Domestic Violence in Urban American Muslim Women

Basmaa Ali*, Mohammed Ahsan†, Nahida Ahmed‡, H Stephen Leff§, Clifton Chow¶ and Yacoub Khatab**

Muslims constitute about one percent of the U.S. population. Ten percent of U.S. media stories on domestic violence (DV) focus on American Muslims, implying a higher-than-average rate of DV in the American Muslim community. Our study estimates the prevalence of DV among Muslim women in greater Boston and compares it to DV rates among American women as a whole. The study also examines the effect of education, income, and employment status on DV in both samples in comparison with each other. We anonymously surveyed 332 American Muslim women over the age of 18 at five mosques in the greater Boston area and found the DV rate among our study participants to be comparable with that among American women in general.

We used data from the National Longitudinal Study of Adolescent to Adult Health (AddHealth) as a surrogate for the U.S. as a whole. Our study participants experienced less intimate partner violence and more aggression from parents and siblings than the women in AddHealth. Also, rising socioeconomic and employment status were not buffers against DV in our study as they were for the AddHealth participants. Ethnicity or country of birth had no impact on DV risk among the women in our study. These results are important because they counter the bias in U.S. media that implies DV is more prevalent among American Muslims than in the U.S. population at large. Our data also suggests measures to ameliorate DV in American Muslims need to target the whole family (i.e., parents and children of both genders).

Keywords

Muslim women • Urban American women • domestic violence, • verbal abuse • physical abuse • emotional abuse • greater Boston • intimate partner violence • Islamophobia

*Harvard Medical School, bali@sloan.mit.edu
https://orcid.org/0000-0003-4900-1920
†Harvard University, mohammedahsan313@gmail.com
https://orcid.org/0000-0002-3342-1616
‡Harvard Medical School, drnahida.ahmed@gmail.com
https://orcid.org/0000-0003-0508-3426
§Harvard Medical School, sleff@hsri.org
https://orcid.org/0000-0001-9414-3659
¶Cambridge Health Alliance, clchow@challiance.org
**Texas Tech University Health Sciences Center, yacoub.khatab@gmail.com
https://orcid.org/0000-0002-2491-0151

doi: 10.3998/jmmh.145

Conflicts of interest:
The authors have no conflicts of interest to disclose.

Background

The U.S. Department of Justice defines domestic violence (DV) as a pattern of abusive behavior in any relationship that is used by a person to gain or maintain control over an intimate partner or family member. The abuse can be physical, verbal, or emotional. The Nonfatal Domestic Violence Report 2003–2012 by the U.S. Department of Justice reports one in three American women have experienced physical DV and half (48.4%) report psychological or emotional abuse (Center for Disease Control and Prevention, 2011).

There are 3.45 million American Muslims, 58% of whom are first-generation immigrants. They are ethnically and culturally diverse with South Asians (India, Pakistan, and Bangladesh), Arabs, North Africans, and African Americans being the largest groups. Converts to Islam make up 20% of the American Muslim population. American Muslims vary a great deal in education, socioeconomic status (SES), political beliefs and degree of adherence to Islam (Pew Research Center Report, 2017).

We did a LexisNexis review (Appendix A) for news stories on DV across all English language media outlets in the U.S. between 2006 and 2016 and found 121,696 stories on domestic violence of which 11,870 (9.7%) were related to Muslims. Since Muslims are approximately 1% of the U.S. population, the LexisNexis data shows a ten-fold overrepresentation of Muslims in media stories on DV than would be expected based on their percentage in the U.S. population. This disproportionality implies that either American Muslim women face a much higher risk of domestic abuse in comparison to American women as a whole or that there is a media perception of increased risk.

The two best quantitative studies on DV in American Muslim women date back to the 1990s and show that rates of DV in American Muslim women are *not* higher than in the general population. In 1995, Kulwicki and Miller studied 500 Arab women (98% of whom were Muslim) in the Dearborn, Michigan area, and showed that 18 to 20 percent of the women had experienced spousal abuse. In 1993, the North American Council for American Women (as cited in AlKhateeb, 1999) surveyed 63 Muslim community workers, leaders, and individuals in a study that showed physical violence against Muslim women and children to be around 10%. The survey did not query about verbal and emotional abuse. In 2007, Sound Vision conducted an online survey of 241 Muslims which showed 40% of the respondents had experienced verbal abuse and 31.5% physical abuse within their homes. However, because this survey had self-selection bias, it is hard to extrapolate the results.

A comprehensive review of literature on domestic violence in American Muslim women show most studies of DV in American Muslims are narrative driven and qualitative and do not offer conclusive data on rates of DV in this group. There are studies on Islamic interpretation of wife battery (Faith Trust Institute, 2007; Ammar, 2007), narratives of Muslim women leaving abusive relationships (Hassouneh-Phillips, 2001), and on women's experiences with the police (Ammar et al., 2013). Abu-Ras (2007) examined the correlation between cultural beliefs and social services utilization by Muslim women facing DV and Kulwicki and colleagues (2014) have looked at DV, depression, and service utilization among Arab American women. More recently, Crabtree-Nelson and colleagues (2018) have looked at the experiences of Arab American women with intimate partner violence. There is, however, no recent study of rates of domestic violence in American Muslim women and any correlation with the age, educational achievement, income, or employment status of the women involved.

Certain academic frameworks offer a lens as to why domestic violence *might* be higher among American Muslim women. Almost two thirds (58%; Pew Research Center Report, 2017) of American Muslim are immigrants, mostly from countries with a patriarchal social

structure where varying degrees of emotional, verbal, and physical abuse of women may be culturally acceptable and not considered out of bounds (Bhandari and Sabri, 2018; Ayyub, 2000; Adam and Schewe, 2007; and Johnson, 2015). Likewise, many Muslim immigrant men come from conflict-afflicted regions like Somalia, Syria, and Iraq where they may have experienced atrocities that create stressors which may translate into abuse toward the women in their families (Ward, 2002; Hynes et al., 2004; Horn. et al., 2014; Clark et al., 2010; and Gurges et al., 2017). The Culture of Violence theory (Wolfgang & Ferracuti, 1967) argues that within large, complex, and pluralistic societies, subgroups learn and develop specialized norms and values through differential associations that justify the use of DV beyond that which is regarded as "normative" for the society as a whole.

In the absence of reliable data on the prevalence of DV and its drivers, and in the presence of certain academic frameworks indicating that the rate of DV among American Muslim women may be higher than in the general U.S. population, it is critical to accurately gauge the rate of domestic violence among Muslim women in America. It is not possible to develop an effective plan to allocate resources to alleviate this issue in the diverse American Muslim community without this data. Lack of this information also makes it difficult to discern whether disproportionate representation of American Muslim women in the U.S. media stories on DV is a reflection of their reality or part of a media narrative that asserts that misogyny and violence are inherent parts of the Islamic religion. The data our study seeks to gather is therefore a critical prerequisite for ameliorating DV in the American Muslim community and for countering this possible aspect of Islamophobia in the U.S. media.

Study Goals

The overall goals of our study were to assess the prevalence of DV and the educational and socioeconomic factors associated with it, in mosque-going American Muslim women and to compare these statistics with those of American women as a whole. More specifically, our goals were to:

1. Estimate the rate of DV among mosque-going American Muslim women in greater Boston.
2. To examine the educational, immigration, employment, and socioeconomic status as well as domestic living arrangements of our study participants for possible correlation of these variables with DV in this group.
3. Compare the DV rate in our study group with that in American women as a whole while controlling for education and SES. We used the National Longitudinal Study of Adolescent to Adult Health (AddHealth) database as a surrogate for DV rates in overall American society as well as education and socioeconomic status of DV victims.

Methods

Study Population

We chose to study mosque-going Muslim women, because census data does not track religion and Muslims are approximately 1% of the U.S. population. The total number of Muslims in greater Boston is estimated around 82,000 (Islamic Society of Boston Cultural Center, 2014). About one-fifth of this number go to a mosque at least once a year. The total number of mosque-going Muslim women in the greater Boston area is estimated to be between 5000 and 7500. Our sampling choice was driven by convenience, and to partly ameliorate bias introduced

into the data by choosing this population, we did 80% of our data collection in the month of Ramadan, which draws both the largest numbers and the most diverse group of women by ethnic background, education, and income status.

We reached out to ten mosques with sizeable congregations in the greater Boston area. Five mosques expressed a willingness to participate in the study. Of these, three are in urban areas and two are suburban. This allowed the study to capture a diverse array of socioeconomic, ethnic, and educational backgrounds. The sample sizes of each mosque were calculated and are listed in Table I alongside the congregation sizes of each mosque. The numbers in Table 1 are estimates provided by the mosque leaders from the congregation sizes on Eid prayers, which are occasions with maximum attendance.

Any Muslim woman older than 18 years of age, who was willing to participate in the study, and had the ability to read and comprehend English at one of our five study sites was eligible to participate in the study. All members of the study team were excluded from participating in the study.

Privacy and Anonymity

A Harvard Medical School IRB approved the study instrument and processes. The study was publicized as a Social Wellness study in the participating mosques to encourage participation and ensure the safety of the women filling out the survey. The study sites had no signs indicating we were collecting data on domestic violence. Prospective participants approached tables we had set up in the women's section of the mosque or areas designated by the mosque leadership; female team members and volunteers who had been trained in human subject research protocols asked them if they would be willing to participate in an anonymous survey about domestic violence in American Muslim women in private conversations. Participants consented verbally after reading a written form describing details of the study goals, measures taken to ensure anonymity of the participants, and that participation was voluntary. Participants had the opportunity to ask questions before they completed the survey. A table was set up where they could fill out the survey privately. Women sealed the filled survey in the provided envelope and put the envelope into a sealed drop box that was opened only by team members.

Data Collection Tools and Procedure

The third aim of our study was only possible if we could compare our data with a DV database for all American women that tracked education, income, employment, and relationship status

Table I. Congregation and sample sizes of the participating mosques.

Mosque	Congregation size	Study Participants
Urban mosque A	1500	193
Urban mosque B	500	52
Urban mosque C	500	40
Suburban mosque A	1000	36
Suburban mosque B	1000	11
Total	4500	332

Congregation numbers are estimates provided by the mosque leaders from the congregation sizes on Eid prayers which are occasions with maximum attendance.

of its participants. We reviewed a large cross section of databases from U.S. census data to local police records before choosing the National Longitudinal Study of Adolescent to Adult Health (AddHealth) as our comparison study.

AddHealth is a continuously updated database located at University of North Carolina that longitudinally follows a nationally representative of participants who were adolescents when the study started in 1994. AddHealth collects data in waves, is currently on wave V, and has data on DV prevalence as well as education and SES of its participants. We replicated the questions on education, income, employment status, and emotional and physical abuse from the AddHealth in our questionnaire to facilitate a head-to-head comparison of the relevant data. Our questionnaire started with screening questions (Table II), which included queries about being talked down to and verbal insults that AddHealth data did not ask. If a participant said yes to any of the screening questions, the survey asked about her relationship to the perpetrator.

We then asked questions in Table IIA and IIB. These questions asked more details about the DV incident(s) and are identical with AddHealth questions.

Table II. In the last 12 months, how often anyone in your home done any of the following?

Physically hurt you	**Threatened you with harm**	**Screamed or cursed at you**	**Insulted or talked down to you**
Never	Never	Never	Never
Rarely (1–2)	Rarely (1–2)	Rarely (1–2)	Rarely (1–2)
Sometimes (3–5)	Sometimes (3–5)	Sometimes (3–5)	Sometimes (3–5)
Fairly often (6–10)	Fairly often (6–10)	Fairly often (6–10)	Fairly often (6–10)
Frequently (11–20)	Frequently (11–20)	Frequently (11–20)	Frequently (11–20)

Table IIA. How often (has/did) this person (threatened/threaten) you with violence (pushed/push) or (shoved/shove you) or (thrown/throw) something at you that could hurt?

Choose all persons who apply but please choose only one frequency for each person	**Spouse**	**Father**	**Mother**	**Brother**	**Sister**	**In-laws**	**Other:**
Never							
This has not happened in the past year, but it did happen before then							
Once in the last year of the relationship							
1–5 times in the last year of the relationship							
More than 5 times in the last year of the relationship							
I prefer not to say							
I don't know							

Table IIB. How often (has/did) this person (slapped/slap), hit or (kicked/kick you)?

Choose all persons who apply but please choose only one frequency for each person	**Spouse**	**Father**	**Mother**	**Brother**	**Sister**	**In-laws**	**Other:**
Never							
This has not happened in the past year, but it did happen before then							
Once in the last year of the relationship							
1–5 times in the last year of the relationship							
More than 5 times in the last year of the relationship							
I prefer not to say							
I don't know							

Our questionnaire asked about abuse perpetrated by anyone in the household, whereas AddHealth asks primarily about intimate partner abuse. Additionally, our questionnaire filtered for marital status, whereas the AddHealth data asks about 'status of marriage,' and does not parse that data into unmarried, divorced, and widowed. Our study questionnaire also asked about the ethnic and national identity of the participants. See Appendix B for the full questionnaire.

The AddHealth data was collected through live interviews, whereas our study participants filled out surveys anonymously, in private. A female study team member or Questionnaire Administrator Volunteer (QAV) from the congregation of each designated site asked the participants to fill out a questionnaire regarding their anonymized demographics and exposure to DV. A member of the study team had trained each QAV on protocols for human subject research as well as how to provide privacy for participants filling the questionnaire.

The sample size in AddHealth database at 2761 was much larger than our sample size of 332, but participants' demographics were quite comparable in both populations. The interviewees in AddHealth were all between 24 and 32 years of age and the mean age of our study participants was 31.84 years. 70% of women in both AddHealth and our study had a college degree or higher education. The detailed demographics of our study participants and those of AddHealth are summarized in Tables III, IIIA and IV.

Statistical Methods

All responses were recorded in an Microsoft Excel spreadsheet and transferred to STATA 14 for descriptive and inferential analysis.

Analytical Methods

Correlations between domestic violence and control variables were approximated by computing the relative risks of all indicator abuse variables associated with control variables. A 1.00 or higher indicates increased risk, while a less than 1.00 suggests decreased risk. Because domestic violence is often considered a rare event, the probability distribution that informed any

Table III. Income, Employment Status and Education of our study participants (N=332)

Income	#	%	Employment Status	#	%	Education	#	%
Less than $5K	33	10	Full time	130	38	BA/BS	147	45
$5K - $20K	29	9	Part time/Per Diem	69	20	MA/MS/PHD	106	32
$20K - $50K	68	21	Student	50	15	HS/GED	49	15
$50K - $100K	65	20	Homemaker	50	15	Less than HS	15	5
More than $100K	65	20	Unemployed	42	12	Voc/Tech	10	3
Prefer not to say	28	9				Prefer not to say	2	0.6
I don't know	34	10				Don't know	1	0.3

Table IIIA. Income, Employment Status and Education of Add Health participants (N=2761)

Income	#	%	Employment Status	#	%	Education	#	%
Less than $5K	75	3	Full time			BA/BS	1540	56
$5K - $20K	295	11	Part time/Per Diem			MA/MS/PHD	424	15
$20K - $50K	875	32	Student			HS/GED	174	10
$50K - $100K	988	36	Homemaker			Less than HS	324	13
More than $100K	351	13	Unemployed			Voc/Tech	265	6
Prefer not to say	26	1				Prefer not to say	0	0
I don't know	151	5				Don't know	0	0

Table IV. Age and Marital Status of our study participants – Add Health did not track marital status

Variable	Mean	SD
Age	31.84	12.8
Length of US residence	19.84	13.4
Age of moving to the US	13.25	12.3
Marital Status	**#**	**%**
Married	188	57
Single	109	33
Divorced	18	5.4
In a relationship	11	3.3
Widowed	3	0.9
Separated	1	0.3

significant associations between the relative risk of experiencing an abuse and a demographic variable was based on the Poisson distribution modeled through the generalized linear model log-link function (STATA 14). To minimize the vulnerability of detecting significant differences when the true nature is no difference that often results from conducting numerous inferences, the p-value from the Poisson models were transformed using the Benjamini-Hochberg (B-H) procedure. The B-H procedure controls for false positive rates across multiple comparisons (Thissen, Steinberg, & Kuang, 2002) by computing a critical value for each test statistic from a linear interpolation between the largest and smallest observed p-value. All inferential results are interpreted as relative risks of exposure to the abuse by a given family member and considered statistically significant if the observed Poisson p-value is below the B-H critical p-value.

Results

A total of 332 women from five mosques in the greater Boston area participated in the study. About 10% of women approached by study team members either refused to participate or did not complete the survey.

The largest ethnic origin in the study population was South Asian (39%), followed by African American (19%), Arab (19%), and White (17%), with the remaining 6% being Hispanic or other. This reflects the ethnographic makeup of Muslims in greater Boston as seen in the study ISBCC had commissioned in 2014. The women in our study are diverse in their countries of birth with the largest group being American-born (26%), but significant percentages born in South Asia (24%), the Middle East (17%), Middle Africa (13%), and North Africa (10%) are present as well. (see Table V)

Thirty-six percent of women in our study reported some form of domestic abuse, in comparison with 33% in the AddHealth database. In total, 119 unique women in our study reported 165 incidents of some form of abuse (Table VI).

Of the incident reports, 115 (68%) were emotional or verbal abuse and 54 (32%) were physical abuse. Fifty (42%) women in our study had faced both. In AddHealth data, of 907 incidents reported, 526 (58%) were emotional or verbal abuse and 381 (42%) were physical abuse.

Domestic violence tends to be used interchangeably with intimate partner violence, but we found that parents, siblings, in-laws, and close friends were perpetrators in 37% of the incidents in our study. Being married or in a relationship protected against all types of DV (RR: 0.58, P: 0.000 for emotional/verbal and RR:0.42, P:0.001 for physical abuse). This could not be compared to the AddHealth dataset, because AddHealth did not track marital status. A breakdown of incidents of domestic violence by relationship with the perpetrator is shown in Table VII.

The AddHealth dataset shows a clear trend of increasing income and education being protective factors against domestic violence. This is not echoed in our data. We used Poisson coefficient transformed to relative risk (RR) for this analysis. In our study, the single variable with the highest risk for both emotional/verbal (RR: 1.43, P:0.042) and physical abuse (RR:1.90, P:0.02) was the educational status of high school only (HS). The average age of the HS/GED participants who were being physically abused (N=13) is 24.46, with the youngest being 18 and the oldest being 40. Their reported physical abusers in the nuclear family include spouse (n=1), father (n=5), mother (n=7), brother (n=5), and sister (n=4).

An analysis of employment status of victims of DV showed women with full-time work (RR:1.45, P:0.012) and those who were students (RR:1.47, P:0.024) were at risk for emotional/verbal abuse; and students were at highest risk for physical abuse (RR:1.77, P:0.041). Women with household incomes less than 20K and those who preferred not to share their financial

Table V. Race Ethnicity and Region of Birth of Study Percipients.

Race Ethnicity	Number	Region of Birth (1)	Number
Asian	129 (39%)	Americas	83 (26%)
Black or African- American	64 (19.4%)	Indo-Pakistan	78(24.4%)
Middle Eastern	62(19%)	Middle East	53(17%)
White	56(17%)	Middle Africa	43(13.5%)
Other	7(2%)	North Africa	33(10%)
Hispanic/Latin	6(2%)	Turkey & Balkans	13 (4%)
		Iran and central Asia	8(2.5%)
		East Asia	8(2.5%)

Region	Constituting countries
Americas	Countries in North and South Americas and the Caribbean
Indo-Pakistan	India, Pakistan, and Bangladesh
Middle East	Egypt, Lebanon, Palestine, Jordan, Syria, Iraq, Saudi Arabia, Yemen, Oman, Kuwait and the United Arab Emirates (UAE).
Middle Africa	Sudan, Rhodesia, Angola, Cameroon, the Congo and Sierra Leone
North Africa	Algeria, Libya, Mauritania, Morocco and Tunisia
Turkey & Balkans	Turkey and Balkan States
Iran & central Asia	Russia, Iran, Afghanistan and the Central Asian Republics of Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan and Tajikistan
East Asia	Malaysia, Indonesia and Pacific Rim Countries

We coded the country of birth of the participants into eight regions

Table VI. Reported Domestic Violence

Variable	N	%
Suffered Any Emotional and Verbal Abuse Only	65	19.7
Suffered Any Physical Abuse Only	4	1.2
Suffered both Emotional and Verbal and Physical Abuse	54	16.3
Total	119	36.6
Number of Abuse Incidents	**N**	**%**
Suffered only one abuse	76	23
Suffered two abuses	12	3.6
Suffered three abuses	16	4.8
Suffered four abuses	15	4.5
Relationship with the person respondent felt threatened in any way in the past 12 months		
Nuclear Family (Spouse, Father or Mother)	75	63
Extended Family (Brothers, Sisters or In-laws)	44	37

Table VII. Frequency and Distribution of abuse incidents by relationship of perpetrator

	Number of DV incidents				
Relationship of perpetrator	**Once in last year**	**1–5 times in last year**	**>5 times in last year**	**Before this past year**	**Total**
Father	1	2	**0**	30	32
Mother	2	5	5	36	48
Brother	5	7	2	26	40
Sister	4	8	0	10	22
Spouse	5	9	8	18	40
In-Laws	0	0	1	3	4
Total	16	31	16	123	186

status faced less emotional/verbal trauma (RR:0.38, P:0.041 for prefer not to say and RR: 0.51, P:0.039 for less than 20K). An analysis of which two-variable combinations increased the risk of DV showed that women who work full time and have incomes of more than 50K report more emotional and verbal distress (RR:1.49, P: 0.012). We did not see a difference in DV between women born in the U.S. and women born abroad, nor a higher rate of DV among Muslim women immigrating from war-torn countries, although the sample of immigrants from war-torn countries was small in our study.

Discussion

We set out to estimate the rate of domestic violence in Muslim women in greater Boston. We found it to be similar to the DV prevalence among AddHealth participants and lower than the U.S. Department of Justice numbers for all American women. Our study indicates that the American Muslim community in greater Boston struggles with the same scale of domestic violence as the rest of the U.S. We need more data from more regions of the U.S., but it is safe to say our study results, in combination with the work done by Kulwicki and colleagues in Michigan in the 1990s, suggest that disproportionate representation of American Muslims in DV focused news stories may reflect an Islamophobic bias in the U.S. media. Despite its limitations, our data offers a foundation to counter this media bias.

Increasing education, income, and employment status are protective factors against DV for the women in the AddHealth database. Our study did not reflect these results. About 70% of participants in both AddHealth and our study had a college degree. Thirty-seven percent of all American women have college degrees (Statista.com, 2020), so both AddHealth and our study are not representative in this variable. Our study is, however, representative of the educational status of Muslims in the greater Boston area, since data collected by Islamic Society of Boston Community Center (ISBCC) shows Muslims in greater Boston have college education rates that are higher than the national average for this variable.

Our outcomes show marriage as a protective factor against abuse, with parents and siblings perpetrating significant proportion of incidents reported (Table VII). Non-Intimate Partner Violence (NIPV) is often not studied in DV studies and needs further work. It also implies that civic and mosque-based efforts to reduce DV need a whole family rather than intimate partner focus.

We report verbal and emotional abuse to be higher in fully employed women with higher than 50K in household income. In AddHealth data, full time employment and higher income are protective against physical abuse. AddHealth does not ask questions about verbal abuse. We need further study to determine if there are specific reasons why higher income women with full-time jobs in our study population experience higher levels of emotional and verbal abuse or if AddHealth data underreports verbal abuse because it does not screen for it specifically.

High school students have the highest rates of being physically abused in our study. A more granular examination of this sub-population reveals that these are mostly young high school students who are being hit by parents or siblings. This goes back to our earlier assertion that measures to ameliorate DV need to expand beyond husbands and intimate partners and involve the whole nuclear and extended family.

A major limitation of our study is the need for women to be able to read and understand English to take the study-survey. The women in our study, therefore, are more likely to be integrated into the mainstream American society compared to non-English speaking women. There is a need for follow-up studies with questionnaires in a variety of languages to render a more complete picture.

We administered the questionnaires exclusively in the greater Boston area. Boston is an metropolitan city with higher than national rates of education which may not be representative of Muslim women in non-urban parts of the U.S. Additionally, while our sample size of 332 is relatively large for a study of DV in Muslim women, 74% of the responses came from the two urban mosques in the study. Further studies focused on other urban centers and more suburban data can supplement the results of our study.

Underreporting of DV is a known limitation of work on this issue. The mosque is a place of community, and for some women, revealing their experience of domestic abuse even with privacy and anonymity reflects on their community as a whole. Most mosque leaders in the U.S. are men, and though all the questionnaire administrators were women, the fact that they were in a place run by men may promote underreporting. It would therefore be useful to come up with study designs that allow DV data to be gathered in places other than the mosque for American Muslim women.

Conclusion

Our study suggests Muslim women in greater Boston face similar or lower domestic violence rates than their non-Muslim peers. In comparison with the American population, rates of physical abuse in Muslim women in greater Boston are lower, making verbal/emotional abuse the dominant form of aggression in our study population.

Rising levels of education and income protect women against domestic violence in a linear relationship in the AddHealth dataset. This trend is not seen in our study; instead, marriage was shown to be a protective factor against abuse. Our study shows perpetrators of abuse are more likely to be parents and siblings than spouses and intimate partners, unlike trends seen in the general population. While more research is needed to explore the nuances of this finding, our data suggests ameliorative interventions need to involve the whole family rather than intimate partners only. Our study was not able to reach non-English speaking women and may not be representative of Muslim populations in non-urban America. However, our study provides a first of its kind, relatively large snapshot of domestic violence in both urban and suburban mosque-going Muslim women in a major American city with a sizeable Muslim population.

Acknowledgements

The authors would like to acknowledge the help and support of Elizabeth Hughes, Rawan Oneiz, Nour Khreim, Yusufi Vali, Rasha Azoni, Taiba Zahir, Musshda Haq, Hafsa Baloch, Aula Alami, and Rowida Dallou for their contributions to the various aspects of work on this study. Thank you. We could not have done this work without you.

References

Abu-Ras, W. (2007). Cultural beliefs and service utilization by battered Arab immigrant women. Violence Against Women, *13*(10), 1002–28.

Adam, N., and Schewe, P. (2007) A Multilevel Framework Exploring Domestic Violence Against Immigrant Indian and Pakistani Women in the United States. *Journal of Muslim Mental Health, 2*(1), 5–20.

Alkhateeb, S. (1999). Ending domestic violence in Muslim Families. *Journal of Religion and Abuse*, *1*(4), 49–59. doi: https://doi.org/10.1300/J154v01n04_04

Ammar, N. H. (2007). Wife battery in Islam: a comprehensive understanding of interpretations. Violence Against Women, *13*(5), 516–26.

Ammar, N., Couture-Carron, A., Alvi, S., San Antonio, J.(2013). Experiences of Muslim and non-Muslim battered immigrant women with the police in the United States: a closer understanding of commonalities and differences. Violence Against Women, *19*(12),1449–71. doi10.1177/1077801213517565

Ayyub, R. (2000). Domestic Violence in the South Asian Muslim Immigrant Population in the United States. *Journal of Social Distress and the Homeless*, *9*(3), 237–248.

Bhandari, S., and Sabri, B. (2018). Patterns of abuse among South Asian women experiencing domestic violence in the United States. *International Social Work*, *63*(1), 55–68. doi: https://doi.org/10.1177%2F0020872818767250

Clark, C. J., Everson-Rose, S. A., Suglia, S.F., Btoush, R., Alonso, A., Haj-Yahia, M. M. (2010) Association between exposure to political violence and intimate-partner violence in the occupied Palestinian territory: a cross-sectional study. *The Lancet*, *375*(9711), 310–316. Doi: https://doi.org/10.1016/S0140-6736(09)61827-4

Crabtree-Nelson, S., Vincent, N. J., Shalabi I. (2018). Exploring the experience of Arab American and Arab immigrant women with intimate partner violence. *Violence and Victims, 33*(5), 918–931. Doi:10.1891/0886-6708.VV-D-17-00174

Faith Trust Institute. (2007). *A Perspective on Domestic Violence in Muslim Community*. Retrieved on January 7, 2022, from http://www.faithtrustinstitute.org/resources/articles/DV-in-Muslim-Community.pdf

Guruge, S., Ford-Gilboe, M., Varcoe, C., Jayasuriya-Illesinghe, V., Ganesan, M., Sivayogan, S., Kanthasamy, P., Shanmugalingam, P., Vithanarachchi, H. (2017) Intimate partner violence in the post-war context: Women's experiences and community leaders' perceptions in the Eastern Province of Sri Lanka. *PLoS One, 12*(3), e0174801.[DOI.]

Hassouneh-Phillips, D.(2001). American Muslim women's experiences of leaving abusive relationships. Health Care Women Int., *22*(4), 415–32.

Horn, R., Puffer, E. S., Roesch, E., Lehmann, H. (2014) Women's perceptions of effects of war on intimate partner violence and gender roles in two post-conflict West African Countries: consequences and unexpected opportunities. *Conflict and Health, 8*(12). doi: https://doi.org/10.1186/1752-1505-8-12

Hynes, M., Robertson, K., Ward, J., Crouse, C. (2004) A determination of the prevalence of gender-based violence among conflict-affected populations in East Timor. *Disasters*, *28*(3), 294–321. Doi: https://doi.org/10.1111/j.0361-3666.2004.00260.x

Islamic Society of Boston Cultural Center (ISBCC) (2014) *A study on Muslim demographics in Greater Boston area*. ISBCC was gracious enough to share this data with the study team.

Johnson, A. J. (2015). *Religion and Men's Violence Against Women*. New York: Springer Publications. [ISBN: 978-1-4939-2266-6]

Kulwicki, A. D., Ballout, S., Kilgore, C., Adnan, H., Dervartanian, H. (2014). Intimate Partner Violence, Depression, and Barriers to Service Utilization in Arab American Women. *Journal of Transcultural Nursing*, *26*(1), 24–30. doi: https://doi.org/10.1177/1043659614524000

Kulwicki, A.D., and Miller J. (1999). Domestic Violence in the Arab American Population: Transforming Environmental Conditions through Community Education. *Issues in Mental Health Nursing*, *20* (3), 199- 215. doi: 10.1080/016128499248619

National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. (2011). *The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report*. Retrieved from https://www.cdc.gov/violenceprevention/pdf/nisvs_report2010-a.pdf

National Longitudinal Study of Adolescent to Adult Health. 2022 Some of our questions are from AddHealth, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information about AddHealth is available on the AddHealth website [http://www.cpc.unc.edu/addhealth]. No direct support was received from grant P01-HD31921 for this study. Retrieved January 7, 2022, from https://addhealth.cpc.unc.edu/documentation/codebooks/

Pew Research Center (2017). *Muslims and Islam: Key findings in the U.S. and around the world* Retrieved January 7, 2022, from https://www.pewresearch.org/fact-tank/2017/08/09/muslims-and-islam-key-findings-in-the-u-s-and-around-the-world/

Sound Vision. (2009). *Domestic Violence Survey Analysis. Feb – March 2009*. Retrieved January 7, 2022, from http://www.soundvision.com/article/domestic-violence-survey-analysis-february-march-2009

Statista.com, *Percentage of the U.S. population with a college degree, by gender 1940–2020*. Retrieved January 7, 2022, from https://www.statista.com/statistics/184272/educational-attainment-of-college-diploma-or-higher-by-gender/

The Bureau of Justice Statistics. (2014). *Nonfatal Domestic Violence 2003–2012, Bureau of Justice Statistics Special Report*. Retrieved from https://www.bjs.gov/content/pub/pdf/ndv0312.pdf

Thissen, D., Steinberg, L., Kuang, D. (2002) Quick and Easy Implementation of the Benjamini-Hochberg Procedure for Controlling the False Positive Rate in Multiple Comparisons. *Journal of Educational and Behavioral Statistics,27*(1), 77–83.doi: https://doi.org/10.3102/10769986027001077

Ward, J. (2002). *If not now, when? Addressing gender-based violence in refugee, internally displaced, and post-conflict settings: a global overview*. New York: The Reproductive Health for Refugees Consortium.

Wolfgang, M., and Ferracuti, F. (1967). *The Subculture of Violence*. London: Tavistock Publications Limited.

Appendix A

LexisNexis search for domestic violence stories in media and news outlets from 2006–2016

To prevent data mining, the LexisNexis database only presents 1000 or so total cases that the database considers relevant to one's search. Since the goal of this report was to compare the total media coverage of domestic violence among Muslim populations in comparison to the total coverage of domestic violence between 2006 and 2016 in all English-language media outlets across the U.S., this feature of the database served as a major constraint. To get around this feature, we conducted the same search but did it several times in smaller increments of time and added the net searches together. For instance, the first search may have been January-February of 2006, and then the second search would have been March-April of 2006, etc.

Our results showed that media coverage for domestic violence related to Muslims in all English-language media outlets in the U.S. totaled to roughly around 11,870; while the coverage for domestic violence in general for all outlets was 121,969. That is, roughly 9.73% of all domestic violence coverage in the media was associated and with Muslims and Islam. Considering that Muslims make up only around 1% of the U.S. population, this proportion is very significant, and therefore makes the need for acquiring accurate and reliable data regarding the prevalence of domestic violence in American Muslims all the more urgent.