jasinski, 2002; Kantor, et al., 1994; Tjaden &

Theonnes, 2000), thus neglecting to acknowledge numerous sub-categories of Hispanics of various cultures exist (Page, 2005), and foregoing an important opportunity to explore the intersection of socioeconomic status, culture and IPV among Hispanics. As such, few studies examine variables that may account for observed differences between groups. The purposes of this exploratory study are to: 1) identify variations in demographics, cultural factors (acculturation, Hispanic Stress and *machismo*), self-esteem and IPV among Hispanic women according to country of origin, and 2) describe the relationship between country of origin, demographics, cultural factors, self-esteem and IPV among a community sample of Hispanic women living in South Florida.

Conceptual Framework

Using the Syndemic Model of Substance Abuse, Intimate Partner Violence, HIV Infection, and Mental Health Among Hispanics (Gonzalez-Guarda, Florom-Smith, & Thomas, 2011) as the theoretical framework for this study, demographic, cultural and psychological factors were conceptualized as factors associated with IPV among Hispanic women that may partly account for differences in the frequency of IPV across country of origin. The Syndemic Model considers multiple, interwoven, and simultaneously occurring conditions contributing to health disparities among Hispanics within the context of poor social and/or physical environments, while also acknowledging the importance of individual, relationship, socioenvironmental and cultural level risk and protective factors. These factors are conceptualized as links between these conditions (Gonzalez-Guarda, Florom-Smith, & Thomas, 2011). Increased understanding of the potential links between demographic, cultural and psychological factors influencing IPV among Hispanic women may provide needed insight into a complex set of relationships requiring innovative interventions on multiple levels.

Demographic Factors

Country of origin. Very few studies have investigated the effect of country of origin on variation in IPV among Hispanic subgroups (Aldarondo et al., 2002; Kantor et al., 1994). Aldarondo and colleagues (2002) used national survey data to determine the predictive utility of commonly regarded individual (age, violence approval, alcohol consumption, and history of violence), relationship (marital status, relationship conflict) and social (income, employment, and occupation) markers of IPV among Mexican, Mexican American, and Puerto Rican Hispanics residing in the United States previously analyzed in their 1994 study (Kantor et al., 1994). The authors found that the commonly recognized markers for IPV did not adequately explain the between-group differences in IPV among the three Hispanic subgroups. Aldarondo and colleagues (2002) found that Mexican American men reported the highest rates of assaults on their wives, followed by Puerto Rican men, and lastly Mexican men. This may be due to differences in the levels of acculturation between these groups, as research has indicated that higher levels of acculturation are associated with an increase in risk behaviors such as substance abuse and violence among Hispanics (Gonzalez-Guarda et al., 2011) Interestingly, Aldarondo and colleagues (2002) found that when women reported assaults, the highest rates were among Puerto Rican families, then Mexican American families, and lastly Mexican families. The authors cite the hesitancy of spouses of immigrant perpetrators in reporting IPV as a partial explanation of the discrepancies between men and women's reports of assault, and suggest future researchers should highlight culture-specific variables associated with IPV. In addition, this discrepancy may be explained by differences in legal status. Individuals from Puerto Rico do not immigrate to the U.S., as natural-born Puerto Ricans are U.S. citizens (U.S. Department of the Interior, 2010). As such, Puerto Rican women may feel more comfortable reporting IPV than do

immigrant Hispanic women of other subgroups who are more likely to be undocumented because they need to apply for citizenship and may fear the deportation of themselves or their partners as an outcome if they are non-legal.

Socioeconomic Status. Other demographic factors, such as socioeconomic inequalities, have been found to be risk factors for IPV among Hispanics (Cunradi, Caetano, & Schafer, 2002; Kantor et al., 1994) and in the general population (Tjaden & Theonnes, 2000). However, little consensus exists on specific resource disadvantages placing Hispanic women at increased risk for IPV, and whether these disadvantages persist when other factors are considered. Identified socioeconomic risk factors for IPV among Hispanics vary from study to study depending on the socioeconomic indicators (e.g., employment versus income), population sampled and control measures included in the analyses. While low income has consistently been identified as a socioeconomic risk factor for IPV among Hispanics (Caetano et al., 2000; Cunradi et al., 2002; Kantor et al., 1994), findings associating education and IPV have been inconsistent, with some researchers arguing that these factors are not related (Cunradi et al., 2002; Gonzalez-Guarda et al., 2009) and others supporting strong relationships between the two (Denham et al., 2007; Newcomb & Vargas Carmona, 2004).

Inconsistencies in these findings may be indicative of important differences that exist between the Hispanic subgroups sampled. In a study examining the socioeconomic predictors of IPV among a representative sample of couples from different Hispanic subgroups (e.g., Mexican, Puerto Rican and Cuban) and racial origins, male unemployment was a significant predictor of male to female IPV across all groups (Kantor et al., 1994). However, in a further examination of this same dataset, Aldarondo and colleagues (2002) found that the unique contribution of socioeconomic resources (i.e., income, employment and occupational status) examined to predict

IPV was significantly reduced when relationship factors and other differences between Hispanic subgroups were considered. This finding indicates there may be other factors (e.g., acculturation, Hispanic Stress and *machismo*) mediating the relationship between economic resources and IPV.

Cultural Factors

Acculturation. Acculturation occurs when individuals or groups of different cultures interact, resulting in changes in both cultures; however, in a multicultural society, non-dominant culture groups generally experience greater change than the dominant culture group (Berry, 1997). The voluntary aspects of and difficulty involved in acculturation may vary for individuals and groups, but Berry (1997) maintains the bidirectional issues of *cultural maintenance* (the significance and preservation of cultural identity) and *contact and participation* (interaction or lack thereof with other cultural groups) are common concerns across cultural groups.

Studies using unidimensional (e.g., time spent in the U.S.) or language-oriented measures of acculturation have found that acculturation is a strong predictor of IPV. In a study of predominantly low-income women of Mexican origin, Firestone, Harris and Vega (2003) found acculturation to be the greatest predictor of IPV, even when other factors such as stress, education level and income were considered. In a longitudinal study, Caetano, Ramisetty-Mikler and McGrath (2004) measured acculturation among Hispanic couples as a dyad representing the level of acculturation of each partner (e.g., low-low, low-medium, low-high, medium-medium, medium-high, high-high), and found couples with at least one member of medium acculturation (e.g. medium-low, medium-medium or medium-high) were more likely to report male to female partner violence than couples reporting other levels of acculturation. However, because these studies measure acculturation toward one orientation, American culture, little is known about the role that maintaining one's own culture of origin (e.g., Hispanicism) plays in predicting IPV.

Hispanic Stress. Hispanic Stress is viewed as a cluster of stressful events specific to Hispanics as members of an ethnic minority group in the U.S. Acculturative stress, the stress associated with acculturating to the U.S., has been found to partially mediate the relationship between acculturation and risk for IPV among Hispanic women (Caetano et al., 2005). Examples of these stressful events are problems with linguistic differences, changing personal and family values, changing gender role expectations, difficulty in meeting daily needs, and immigrant status (Cervantes, Padilla, & Salgado de Snyder, 1991). Hispanic (i.e., acculturation) Stress has been found to be the third most significant influence on IPV among women of Mexican origin, after acculturation and the spouse demanding his own way (Firestone et al., 2003).

Machismo. The term *machismo* is often used to refer to the negative ideals and behaviors associated with being a strong man in Hispanic culture, such as domination of women, virility, and risky behaviors such as having multiple intimate partners and engaging in substance abuse. Although some scholars argue that the concept of *machismo* is associated with both positive (e.g., chivalrous) and negative (e.g., aggressive) behaviors (Arciniega & Anderson, 2008), investigators found in several studies that Hispanic female research participants often focused on the negative aspects of *machismo* when they described cultural factors associated with IPV in their communities (Gonzalez-Guarda, Vasquez, Urrutia, Villarruel & Peragallo, 2011; Moreno, 2007; Peragallo et al., 2002). A recent qualitative study conducted with a diverse sample of Hispanic men also provided evidence that culturally ascribed norms for men are believed to promote IPV and other risky behaviors among men in their community (Gonzalez-Guarda, Ortega, Vasquez, & De Santis, 2010). Despite the fact that *machismo* has been identified

conceptually as a risk factor for IPV, few studies have measured this construct or explored the relationship of *machismo* with IPV.

Psychological Factors

Self-esteem. Self-esteem, the favorable or unfavorable attitude towards one's self (Rosenberg, 1965), appears to be an important individual level factor that can protect Hispanic women against IPV. In a study exploring the relationships between extrinsic (i.e., external factors such as income, education, employment and health status) and intrinsic (i.e., internal factors such as self-esteem) factors associated with IPV among a community sample of Hispanic women from diverse backgrounds, self-esteem was the only individual level factor that had a clinically and statistically significant protective effect on IPV (Gonzalez-Guarda, Urrutia, Vasquez, Mitrani & Peragallo, 2009). Further, one study with Hispanic women found that self-esteem is not only directly related to IPV in that women with higher self-esteem are less likely to tolerate an abusive relationship, but also that self-esteem is a mechanism through which aggressors victimize their partners. That is, aggressors work on lowering their victim's self-esteem in order to make them more vulnerable to IPV (Gonzalez-Guarda et al., 2011).

The purpose of this study is to expand knowledge about IPV in two ways. First, we expand on previous studies of Hispanic women by exploring the relationship between country of origin and IPV. Second, we examine whether the relationship between country of origin and IPV are associated with various variables, such as demographics, cultural factors, or self-esteem. We accomplish this purpose by testing two research questions. First, are there significant differences in IPV between women of different countries of origin? Second, if differences exist, do differences in other factors (demographics, cultural factors, or self-esteem) mediate the differences in IPV?

Methods

Design

Standardized questionnaires were administered to participants of SEPA II (*Salud, Educación, Prevención y Autocuidado*-Health, Education, Prevention and Self-care) (citation removed for peer review, 2010), a randomized control trial of a group intervention designed for Hispanic women in the U.S. to reduce HIV risk. Participants were assessed at baseline and at three follow-up periods (3 months, 6 months and 12 months) after having received the intervention. All of the measures used in this study were taken at baseline, with the exception of the measure for *machismo* (a description of the measure will follow), a supplemental measure that was added to the SEPA II assessment battery for the purposes of this study. Participants responded to the *machismo* measure during one of their follow-up appointments; measuring *machismo* during the follow-ups was not considered problematic because *machismo*, as with many beliefs about gender roles, was construed as being stable for individuals over a single year. Preliminary evaluation of the cultural variables assessed in Project SEPA II (i.e., acculturation and Hispanic Stress) revealed that these measures were stable, meaning that the scores changed very little over time. Consequently, the study team decided to stop reassessing for these variables during follow-up periods in order to reduce participant burden. Additionally, gender norms were also not one of the hypothesized mechanism of change targeted in the SEPA II intervention. All questionnaires were administered in English or Spanish via face-to-face interviews conducted by bilingual, female study personnel between January 2008 and April 2009. The sample, recruitment methods and procedures for SEPA II are described elsewhere (citation removed for peer review, 2010). The sample for this study consisted of a subset of participants who responded to the *machismo* measure (N = 350).

Measures

Demographic Variables. Demographic information (e.g., country of origin, age, years living in the U.S., income, education) was collected at the beginning of the assessment. Participants were asked to report their country of origin. In order to allow for large enough groups to make comparisons, responses were recoded into the following groups: Colombia (33.9%), other Central/South America countries, including Mexico (34.3%), Cuba (12.8%), other Caribbean countries (11.1%), and U.S. (7.8%). Age was measured on a continuous scale. Income data was collected according to pre-established ranges, as this has been found to help participants feel more comfortable disclosing their income (Fowler, 1995). Monthly income was categorized into one of eight ranges (< $500, $500 – 999, $1000 – 1999, $2000 – 2999, $3000 – 4999, $4000 – 4999, $5000 – 5999, >$5999), and treated as continuous in the analyses. Education was originally collected as a continuous scale but later dummy-coded to differentiate between individuals who completed at least a high school education, and individuals who did not.

Acculturation. The Bidimensional Acculturation Scale (BAS; Marin & Gamba, 1996) consists of 24 items that measure acculturation in a bidemensional manner. This scale consists of two subscales that measure how acculturated Hispanics are to American culture (Americanism) and to their culture of origin (Hispanicism). Americanism and Hispanicism are calculated by adding and averaging the responses to the 12 questions in each of these cultural domains. Scores for each domain can range from 1 to 4, with a score of 2.5 used as a cut-off point for low or high cultural activities. The validity of this measure is supported by high correlation with criteria previously used for developing acculturation scales (Marin & Gamba,

1996). In this study the BAS demonstrated a high reliability for both the Americanism and Hispanicism subscales (α = .95 and .85, respectively).

Hispanic Stress. Hispanic Stress was assessed with the Hispanic Stress Inventory (HSI; Cervantes, Padilla, & Salgado De Snyder, 1991). The immigrant version of this scale was used as the vast majority of the sample was foreign-born (92.5%). The original version includes five subscales that measure Economic Stress, Parental Stress, Family/Cultural Stress, Marital Stress, and Immigration Stress via 73 items. The Parental Stress subscale was not used in this study because not all of the participants were parents. Responses to these items screen for common stressors Hispanics face in the U.S. by asking participants if they have experienced these stressors. If participants respond "yes", they are asked to evaluate how much this stressor affected them. Two scores are calculated for each subscale. One score calculates exposure to the stressors and the other score evaluates the effect that stressor had in participants' lives. The score measuring exposure to the stressor was used for this study. The Economic, Family/Cultural, Marital and Immigration Stress subscales demonstrated high reliability (α = .74, .80, .74, .83, respectively).

Machismo. The concept of *machismo* was initially measured in this study through the Traditional *Machismo* and *Caballerismo* Scale (Arciniega, Anderson, Tovar-Blank & Tracey, 2008). This 20-item scale is the only measure that aims to capture both the negative (i.e., *Traditional Machismo* subscale) and positive (i.e., *Caballerismo* subscale) dimensions of *machismo* in Hispanic culture. The Traditional *Machismo* subscale contains questions regarding time-honored expected male and female roles in society (e.g., a man should be in control of his wife, the bills should be under the man's name, women should be beautiful). The *Caballerismo* subscale contains questions regarding men's responsibilities to their family and society in

general (e.g., men should be willing to fight to defend their families, men should be affectionate to their children, men must display good manners in public). Agreement or disagreement with these items are measured on a Likert scale and summed for one score for each subscale. The scale was initially developed and tested for reliability and validity among Mexican American males in English (Arciniega et al., 2008). This instrument was translated into Spanish through the standard translation, back-translation and verification process. However, because both subscales performed poorly within this sample (α = .59 for Traditional *Machismo* and α = .48 for *Caballerismo*) only one item from this measure was selected (i.e., "a man should be in control of his wife") as an indicator of participants' acceptance of traditional *machismo.* This item was chosen because results from qualitative research conducted with a similar sample indicated this belief was pervasive among women in Hispanic culture (Citation removed for peer-review, 2011).

Self-esteem. The widely-used Rosenberg Self-esteem Scale (RSE; Rosenberg, 1965), which includes 10 questions relating to participants' perceptions of themselves, was used to measure self-esteem. Responses to each question are measured on a Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree). Total scores range from 10 to 40, with higher scores indicating higher levels of self-esteem. This scale has demonstrated good reliability when used among Hispanics (Robins, Hendin, & Trzesniewski, 2001). In this study, the self-esteem scale demonstrated good internal consistency (α = .84).

Intimate Partner Violence. Partner violence was ascertained with the Partner-to-You (victimization) subscale of the Revised Conflict Tactics Scales (CTS), one of the most widely used instruments to measure IPV (Straus & Douglas, 2004). The CTS measures violent tactics used to handle conflicts in intimate relationships, including physical, sexual and psychological

forms of abuse. The Partner-to-You subscale consists of 12 items that assess for physical (e.g., pushing, grabbing, or shoving you), sexual (e.g., forced sex) and psychological (e.g., insults) forms of abuse perpetrated by an intimate partner. Participants report the number of times they experienced these violent tactics (never, 1 time, 2 times, or 3 or more times) in the past three months. The Partner-to-You subscale demonstrated strong reliability ($\alpha = .86$) in this study. To correct for positive skew, the square root of IPV was used in analyses.

Analysis

The analysis was conducted in two steps. First, we tested for differences in IPV between the five national origin groups using ANOVA. Bonferroni post-hoc tests identified which groups were significantly different. ANOVA and Bonferroni post-hoc also tested for differences in demographic variables (age, income, education and percent years in the U.S.), cultural factors (acculturation, Hispanic Stress, *machismo*), and self-esteem between Hispanic women from different countries of origin, and to identify which groups were different. Next, we evaluated mediation using path analyses (Mplus 6; Muthén & Muthén, 2007). Bentler & Chou's (1987) recommendation of five participants per path suggests that 70 participants will be sufficient for mediation analyses of any two groups. Results of ANOVA were used to select possible mediators (i.e., only variables that differed significantly between countries of origin with significant differences in IPV were included in the mediation analyses). The bias-corrected bootstrap method, which forms standard error estimates by resampling and correcting for bias in the central tendency of the model estimates, was used to test for mediation (MacKinnon, Lockwood & Williams, 2004). This method produces a coefficient, confidence interval and *p*-statistic associated with the product of the paths to and from the mediators. Maximum likelihood estimation was also used to permit the inclusion of missing data. Cutoffs for excellent fit were

CFI $\geq$ .95, and RMSEA $\leq$ .06 (Kline, 2009) and for acceptable fit were CFI $\geq$ .90, and RMSEA $\leq$ .08 (McDonald & Ho, 2002). Finally, to improve model fit, correlated errors suggested by modification indices that made theoretical sense were added.

Results

Group Differences

As shown in Table 1, there were significant differences in IPV between women from different nationality groups. Post-hoc Bonferroni tests indicated that Colombian women reported less IPV than women born in other Central/ South American Countries (p = .001). Significant differences in age, income, education, percent years living in the U.S., acculturation, occupational stress, immigration stress, control of wife, and self-esteem were found (p < .05). No significant differences between groups were noted for marital stress and family stress. Post-hoc Bonferroni analyses showed the Colombian women had more education than women born in Cuba (p < .001), the Caribbean (p < .001), Central/South America (p < .001), and the U.S. (p < .01). Colombian women also reported higher income than women born in Cuba (p < .001), the Caribbean (p < .01), Central/South America (p < .01), and the U.S. (p < .01). Women born in the U.S. were significantly younger than those born in Cuba (p < .001), Colombia (p < .001), the Caribbean (p < .01), and Central/South America (p < .001). Women born in the U.S. also spent significantly greater proportions of their lives in the U.S. than those born in Cuba (p < .001), Colombia (p < .001), the Caribbean (p < .001), and Central/South America (p < .001). Women born in the U.S. had greater Americanism than those born in Cuba (p < .001), Colombia (p < .001), the Caribbean (p < .001), and Central/South America (p < .001), and lower Hispanicism than those born in Cuba (p < .001), Colombia (p < .001), the Caribbean (p < .001), and

Central/South America ($p < .001$). Women born in the U.S. had significantly lower immigration stress than those born in Cuba ($p < .01$), Colombia ($p < .001$), the Caribbean ($p < .01$), and Central/South America ($p < .001$). Cuban women had significantly lower immigration stress than women from Central/South America ($p < .001$) and Colombia ($p < .05$). Caribbean women had significantly lower immigration stress than women from Central/South America ($p < .05$) and Colombia ($p < .001$). For occupational stress, the difference between women from the Caribbean and Central/South America approached statistical significance ($p = .05$).

Mediation

Only those countries of origin (Colombia, N = 186, or other Central/South American nations, N = 188) that had statistically significant differences in IPV in post-hoc Bonferroni tests were included in the mediation model. The initial mediation model did not have an acceptable fit to the data, CFI = .62, RMSEA = .15. Model fit was improved significantly when covariance between the errors of education and 1) income and 2) control of wife were added to the model. The modified (with two additional covariances) model had acceptable fit to the data, CFI = .94, RMSEA = .08. As described in Figure 1, significant paths were found between country of origin and income ($\beta = -.20$, $B = -0.26$, $SE_B = 0.07$, $p < .001$, 95% CI(B) = -0.35, -0.13), education ($\beta = -.26$, $B = -0.95$, $SE_B = 0.18$, $p < .001$, 95% CI(B) = -1.24, -0.66), self-esteem ($\beta = -.19$, $B = -0.86$, $SE_B = 0.23$, $p < .001$, 95% CI(B) = -1.24, -0.47), and beliefs that a man should be in control of his wife ($\beta = .21$, $B = 0.33$, $SE_B = 0.10$, $p < .01$, 95% CI(B) = 0.16, 0.49). Consistent with the ANOVA results, women born from other countries in Central/South America reported lower income, less education, greater control over wife, and lower self-esteem than women born in Colombia. Self-esteem was significantly related to IPV ($\beta = ,-.19$ $B = -0.01$, $SE_B = 0.002$, $p < 01$, 95% CI(B) = -0.012, -0.005), such that women with higher self-esteem had lower IPV. A

significant path was also found between country of origin and IPV ($\beta = .14$, $B = 0.03$, $SE_B = 0.01$, $p < .05$, 95% CI(B) = 0.01, 0.04), controlling for education, income, self-esteem, and the belief that a man should be in control of his wife, indicating that women born in other Central/South American countries had significantly greater IPV than women born in Colombia. Additionally, the product of the path from country of origin to self-esteem and from self-esteem to IPV was significant ($\beta = .037$, $B = 0.007$, $SE_B = 0.003$, $p < .01$, 95% CI(B) = 0.003, 0.012), indicating that self-esteem partially mediated the relationship between country of origin and IPV when differences in the demographic and cultural variables were accounted for. Combined, education, income, self-esteem, beliefs about controlling one's wife, and nativity explained a small amount ($R^2 = .08$) of variation in IPV.

Discussion

To the authors' best knowledge, this study is the first to explore differences in a myriad of demographic and cultural variables, self-esteem and IPV among Hispanic women of different countries of origin. The sample of women participating in this study reported varying ages, income and educational levels, percent of their lives lived in the U.S, acculturation levels, exposures to occupational and immigration stressors, beliefs regarding whether a man should be in control of his wife, self-esteem, and IPV according to country of origin. Although few research studies have accounted for the heterogeneity of Hispanics regarding these variables, this study suggests important differences exist among Hispanics from different countries of origin in terms of health related indicators. However, due to convenience sampling, the differences noted between the groups of Hispanic women compared in this study cannot be generalized to the general Hispanic population in South Florida or other areas in the U.S.

Colombian and Cuban women in this study appeared to fare better than the other groups of women. Colombian and Cuban women had lower mean IPV scores than women from other Latin American countries and the U.S., although these differences were only significant between Colombian women when compared to women from other Central/South American countries. Colombian women also had better socioeconomic indicators, reporting a higher monthly income and more years of education. The Colombian women's average age was the second oldest of the subgroups, they spent the least amount of time in the U.S., and they had the highest level of education, which may indicate that these women were educated outside of the U.S. The demographic profile of the participants of the study is likely a result of the migratory patterns of Hispanics to the U.S. and South Florida, specifically. For example, Colombians as a group are most concentrated in Florida (31.9%), and have higher levels of education and income, more proficiency in English, and a greater likelihood of being married compared to U.S. Hispanics overall (Pew Hispanic Center, 2010). The migratory and demographic patterns of Hispanic sub-groups appear to contribute to their vulnerability to IPV. More research is needed to identify what factors relating to these (e.g., economic, political, historical) is responsible for this vulnerability.

One important factor that may be associated with vulnerability of Hispanic women for IPV is stress. Colombian and Cuban women scored lower on occupational and immigration stress than women from other Central/South American countries. This may be because these two groups comprise a large proportion of Hispanics living in South Florida. Hispanics represent 45% of the population living in Miami-Dade and Broward Counties. Colombians and Cubans represent 4% and 20% of this population respectively (U.S. Census Bureau, 2000). Being the majority of a minority (i.e., Cubans are the largest Hispanic sub-group, accounting for 45% of all

Hispanics in the area) and/or living in enclaves in South Florida (i.e., participants were recruited from a highly dense Colombian neighborhood in Broward County), may indicate these women have access to more resources than the other minority Hispanic subgroups. These resources can assist in helping these women find desirable employment opportunities and navigate the immigration and legal systems. It is also important to note that anyone from Cuba has the right to claim refugee status in the U.S. because of political persecution, and Colombians may seek refugee status on an individual basis because of persecution from the *guerrilla* (UNHCR, 2010). These political considerations may assist Hispanics from these countries in obtaining legal status and therefore provide access to more opportunities in the U.S. However, because access to these resources and legal status were not directly assessed in this study, this hypothesis could not be tested. More research needs to be conducted to tease out the effects that minority and immigration status as well as migratory patterns may have on health outcomes, with both nationally representative groups of Hispanics and across Hispanic subgroups in different regions of the U.S.

The beliefs regarding traditional gender roles, as measured in this study, did not appear to play an important role in predicting differences in IPV across Hispanic subgroups. However, this is not consistent with what others have documented in the literature. In fact, Santana and colleagues (2006), found that more traditional masculine gender roles are associated with an increase risk for the perpetration of IPV among primarily Hispanic sample of Hispanic men (*AOR* = 2.1, *95%CI* = 1.2, 3.6). The lack of a statistically significant relationship between gender role beliefs and IPV in this study may have been because only one aspect of *machismo*, the participants' perceptions of whether a man should be in control of his wife, was assessed. Although a measure of *machismo* that includes both positive and negative aspects of this concept

was used (Arciniega et al., 2008), the scale did not perform adequately enough to be used in the analysis. Problems with this scale included very poor reliability and extreme scores on most items, both of which may have restricted the ability to detect significant relationships. The poor performance of the scale may have been because it was developed for Mexican-American males and the items may have not resonated in the same way for Hispanic women from diverse countries of origin. This measure was chosen by the authors because it was the only gender role scale that was specifically developed for Hispanics and the items from this scale fit well with qualitative research conducted with the targeted community. This speaks to the lack of valid and reliable psychological instruments appropriate for use with Hispanic populations in general, and Hispanic female subgroups in particular. Additional research needs to be conducted to develop the instrumentation needed to perform rigorous studies of cultural beliefs with Hispanic populations.

Differences in demographic and cultural factors across Hispanic subgroups did not account for variations in IPV scores. However, self-esteem partially mediated the relationship between country of origin and IPV, thus indicating this variable partially explained the difference in IPV scores within the model. Self-esteem has been found to be associated with IPV in other studies conducted with similar samples (Gonzalez-Guarda et al., 2009). Caution must be taken, however, in identifying self-esteem as risk or protective factor, as this may lead to incorrect conclusion regarding the victim "causing" abuse. In fact, Hispanic women have described self-esteem to be a mechanism through which perpetrators victimize their partners. That is, Hispanic women have described how their partners started to victimize them by verbal and psychological forms of abuse that intentionally lowered their self-esteem and left them more vulnerable to battering (Gonzalez-Guarda, Vasquez, Urrutia, Villarruel & Peragallo, 2011). Self-esteem may

also be related to other potential confounders. Investigators interacting with the women during the intervention sessions noted that the Colombian participants were more participatory than the other women during sessions and often took control of group discussions. They also appeared more self-confident and empowered, which may, again, have been related to variations in demographic factors across sub-groups and/or previous histories of abuse. More research is needed to identify how individual level factors such as self-esteem, empowerment and history of abuse, interact with cultural and environmental factors to place Hispanics from different birthplaces at risk for IPV. This research should include information regarding the characteristics of women's partners, whose attitudes, beliefs and behaviors may have strong predictive values.

It is important to note that the current dataset had several limitations. Self-esteem and IPV were measured in a single cross-section, which limits causal interpretations. We cannot rule out the possibility that the experience of IPV led to decreases in self-esteem for the women in this sample, or that a third variable (e.g., personality differences in assertiveness) caused both low self-esteem and higher risk for IPV. Further, results from this study do not rule out the possibility that alternative models could fit the data as well or better and the relatively modest amount of variation in IPV explained by these predictors suggests that many other variables might explain IPV. Of these, legal status in the U.S. and/or relationship power could have explained some of these relationships (Aldarondo, Kantor, & Jasinski, 2002; Gonzalez-Guarda et al., 2010). Nevertheless, in order to prevent turning participants away from the study because of fear of deportation or having a questionnaire that was too lengthy, legal status and relationship power were not assessed. Lastly, in addition to the problems regarding the measure used for *machismo* that were previously discussed, this measure was collected at a different time point

(i.e., during one of the follow-up appointments) than the other variables in this study, which were collected at baseline. It is possible that the intervention had effect on this variable.

This study supports the development of interventions that address the unique context, experiences and culture of Hispanic women according to their birthplace. As supported by this study, Hispanic women vary significantly in demographic, cultural and psychological factors according to their birthplace. . As such, interventions addressing Hispanic women should take these differences into consideration. Although others have called upon the need for social scientists and clinicians to acknowledge that Hispanics represent numerous cultural identities (Page, 2005), few culturally specific interventions that consider these differences exists. This is likely due to the difficulty in striking a balance between being generalizable enough to apply to women of various cultural groups, but specific enough to meet the unique needs of these Hispanic subgroups. This balance is crucial to the prevention of IPV among Hispanics and the general health and well-being of this population.

References

Aldarondo, E., Kantor, G.K. & Jasinki, J. (2002). A risk marker analysis of wife assault in Latino families. *Violence Against Women, 8*(4), 429-454.

Arciniega, G. M., Anderson, T. C., Tovar-Blank, Z. G., & Tracey, T. J. (2008). Toward a fuller conceptualization of machismo: Development of a traditional machismo and caballerismo scale. *Journal of Counseling Psychology*, *55*(1), 19-33. doi:10.1037/0022-0167.55.1.19

Bentler, P. M. & C. P. Chou (1987). Practical issues in structural modeling. *Sociological Methods and Research. 16*(1), 78 - 117. doi: 10.1177/0049124187016001004

Berry, J. W. (1997).Immigration, acculturation, and adaptation. *Applied Psychology: An International Review*, *46*(1), 5-68.

Caetano, R., Cunradi, C.B., Clark, C.L. & Schafer, J. (2000). Intimate partner violence and drinking patterns among White, Black and Hispanic couples in the U.S. *Journal of Substance Abuse, 11*(2), 123-138.

Caetano, R., Field, G.A., Ramisetty-Mikler, S., & McGrath, C. (2005). The 5-year course of intimate partner violence among White, Black and Hispanic couples in the United States. *Journal of Interpersonal Violence, 20*(9), 1039-1057.

Caetano, R., Ramisetty-Mikler, S., & McGrath, C. (2004). Acculturation, drinking, and intimate partner violence among Hispanic couples in the United States: A longitudinal study. *Hispanic Journal of Behavioral Sciences, 26*(1), 60-78.

Cervantes, R. C., Padilla, A.M., & Salgado de Snyder, N. (1991). The Hispanic Stress Inventory: A culturally relevant approach to psychosocial assessment. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *3*(3), 438-447.

Cunradi, C.B., Caetano, R., & Schafer, J. (2002). Socioeconomic predictors of intimate partner violence among White, Black, and Hispanic couples in the United Status. *Journal of Family Violence, 17*(4), 377-389.

Denham, A.C., Fraisier, P.Y., Hooten, E.G., Belton, L., Newton, W., Gonzalez, P., et al. (2007). Intimate partner violence among Latinas in eastern North Carolina. *Violence Against Women, 13*(2), 123-140.

Firestone, J.M., Harris, R.J., & Vega, W.A. (2003). The impact of gender role ideology, male expectancies, and acculturation on wife abuse. *International Journal of Law and Psychiatry, 26*(5), 549-564.

Fowler, F. J. (1995). Improving Survey Questions: Design and Evaluation. (38th Vol.). Applied Social Research Methods Series. California: Sage Publications.

Gonzalez-Guarda, R. M., Florom-Smith, A. L., & Thomas, T. (2011). A syndemic model of substance abuse, intimate partner violence, HIV infection, and mental health among Hispanics. *Public Health Nursing*, Retrieved March 15, 2011 from: Wiley-Blackwell Full Collection Database.. doi: 10.1111/j.1525-1446.2010.00928.x

Gonzalez-Guarda, R.M., Vasquez, E.P., Urrutia, M.T., Villarruel, A. & Peragallo, N., (2011). Hispanic Females' Experiences with Substance Abuse, Intimate Partner Violence and Risk for HIV. *Journal of Transcultural Nursing,* 22(1):46-54.

Gonzalez-Guarda, R.M., Ortega, J., Vasquez, E. & De Santis, J. (2010). *La mancha negra*: Substance abuse, violence and sexual risks among Hispanic males. *Western Journal of Nursing Research, 32*(1), 128-148.

Gonzalez-Guarda, R.M., Peragallo, N., Vasquez, E.P., Urrutia, M.T. & Mitrani, V.B. (2009). Intimate partner violence, depression and resource availability among a community sample of Hispanic women. *Issues in Mental Health Nursing, 30*(4), 227–236.

Gonzalez-Guarda, R.M., Vasquez, E.P., Urrutia, M.T., Villarruel, A. & Peragallo, N., (2011). Hispanic Females' Experiences with Substance Abuse, Intimate Partner Violence and Risk for HIV. *Journal of Transcultural Nursing,* 22(1):46-54.

Kantor, G.K., Jasinki, J.L. & Aldarondo, E. (1994). Soiocultural status and incidence of marital violence in Hispanic families. *Violence and Victims*, *9*(3), 207-222.

Kelly, U.A. (2009). "I'm a mother first": The influence of mothering in the decision-making processes of battered immigrant Latino women. *Research in Nursing & Health, 32*(3), 286-297.

Kline, R.B. (2009). Principles and practice of structural equation modeling (2nd ed.). New York: Guilford Press.

Krishnan, S., Hilbert, J.C. & VanLeeuwen, D. (2001). Domestic violence and help-seeking behaviors among rural women: Results from a shelter-based study. *Family and Community Health*, *24*(1), 28-48.

Page, J.B. (2005). The concept of culture: A core issue in health disparities. *Journal of Urban Health: Bulletin of the New York Academy of Medicine, 82*(2), Supplement 3, iii35-11143. doi:10.1093/jurban/jti062.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*(1), 99-128.

Marin, G., & Gamba, R. J. (1996). A new measurement of acculturation for Hispanics: The bidirectional acculturation scale for Hispanics (BAS). *Hispanic Journal of Behavioral Sciences, 18*(3), 297-316.

McDonald, R.P. & Ho, M. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods, 7*(1), 64–82. doi:10.1037/1082-989X.7.1.64

Moreno, C. (2007). The relationship between culture, gender, structural factors, abuse, trauma, and HIV/AIDs for Latinas. *Qualitative Health Research, 17*(3), 340-352. doi:10.1177/1049732306297387

Muthén, L.K. & Muthén, B.O. (2007). *Mplus user's guide* (5th ed). Los Angeles: Muthén & Muthén.

Newcomb, M.D. & Vargas Carmona, J. (2004). Adult trauma and HIV status among Latinas: Effects upon psychological adjustment and substance abuse. *AIDS and Behavior, 8*(4), 417-428.

Peragallo, N. P., DeForge, B., Rivero, R., Khoury, Z., & Talashek, M. (2002). Latinas' perspective on HIV/AIDS: Cultural issues to consider in prevention. *Hispanic Health Care International, 1*(1), 11-23

Pew Hispanic Center. (2010). Hispanics of Colombian origin in the United States, 2008. Retrieved March 16, 2010, from: http://pewhispanic.org/files/factsheets/64.pdf

Robins, R.W., Hendin, H.M. & Trzesniewski, K.H. (2001). Measuring global self-esteem: Construct validation of a single item question and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin, 27*(2), 151-161.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton: Princeton University Press.

Straus, M.A. & Douglas, E.M. (2004). A short form of the revised conflict tactics scales, and typologies for severity and mutuality. *Violence and Victims, 19*(5), 507-520.

Tjaden, P. & Thoennes, N. (2000). Full report of the prevalence, incidence, and consequences of violence against women: Findings from the national violence against women survey. Washington, D.C.: National Institute of Justice.

United Nations High Commissioner for Refugees, UNHCR (2010). Refugees: Flowing across borders. Retrieved March 16, 2011, from: http://www.unhcr.org/pages/49c3646c125.html

U.S. Census Bureau. (2008). The American fact finder: Selected population profile in the U.S., Hispanic or Latino (of any race), 2006 American community survey. Retrieved March 16, 2011, from: http://factfinder.census.gov

U.S. Census Bureau (2000). American fact sheets for Miami-Dade and Broward counties. Retrieved March 15, 2011, from: http://factfinder.census.gov

U.S. Department of the Interior. (2010). Puerto Rico – Office of Insular Affairs. Retrieved March 15, 2011, from: http://www.doi.gov/oia/Islandpages/prpage.htm#Political_Status

Zinn, M. B., & Dill, B. T. (Eds.) (1994). *Women of color in U.S. society.* Philadelphia: Temple University Press.