



Factors Contributing to Domestic Violence Among Hindu Asian Indian Immigrant Women in Allegheny County, Pennsylvania: A Feasibility Study

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Chelsea Pallatino , *Making Cents International*, chelsea.pallatino@gmail.com

Todd Bear , *University of Pittsburgh Graduate School of Public Health, Department of Behavioral and Community Health Sciences*, tobst2@pitt.edu

Martha A. Terry , *University of Pittsburgh Graduation School of Public Health, Department of Behavioral and Community Health Sciences*, materry@pitt.edu

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Abstract

While there is research on survivors of domestic violence in India and the United States (U.S.), little is known about the sociocultural factors related to domestic violence among Hindu Asian Indian immigrant women (AIIW) in the U.S. The objectives of this study were to a) test the feasibility of conducting domestic violence research among Hindu AIIW; b) investigate domestic violence prevalence and correlations with other characteristics; and c) test the cultural appropriateness of completed measures on social support, acculturation status, and domestic violence. Over 50% of respondents had experienced abuse, often perpetrated by family. Participants had high levels of social support and acculturation, regardless of their abuse status. Participants were receptive to this research, suggesting that domestic violence research among Hindu AIIW is feasible. High prevalence of violence among Hindu AIIW suggests they are at high risk for experiencing abuse; lack of variability in social support and acculturation scale responses suggest the need to further test instruments among Hindu AIIW.

Keywords

domestic violence; Asian Indian immigrant women; feasibility

Cover Page Footnote

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Chelsea L. Pallatino, PhD, MPH, Making Cents International
Todd M. Bear, PhD, MPH, University of Pittsburgh Graduate School of Public Health
Martha Ann Terry, PhD, University of Pittsburgh Graduate School of Public Health
Corresponding Author: Chelsea L. Pallatino, PhD, MPH, chelsea.pallatino@gmail.com

ABSTRACT

While there is research on survivors of domestic violence in India and the United States (U.S.), little is known about the sociocultural factors related to domestic violence among Hindu Asian Indian immigrant women (AIIW) in the U.S. The objectives of this study were to a) test the feasibility of conducting domestic violence research among Hindu AIIW; b) investigate domestic violence prevalence and correlations with other characteristics; and c) test the cultural appropriateness of completed measures on social support, acculturation status, and domestic violence. Over 50% of respondents had experienced abuse, often perpetrated by family. Participants had high levels of social support and acculturation, regardless of their abuse status. Participants were receptive to this research, suggesting that domestic violence research among Hindu AIIW is feasible. High prevalence of violence among Hindu AIIW suggests they are at high risk for experiencing abuse; lack of variability in social support and acculturation scale responses suggest the need to further test instruments among Hindu AIIW.

Keywords: domestic violence, Asian Indian immigrant women, feasibility research

INTRODUCTION

Lifetime experiences of domestic violence have been well-researched among American women in the U.S. and Indian women in India, but few studies have been conducted with Asian Indian immigrant women (AIIW) in the U.S. In the U.S., 25% of all women are estimated to experience intimate partner violence (IPV) and over 16% of women are victims of attempted or completed rape during their lifetime (Ackerson & Subramanian, 2008; Bhattacharya, Basu, Das, Sarkar, Das, & Roy, 2013). For women in India, estimates of domestic violence range from 6-

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60% and it is estimated that domestic violence is reported every five minutes, often carried out by the husband or one of his relatives (Abramsky et al., 2011; Mahapatro, Gupta, & Gupta, 2012). Research has shown that immigrants who experience IPV are more likely to be of a minority racial group, perceive discrimination, report IPV less than nonimmigrant peers, and be less acculturated (Allagia, Regehr, & Rishchynski, 2009; Du Mont et al., 2012; Kimber et al., 2014; Vatnar & Bjorkly, 2010). Survivors of abuse are more likely to have arranged marriages, be of low-income and low caste, and have lower education levels (Abramsky et al., 2011; Ackerson, Kawachi, Barbeau, & Subramanian, 2008; Bhattacharya et al., 2013; Dalal & Lindqvist, 2012; Du Mont et al., 2012; Sabarwal, McCormick, Subramanian, & Silverman, 2012; Sabri, Renner, Stockman, Mittal, & Decker, 2014).

Acculturation is the process by which individuals adjust to a new culture and choose whether or not to incorporate new behaviors and attitudes of that culture into their identity. Acculturation is an indicator of an individual's or a group's level of adaptation to a new, dominant culture. Acculturation status is important for understanding health outcomes of immigrant victims of violence, because not adopting cultural practices of the new country has been associated with more adverse mental health outcomes, history of child maltreatment, and higher risk for IPV (Hyman et al., 2006; Kimber et al., 2014; Mehta, 1998). Lack of assimilating or integrating the dominant culture's norms is common when there is much cultural distance between the host culture and the culture of origin (Schwartz, Unger, Zamboanga, & Szapocznik, 2010). While diversity is acceptable in multicultural societies, when there is little tolerance for cultural practices that differ from the host culture, immigrant populations may become more isolated because of their differences, and instances of perceived and actual discrimination increase (Schwartz et al., 2010).

Understanding the relationship between acculturation and domestic violence is crucial as the population of Asian Indians in the U.S. continues to increase, warranting the need to address and consider any concerns related to their safety. The Asian Indian diaspora is the third largest Asian diaspora in the U.S., with 3.8 million people as of 2013 (Zong & Batlova, 2016). Asian Indians are widely spread and heavily concentrated in a higher number of states, including in the geographic area of focus for this research study, Pennsylvania (U.S. Census Bureau, 2012). As of 2013, 62% of the Asian population are first generation immigrants and 64% of females are first generation immigrants (U.S. Census Bureau, 2012). According to the Pennsylvania Department of Health it is estimated that as of 2014, 426,123 Asian and Pacific Islanders were in Pennsylvania, with the exact number of Asian Indians in the state being unclear due to lack of disaggregated data (Pennsylvania Department of Health, 2016).

In general, the majority of Asian Indians view themselves as "very different" from the typical American and are less likely than most populous Asian groups in the U.S., such as Chinese, Filipino and Japanese Americans, to consider themselves as "typical" Americans (Pew Research Center, 2013). Asian Indians also care deeply about the quality of their relationships, with 64% of them reporting that having a successful marriage is "one of the most important things" in life compared to 34% of all Americans 18 or older (Pew Research Center, 2013). This rate is identical among Korean Americans, but exceeds rates among Vietnamese, Filipino, Japanese and Chinese Americans (Pew Research Center, 2013). Among Asian Indians, 78% reported that "being a good parent" is "one of the most important things" in life, which is higher than the five other most populous Asian groups in the U.S. and Americans (Pew Research Center, 2013).

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Although the Asian Indian population is well-established in Pennsylvania and in the Allegheny County and Greater Pittsburgh region, data are lacking regarding their population size, neighborhood location, and other demographic factors. In addition little research focuses on Hindu AIIW's experiences of domestic violence. Among studies on South Asian women, the majority of whom are Asian Indian, studies have found a 38-94% risk for lifetime experiences of violence (Adam & Schewe, 2007; Mahapatra, 2012; Raj et al., 2006). Despite their high risk for experiencing abuse and rapidly increasing population size in the U.S., studies on AIIW are nonexistent, regardless of their religious identity. Studies and data at the national, state, and local level are not available for Asian Indians or South Asians nor are they disaggregated by gender. Often studies and data group all Asians or South Asians together, without considering the cultural, social, religious, and linguistic nuances that make them unique and which may be contributing to experiences of violence.

Thus, there is a need to better understand the size of this population, their location, demographics, perceptions, and experiences of abuse. Researchers, providers, and policymakers do not fully understand the relationship between social support, acculturation, and domestic violence among Hindu AIIW in the U.S. and there is a need to test existing instruments to better understand this relationship and determine opportunities for intervention. This paper presents methodological and study findings from a research study regarding the feasibility of conducting questionnaires on the social and cultural characteristics of Hindu AIIW in Allegheny County and the surrounding counties and their experiences of domestic violence. The study seeks to address the follow objectives: a) test the feasibility of conducting domestic violence research among Hindu AIIW; b) investigate domestic violence prevalence and correlations with other characteristics; and c) test the cultural appropriateness of completed measures on social support, acculturation status, and domestic violence.

METHODS

Study Design and Participants

Prior to recruiting participants for the study, the principal investigator had several informal discussions with Hindu AIIW in Allegheny County to explore perceptions about the prevalence of domestic violence among Hindu AIIW and feasibility of conducting a study with Hindu AIIW. Feasibility refers to the financial cost of research activities, the time-related cost of recruiting for and completing research activities, and the feasibility of completing a research study with Hindu Asian Indian women and on the topic of domestic violence. These conversations informed the recruitment approach and appropriate questions for inclusion in data collection activities for the Indian Healthy Relationships Study (IHRS). This was a mixed methods pilot study advertised to and completed by participants in Allegheny County, Pennsylvania. The aim of this quantitative study was to assess the feasibility of describing local Hindu AIIW and their experiences of domestic violence, as well as better understand how length of time in the U.S. impacts how Hindu AIIW define, experience, and seek help in situations of abuse. Participants completed questionnaires on demographics, social support, acculturation, and lifetime experiences of domestic violence. The research question for the study was: *What is the relationship between social support, acculturation status, domestic violence, and sociodemographic factors among Hindu AIIW?*

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Although the study sample size for the IHRS (n=30) limited the generalizability of findings, it was hypothesized that women in arranged marriages, with children, who are low-income, low caste, and less educated would more often report domestic violence, as these are risk factors for abuse (Abramsky et al., 2011; Ackerson et al., 2008; Ackerson & Subramanian, 2008; Bhattacharya et al., 2013; Dalal & Lindqvist, 2012; Du Mont et al., 2012; Hyman et al., 2006; Sabarwal et al., 2012; Sabri et al., 2014). Additionally, we hypothesized domestic violence would be higher among participants who spent more years in the U.S., because it was perceived that participants who had spent more time in the country would have broader definitions of domestic violence and that they would be more likely to report instances of abuse.

In order to participate in the study, participants had to self-identify as female, Hindu, age 18 or older, Indian-born, and living in Allegheny County or surrounding counties. Participants did not have to identify as a survivor of domestic violence to be eligible to participate. Because the research team aimed to explore participants' conceptualizations of domestic violence in qualitative interviews, domestic violence was not defined prior to potential study participation. This allowed participants to explain their understanding and opinions regarding domestic violence and share experiences that fit within their individual conceptualizations of domestic violence, should any dimensions of violence not be highlighted by quantitative study measures. Most Asian Indians identify as Hindu and experiences of domestic violence may vary across members of different religions. Because Hinduism is the main religion in India and to control for effects of religion that could influence participant responses, only Hindu women were eligible for this study. This allowed the research focus to center on AIIW's cultural rather than their religious affiliation.

All interested participants born in India were eligible for the study. Women were required to be Indian-born to ensure comparison of their ideas and experiences in India and the U.S. Participants were recruited from Allegheny County and the surrounding counties for feasibility purposes. There was no minimum length of time for women to have spent in India before moving to the U.S. Women who met the eligibility criteria from Allegheny County and nearby counties were considered for inclusion in the study to ensure an adequate sample size. In addition to eligibility criteria, advertisements for this study highlighted that all research activities would occur during a two-hour in-person meeting. All participants were paid \$10 for questionnaire completion and \$30 for completing accompanying interviews.

The study was advertised electronically and through mailers by the University of Pittsburgh's Clinical and Translational Science Institute's (CTSI) Research Participant Registry. The CTSI registry was considered the safest participant recruitment option, as involvement in the registry and potential interest in the study could be kept private if women were currently experiencing domestic violence. As a result, the study was first advertised by the registry only. Several weeks after advertising the study on CTSI, no participants had been recruited. As a result, flyers were shared with additional stakeholders to increase recruitment, including Pittsburgh-based college campuses, community organizations, grocery stores, restaurants, and businesses. Some participants were also recruited by friends and participants in the study. Local Hindu temples were also considered as recruitment sites. After discussions with local members of the Hindu Asian Indian population, it was decided that because temples are the center of the Asian Indian community, recruiting from them might result in more harm for women experiencing domestic violence who were patrons at the temple.

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Flyers encouraged interested participants to call or email the principal investigator (removed for review). Regardless of whether the participant first contacted the principal investigator via email or phone, all eligibility screening for the study occurred over the phone. Those who contacted the principal investigator via email were asked to provide a safe phone number and time for the principal investigator to contact the woman and discuss the study. Responses via phone and email from the principal investigator to interested participants were purposefully vague and brief to ensure that if the woman was still in a situation of abuse, her participation in a domestic violence-related study would be kept private. After screening for eligibility over the phone, the principal investigator reviewed the purpose of the study using an IRB approved script and arranged a time and location to meet with the participant to complete research activities. This research was reviewed and approved by the University of Pittsburgh Institutional Review Board (IRB).

Data Collection and Measures

Demographic questionnaire. The demographic questionnaire was designed by the principal investigator and included questions on household residents and income from the U.S. American Community Survey and caste and marital status from the Indian National Family Health Survey (NFHS) (Kishor & Gupta, 2009). The question on caste status uses government classification categories, but because Indians may be more familiar with the Varna categories, which are religiously and socially based (e.g. Brahmin, Kshatriya), these were also included in the questionnaire. While an individual's caste status is indicative of the Indian government's assessment of the socioeconomic status of the individual and the affirmative action-like policies that exist for someone based on their status, Varna status is more linked to ritual. Varna status is a fairly accurate way to determine someone's caste status and most individuals are more familiar with their Varna status than their caste status, especially if they no longer live or never lived in India. This change and several others were made after an electronic draft version of the questionnaire was pretested with a convenience sample of 16 individuals, primarily students, who offered feedback. Other changes included the addition of questions on length of marriage and satisfaction with marriage. The 18 demographic questions addressed citizenship status, length of time spent in the U.S., Indian state of origin, native language, marital status, marriage type, length of marriage, satisfaction with marriage, motherhood status, pregnancy status, household composition, Varna status, caste status, education status, and income.

Social support questionnaire. In addition to the demographic questionnaire, participants completed questionnaires on social support, acculturation status, and lifetime experiences of violence. For social support, participants answered the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS has been completed by South Asian women, but not in a study that is exclusively Asian Indian women (Mahapatra & DiNitto, 2013; Yoshioka, Gilbert, El-Bassel, & Baig-Amin, 2003). The MSPSS is 12 items and asks participants to rate their level of support with responses that range from very strongly agree to very strongly disagree on a 7-point Likert scale. Topics include having someone to discuss problems with and having someone for emotional and decisionmaking support. Questions refer to support from significant others, family, and friends, each of which has its own subscale and impact the overall score on the scale. Thus, the participant is scored on the significant other, family, friends, and overall scale regarding their support from each person or group. Scores

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are averaged on each scale, with 1 to 2.9 representing *low support*, 3 to 5 representing *moderate support*, and 5.1 to 7 representing *high support* (Zimet et al., 1988).

Acculturation questionnaires. Acculturation status was measured by 40 total items on several questionnaires including the Brief Sociocultural Adaptation Scale (BSAS), the Brief Psychological Adaptation Scale (BPAS), the Brief Perceived Cultural Distance Scale (BPCDS), and the Brief Acculturation Orientation Scale (BAOS) (Demes & Geeraert, 2014). The BSAS, BPAS, BPCDS, BAOS have been tested among Thai populations, but not with Asian Indian samples (Demes & Geeraert, 2014). The BSAS and BPCDS have 12 items each, while the BPAS and BAOS each has eight items. The use of adaptation instead of acculturation for the BSAS and BPAS refers to behavioral acculturation in the case of the BSAS and mental well-being in the context of relocation for the BPAS (Demes & Geeraert, 2014). The BSAS and BPCDS focus on aspects of the host and home cultures, in this case the U.S. and India respectively, such as climate, eating practices, norms, and language. While the BSAS focuses on the host country, the BPCDS asks the participants about their perceived differences between the host and home country on the above-mentioned topics. The BPAS and BAOS ask participants how their current life and integration experiences make them feel about their host and home country, with the BAOS specifically asking how important it is to identify with cultural aspects of each country. The BSAS and BPCDS have a single composite average score, in which higher scores represent high sociocultural adaptation and high perceived cultural distance, respectively (Demes & Geeraert, 2014). The BPAS and BAOS are reverse scored and given a single composite average score, with higher scores meaning high psychological adaptation and home or host acculturation orientation, respectively (Demes & Geeraert, 2014).

Domestic violence questionnaire. The Demographic Health Survey (DHS) Domestic Violence module is a 40-question domestic violence measurement instrument and a component of the NFHS that participants completed on their lifetime experiences of violence (United States Agency for International Development, 2017). Similar to the demographic questionnaire, the DHS Domestic Violence module did not involve any scoring or categorization of participant responses. To our knowledge, the DHS Domestic Violence module has not been tested among any South Asian population in the U.S. This questionnaire has been tested among Indian women in India and therefore it allows for cross-cultural comparisons of lifetime experiences of domestic violence between Hindu Indian women in India and Hindu AIIW (United States Agency for International Development, 2017). Because none of these questionnaires have been used in studies focusing solely on AIIW, this study is an opportunity to determine the feasibility of administering these measures among Hindu AIIW and to compare associations between domestic violence experiences, level of acculturation, and social support.

Data Analysis

All questionnaire responses were entered into an SPSS database. The MSPSS responses were scored and the BSAS, BPAS, BPCDS, and BAOS were consolidated into low, moderate or high categories according to participant ratings on each scale. Social support and acculturation scale scores were categorized into groups of low, moderate, and high. Descriptive statistics and frequencies that included two sample t-tests were computed when appropriate for demographic questions and responses on the social support, acculturation scales, and domestic violence questionnaire. Two-sample t-tests were used to test hypotheses and compare differences in social

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support, acculturation status, and demographics between participants based on their domestic violence status.

RESULTS

Overview

Informal discussions with the Asian Indian community prior to finalizing the study design and beginning data collection revealed important insights on conducting research with Hindu AIIW. Discussions with women included students who moved to the U.S. during their childhood, as well as women who left India in their young adult years, and their ages ranged from 23 to 73 years old. While several of the students were not in intimate relationships, some of the middle-aged women spoke of their peers who feared reporting abuse and leaving the abusive partner. As a result, several community members expressed concerns over the difficulty of identifying survivors of abuse and talking with them about their experiences. Despite issues concerning recruitment, informants were supportive of efforts to research domestic violence among Hindu AIIW and suggested reaching out to organizations and businesses embedded in the Asian Indian community to identify AIIW to participate. Informants agreed that identifying women who are isolated and lack informal support systems is crucial for determining who may be at risk for experiencing domestic violence.

Research activities were completed from February to June of 2016. Of the 30 Hindu AIIW who participated in the study, 73% were recruited from flyers advertised on university campuses and approximately 17% were referred by friends, while other participants were recruited from student organizations or flyers at local Indian grocery stores. Participants completed questionnaires on social support, acculturation, domestic violence, and demographics in-person with the principal investigator at a location of the participant's choosing. Although the participants were given the choice of where to meet, research activities were often conducted in university conference rooms to ensure privacy and minimal disruption.

Demographics

All 30 research participants completed the 110 questionnaire items within approximately 20 to 30 minutes. The majority of participants were unmarried, Brahmin, upper caste students under age 30, received or were pursuing higher education, did not have children, had been in the U.S. for ten years or less, and were not U.S. citizens at the time of data collection (Table 1). Some participants were unable to report their caste or Varna status, perhaps because these traditional Indian markers of status are less emphasized in American culture. The majority of individuals lived with one other person, whom they identified as family, and had an individual income of less than \$12,000.

Table 1: Select Demographics of Participants

Demographics	N=30 (%)
Age	
<20	2 (6.7)
20-24	11 (36.7)
25-29	10 (33.3)

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30-34	5 (16.6)
35 and above	2 (6.7)
Time Spent in U.S.	
<1 year	8 (26.6)
2-3 years	5 (16.7)
4-5 years	1 (3.3)
6-10 years	5 (16.7)
11-15 years	3 (10.0)
16-20 years	5 (16.7)
>20 years	3 (10.0)
Citizenship Status	
U.S Citizen	13 (43.3)
Non U.S. Citizen	17 (56.7)
Marital Status	
Married	9 (30.0)
Unmarried	21 (70.0)
Marriage Type	
Arranged	4 (13.3)
Chose Spouse	5 (16.7)
Unmarried	21 (70.0)
Children	
Yes	3 (10.0)
No	27 (90.0)
Education Level	
Secondary Education	2 (6.7)
Some College Education	6 (20.0)
Associate's Degree	1 (3.3)
Bachelor's Degree	6 (20.0)
Master's Degree	12 (40.0)
Doctoral Degree	3 (10.0)
Student Status	
Student	20 (66.7)
Non student	10 (33.3)
Varna Status	
Brahmin	14 (46.7)
Kshatriya	6 (20.0)
Shudra	1 (3.3)
Vaishya	5 (16.7)
Don't Know	4 (13.3)
Caste Status	
Upper caste	16 (53.3)
Scheduled caste	2 (6.7)
Other backwards class	2 (6.7)

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Don't know	10 (33.3)
Household Size	
1	2 (6.7)
2	13 (43.3)
3	5 (16.7)
4	6 (20.0)
5	4 (13.3)
Individual Income	
<\$12,000	20 (66.7)
\$12,000-\$25,000	2 (6.7)
\$25,001-\$40,000	2 (6.7)
\$40,001-\$50,000	2 (6.7)
\$60,001-\$75,000	2 (6.7)

Domestic Violence

Lifetime experiences of domestic violence were reported by 53% of women who participated in this study, with 37% reporting physical violence, 17% reporting psychological abuse, 10% reporting rape, and 17% reporting any sexual violence (Table 2). The majority of survivors reported no experiences of abuse in the past 12 months. Participants in current situations of abuse (13%) most often reported psychological or sexual abuse, and each current victim reported their perpetrator of violence as their husband. Survivors more often identified their perpetrators as family members rather than intimate partners, with the most common perpetrator identified as the woman's mother, as reported by almost 25% of all survivors and 63% of those who were physically abused. Fathers, brothers, and nonfamily members such as a former boyfriend, teacher, male community member, roommate, acquaintance, or a stranger were also identified as perpetrators and some participants reported abuse by multiple perpetrators. When asked, almost 17% of participants reported that their fathers physically assaulted their mothers. Seeking help in situations of abuse was not as common as the abuse itself. Of the 53% of women who reported abuse, only 25% ever sought help, with participants identifying friends, mothers or online resources as sources of support. Seeking medical or other additional help was reported by 44% of women who had a lifetime experience of abuse, who reported getting help from friends, mentors, boyfriends, mothers, and cousins.

Table 2: Experiences of Violence

	N=30 (%)
Lifetime psychological violence	5 (16.7)
Lifetime physical violence	11 (36.7)
Lifetime physical violence perpetrator	
Father	4 (13.3)
Mother	7 (23.3)
Brother	2 (6.7)
Former Boyfriend	1 (3.3)
Teacher	1 (3.3)
Male Community Member	1 (3.3)
Stranger	1 (3.3)
Lifetime experience of rape	3 (10.0)
Lifetime experience of any sexual abuse	5 (16.7)
Lifetime experience of violence	16 (53.3)
Lifetime help-seeking for violence	4 (13.3)
Lifetime experience of father beating mother	5 (16.7)

Demographic Associations with Domestic Violence

Demographic characteristics of survivors varied when compared to non-victims, but not significantly. The majority of survivors were single, low-income (>\$12,000), non U.S. citizens, high caste (i.e. Brahmin or Kshatriya), had smaller households ($2 \leq$), and were pursuing or had already achieved master's degrees or higher. Our hypothesis that survivors would be low-income was supported by findings, however; it is possible that this result is confounded by the fact that most participants were students and most likely not working at the time of data collection. Hypotheses that survivors would be less educated, low caste, have spent more time in the U.S., have children, and have arranged marriages were not supported by research findings. Individuals with less education, low caste, and high income levels were not well-represented among participants. However, individuals of high caste are more likely to migrate than those of low caste status, a group that was underrepresented in our study sample.

Social Support Associations with Domestic Violence

Ratings of social support varied little, regardless of whether the participant had a lifetime experience of violence. The majority of the sample had high perceived social support from significant others, family, friends, and overall (Table 3). Although respondents indicated they had the most support from significant others, followed by family and friends, for each subscale and for the total scale, all except one participant indicated high or moderate social support on each subscale. No survivors of abuse reported low social support on any scale and two sample t-tests found no difference between survivors and non-victims based on scores of perceived social support among friends, significant others, family or overall.

Acculturation Associations with Domestic Violence

Similar to social support findings, there was a lack of variation in acculturation responses among non-victims and survivors (Table 3). The majority of participants and all but one survivor

of abuse identified themselves as moderately or highly adapted on sociocultural and psychological adaptation scales. All participants reported high or moderate perceived cultural distance, home acculturation orientation, and host acculturation orientation. Two sample t-tests revealed no significant differences between survivors and non-victims on scores for sociocultural and psychological adaptation, perceived cultural distance, or host acculturation orientation. For home acculturation orientation, there was a significant difference between survivors and non-victims ($p=.019$).

Table 3: Social Support and Acculturation Responses

Scales				N=30 (%)
Multidimensional Scale of Perceived Social Support				
Support Type	Low	Moderate	High	
Significant Other	1 (3.3)	4 (13.3)	25 (83.3)	
Family	1 (3.3)	6 (20.0)	23 (76.7)	
Friends	1 (3.3)	8 (26.7)	21 (70.0)	
Total	1 (3.3)	3 (10.0)	26 (86.7)	
Acculturation Scales				
Acculturation Type	Low	Moderate	High	
Sociocultural	2 (6.7)	17 (56.7)	11 (36.7)	
Psychological	1 (3.3)	26 (86.7)	3 (10.0)	
Cultural Distance	0 (0.0)	7 (23.3)	23 (76.7)	
Home Orientation	0 (0.0)	12 (40.0)	18 (60.0)	
Host Orientation	0 (0.0)	8 (26.7)	22 (73.3)	

Associations with Domestic Violence-Related Help-Seeking Behaviors

Demographic characteristics and perceived social support for those who sought help for their experiences of abuse differed from those who did not. Of the 53% of participants who had ever experienced any abuse, 25% sought help. The majority of survivors who sought help were single, Brahmin, non U.S. citizens, without children, and had or were pursuing a master's degree or higher. All reported high social support from significant others and overall and 75% reported high social support from friends and family.

DISCUSSION

To our knowledge this is the first study to test the feasibility of using the above-mentioned measures to examine the relationship between demographics, social support, acculturation status, and lifetime experiences of domestic violence among Hindu AIIW in the U.S. Discussions with participants during the screening and data collection process indicated that Hindu AIIW are receptive to participating in research regarding domestic violence. Despite the two-hour timeslot required to complete research activities, each participant completed all items in their entirety. It is possible that item nonresponse was not an issue because many women felt strongly about supporting research on the topic of domestic violence among Hindu AIIW. During the screening process for potential participants, women were made aware that domestic violence and their

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personal experiences of violence would be discussed in detail. In response, most women mentioned that they were more invested in participating in the study because domestic violence warranted greater attention within their culture. Additionally, participants may have been more likely to answer all questions because data collection occurred in person. The lack of nonresponse suggests that this type of research and these questionnaires can be completed feasibly at a low cost among the target population in the future.

Although the IHRS was heavily focused on domestic violence, questionnaires also asked about healthy relationships. For this reason, the study was called the Indian Healthy Relationships Study, a study to better understand how a woman's identity as an AIIW influences her understanding and experiences of relationships compared to Indian women in India. The study name also purposefully frames the research in a positive way, and highlights its focus on the spectrum of all types of relationships. These decisions were made to ensure that women were not discouraged from participating in a study that focused primarily on domestic violence.

The high rate of lifetime experiences of violence among participants in this sample indicates the need for more research among Hindu AIIW. Lifetime experiences of any violence were reported by 53%, physical abuse was reported by 37%, and sexual violence was reported by 17% of participants in this study. This is compared to the 33% of women globally who have experienced sexual or physical IPV in their lifetime, and does not include psychological, emotional, or financial dimensions of abuse (World Health Organization, 2014). Over 33% of women in the U.S. experience physical violence and 20% experience rape in their lifetime (Black et al., 2011; NCADV, 2017). In India alone, 39% of married women between the ages of 15-49 report experiencing physical, sexual, or emotional abuse in their marriage (Kishor & Gupta, 2009). Despite the limited sample size for this study, lifetime reports of violent experiences exceeded the typical rates for lifetime experiences of abuse for women in the U.S. and in India. Over 16% of all respondents also indicated that they had knowledge of their fathers beating their mothers. This is in comparison to the 21% of children in the U.S. estimated to witness family assault in their lifetime, 8% of whom are estimated to have observed this type of violence in the past year and 17% of children estimated to witness assault between parents (Finkelhor, Turner, Shattuck, Hamby, & Kracke, 2015).

The high level of physical violence perpetration by family members suggests the need to further explore family dynamics. Since the DHS Domestic Violence module measures lifetime experiences of violence, this questionnaire captures both current and past incidents of domestic violence. Among those who had ever experienced violence, 25% were still victims of abuse, which was perpetrated by their partners. Since the domestic violence module shows dimensions of abuse experienced by survivors of abuse and current victims, this finding further supports the idea that many of those physically abused by parents may have been reporting past experiences of child abuse. Certain types of physical abuse may be considered as acceptable forms of punishment, in which victims are disciplined by the perpetrator for some perceived wrongdoing. Some participants who disclosed abuse had a tendency to minimize or justify its occurrence, suggesting that these incidents may not be perceived as abuse within this context or within this culture. This may explain why so few participants had ever sought help for the abuse, especially if they were children at the time. Exploring the context and timing of abuse in women's lives can help researchers better understand if measures are capturing instances of child abuse. Existing

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instruments should distinguish if the abuse occurred during childhood and/or adulthood to guide providers on how to feasibly prevent future situations of violence across the lifespan.

Mothers were listed most often as the perpetrators of physical abuse. Fathers and brothers were also cited, and nonfamily members were listed as perpetrators of physical and sexual abuse. The finding that family members were more often perpetrators than intimate partners was unexpected and suggests that future studies should consider family members more often as potential perpetrators, rather than intimate partners. Despite this surprising finding, these results are not uncommon in India. For women married in India, the most common perpetrator of violence is her partner, but for unmarried women in India the most common perpetrator is the mother (UNICEF, 2014). South Asian women in the U.S. are also most likely to report child abuse perpetrated by the mother (Maker, Shah, & Agha, 2005). Child abuse among Asian Pacific Islanders is considered very low at 3.5 out of every 1,000 children, compared to nine of every 1,000 American children (National Children's Alliance, 2014; Zhai & Gao, 2009). Similar to South Asian and Asian Pacific Islanders, over 75% of American children experience child abuse at the hands of their parents (National Children's Alliance, 2014). However, it is possible that there is less reporting rather than less experience of abuse, as there is with any population.

Most survivors were not U.S. citizens, Brahmin, had a smaller household size, made \$12,000 or less, and were unmarried, some of which are supported by previous research. Among a study of battered South Asian immigrant women in the U.S., 42% were visa holders, suggesting that non U.S. citizens continue to be a high-risk population for domestic violence (Mahapatra & DiNitto, 2013). USAID's Demographic Health Surveys Program revealed that Asian Indian women in nuclear family households in India are more likely to experience violence than unmarried or single women in households with or without children (Kishor & Johnson, 2004). While this supports study findings that Hindu AIIW in smaller households may be more likely to experience domestic violence, it is possible that this finding is confounding, because the majority of the sample were young women who were unmarried or never married.

Studies in India have found that women of lower caste are at highest risk and high caste women at the lowest risk for domestic violence, with low caste women being more likely to report violence (Ackerson & Subramanian, 2008; Dalal & Lindqvist, 2012; Sabarwal et al., 2012). These findings do not support the current study's results of high rates of violence among Brahmin women. Brahmin women tend to be overrepresented in the U.S., because they are more likely to have higher SES and have more opportunities for education and occupational opportunities in India and abroad. It is possible that Brahmin women have the same level of risk for experiencing violence as low caste women, but because of perceived and actual social costs, they are less likely to report the violence. Hindu AIIW with high education levels also tend to be overrepresented in the U.S., as they were in our sample, and this study found that most survivors of violence had high education levels. This contradicts findings in India that women with secondary or higher levels of education are less likely to experience violence (Kishor & Johnson, 2004). Overrepresentation of high caste and highly educated women in our sample limited our ability to test our hypotheses that lifetime experiences of violence would be more common among low caste and less educated women, because low caste and less educated women were not well-represented in this sample. Thus, the overrepresentation of highly educated Brahmin women in this study and in the U.S.

suggests the need for more research on how education, caste, and Varna status impact risk for domestic violence in the U.S. among Hindu AIIW.

There was little variability in social support and acculturation regardless of whether participants had lifetime experiences of domestic violence and other studies found similarly high rates of social support and acculturation among survivors of domestic violence. A study using the MSPSS to measure social support with South Asian, African American, and Hispanic battered women living in the U.S. found moderate levels of social support among all participants (Yoshioka et al., 2003). South Asian women had higher social support than African American women, but lower support than Hispanic women (Yoshioka et al., 2003). Another U.S. based study of 215 South Asian women in 33 states found that 38% of South Asian women experienced abuse, despite reporting high levels of social support from friends, family, and significant others on the MSPSS (Mahapatra & DiNitto, 2013). South Asian women reported high social support from significant others and because almost 80% were married and experienced abuse in the past year, it is highly likely that their current partners were the perpetrators (Mahapatra & DiNitto, 2013). In contrast, another study among this same group of women found that overall those with more social support were less likely to be abused (Mahapatra, 2012).

While it is possible that Hindu AIIW have high rates of social support and acculturation, the lack of variation in participant responses suggests that the MSPSS and acculturation scales may not be culturally appropriate enough to detect nuances in social support and acculturation for this population and additional research is needed to test appropriateness of this scale for the Asian Indian population. It is possible that while Asian Indians have high rates of social support from friends, family, and significant others, they do not have support when making life-changing and culturally taboo decisions, such as seeking a divorce from an abusive partner. Because lower acculturation to Asian Indian norms was more common among survivors of violence in this study, future research should explore if more western attitudes are associated with a greater likelihood of experiencing and/or reporting experiences of violence. Although lack of variability in participant responses on acculturation scales may be due to actual high acculturation scores and the makeup of the study sample, these findings may also suggest the need to test these scales further in the Asian Indian population to develop more culturally relevant scales that can further explore the context of how acculturation status impacts gender and domestic violence norms.

While this study also found little variability in responses on acculturation scales, responses from survivors and participants who had never experienced abuse were significantly different regarding their home acculturation. Survivors of abuse were more likely to have lower scores of home acculturation than those who had never experienced abuse, suggesting that women who are less acculturated to India, or more Westernized, are more likely to have experience or report that they have experienced violence in their lifetime. In one study among Asian Indians, statements that represented a more assimilated or Westernized acculturation attitude correlated with less agreement with statements supporting IPV among participants (Yoshihama, Blazevski, & Bybee, 2014). This contrasts with findings among those who were less assimilated and more likely to agree with statements that supported IPV and gender norms in their home country (Yoshihama et al., 2014). Another study among abused immigrant women found that women who are less acculturated are more likely to experience abuse, and less likely to take action that promoted safety

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in situations of abuse (Nava, McFarlane, Gilroy, & Maddoux, 2014). These findings suggest that acculturation to the U.S. impacts the likelihood of immigrants experiencing or reporting abuse.

In the current study, only 25% of survivors reached out for help in situations of domestic violence, despite high levels of social support. A study that included South Asian battered women found that they were more likely to seek help from family members than African American or Hispanic women, and also more likely to be advised to stay in the marriage and work it out by both family and nonfamilial sources than the other groups (Yoshioka et al., 2003). When South Asian women do seek help, it is most often from friends and family, and among women who do seek help from formal resources almost 33% do so as a last resort (Mahapatra & DiNitto, 2013). These findings suggest that high levels of social support do not always dictate help-seeking or reporting behaviors.

None of the women who sought help in the current study were U.S. citizens at the time of data collection and most were unmarried, Brahmin, without children, and had or were pursuing a graduate degree. All participants in the current study were foreign-born and 70% had a bachelor's degree or higher. This compares to another study that included South Asian battered women, 75% of women were also foreign-born and over 60% had masters or equivalent degrees (Mahapatra & DiNitto, 2013). In this study with South Asian immigrant women, of those who had experienced abuse almost 70% had a master's degree (Mahapatro & DiNitto, 2013). The majority of survivors in the current study were low-income and most survivors in Mahapatro and DiNitto's study (2013) reported incomes of over \$70,000, however; many of the participants in this study identified as students and had lower incomes because of their decision to not work while pursuing their education. While it is possible that high levels of education and income do not reduce risk for experiencing abuse, this may also be confounded due to the small household size of participants.

Limitations

While this study has identified emerging associations in the relationships among social support, acculturation, and domestic violence among Hindu AIIW, there are limitations to its findings. The study sample included 30 Hindu AIIW in Allegheny County, Pennsylvania, who self-selected to participate in this study. This sub-population of South Asian women were the focus of the study because the majority of studies on South Asian women and domestic violence do not disaggregate or specify the country of origin of participants and participant religion is often not reported. Thus, because most Asian Indians identify as Hindu, this study focused exclusively on Hindu AIIW to ensure that the study focused on participants' cultural rather than their religious affiliation. This research was advertised as the Indian Healthy Relationships Study, and those who do not consider themselves to be in healthy relationships may have decided not to participate.

Hindu AIIW involved in severely abusive relationships at the time of data collection may also have decided not to participate out of fear of repercussions from their abusive partners, should they learn of their involvement in the study. Participants were not required to be a survivor or victim of domestic violence in order to participate in the study, because one of the main goals of the study was to better understand Hindu AIIW's definitions of domestic violence. Thus, by not defining the term domestic violence for potential participants, research participants had the opportunity to describe their definitions of domestic violence and discuss experiences of domestic violence that aligned with their personal definitions. Although participants did not need to have lifetime experiences of domestic violence to participate in the study, over half of potential reported

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these experiences. Additionally, during research activities, many participants expressed that they felt very strongly about contributing to the study because of its focus on domestic violence, which they perceived as an important problem to discuss in the context of Indian culture.

Eligible participants for the study were required to self-identify as women, thus individuals identifying as gender non-conforming with different expressions of gender are not represented in our study sample. Regarding sexual orientation, the study had no explicit eligibility criterion, however; the study flyer advertised a male and female couple, which may have discouraged Hindu AIIW in same-sex relationships and/or attracted to women from participating in the study. Thus, sexual and gender minority populations are not represented in our study sample.

All research activities were completed and advertised in the English language only, thus while non-English speakers were not ineligible from participating, non-English speakers or Hindu AIIW less comfortable speaking English may have been less likely to consider participating in the study and/or study flyers may not have been linguistically appropriate. The principal investigator (removed for review) who completed all research activities with study participants has proficiency in the Hindi language, which s/he had prepared to use during research activities, if needed. Although Hindi is one of many spoken languages in India, it is the country's national language along with English, thus participants had the option to participate in research activities in Hindi, if it was preferable.

The study was advertised by a research registry, businesses, and restaurants and by Indian cultural organizations and groups, and on local urban university campuses. Because of this approach to advertising for the study, young students were heavily exposed to advertisements and most participants identified as young adults and current students recruited via university campus flyers. Study instruments were also pretested with young undergraduate and graduate students, who may have different perspectives and experiences regarding these topics than older nonstudent populations, who were underrepresented in the study sample. Although all participants were born in India, fulfilling a study eligibility criterion, many moved to the U.S. in their early childhood and therefore may have more Westernized and thus different responses than those who had spent their formative years in India. Schedule availability may have also impacted study participation. Two hours were allotted for each participant to complete the questionnaires and qualitative component of this study. This time constraint may have been more realistic for a nonworking student schedule, compared to a working woman's schedule. Additionally, the incentive may have been more appealing to students, who may be unable to work while completing their classes during the school year. The lack of variability in participant demographics could be addressed in future studies by offering questionnaires over the phone or online. This may lead to broader participation from Hindu AIIW of different age levels or work experiences.

Although all participants responded to all items on every questionnaire, it is possible that there was reporting bias. Demographic, social support, and acculturation questionnaires were completed independently, but the DHS Domestic Violence module was dictated by the principal investigator. The DHS program is conducted in 92 countries and all questions, including those in the Domestic Violence module are completed orally (United States Agency for International Development, 2016). Thus, in order to maintain fidelity, the DHS Domestic Violence module was dictated to participants and not self-administered. An additional limitation is that several sections on physical and psychological abuse on the Domestic Violence module are completed only by

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participants who are married. This includes measurements of specific types of physical abuse, such as burning and psychological abuse, such as insults and humiliation. As a result, these specific types of violence are not captured in questionnaires completed by unmarried women. Sharing lifetime experiences of violence can be emotional and some participants may have chosen not to disclose this information, leading to social desirability bias and underreporting of domestic violence among participants. Despite this limitation, over half of the sample from this study reported a lifetime experience of abuse. Given that violence is often underreported, this may be a conservative estimate of actual prevalence of abuse among AIIW.

As previously mentioned, the majority of perpetrators of violence were family members, specifically mothers. Because the Domestic Violence module does not require participants to disclose their age or date of the violent incident, it is not possible to confirm if these experiences were child abuse. As this questionnaire looks at lifetime experiences of violence, it is possible that reports of violence shared by participants are not an accurate reflection of current experiences of abuse, thus some reported abuse may have occurred when the woman was under age 18 and legally a child. Interestingly, none of the participants who were currently experiencing abuse at the time of data collection were experiencing physical abuse or experiencing violence from their parents. All victims were experiencing psychological or sexual abuse and the perpetrator was the current partner.

While the MSPSS has been tested among South Asian women, the acculturation scales have not, and measurement error may have occurred due to lack of culturally appropriate phrasing of questions. The majority of participants reported moderate or high social support and acculturation on all scales, and it is unclear if this lack of variability is due to high levels of social support and acculturation or absence of culturally appropriate phrases and wording. Thus, while the implementation of this study demonstrates high feasibility for domestic violence research among Hindu AIIW, the findings suggest the need for further testing of these instruments among the Asian Indian population and Hindu AIIW. Additionally, the homogeneity of our study sample limits our study findings. Most Hindu AIIW were young, unmarried, low-income, not working, and received higher education and their perspectives and experiences may differ from Hindu AIIW who are older, working, or of lower education levels. In summary, while our study team made efforts to recruit Hindu AIIW of diverse socioeconomic backgrounds and ages, due to our small and skewed study sample the results of our study are not generalizable to other Asian Indian, South Asian, Hindu, or immigrant or nonimmigrant women and these limitations should be considered within the context of our study findings.

Future Directions

This pilot study identified associations of lifetime experiences of domestic violence, social support, acculturation status, and demographic characteristics, and supports the feasibility of conducting domestic violence research among Hindu AIIW. Although social support and acculturation status varied little regardless of lifetime experience of domestic violence, other studies with similar findings suggest the need to further explore the impact of social support and acculturation among a larger sample of Hindu AIIW. Additionally, instruments measuring social support and acculturation should be tested and validated among the Asian Indian population and Hindu AIIW. While research participants in the current study were recruited without difficulty and not discouraged from completing data collection despite the length of research activities, the

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lack of variability in findings suggests instruments may need to be tailored to members of different cultural backgrounds.

Future directions should explore how social support can both positively and negatively influence decisions to seek help or end abusive relationships, particularly when support is from individuals in the Asian Indian community. Additionally, research should investigate how acculturating to life in the U.S. impacts experiences of abuse and the victim's decision to seek help. Measures of lifetime experiences of violence should also include items on perpetrators who are not intimate partners, particularly family members. These studies should represent a larger and more diverse sample of Hindu AIIW, who are more representative of the Hindu AIIW population in the U.S. This research indicated that Hindu AIIW are receptive to participating in research on domestic violence, thus expansion of this research should be feasible and well supported by Hindu AIIW. Given that the current study included only one measurement of lifetime experiences of violence, a longitudinal country-wide, state, or local study would be necessary to better measure AIIW's experiences of domestic violence. The validity and reliability of these instruments and this study's findings can be tested by replicating this study in larger and more diverse populations of Hindu AIIW, after instruments are reviewed by and pretested among Hindu AIIW. This will help researchers better understand lifetime experiences of violence and associated factors for Hindu AIIW in the U.S., especially to understand how these associations have changed over time.

While it has become a more common practice to implement cultural competency trainings for professionals in education, law enforcement, and healthcare throughout the last decade, it is especially important with the increase of widely public incidents of xenophobia and recent rises in hate crimes in the current political climate. All data collection for this study occurred prior to the 2016 U.S. Presidential election and incidents defaming immigrant populations and threatening massive immigrant deportation have escalated dramatically since.

Several of these incidents, one of which was fatal, involved an Asian Indian man. In another case, a Latina woman in a situation of abuse was arrested and detained because of her immigration status. Because of the increase in incidents of this nature and growing fears of deportation, it has been suggested that incidents of violence against women are being reported less and women will continue to feel less inclined to report situations of abuse and/or seek justice against their perpetrators. While data for this study were collected before these incidents occurred, many participants still heavily discussed Hindu AIIW's fears of deportation and custody issues with children and how this negatively impacts their reporting behaviors in situations of abuse. Thus, the impact of current and recent events cannot be understated, as it may make it increasingly difficult to find Hindu AIIW in situations of abuse, encourage them to disclose their abuse status, increase their participation in domestic violence research, and connect them with supportive services.

CONCLUSION

Violence against women is a global health issue that is influenced by individual social and cultural characteristics and experiences. This study indicated that research with Hindu AIIW is feasible and there were no issues with recruitment or item nonresponse among participants in this study. Although the size and homogeneity of characteristics among participants in this research study limited the generalizability of findings, this research suggests that a) Hindu AIIW may be

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more vulnerable to lifetime experiences of violence than native women in the U.S. and Indian women in India and b) Hindu AIIW are open to and interested in participating in studies on domestic violence. Similar levels of acculturation and perceived social support among survivors and non-victims suggest that future research should include larger samples of women to better detect, interpret, and address emerging associations, as well as identify how to make instruments more culturally appropriate for diverse populations. Further research should also be longitudinal to help researchers and policymakers better understand and mitigate factors contributing to violent experiences among Hindu AIIW.

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