violence in their current relationship in a recent study.3 Other research indicates that immigration-related social isolation, often resulting from the absence of both family in the United States and community support for intimate partner violence victims, and lack of awareness of intimate partner violence services prevent battered South Asian women from seeking help.^{3,7–13} These findings suggest that factors related to immigration may place South Asian immigrant women at increased risk for intimate partner violence. The purpose of the current study was to assess the relations between immigration-related factors and intimate partner violence among a sample of South Asian women residing in the United States.

METHODS

South Asian women in greater Boston, Mass, who were involved with a male partner were invited via community outreach (e.g., flyers, "snowball sampling", referrals) to participate in a word of mouth or a women's health study. Data were collected through 30minute self-administered, anonymous surveys. Participants provided written informed consent immediately before survey administration and were given a \$20 incentive and a listing of referrals after survey completion.

Participants (N=160) were aged 18 to 62 years (mean age=31.6 years; SD=9.5 years). The majority (83.1%) were Indian; the remaining 16.9% were Bangladeshi, Pakistani, Sri Lankan, or Nepalese. Half (49.4%) had postgraduate training, and 71.9% reported a family income of \$2100 or more per month. The majority (74.3%) were married; 83.6% had a South Asian partner.

Survey items included assessments of demographics (e.g., age, education, income), immigrant status (nativity, recency of immigration), and social isolation (no family in the United States, no social support if abused). A 12-item general social support scale 10 also was included, as was a 10-item South Asian acculturation scale created for use in this study³ to assess language, food, and community affiliation. Scales were quartiled because of lack of normal distribution. Outcome measures included an item that assessed participants' knowledge of intimate partner violence services and 3 dichotomized Conflict Tactics Scales¹⁴ violence

TABLE 1—Prevalence of Intimate Partner Violence, Knowledge of **Intimate Partner Violence Services, and Immigration-Related Factors Among South Asian Immigrant Women** (N = 160): Greater Boston, August 1998-June 1999

	Percentage
Abuse prevalence	
Physical abuse	30.6
Sexual abuse	18.8
Injury/need for medical services	15.7
due to abuse	
Any abuse	40.8
No knowledge of available intimate	50.6
partner violence services	
US citizens	38.6
Immigrant status	
Immigrant (non-US born) ^a	87.5
Among immigrants	
Immigrated within past 2 y	22.3
Immigrated between 2 and 10 y ago	38.1
Immigrated ≥11 y ago	39.6
Immigrant context	
No family in United States	28.1
No social support if abused	10.0

^aResults did not alter when immigrant status was configured as a nondichotomized variable.

Immigrant South Asian Women at Greater Risk for Injury From Intimate **Partner Violence**

Anita Raj, PhD, and Jay G. Silverman, PhD

Intimate partner violence and intimate partner violence-related homicide disproportionately affect immigrant women. 1-6 South Asian women residing in the United States appear to be at particularly high risk for intimate partner violence, with 40% reporting intimate partner

subscales to assess prevalence of physical, sexual, and injury-related intimate partner violence in the current relationship.

Logistic regression analyses controlling for demographics significantly related to outcome variables were conducted to assess the relations between immigration-related predictor variables and intimate partner violence. Odds ratios (ORs) and 90% confidence intervals (CIs) were used to assess the magnitude and significance of relations.

RESULTS

Table 1 shows high prevalence of intimate partner violence (40.8%) and low awareness of intimate partner violence services (50.6%); 28.1% of this largely immigrant sample reported no family in the United States, and 10.0% indicated that they would have no social support if abused.

TABLE 2—Logistic Regression Analyses to Assess the Relations Between Immigration-Related Factors, Intimate Partner Violence, and Awareness of Intimate Partner Violence-Related Services Among South Asian Immigrant Women (N = 160): Greater Boston, August 1998-June 1999

	Physical Abuse ^a (n = 49) OR (90% CI)	Sexual Abuse (n = 30) OR (90% CI)	Intimate Partner Violence-Related Injury (n = 25) OR (90% CI)	No Knowledge of Intimate Partner Violence Services ^b (n = 81) OR (90% CI)
Not born in United States	3.53 (0.96, 13.07)	1.35 (0.46, 4.02)	3.96 (0.70, 22.5)	2.01 (0.88, 4.61)
Immigrated in past 2 y	0.79 (0.36, 1.77)	0.55 (0.21, 1.43)	0.64 (0.24, 1.70)	3.10 (1.47, 6.54)
Lower acculturation	0.97 (0.68, 1.37)	0.87 (0.60, 1.26)	2.06 (1.28, 3.33)	1.03 (0.76, 1.39)
No family in United States	1.23 (0.65, 2.34)	1.35 (0.41, 4.02)	2.83 (1.35, 5.90)	0.80 (0.44, 1.45)
Low general social support	1.31 (0.99, 1.72)	1.51 (1.02, 2.23)	1.50 (1.05, 2.15)	0.94 (0.73, 1.21)
No social support if abused	1.62 (0.63, 4.18)	1.05 (0.26, 4.26)	5.40 (2.14, 13.65)	2.14 (0.83, 5.51)

Note. OR = odds ratio; CI = confidence interval.

As seen in Table 2, no variables were significantly related to physical abuse. Lower general social support was significantly related to sexual abuse (OR=1.51; 90% CI= 1.02, 2.23). Participants reporting lower acculturation (OR=2.06; 90% CI=1.28, 3.33), no family in the United States (OR=2.83; 90% CI=1.35, 5.90), lower general social support (OR=1.50; 90% CI=1.05, 2.15), and no social support if abused (OR=5.40; 90% CI=2.14, 13.65) were significantly more likely to report injury from intimate partner violence. Participants who immigrated in the past 2 years were significantly more likely to report no knowledge of intimate partner violence services (OR=3.10; 90% CI=1.47, 6.54). Although nonsignificant, analyses also indicated that non-US born participants were 3.5 times as likely to report physical abuse, almost 4 times as likely to report intimate partner violence-related injury, and two times as likely to report no knowledge of intimate partner violence services.

CONCLUSIONS

Findings from the current study indicate that immigrant-related factors may be predictive of more severe intimate partner violence for South Asian women residing in the United States. Social isolation, in particular, was associated with an increased likelihood of experi-

encing severe intimate partner violence; women reporting no family in the United States were 3 times more likely than those with family in the United States to have been physically injured by their current partner.

Trends also suggest that non-US born participants were more likely to report physical abuse, intimate partner violence-related injury, and no knowledge of intimate partner violence services. Lack of significant findings related to immigrant status may be attributable to the small numbers of US-born women included in the study. However, women reporting more recent immigration were significantly more likely to report no knowledge of intimate partner violence services.

Study limitations included reliance on measures (e.g., Conflict Tactics Scales¹⁴) not previously validated for South Asians and reliance on self-report from a self-selected sample. Generalizability of findings was limited by the sample being predominantly Asian Indian and of higher socioeconomic status. Although limitations may have yielded biased data, the affluence of the sample would likely have biased estimates downward.⁶ Finally, the English-based survey was translated as necessary by proctors and conducted as an interview, subjecting the data to interviewer biases.

Further research with larger, representative samples is needed to clarify these relations. Nonetheless, findings from this study indicate

the need to increase efforts to provide intimate partner violence-related intervention and prevention services for South Asian immigrants. Culturally tailored efforts should include community education to promote awareness of available intimate partner violence services, victim services, and batterers' intervention.

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Contributors

A. Raj planned the study, analyzed the data, and wrote the brief. J. G. Silverman assisted Dr Raj in identification of domestic violence measures for the study and with conceptualization of the study and writing of the brief.

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^aAnalyses controlled for age and relationship length.

^bAnalyses controlled for ethnicity.

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