

## ABSTRACT

Title of thesis: INVESTIGATING ISLAMOPHOBIA:  
IDENTIFYING RISK AND PROTECTIVE  
FACTORS IN THE MUSLIM AMERICAN  
COMMUNITY

Shereen Ashai, Master of Arts, 2022

Thesis directed by: Dr. Richard Shin  
Department of Counseling, Higher Education, and  
Special Education

Muslim Americans have experienced considerable anti-Muslim discrimination as a result of ongoing exposure to Islamophobic rhetoric and hate crimes (Khan & Ecklund, 2012; Kunst et al., 2012). Like other forms of oppression, Islamophobia operates at an interpersonal and institutional level (Helms, 2016). This study explored societal and interpersonal anti-Muslim discrimination experienced by 188 Muslim adults in the United States. Vigilance, community connectedness, and social support were investigated as potential moderators in the relationship between societal and interpersonal anti-Muslim discrimination and psychological distress (depression, anxiety, and stress). Results suggested that vigilance exacerbated the relationship between societal anti-Muslim discrimination and anxiety. Social support initially buffered the effects of interpersonal anti-Muslim discrimination and depression; however, this finding was not substantiated when controlling for the influence of COVID-19 related stressors. There was

no evidence to suggest the moderating effects of community connectedness. Clinical implications and recommendations for future research are also discussed.

INVESTIGATING ISLAMOPHOBIA: IDENTIFYING RISK AND PROTECTIVE FACTORS  
IN THE MUSLIM AMERICAN COMMUNITY

by

Shereen K. Ashai

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Advisory Committee:

Richard Shin, Ph.D., Chair

Jioni Lewis, Ph.D.

Nazish Salahuddin, Ph.D.

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## Introduction

Islamophobia, which refers to negative attitudes and behaviors towards Muslims including anti-Muslim discrimination and stereotypes, has been exponentially rising in recent years in the United States and globally (Kunst et al., 2012; Samari, 2016). The current sociopolitical climate has ignited fear, suspicion, and animosity towards Muslims (Ogan et al., 2014) due to rampant anti-Muslim rhetoric in public discourse. In fact, 60% of Americans reported having an unfavorable attitude towards Muslims (Samari, 2016). This noxious climate perpetuates Islamophobia, which has surged following the September 11th attacks and the 2016 presidential election (Ahmed, 2021).

Like other minority groups, Muslims experience discrimination at an individual and institutional level (Helms, 2016). Astoundingly, a majority (60%) of Muslim Americans reported religious discrimination in the past year (Mogahed & Chouhoud, 2017). Alarming levels of psychological (e.g., negative representation and racial profiling; Kunst, Sam, & Ullberg, 2012; Mogahed & Chouhoud, 2017; Moradi & Hasan, 2004), physical (e.g., hate crimes, assault, and street harassment; Allen, 2015; Mason-Bish & Zempi, 2019; Moradi & Hasan, 2004; Pew Research Center, 2017), and economic threats (e.g., employment discrimination; Di Stasio et al., 2019; Rooth, 2010; Wallace et al., 2014; Wright et al., 2013) suggest that religious affiliation may be related to multifaceted forms of discrimination. These trends uncover an urgent need to investigate potential psychological implications afflicting the Muslim American population following instances of discrimination motivated by anti-Muslim sentiment.

Anti-Muslim sentiment contributes to societal level marginalization, misconceptions about Islam, and a climate of racism and xenophobia (Haque et al., 2018; Helms, 2016; Samari, 2016). Muslims have reported experiencing Islamophobia through employment discrimination

(Di Stasio et al., 2019; Rooth, 2010; Wallace et al., 2014; Wright et al., 2013), hostile street harassment (Allen, 2015; Mason-Bish & Zempi, 2019), negative media representation (Kunst et al., 2012; Saleem & Ramasubramanian, 2017), racial profiling and surveillance (e.g., profiling Muslim airline passengers, monitoring Muslim university students, or secondary screenings for Muslim travelers; Hopkins, 2011; Mogahed & Chouhoud, 2017; Moradi & Hasan, 2004), and hate crimes (Moradi & Hasan, 2004). Similar discriminatory patterns are prevalent in the healthcare field, where Muslims have endured patronization, insults, exclusion, and premature termination from therapy (Amer & Bagasra, 2013; Haque et al., 2018; Martin, 2015; Samari, 2016).

Perceptions of anti-Muslim discrimination exacerbate mental health symptoms in Muslims. Major depression, generalized anxiety, and subclinical paranoia have all been identified in Muslims who experienced discrimination in their environment (Lowe et al., 2019; Rippy & Newman, 2006). Moreover, anti-Muslim discrimination has been associated with depressive symptoms, psychological distress, anxiety about future discrimination, vicarious trauma, paranoia, anger, and visibility as a Muslim (Ahmed, 2020; Ashraf & Nassar, 2018; Samari et al., 2018) in samples of Muslims. Regarding visibility, Muslim women who display visible religious identifiers, such as a *hijab* or *niqab*, experienced more discrimination (Jasperse et al., 2012) and were more likely to be targets of discrimination (Mogahed & Chouhoud, 2017). This adds a degree of nuance when considering how intersectional identities contribute to anti-Muslim discrimination.

Although the Muslim community does not represent a homogenous racial or ethnic group, the distinction between religious and racial discrimination is often indistinguishable when considering the effects of Islamophobia. Targets of Islamophobia include anyone who bears

semblance to stereotypical depictions of Muslims and are subsequently perceived to be Muslim (e.g., Middle Easterners/Arabs, South Asians, Sikhs; Samari et al., 2018). “Muslim markers” including skin tone, accent, or clothing (e.g., turbans), may make some members of the non-Muslim community susceptible to the effects of Islamophobia as well. Despite the growing prevalence of anti-Muslim discrimination, the effects on mental health have been largely excluded from the field of counseling psychology and mainstream literature broadly (Amer & Bagasra, 2013; Mogahed & Chouhoud, 2017).

### **Theoretical Framework**

The Minority Stress Theory (Meyer, 2003) describes the relationship between environmental stressors and psychological distress for minoritized individuals. Prejudice and discrimination create a hostile environment for minorities that can lead to adverse health outcomes such as depression, anxiety, or substance use (Meyer, 2003; Meyer, 2015). Thus, minorities encounter unique, chronic, and socially based stressors related to their minoritized identity that have detrimental effects on mental health.

The theory posits that minority communities are exposed to proximal and distal stressors due to their stigmatized identity (Meyer, 2003). Using this conceptual paradigm, minorities can encounter distal stressors, such as discrimination, and proximal stressors, such as internalized stigma, which contribute to negative physical and psychological health outcomes (Budhwani & Hearld, 2017). Sometimes, minorities respond and adapt to stress by internalizing stigma, concealing minoritized identities, or anticipating future discrimination (Mereish & Poteat, 2015; Meyer, 2003; Meyer, 2015). It can be assumed that Muslim Americans respond to environmental stress related to their minoritized religious identity in a similar fashion.

However, minority stress does not affect all members of a minority community in the same way. Various factors, such as identity centrality, intersectionality, and cumulative stress, may alter the susceptibility and intensity of minority stress (Balsam et al., 2011; Priscilla Lui & Quezada, 2019). For instance, minorities with multiple marginalized identities may be prone to negative mental and physical health (Balsam et al., 2011), which may hinder opportunities for coping and resilience (Meyer, 2015).

A notable component of the theory examines the unique protective factors that buffer negative environmental influences. Resilience in marginalized communities has been documented following experiences of prejudice or discrimination (Bowleg et al., 2003). Examples of protective factors that mitigate negative mental health outcomes include positive coping, access to resources, group cohesiveness, social support, and strong community bonds (Meyer, 2003). Meyer's (2015) process of stress buffering implements a moderation effect, where high or low levels of the buffer modify the impact of minority stress on mental health outcomes. Moreover, exploring protective factors promotes the use of a strengths-based approach for research on minority communities.

## **Stress Related Factors**

### ***Community Connectedness***

In line with adopting a strengths-based approach, identifying strength and resilience factors inherent in the Muslim American community assists in shifting away from a strictly deficit narrative. Community connectedness is considered a protective factor rooted in the need to belong that constructs a collective identity by providing an individual with a sense of belonging and emotional connection within a larger social group (Frost & Meyer, 2012; Whitlock, 2007). Community connectedness focuses on community level resources such as

“values, role models, and opportunities for social support” that may assist in reducing minority stress (Meyer, 2015, p. 211) and may provide a unique form of protection for marginalized communities.

Research has found that connection with a community promotes a sense of belonging and protects against emotional distress, negative body image, and drug use (Ahmed, 2006; Whitlock, 2007). In racial and ethnic minority groups, high levels of ethnic social connectedness weakened the relationship between perceived racial discrimination and posttraumatic stress symptoms and the relationship between racial microaggressions and anxiety symptoms (Liao et al., 2016; Wei et al., 2012). Muslim American communities may exhibit similar benefits when engaging in community connectedness. Many Muslim Americans have been socialized in Islamic cultural communities, which emphasize the importance of family and community bonds (Ahmed, 2006). Feeling valued within the Muslim community, communicating with other Muslims, and interacting with local imams/clergy are all possible ways that Muslims engage with their community (Ali, 2016). Muslim faith leaders, in particular, serve an integral role in the community by providing support to their congregants (Ali et al., 2005; Ciftci et al., 2013). It is possible that some Muslims may rely on strong community bonds to provide essential support that buffers the deleterious effects of minority stress.

### ***Social Support***

In general, individuals who derive social support from family, friends, or significant others tend to have more positive outcomes including self-esteem and well-being compared to those with less social support (Cohen & Wills, 1985). Social support refers to individual level resources such as receiving instrumental and emotional support from family, friends, or organizations (Breese et al., 2000). Copious studies have documented a buffering effect of social

support such that social support protects against the harmful effects of psychological distress (Bailey et al., 1996; Nguyen et al., 2016). Therefore, it is possible that Muslim Americans rely on close personal networks consisting of family, friends, or significant others to receive support, validation, and resources.

### ***Vigilance***

Stress exacerbating factors may amplify the effects of minority stress in the Muslim American population. Vigilance is a defensive process used by minorities to monitor and adjust behavior in preparation for a discriminatory event, which has been linked with poor mental health outcomes (Allport, 1954; Budhwani & Hearld, 2017; Himmelstein, 2015; Meyer 2003; Meyer 2015). Research has noted that individuals who are targets of discrimination may be vigilant to surrounding stigma and prepare for the possibility of experiencing discrimination in their daily life (Hicken et al., 2013; Kunst, Tajamal, Sam, & Ullberg, 2012). Some Muslims may expect hostility from the environment, leading to a heightened level of vigilance and paranoia (Rippy & Newman, 2006). This may be particularly evident in visible Muslims, such as Muslim women who wear hijab (Mogahed & Chouhoud, 2017). Similarly, in Muslim men, perceived religious discrimination was positively related to increased vigilance and mistrust, suggesting that high levels of vigilance may exacerbate negative psychological outcomes (Rippy & Newman, 2006).

### **Summary**

Drawing conceptually from the minority stress theory, the purpose of the present study was to examine how minority stress influences psychological outcomes in Muslim Americans. The study proposed vigilance, community connectedness, and social support as risk and protective factors in the relationship between anti-Muslim discrimination and psychological

distress. The present study also implemented a strengths-based approach by incorporating Meyer's (2015) idea of stress buffering.

Specifically, it was hypothesized that anti-Muslim discrimination would be positively associated with psychological distress. The interaction between vigilance and anti-Muslim discrimination was expected to be associated with psychological distress, with anti-Muslim discrimination having a stronger effect on psychological distress at high levels of vigilance versus low levels of vigilance (see Figure 1). Alternately, the interaction between community connectedness and anti-Muslim discrimination was expected to be associated with psychological distress with anti-Muslim discrimination having a stronger effect on psychological distress at low levels of community connectedness versus high levels of community connectedness (see Figure 2). Similarly, the interaction between social support and anti-Muslim discrimination was expected to be associated with psychological distress with anti-Muslim discrimination having a stronger effect on psychological distress at low levels of social support versus high levels of social support (see Figure 3).

This study is important because Muslim Americans face complex minority stress, contributing to negative mental health outcomes. The spike in anti-Muslim sentiment in recent years exposes an urgent need for increased scholarship focused on the psychological well-being of Muslim Americans (Awaad et al., 2019). Mental health providers are uniquely positioned to address mental health challenges stemming from societal and interpersonal level Islamophobia. The findings from this study could inform the development of future interventions targeted towards reducing the adverse effects of minority stress in Muslim Americans. The advancement of culturally relevant research and the development of tailored interventions is essential for promoting the mental health of the Muslim American community.

**Hypotheses:**

1. Anti-Muslim discrimination will be positively associated with psychological distress.
2. The interaction between vigilance and anti-Muslim discrimination will be associated with psychological distress. Specifically, anti-Muslim discrimination will have a stronger effect on psychological distress for individuals who score higher on vigilance versus individuals who score lower on vigilance.
3. The interaction between community connectedness and anti-Muslim discrimination will be associated with psychological distress. Specifically, anti-Muslim discrimination will have a stronger effect on psychological distress for individuals who score lower on community connectedness versus individuals who score higher on community connectedness.
4. The interaction between social support and anti-Muslim discrimination will be associated with psychological distress. Specifically, anti-Muslim discrimination will have a stronger effect on psychological distress for individuals who score lower on social support versus individuals who score higher on social support.

**Method****Procedure**

Permission was obtained from the University of Maryland Institutional Review Board (IRB) to conduct the study. Upon receipt of IRB approval, participants who met the inclusion criteria (above the age of 18, identified as Muslim, lives in the United States, and able to read/write in English) were invited to participate in an online Qualtrics survey. A convenience sampling method was implemented to recruit Muslim American adults from various

geographical locations in the United States. Participants were recruited through personal contacts, social media posts (e.g., Instagram), listserv emails, and flyers. Listserv email managers for various American Psychological Association (APA) divisions, APA affiliated student groups, racial/ethnic psychology groups, and professional associations were contacted to request permission to distribute recruitment information to members. Additionally, administrators for community organizations (e.g., nonprofit charities, mosque community groups, mental health organizations) in the Muslim American communities were contacted. Flyers and study information were also distributed to various campus Muslim Student Associations (MSAs) at universities across the United States.

The survey was initially reviewed by a group of six researchers who completed the survey within eight minutes on average. The completion time for the survey was estimated to not exceed 20 minutes. Participation was voluntary and participants could withdraw at any time. No personally identifying information was collected. After providing informed consent, participants were presented with several quantitative measures. Upon completion, participants had the opportunity to submit their email address into a raffle to win a \$20 Amazon gift card as incentive for their participation. Data was collected during the summer of 2021.

### **Participants**

The participants in the study were 188 Muslim adults from the United States. All participants were above age 18 and able to read and write in English. An *a priori* statistical power analysis, using the G\*POWER v3 software (Faul, Erdfelder, Lang, & Buchner, 2007), was used to calculate the total number of participants needed to achieve statistical power of 0.95 and medium effect size ( $f^2 = 0.15$ ) with an overall  $\alpha = 0.05$  for the moderation analysis. The results suggested a total sample size of 119 participants. Due to the use of multiple moderation

analyses and the desire to collect a representative sample, a goal of 200 participants was intended for this study.

Over 2300 surveys (n = 2312) were submitted via Qualtrics due to unforeseen circumstances regarding a bot attack that resulted in an improbable influx of data. The term “bot” refers to a specific type of malicious software that performs virtual automated tasks with speed and efficiency (Teitcher et al., 2015), providing rapid survey submissions especially in circumstances where compensation is offered. Despite thoughtful and rigid restrictions to the survey design including password protection, validity checks, prevention of multiple submissions (also known as “ballot stuffing”), and inclusion criteria, the survey still remained vulnerable to digital threats.

1481 participants failed to respond correctly to two validity check items and were subsequently eliminated from the analyses. These omitted responses included participants who provided initial consent but did not respond to any survey items (n=819). Data from participants who did not complete at least 85% of the items on the survey were removed, reducing the sample size to 812. This remaining data included a combination of authentic and inauthentic responses.

Consultation with other researchers, data specialists, and emerging literature informed best practices to detect fabricated data (Dennis et al., 2020; Storozuk et al., 2020; Teitcher et al., 2015). Rigorous procedures were used to remove fraudulent data from further analysis. Text entries to an open-ended qualitative question (e.g., “*What was your experience like receiving support services or therapeutic treatment?*”) were inspected for duplicate responses and quality of responding. 145 responses were omitted for having identical responses to other participants (n=667). Text entries were also inspected for nonsensical or incomprehensible responses (e.g., “*Let’s not talk about employment, but study first*”) and irrelevant responses (e.g., “*Freud, the*

*originator of psychoanalytic psychotherapy was the eldest son in his family” or “Another person was examined with an X-ray film that had been fluoroscopic”*). Poor quality responses were determined based on unrelated content, incoherent responses, and inconsistent grammar. Thus, 108 responses were omitted (n=559).

Based on existing literature on cyberattacks, bots have the ability to learn quickly and become effective at mimicking human behavior (e.g., providing correct responses to validity check items or imitating humanlike completion times), thereby making it increasingly difficult to detect fraudulent data (Storozuk et al., 2020). In these equivocal circumstances, Storozuk and colleagues (2020) recommended that the acceptability of the response is dependent on the discretion of the researcher. Upon review of recommendations from data specialists, the duration of the survey, IP addresses, and temporal proximity of responses were examined.

67 responses were rejected due to suspiciously similar start and end times (n=492), which may indicate that multiple responses were submitted in the same brief timeframe. Moreover, data gathered from duplicate IP addresses were also removed from analysis. Investigating IP addresses is a contested practice (Dennis et al., 2020) due to the ability to provide fake IP addresses and the possibility of eligible participants in the same physical location to share similar IP addresses (for instance, people living in the same residence hall at a university may realistically have the same IP address; Teitcher et al., 2015). However, due to the desire to adopt a conservative approach to preserve data integrity, 87 duplicate IP addresses were removed (n=405). About 217 responses from the remaining data were removed if the responses appeared to resemble spam (i.e., responses with the same answer to every question), had an inhuman response time (i.e., surveys submitted too quickly that did not meet a reasonable minimum length of time for completion), or were submitted in close temporal proximity (e.g., multiple

submissions in a short amount of time). A final sample size of 188 responses were retained for analysis. Due to the rapid influx of fraudulent responses, it is implausible to determine an accurate response rate.

Participants ranged in age from 18 to 76 years old ( $M = 27.11$ ,  $SD = 9.31$ ). Regarding gender identity, 71.8% of the sample identified as women, 26.1% identified as men, and 1.6% identified as nonbinary (see Table 1 for demographic information). The racial composition of the sample included 52.1% South Asian, 29.3% Arab/Middle Eastern, 9.0% White/European American, and 6.9% Black/African American. Most participants identified as second-generation immigrants (63.8%) and heterosexual (88.3%). Participants identified as either politically moderate (36.7%) or liberal (29.8%). They reported coming from a middle class (38.3%) or upper middle class (33.5%) background. The most frequently reported COVID-19 related stressors included worry about the health of family, friends, and loved ones (73.9%) and social isolation (73.4%). Respondents in this sample participated in a range of counseling experiences. Most responded that they received no form of counseling (53.7%) with some reportedly receiving individual counseling (35.1%).

In terms of religious affiliation, the majority endorsed belonging to the Sunni sect (87.2%) and practicing their faith to great degree (39.4%) or considerable degree (32.4%). Approximately 45.7% indicated always wearing an Islamic headscarf (e.g., burqa, niqab, hijab) and 10.6% reported always wearing Islamic clothing.

## Measures

### *Perceived Islamophobia*

The Interpersonal Anti-Muslim Discrimination Index and the Societal Anti-Muslim Discrimination Index were used to assess Muslim participants' perception of religious-based discrimination (Ahmed, 2021; see Appendix B and Appendix C).

**Interpersonal Discrimination.** The 9-item Interpersonal Anti-Muslim Discrimination Index measured interpersonal experiences of discrimination (Ahmed, 2021; see Appendix B). Responses were provided on a Likert scale ranging from 1 (*this event never happened to me*) to 6 (*this event happened and I was extremely upset*). Participants also had the option of selecting 0 (*prefer not to answer*). Sample items included, “*You are treated poorly in health care settings (e.g., doctor’s office, hospital, clinic) because you are Muslim*” and “*You are stopped for additional security screenings at the airport because you are Muslim.*” Responses to items were averaged with higher scores indicating more perceived interpersonal anti-Muslim discrimination and distress related to the experience.

**Societal Discrimination.** The 19-item Societal Anti-Muslim Discrimination Index assessed perceptions of societal level anti-Muslim discrimination in the United States (Ahmed 2021; see Appendix C). Responses were provided on a Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Participants also had the option of selecting 0 (*don’t know or prefer not to answer*). Sample items included, “*In the U.S., non-Muslims perceive Muslims as being dangerous*” and “*Muslims are under government (e.g., Homeland Security, FBI, police) surveillance in the U.S.*” Three items were reverse coded and mean scores were computed with higher scores representing higher levels of perceived societal anti-Muslim discrimination.

Internal consistency was reported for the two indexes in the instrument development study: Interpersonal Anti-Muslim Discrimination Index ( $\alpha=.77$ ) and Societal Anti-Muslim Discrimination Index ( $\alpha=.88$ ; Ahmed, 2021). Evidence of validity for both scales was found with high scores on the anti-Muslim discrimination indexes having positive relationships with measures on depressive symptoms and experiences of everyday discrimination. In the current investigation, reliability estimates were modest to high (Interpersonal Anti-Muslim Discrimination Index:  $\alpha=.77$ ; Societal Anti-Muslim Discrimination Index:  $\alpha=.83$ ).

### ***Vigilance***

The six-item Heightened Vigilance Scale (AHVS; Clark et al., 2006) was used to measure participants' preparation for anticipated discrimination (see Appendix D). Responses were provided on a five-point Likert scale ranging from 1 (*very often*) to 5 (*never*). The scale began with a prompt saying, "*In dealing with day-to-day experiences, how often do you...?*" with items including "*try to avoid certain social situations and places*" and "*try to prepare for possible insults before leaving home.*" To add specificity, the prompt was modified to, "*In dealing with day-to-day experiences as a Muslim American, how often do you...?*" Items were reverse coded with higher scores associated with higher levels of vigilance.

This measure was developed in 1995 for a Detroit area study and has been used to explore the relationship between vigilance and physical/psychological health outcomes in Black youth (Clark et al., 2006; Himmelstein et al., 2015; LaVeist et al., 2014). In the original study, the reliability estimates were adequate ( $\alpha=.80$ ; Clark et al., 2006). An abbreviated version of this measure ( $\alpha=.83$ ) used in a study on Muslim women found that higher levels of vigilance were related to higher levels of depression, demonstrating support for validity (Budhwani & Hearld, 2017). Reliability estimates in the current study were adequate ( $\alpha=.88$ ).

### ***Community Connectedness***

The five-item Social Connectedness to Ethnic Community (SCETH; Yoon et al., 2012) scale was developed to measure an individual's sense of closeness to their ethnic community (see Appendix E). Responses were measured on a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Responses were summed with higher scores representing a greater sense of connectedness with an ethnic community. Sample items include, "*I feel connected with the \_\_\_\_\_ American community*" and "*I feel accepted by \_\_\_\_\_ Americans.*" Researchers were instructed to fill in the blank with a community group of their choice. The term "Muslim" was inserted into the blank for this study.

The instrument development study found satisfactory reliability estimates for the SCETH ( $\alpha = 0.94$ ) in a sample of Mexican American and Asian students. Validity was demonstrated with the scale's relationship to general social connectedness, acculturation, and ethnic identity (Yoon et al., 2012). Reliability estimates in the current study were satisfactory ( $\alpha = 0.95$ ).

### ***Social Support***

The 12-item Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) was used to assess perceptions of social support (see Appendix F). The scales consisted of three subscales including family (4 items; e.g., *I get the emotional help and support I need from my family*), friends (4 items; e.g., *I can talk about my problems with my friends*), and a significant other (4 items; e.g., *There is a special person who is around when I am in need*). Responses to items were scored on a seven-point Likert scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Responses were summed with higher scores indicating higher levels of perceived social support from family, friends, and a significant other.

In the instrument development study, internal consistency coefficients were provided for the total scale ( $\alpha= 0.88$ ) along with each subscale (Family subscale,  $\alpha= 0.87$ ; Friends subscale,  $\alpha= 0.85$ ; Significant Other subscale,  $\alpha= 0.91$ ; Zimet et al., 1988). Regarding construct validity, Zimet and colleagues (1988) found evidence of negative relationships between the MSPSS and measures of depression and anxiety. In the current study, reliability estimates were calculated for the total scale ( $\alpha= 0.93$ ) along with each subscale (Family subscale,  $\alpha= 0.91$ ; Friends subscale,  $\alpha= 0.93$ ; Significant Other subscale,  $\alpha= 0.93$ ).

### ***Psychological Distress***

The Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995) was used to measure participants' emotional state over the past week (see Appendix G). The 21-item measure is divided into three self-report scales related to depression (7 items; e.g., *I felt like I had nothing to look forward to*), anxiety (7 items; e.g. *I felt like I was close to panic*), and stress (7 items; e.g., *I found it difficult to relax*). Participants responded to each statement on a four-point Likert scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much or most of the time*). Responses to items were summed with higher scores indicating higher levels of depression, anxiety, and stress.

The DASS-21 was used in samples of Muslim participants (Ateerah & Lukman, 2019; Fekih-Romdhane et al, 2020; Nadeem et al., 2017) with adequate reliability (Depression scale:  $\alpha=0.82$ , Anxiety scale:  $\alpha= 0.87$ ; Stress scale:  $\alpha= 0.88$ ; Fekih-Romdhane et al, 2020). Support for convergent validity was found with strong correlations with other depression and anxiety measures (Henry & Crawford, 2005). In the current study, reliability estimates were calculated for the total scale ( $\alpha= 0.95$ ) along with each subscale (Depression subscale,  $\alpha= 0.93$ ; Anxiety subscale,  $\alpha= 0.84$ ; Stress subscale,  $\alpha= 0.88$ ).

## ***Demographics***

Participants also responded to items assessing age, gender identity, sexual orientation, race/ethnicity, religious affiliation, generational status, political identity, socioeconomic status, visibility of a Muslim identity, frequency of religious/spiritual practices, exposure to COVID-19 related stressors, and mental health support (see Appendix H).

## **Results**

### **Analysis**

All variables of interest were entered and analyzed in SPSS 25 using Process Macro. Missing data were addressed by first excluding the participants who completed less than 85% of the survey. Little's (1988) missing completely at random (MCAR) test was performed and revealed an insignificant chi-sq statistic ( $\chi^2= 1143.22, p= .201$ ), suggesting that the data were missing in a random way. Results also indicated that less than 1.1% of data were missing in the dataset. The remaining missing data were addressed by using the Expectation Maximization (EM) algorithm to impute values. EM offers unbiased estimates of missing data by using an iterative process to identify maximum likelihood estimates (Baraldi & Enders, 2010; Kang, 2013).

Prior to conducting moderation analyses, six assumptions were checked. Review of scatterplots confirmed the assumption of linearity that each independent variable had a linear relationship with each dependent variable. The absence of multicollinearity was confirmed through VIF scores below 10 and tolerance scores above 0.2. The third assumption required that the residuals be independent, suggesting that there was no external variable accounting for the residuals. Durbin-Watson values ranging from 2.03-2.27 indicated that this assumption had been met. The assumption of homoscedasticity (constant variance of the residuals) was met since there

were only slight signs of funneling in the data. No obvious signs of funneling were present as the data appeared randomly dispersed. Moreover, no cases of biasing were present as the Cook's distance values were below 1, implying that individual cases were not changing the model.

The assumption of normality was violated through evidence of significance in the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality. Likewise, examination of P-P plots revealed slight deviations from normality. Since the distribution appeared positively skewed, transformations (e.g., log10, natural log, and square root) were implemented but did not yield significantly different distributions. Skewness values measuring asymmetry ranged from 0.89-1.37. Kurtosis values measuring tailedness ranged from 0.05-1.39. Using Weston and Gore's (2006) guidelines on normality, skewness values below 3 and kurtosis values below 10 are appropriate. Thus, no transformations were performed on the data as transformations limit the interpretability of results.

### ***Descriptive Statistics***

The means, standard deviations, ranges, reliabilities, and correlations among the measures were computed and reported in Table 4. On average, participants endorsed high levels of societal anti-Muslim discrimination ( $M= 4.32$ ,  $SD= 0.75$ ) and moderate levels of interpersonal anti-Muslim discrimination ( $M= 2.46$ ,  $SD= 0.82$ ). On average, they *agreed* to perceptions of societal anti-Muslim discrimination and were *slightly bothered* by perceptions of interpersonal anti-Muslim discrimination. When listed in order of descending means, the most commonly endorsed forms of societal anti-Muslim discrimination included negative media reports (e.g., terrorism and conflict in Muslim-majority countries), negative portrayals in popular media (e.g., movies and television shows), and hate crimes against Muslims (e.g., vandalism of mosques or physical attacks on Muslims; see Table 2 for data on societal anti-Muslim discrimination). In

fact, 49.5% of respondents *strongly agreed* that hate crimes against Muslims are a problem in the United States. Moreover, 59.6% *strongly agreed* that Muslims are held responsible for acts of terrorism.

The most common and bothersome forms of interpersonal anti-Muslim discrimination included witnessing negative comments about Muslims perpetrated by non-Muslims (90%), being stopped for additional security screenings at the airport (81.9%), and experiencing uneasiness (e.g., stares, avoidance) from others in public settings (79.8%; see Table 3 for data on interpersonal anti-Muslim discrimination) when listed in order of descending means. These instances of discrimination were described as either *slightly bothersome* or *upsetting* on average. Overall, smaller proportions of the sample experienced poor treatment in healthcare settings (20.7%), physical attacks (12.2%), or property vandalism (7.9%).

On average, participants reported remaining vigilant either *not too often* or *fairly often* ( $M= 20.38$ ,  $SD= 5.65$ ). When listed in order of descending means, the most common forms of vigilance endorsed on average included carefully observing one's surroundings, carefully watching what one says, and avoiding certain social situations and places. In fact, 42% of participants reported observing their surroundings *fairly often*. In terms of protective factors, participants reported a moderate amount of social support ( $M= 65.73$ ,  $SD= 13.47$ ) and community connectedness ( $M=28.01$ ,  $SD= 6.61$ ). On average, they *mildly agreed* to feeling supported by family, friends, and significant others and *slightly agreed* to feeling connected with the Muslim American community.

Regarding psychological distress, participants reported relatively low levels of overall psychological distress ( $M= 15.04$ ,  $SD= 13.92$ ). On average, participants felt like overall psychological distress *did not apply at all* or applied to them to *some degree*. Specifically, they

reported low levels of depression ( $M= 4.97$ ,  $SD= 5.71$ ), anxiety ( $M= 3.99$ ,  $SD= 4.50$ ), and stress ( $M= 6.07$ ,  $SD= 5.19$ ) that applied to them to *some degree*.

### ***Correlations***

Correlations using Pearson's  $r$  were calculated among the variables of interest (see Table 4). Relationships that were significant were reported at the  $p < .05$  and  $p < .01$  levels. Moderate positive correlations were found between perceptions of societal anti-Muslim discrimination and vigilance ( $r= .47$ ), anxiety ( $r= .31$ ), and stress ( $r= .31$ ). Moreover, a small correlation was found between societal anti-Muslim discrimination and overall psychological distress ( $r= .27$ ).

Moderate positive correlations emerged between perceptions of interpersonal anti-Muslim discrimination and vigilance ( $r= .47$ ), overall psychological distress ( $r= .32$ ), anxiety ( $r= .36$ ), and stress ( $r= .31$ ). A small positive correlation was found between interpersonal anti-Muslim discrimination and depression ( $r= .20$ ).

Symptoms of depression ( $r= -.44$ ), anxiety ( $r= -.28$ ), and stress ( $r= -.29$ ) negatively correlated a small to moderate amount with social support from family, friends, and significant others. Likewise, symptoms of depression ( $r= -.27$ ), anxiety ( $r= -.15$ ), and stress ( $r= -.21$ ) were all negatively related a small amount with community connectedness. Vigilance positively correlated a small to moderate amount with overall psychological distress including depression ( $r= .23$ ), anxiety ( $r= .31$ ), and stress ( $r= .27$ ). Evidence of a small positive correlation ( $r= .25$ ) was found between vigilance and visibility of Muslim identity in those who wore hijab.

### ***Moderation Analyses***

Multiple moderation analyses were conducted to determine the effects of anti-Muslim discrimination (societal and interpersonal) on psychological outcomes (depression, anxiety, and stress). Vigilance, community connectedness, and social support were examined as potential

moderators in these relationships. Demographic variables including age, race, gender, visibility of Muslim identity, generation status, and exposure to COVID-19 related stressors were investigated as potential covariates (Frazier et al., 2004). Age (continuous variable in years) and exposure to COVID-19 related stressors (discrete variable counting the number of COVID-19 stressors experienced ranging from 1-8) were identified as covariates in the model due to their significant correlations with outcome variables.

Evidence to partially support the first hypothesis was obtained through simple regressions. Simple regression analyses were performed with interpersonal anti-Muslim discrimination as the predictor variable and overall psychological distress, depression, anxiety, and stress as outcome variables when controlling for the effects of age and exposure to COVID-19 related stressors. These results identified interpersonal anti-Muslim discrimination as a significant predictor of overall psychological distress ( $R^2 = 0.29$ ,  $F(3, 184) = 24.98$ ,  $p < 0.05$ ), anxiety ( $R^2 = 0.25$ ,  $F(3, 184) = 19.92$ ,  $p < 0.001$ ), and stress ( $R^2 = 0.29$ ,  $F(3, 184) = 25.33$ ,  $p < 0.05$ ), but not depression ( $R^2 = 0.20$ ,  $F(3, 184) = 15.12$ ,  $p = 0.22$ ).

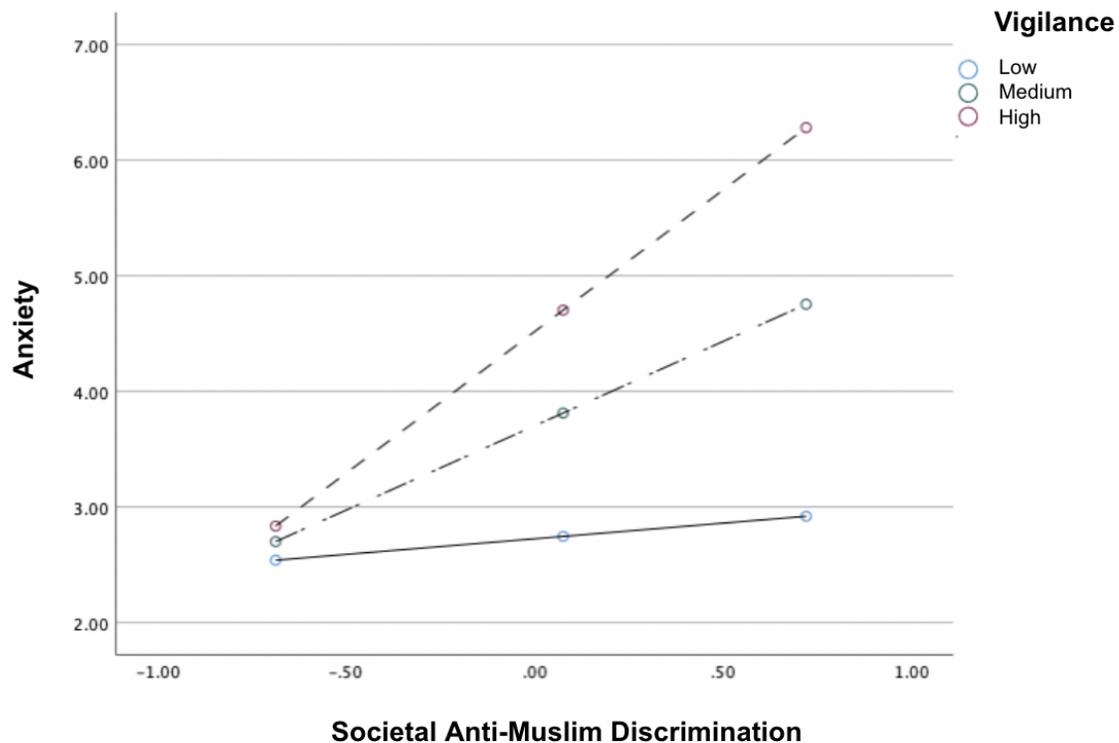
Similarly, simple regression analyses were performed with societal anti-Muslim discrimination as the predictor variable and overall psychological distress, depression, anxiety, and stress as outcome variables when controlling for the effects of age and exposure to COVID-19 stressors. These results identified societal anti-Muslim discrimination as a significant predictor of anxiety ( $R^2 = 0.22$ ,  $F(3, 184) = 16.98$ ,  $p < 0.05$ ) and stress ( $R^2 = 0.29$ ,  $F(3, 184) = 24.61$ ,  $p < 0.05$ ), but not overall psychological distress ( $R^2 = 0.27$ ,  $F(3, 184) = 22.94$ ,  $p = 0.053$ ) or depression ( $R^2 = 0.19$ ,  $F(3, 184) = 14.49$ ,  $p = .88$ ).

Regression analyses using Process Macro were used to test the potential moderating effects of vigilance in the relationship between anti-Muslim discrimination (societal and

interpersonal) and overall psychological distress (depression, anxiety, and stress). In Process Macro, interpersonal anti-Muslim discrimination was inputted as the independent variable and vigilance as the moderator with overall psychological distress, depression, anxiety, and stress as outcome variables. Vigilance did not significantly moderate the relationship between interpersonal anti-Muslim discrimination and overall psychological outcomes ( $R^2 = 0.13$ ,  $F(3, 184) = 8.85$ ,  $p = .82$ ), depression ( $R^2 = 0.06$ ,  $F(3, 184) = 4.15$ ,  $p = .94$ ), anxiety ( $R^2 = 0.16$ ,  $F(3, 184) = 11.75$ ,  $p = .28$ ), or stress ( $R^2 = 0.12$ ,  $F(3, 184) = 8.00$ ,  $p = .68$ ).

Next, societal anti-Muslim discrimination was entered as the predictor variable with vigilance as the moderator and overall psychological distress, depression, anxiety, and stress as outcome variables. Vigilance did not significantly moderate overall psychological outcomes ( $R^2 = 0.12$ ,  $F(3, 184) = 7.95$ ,  $p = 0.27$ ), depression ( $R^2 = .05$ ,  $F(3, 184) = 3.49$ ,  $p = 0.94$ ), or stress ( $R^2 = .11$ ,  $F(3, 184) = 7.83$ ,  $p = 0.57$ ). Vigilance was a significant moderator in the relationship between societal anti-Muslim discrimination and anxiety ( $R^2 = 0.17$ ,  $F(3, 184) = 12.13$ ,  $p < 0.05$ ) providing partial evidence to support the second hypothesis. This effect remained significant when controlling for demographic variables including age and exposure to COVID-19 stressors ( $R^2 = 0.27$ ,  $F(5, 182) = 13.62$ ,  $p < 0.05$ ). Specifically, vigilance served as an exacerbating factor such that societal anti-Muslim discrimination had a stronger effect on anxiety in the high vigilance condition compared to the low vigilance condition (see Table 5 and Image 1).

Image 1



*Note. Societal anti-Muslim discrimination and anxiety moderated by vigilance.*

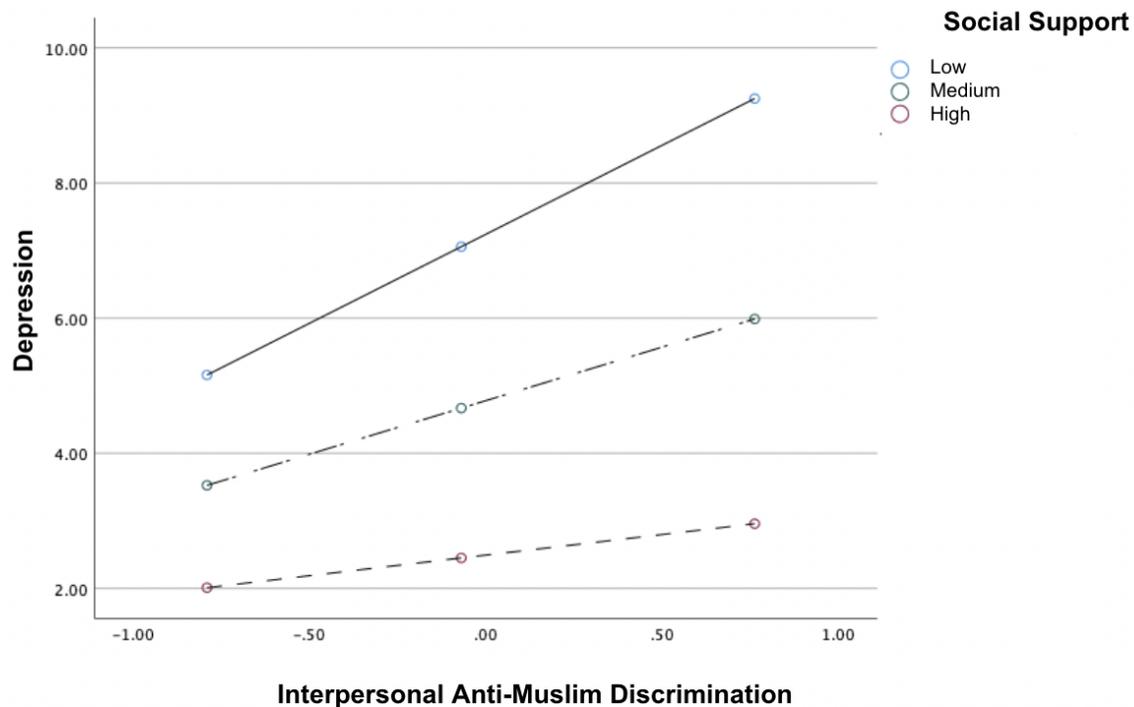
The potential moderating effects of community connectedness were examined in the relationship between anti-Muslim discrimination (societal and interpersonal) and psychological distress (depression, anxiety, and stress). Community connectedness was not a significant moderator in the relationship between societal anti-Muslim discrimination and overall psychological outcomes ( $R^2=0.13$ ,  $F(3,184)= 9.21$ ,  $p= 0.88$ ), depression ( $R^2= .09$ ,  $F(3,184)= 6.26$ ,  $p= 0.80$ ), anxiety ( $R^2= .12$ ,  $F(3,184)= 8.33$ ,  $p= 0.55$ ), or stress ( $R^2= .14$ ,  $F(3,184)= 9.86$ ,  $p= 0.69$ ). Similarly, community connectedness did not significantly moderate the relationship between interpersonal anti-Muslim discrimination and overall psychological outcomes ( $R^2= 0.15$ ,  $F(3,184)= 11.23$ ,  $p= 0.67$ ), depression ( $R^2= 0.11$ ,  $F(3,184)= 7.68$ ,  $p= 0.85$ ), anxiety ( $R^2= 0.15$ ,

$F(3,184)= 11.12, p= 0.44$ ), or stress ( $R^2= 0.14, F(3,184)= 10.02, p= 0.80$ ). Thus, the third hypothesis was not supported.

Lastly, social support was examined as a potential moderator in the relationship between anti-Muslim discrimination and psychological outcomes (depression, anxiety, and stress). Societal anti-Muslim discrimination was inputted as the independent variable and social support as the moderator with overall psychological distress, depression, anxiety, and stress as outcome variables. Regarding societal anti-Muslim discrimination, no significant moderating effects of social support were present when considering overall psychological outcomes ( $R^2= 0.23, F(3,184)= 18.15, p= 0.17$ ), depression ( $R^2= 0.22, F(3,184)= 17.64, p= 0.11$ ), anxiety ( $R^2= 0.18, F(3,184)= 13.04, p= 0.96$ ), or stress ( $R^2=0.20, F(3,184)= 15.06, p= 0.07$ ).

Regarding interpersonal anti-Muslim discrimination, no significant moderating effects of social support were present when considering overall psychological outcomes ( $R^2=0.26, F(3,184)= 21.66, p= 0.10$ ), anxiety ( $R^2= 0.21, F(3,184)= 16.61, p= 0.58$ ), or stress ( $R^2=0.20, F(3,184)= 15.25, p= 0.13$ ). In preliminary analyses, social support significantly moderated the relationship between interpersonal anti-Muslim discrimination and depression ( $R^2=0.26, F(3,184)= 20.98, p< 0.05$ ), providing partial evidence to support the fourth hypothesis. Specifically, social support served as a buffer such that interpersonal anti-Muslim discrimination had a stronger effect on depression in the low social support condition compared to the high social support condition (see Image 2). However, this effect did not remain significant when controlling for the effects of age and exposure to COVID-19 related stressors ( $R^2=0.33, F(5,182)= 17.78, p=0.06$ ; see Table 6).

Image 2



*Note. Interpersonal anti-Muslim discrimination and depression moderated by social support.*

## Discussion

The purpose of this study was to apply minority stress theory to advance knowledge regarding the psychological effects of anti-Muslim discrimination in Muslim Americans and to explore potential risk and protective factors in this population. With a sample of Muslim American adults who reported perceptions of anti-Muslim discrimination, vigilance served as a moderator that exacerbated the relationship between societal anti-Muslim discrimination and anxiety. Additionally, social support served as a protective factor that initially moderated the relationship between interpersonal anti-Muslim discrimination and depression in preliminary

analyses. The findings from this study may be used to inform the development of interventions that reduce vigilance and promote social support in Muslim American adults.

### **Anti-Muslim Discrimination**

The sample was comprised predominantly of young adult Muslim Americans who, on average, largely *agreed* with the perception of societal anti-Muslim discrimination and reported being *slightly bothered* by interpersonal anti-Muslim discrimination. It is important to note that some forms of interpersonal anti-Muslim discrimination (e.g., non-Muslims making negative comments about Islam or getting stopped at the airport for additional security) were rated as *upsetting*.

The findings partially supported the first research hypothesis. Anti-Muslim discrimination significantly predicted adverse mental health outcomes. Specifically, experiences of interpersonal anti-Muslim discrimination were significantly related to more negative mental health outcomes (e.g., overall psychological distress, anxiety, and stress). Likewise, greater perceptions of societal anti-Muslim discrimination were associated with more negative mental health outcomes (e.g., anxiety and stress). These findings support previous literature that established an association between discrimination and negative mental health outcomes especially in minoritized samples (Pieterse et al., 2012; Kunst et al., 2012; Lewis et al., 2017; Todorova et al., 2010). The current findings suggest that greater exposure to anti-Muslim discrimination may be associated with increased levels of psychological distress among Muslim adults, however, further research with this understudied population is needed.

The most frequently endorsed forms of societal anti-Muslim discrimination included terrorism/violence related media reports on Muslims, negative depictions of Muslims in popular media, and hate crimes against Muslims. In this sample, participants generally confirmed the

existence of societal anti-Muslim discrimination which was moderately correlated with adverse psychological outcomes including anxiety, stress, and overall psychological distress. These findings fit well with the sample of Muslim adults whose Muslim American identity may be salient from having spent most of their formative young adult years in a post-9/11 America. More recently, this sample has been exposed to a hostile sociopolitical climate in the United States with proposed policies ranging from banning Muslim immigration to placing Muslims in a national registry (Abu-Ras et al., 2018; Helms, 2016; Samari, 2018). These findings also support existing research examining the prevalence of negative media representations of Islam (Kunst, Sam, & Ullberg, 2012; Saleem & Ramasubramanian, 2017) and the normalization of anti-Muslim hate speech across various social media platforms including Facebook (Oboler, 2016) and Twitter (Awan, 2014).

In terms of experiences of interpersonal anti-Muslim discrimination, participants most frequently endorsed receiving negative comments about Islam from non-Muslims, being stopped for additional security at airports, and experiencing uneasiness (e.g., stares or avoidance) from people in public settings. These findings align with statistics on the alarming rise of anti-Muslim attitudes and behavior (Kunst, Sam, & Ullberg, 2012). Examples of interpersonal anti-Muslim discrimination in existing literature include hostile street harassment (Allen, 2015; Mason-Bish & Zempi, 2019) and racial profiling or surveillance (e.g., profiling Muslim airline passengers or secondary screenings for Muslim travelers; Mogahed & Chouhoud, 2017; Moradi & Hasan, 2004; Hopkins, 2011).

Literature on anti-Muslim discrimination is generally restricted to the prevalence of certain discriminatory experiences, which reveals limited information about the potential repercussions of anti-Muslim discrimination on mental health in Muslim Americans. The

findings from this study emphasized the need to examine various forms of anti-Muslim discrimination and its effects on the psychological health of Muslim American adults.

### **Vigilance**

Vigilance was hypothesized to serve as an exacerbating factor that would magnify the relationship between anti-Muslim discrimination and psychological distress. Vigilance was significantly positively correlated with both societal and interpersonal anti-Muslim discrimination along with all forms of negative mental health outcomes (depression, anxiety, and stress). In our analyses, vigilance was not a significant moderator in the relationship between interpersonal anti-Muslim discrimination and negative mental health outcomes. This unexpected finding may point to limitations in the measurement of interpersonal discrimination regarding temporality. Perhaps participants' experiences with interpersonal anti-Muslim discrimination did not occur frequently enough to be related to vigilance. It may be possible that some participants experienced infrequent anti-Muslim discrimination in the past that does not influence their current level of vigilance. As predicted, vigilance was a significant moderator in the relationship between societal anti-Muslim discrimination and anxiety such that the effects of anxiety were amplified in the high vigilance condition. These findings suggest that perceptions of societal anti-Muslim discrimination may contribute more to heightened levels of vigilance and anxiety compared to interpersonal anti-Muslim discrimination.

Results from this analysis are consistent with prior studies exploring the relationship between vigilance and anxiety (Hur et al., 2019). Moreover, these findings provide evidence that minorities who perceive discrimination may also be more vigilant of their surrounding environment (Himmelstein et al., 2015; Meyer, 2003; Rippy & Newman, 2006), which may be especially true for some Muslims who have external identifiable markers of their faith (e.g.,

hijab; Budhwani & Hearld, 2017). Prior studies have found that wearing a hijab increases the likelihood of becoming a target of discrimination (Mogahed & Chouhoud, 2017), which may contribute to a heightened awareness of their identity in public. In this study, vigilance had a small positive correlation with visibility of wearing hijab.

Muslim American adults in this sample reported various levels of vigilance. Participants reported remaining vigilant *not too often* or *fairly often* on average. The most prevalent forms of vigilance included carefully observing one's surroundings, carefully watching what one says, and avoiding certain social situations and places. These findings are consistent with existing literature on vigilance in Muslim Americans where higher levels of vigilance, known as hypervigilance, may lead to social withdrawal or isolation to avoid adverse social situations (Rippy & Newman, 2006). Likewise, Muslim Americans may be observing their surroundings often to avoid or prepare for instances of discrimination.

### **Community Connectedness**

We hypothesized that community connectedness would serve as a buffer that protects against the adverse effects of anti-Muslim discrimination on mental health. The results did not support this hypothesis. This finding is inconsistent with prior studies documenting the protective effects of community connectedness in various minoritized groups (Frost & Meyer; 2012; Meyer, 2015; Liao et al., 2016). One possible explanation for these results could be the fact that the community connectedness measure does not account for intersecting identities. For instance, the measure prioritizes the participant's relationship with the general Muslim American community which excludes the influence of racial or ethnic community groups.

Similar to research on POC LGBT individuals, POC Muslim Americans may encounter unique stressors due to their membership in multiple marginalized social groups (Balsam et al.,

2011; Le et al., 2021). They may experience racism due to their marginalized racial status along with Islamophobia based on their marginalized religious identity. Therefore, it may be important to examine the level of connectedness that Muslim Americans experience with their racial/ethnic cultural groups along with the level of connectedness with their religious groups. Moreover, community groups that encompass both racial and ethnic identity (e.g., Black/African American mosques) may be important to explore.

Adopting an intersectional framework may assist in exploring these potential influences. Existing research asserts that individuals with multiply marginalized identities may be vulnerable to poor mental health due to the cumulative effects of minority stress (Balsam et al., 2011) and may face additional burdens in attempting to understand the sources of their discrimination (Priscilla Lui & Quezada, 2019). Thus, it may be beneficial to explore protective factors related to community connectedness that account for Muslim Americans' intersectional identities.

### **Social Support**

Regarding the fourth hypotheses, we expected social support to serve as a protective factor that would buffer the relationship between anti-Muslim discrimination and psychological distress. Social support was significantly negatively correlated with all forms of negative mental health outcomes (depression, anxiety, and stress). In our initial analyses, social support was not a significant moderator in the relationship between societal anti-Muslim discrimination and negative mental health outcomes. This finding was unexpected based on extant literature documenting the protective nature of social support. One potential reason for this finding may be due to the fact that societal Islamophobia (e.g., public policies, mass media, and general anti-Muslim attitudes) exists on a macrosystem and exosystem level, while social support operates at an individual microsystem level (Bronfenbrenner, 1979). Perhaps receipt of social support from

family and friends does not mitigate the existence or influence of anti-Muslim discrimination on a broader societal level. Future research could explore protective factors that operate at a societal level.

Social support was a significant moderator in the relationship between interpersonal anti-Muslim discrimination and depression such that the effects of depression were amplified in the low social support condition. These findings are consistent with existing work on social support that documents its protective qualities (Cohen & Wills, 1985; Lu & Wang, 2021). It may also indicate that Muslim Americans who experience interpersonal anti-Muslim discrimination may seek instrumental and emotional support from their immediate social network.

However, once controlling for the influence of COVID-19 related stressors, the moderating effect of social support became nonsignificant. Although this finding was unexpected, there may be multiple explanations, which account for the effects of the current, unique historical context. There may have been similarities in the stressors experienced due to the pandemic and the stressors experienced due to interpersonal anti-Muslim discrimination that caused overlap in the variables. This may have affected the available variance to be accounted for by the moderator variable.

Furthermore, emerging research has noted that physical restrictions (e.g., mass home-confinement directives, quarantine, and social isolation; Pfefferbaum & North, 2020) due to the ongoing pandemic have largely contributed to a surge in isolation and loneliness (Saltzman et al., 2020). Many people were deprived of accessing traditional forms of social support (e.g., friends, family, and significant others). Instead, research has suggested that online social networks may allow individuals to socialize through the use of technology (Saltzman et al., 2020). This platform may address the unique needs of the young adult population, who comprise the largest

and most active group of users on social media (Pew Research Center, 2021). It may be possible that the effects of COVID-19 have caused people to explore nontraditional methods of social support to promote mental health.

### **Psychological Distress**

In our sample, participants reported relatively low levels of psychological distress on average. The distribution of these scores was positively skewed with more participants reporting fewer adverse psychological outcomes. A potential reason for this finding may be due to the measurement of this construct. The DASS-21 measure requires participants to report their level of symptomatology over the past week. Limiting the responses to a one-week timeframe may not be long enough to capture the full range of harmful effects from anti-Muslim discrimination. Another possible explanation for this unexpected finding is that participants who elected to participate in this study may possess a current state of psychological health that allows them to openly report instances of discrimination. Participants who are acutely impacted by the effects of Islamophobia may have declined to participate due to discomfort with the sensitive nature of the study.

### **Limitations**

A primary limitation of the current study was the nature of the sample. Specifically, the Muslim American adult participants reported low levels of psychological distress, which likely was not representative of the entire population of Muslim American adults in the United States. The participants in this sample reported being mostly second generation in terms of immigration status and middle class or upper middle class in terms of socioeconomic status, which could influence the methods of support used (e.g., receiving instrumental support from others, access to coping mechanisms, etc.)

Responses also were self-reported which makes the research vulnerable to social desirability bias and recall bias. Retrospective reports may not capture authentic experiences as the instances of discrimination may be inaccurately represented due to perception bias (Lewis et al., 2015). Due to the stigmatization of mental health, the participants may have been hesitant to fully disclose all details to a researcher or may have been reluctant to report instances of discrimination. Moreover, due to a history of oppression and surveillance against the Muslim American population, it is possible that participants may have approached the study with a general sense of skepticism. Thus, it is likely this sample was not adequately representative of the Muslim adult population in the United States.

The use of a nonrandom convenience sampling method affects the representation in the sample and overall generalizability of the study. This recruitment strategy was implemented due to the challenges accessing the Muslim American population, which comprises 1.1% of the total U.S. population (Ahmed, 2021). Implementing a random sampling strategy would be onerous given the scope of the study and the difficult to access nature of the sample. Moreover, the widespread dissemination of recruitment information made the survey vulnerable to digital threats. By implementing rigorous efforts to minimize fraudulent data, it may have been possible that some legitimate participants were excluded from the study. For the purposes of this study, it was crucial to preserve data integrity to the full extent possible.

Last, it was impossible to gauge where the participants were in terms of processing the discrimination that they experienced. It may be possible that some instance of discrimination occurred in the past, allowing participants to process the deleterious effects over time. Thus, participants who experienced discrimination many years ago may have processed their experiences and reported less intense symptoms of psychological distress. Finally, the cross-

sectional design of this research did not allow for determination of the directionality among the variables in this study.

### **Future Research and Clinical Recommendations**

Future research is needed to understand the unique and complex experiences associated with psychological outcomes in Muslim Americans. Researchers should strive to obtain a more distressed sample of participants, which may require venturing into communities that may be more severely afflicted by rampant Islamophobia or that have experienced more distressing forms of anti-Muslim discrimination. This subsection of the population may not have access to protective factors (e.g., socioeconomic status, education, counseling resources) that might influence mental health. It could be beneficial to collect data from a sample of Muslim American adults who are at-risk of developing psychopathology and may be experiencing significant forms of discrimination associated with interpersonal and societal forms of Islamophobia. This sample could benefit from the development of more culturally and religiously attuned mental health interventions. Additionally, researchers should create measures that are culturally appropriate for this sample and that accurately reflect their experiences.

In terms of research design, longitudinal studies could reveal trends in participants' responses during periods of heightened societal Islamophobic sentiment. Understanding the effects of Islamophobia is highly contingent upon external situations that may cause responses to fluctuate (e.g., discriminatory public policy or prevalence of hate crimes). Future studies may seek to investigate these unique experiences of Muslim Americans over time. Studying these trends would advance knowledge regarding necessary foci of potential interventions, and perhaps most importantly, when those interventions would be most effective.

Research in the future could also examine variables that were not accounted for in this study. For example, time elapsed since the experience of discrimination may contribute to predicting psychopathology. Having participants define their most recent experience of anti-Muslim discrimination and the time since the occurrence of that event may advance understanding of mental health outcomes among Muslim Americans.

Moreover, intersectionality has yet to be thoroughly explored within the Muslim American community. Muslim Americans are not a monolithic demographic. Future studies should incorporate an intersectionality framework into the design to account for the nuanced experiences within the Muslim American community. Existing research has documented the cumulative effects of intersectional discrimination, which has profound effects on mental health outcomes (Meyer, 2015). Thus, there is an urgency for intersectional scholarship (Crenshaw, 1989; Grzanka et al., 2017; Shin et al. 2017) to explore the interlocking systems of oppression that may afflict multiply marginalized Muslim Americans.

If replicated, our findings could be used to potentially develop an intervention to facilitate social support and reduce vigilance in this population. Psychologists could develop tailored interventions to educate Muslim Americans on the benefits of seeking traditional forms of social support, which have initially been shown in this study to protect against the adverse effects of interpersonal discrimination. Psychoeducational and therapeutic interventions may be particularly useful for individuals who are experiencing acute distress related to their minoritized identity. The effectiveness of this intervention could be studied by assessing psychopathology over time.

Many participants in the current study reported not seeking counseling services. Other studies could examine the effects of counseling (religious, individual, and group) on

psychological distress in the Muslim American population. With regard to future clinical interventions, mental health professionals could encourage Muslim Americans to seek external social support during instances of discrimination. They could identify individuals experiencing profound distress and encourage them to turn to positive forms of support from friends, family, or significant others. Practitioners could find methods of assessing and identifying clients who display behaviors consistent with heightened vigilance and work to manage their accompanying symptoms of anxiety. They could validate the perceptions of societal and interpersonal anti-Muslim discrimination and provide healthy outlets for emotional expression.

Mental health professionals should also actively work to dismantle the barriers associated with seeking mental health services in this population. This recommendation would require more mental health professionals to adopt a scientist-practitioner-advocate approach to their clinical work (Fassinger & O'Brien, 2000; Mallinckrodt et al., 2014). Counseling psychologists are uniquely positioned to function proactively as social change agents within the field of psychology and society broadly (DeBlaere et al., 2019). Advocacy efforts could be directed towards offering opportunities for Muslim American clients to discuss instances of discrimination, both interpersonal and societal, in therapy. Moreover, multicultural psychology has been deviating from solely micro/individual level interventions to adopt more macro/systems level interventions (DeBlaere et al., 2019; Goodman et al., 2004). By incorporating this change, counseling psychologists can use social justice principles to dismantle various interlocking systems of oppression that inhibit minority clients, such as Muslim Americans, from accessing essential forms of treatment. Clinicians may be able to facilitate radical healing from discriminatory trauma in this sample through engagement in social advocacy efforts (French et al., 2020).

Regarding spirituality, most participants in this sample reported practicing their faith traditions to a considerable degree, suggesting the importance of recognizing faith based resources. Clinicians could encourage religiously oriented clients to seek opportunities to practice their faith, join with others in these practices, and utilize religious counseling when needed. Since many psychologists exhibit bias against spiritual or religious practices (Azar, 2010), counseling psychologists should be adequately trained to respect spirituality as a viable method of promoting mental health. Practitioners should also continuously self-reflect on their unconscious biases about Muslim Americans and religion/spirituality that may hinder the development of a strong therapeutic alliance. Also, they should attend to the importance of spiritual and cultural identities during instances of discrimination. Thus, psychological services may become more accessible and tailored to the needs of cultural and religious minorities.

### **Conclusion**

The purpose of this study was to examine the degree to which psychological outcomes were influenced by factors such as anti-Muslim discrimination, vigilance, community connectedness, and social support among Muslim American adults. In sum, risk and protective factors were identified when examining adverse psychological outcomes due to anti-Muslim discrimination. The findings from this study revealed that a sample of Muslim adults in the United States experiencing anti-Muslim discrimination reported relatively low levels of psychological distress, perhaps due to multiple factors. This research could inform future interventions that encourage connection with traditional forms of social support and direct Muslim American adults to healthier forms of coping following anti-Muslim discrimination. Finally, this study extends knowledge regarding an understudied population at risk for adverse mental health outcomes and hopefully inspires psychologists to continue to engage in meaningful

clinical and research efforts that enhance positive psychological outcomes for people who experience profound distress due to discrimination

Figure 1. Hypothesized model for vigilance as a moderator

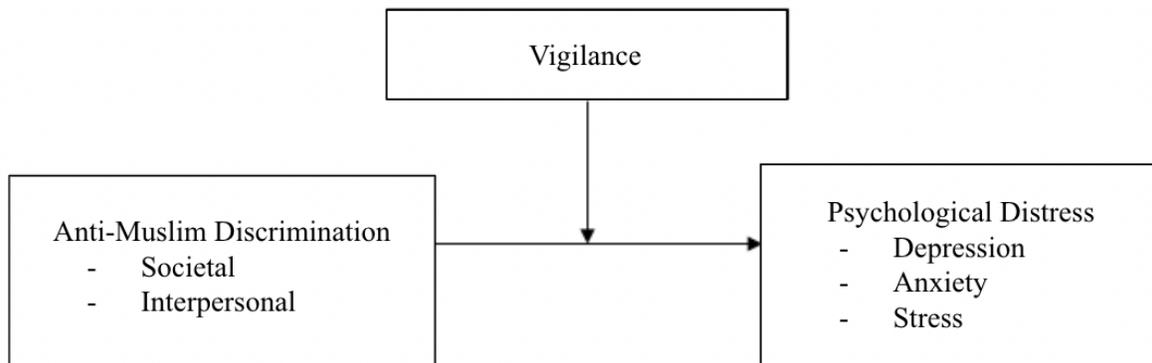


Figure 2. Hypothesized model for community connectedness as a moderator

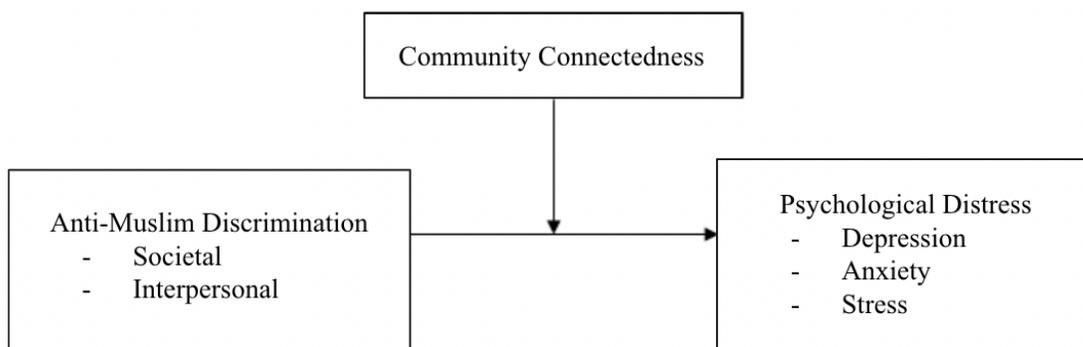


Figure 3. Hypothesized model for social support as a moderator

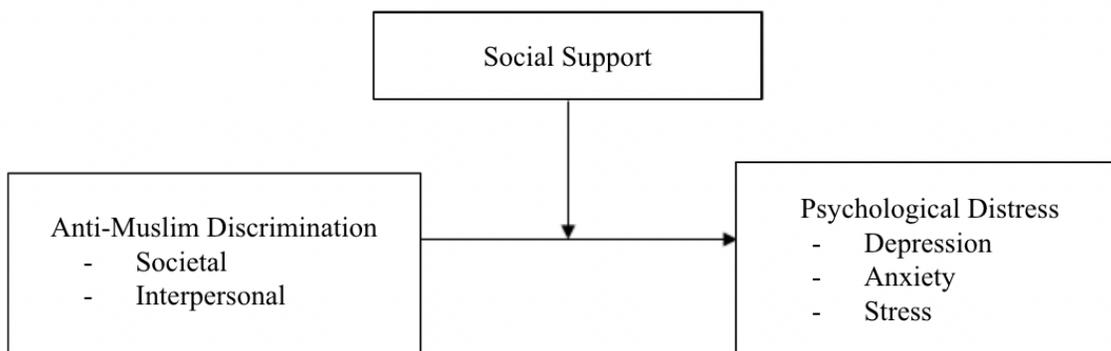


Table 1

*Demographics (n =188)*

Variable	Total %	(n)
<b>Gender Identity</b>		
Woman	71.8	(135)
Man	26.1	(49)
Non-binary	1.6	(3)
<b>Religious Sect</b>		
Sunni	87.2	(164)
Missing	5.3	(10)
Shia	3.7	(7)
Nondenominational	3.2	(6)
Other	0.5	(1)
<b>To what degree do you practice the spiritual traditions indicated above?</b>		
To a great degree	39.4	(74)
To a considerable degree	32.4	(61)
To a moderate degree	16.0	(30)
To a small degree	9.6	(18)
Not at all/not applicable	0.5	(1)
<b>Racial Identity</b>		
South Asian	52.1	(98)
Arab/Middle Eastern	29.3	(55)
White/European American	9.0	(17)
Black/African American	6.9	(13)
Asian/Asian American	3.2	(6)
North African	2.7	(5)
Other	1.1	(2)
Prefer not to answer	1.1	(2)
Latinx	0.5	(1)
Native/Indigenous	0	(0)
Native Hawaiian	0	(0)
Pacific Islander	0	(0)
<b>Generational Status</b>		
Second generation	63.8	(120)
First generation	25.5	(48)
Other	5.3	(10)
Third generation	3.2	(6)
Missing	1.6	(3)
Don't know	0.5	(1)
<b>Sexual Identity/Sexual Orientation</b>		
Heterosexual/straight	88.3	(166)
Asexual	3.7	(7)
Questioning	2.1	(4)
Other	2.1	(4)
Bisexual	1.1	(2)
Prefer not to answer	1.1	(2)
Lesbian/Gay	0.5	(1)
Queer	0.5	(1)
Missing	0.5	(1)

<b>Political Identity</b>		
Moderate	36.7	(69)
Liberal	29.8	(56)
Very liberal	10.1	(19)
Conservative	8.0	(15)
Prefer not to answer	7.4	(14)
Other	5.9	(11)
Very conservative	1.1	(2)
Missing	1.1	(2)
<b>Socioeconomic Class</b>		
Middle class	38.3	(72)
Upper middle class	33.5	(63)
Working class	14.9	(28)
Upper class	6.9	(13)
Lower class	3.2	(6)
Prefer not to answer	1.6	(3)
Other	1.1	(2)
Missing	0.5	(1)
<b>Frequency of Wearing Islamic Headscarf</b>		
Always	45.7	(86)
Not applicable to me	20.7	(39)
Never	17.0	(32)
Rarely	6.4	(12)
Occasionally	5.3	(10)
Frequently	4.8	(9)
<b>Frequency of Wearing Islamic Clothing</b>		
Not applicable to me	59.6	(112)
Always	10.6	(2)
Frequently	8.0	(15)
Occasionally	8.0	(15)
Rarely	6.9	(13)
Never	6.9	(13)
<b>What support/treatment services have you used, if any?</b>		
None	53.7	(101)
Individual counseling	35.1	(66)
Pre-marital/marital counseling	6.9	(13)
Religious counseling	6.4	(12)
Community support groups	6.4	(12)
Other (counseling)	4.3	(8)
Group counseling	3.7	(7)
Prefer not to answer	2.7	(5)
<b>What stressors related to the COVID-19 pandemic have you experienced?</b>		
Worry about the health of family, friends, and loved ones	73.9	(139)
Social isolation	73.4	(138)
Worry about personal health	52.7	(99)
Sleep disturbances	43.1	(81)
Changes in eating/appetite	41.5	(78)
Academic concerns	38.8	(73)
Financial distress	35.6	(67)
Relationship difficulty	26.1	(49)

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Table 2

*Societal Anti-Muslim Discrimination (n = 188)*

Societal Anti-Muslim Discrimination	Mean (SD)
U.S. news media reports on Muslims are primarily about violent incidents (e.g. terrorism, conflict in Muslim-majority countries).	5.57 (0.94)
Depictions of Muslims in popular media (e.g., fictional movies and television shows) are generally negative.	5.29 (0.99)
Hate crimes (e.g. vandalism of mosques, physical attacks on Muslims) against Muslims are a problem in the U.S.	5.16 (1.11)
In the U.S., non-Muslims perceive Muslim women as being oppressed.	5.13 (1.07)
Muslims are held responsible for acts of terrorism carried out by members of their religion.	5.12 (1.44)
Muslims frequently encounter difficulties when traveling by plane (e.g., additional security screenings, delays with boarding).	5.10 (1.22)
Muslims are under government (e.g., Homeland Security, FBI, police) surveillance in the U.S.	5.08 (1.25)
Muslim women who wear Islamic clothes (e.g., hijab, abaya, niqab) are often harassed in public (e.g., verbal and physical harassment).	4.68 (1.42)
Muslims have a harder time getting religious accommodations (e.g., diet, prayer times, religious holidays) in the U.S. than members of other religious groups.	4.60 (1.49)
In the U.S., non-Muslims perceive Muslims as being backwards.	4.45 (1.33)
In the U.S., non-Muslims perceive Muslims as being dangerous.	4.39 (1.26)
Muslims have historically not been welcomed in the U.S.	4.29 (1.76)
Muslims are respected in the U.S.	3.79 (1.21)
In the U.S., Muslim students are treated unfairly by school staff (e.g., teachers, principals) in comparison to non-Muslim students.	3.54 (1.86)
Muslim men who wear Islamic clothes (e.g., kufi, thobe) are often harassed in public (e.g., verbal and physical harassment).	3.44 (1.90)
In the U.S., non-Muslims are welcoming of Muslims.	3.43 (1.07)
It is easy to build a mosque in the U.S.	3.27 (2.22)
Muslims have a difficult time getting jobs in the U.S.	3.20 (1.66)
It is difficult to establish a Muslim cemetery in the U.S.	2.54 (2.46)

Table 3

*Interpersonal Anti-Muslim Discrimination (n =188)*

Interpersonal Anti-Muslim Discrimination	Total %	Yes (n)	Mean (SD)
Non-Muslims have made negative comments about Muslims/Islam in front of you.	90.0	169	3.72 (1.24)
You are stopped for additional security screenings at the airport because you are Muslim.	81.9	154	3.27 (1.37)
In public settings (e.g., stores, parks, airports), people seem uneasy (e.g., stares, avoidance) around you because you are Muslim.	79.8	150	2.85 (1.25)
You have been called derogatory names used for Muslims (e.g., terrorist, sand n*gger, towel head).	61.6	116	2.85 (1.63)
Someone tells you to “go back to your country” or to “go back to where you came from.”	56.3	106	2.62 (1.65)
A mosque in your community is attacked (e.g., vandalism, burglary, arson).	44.7	84	2.50 (1.74)
You are treated poorly in health care settings (e.g., doctor’s office, hospital, clinic) because you are Muslim.	20.7	39	1.61 (1.26)
You have been physically attacked (e.g., someone hits you, throws something at you) because you are Muslim.	12.2	23	1.43 (1.18)
Your home has been vandalized (e.g., graffiti, dead animals left on property) because you are Muslim.	7.9	15	1.28 (0.97)

Table 4

*Means, Standard Deviations, Ranges, Reliability Estimates, and Correlations Among All Variables (n=188)*

Variable	1	2	3	4	5	6	7	8	9
<b>Anti-Muslim Discrimination</b>									
1. Societal	1								
2. Interpersonal	.54**	1							
<b>Moderators</b>									
3. Vigilance	.47**	.47**	1						
4. Community Connectedness	.001	-.01	-.09	1					
5. Social Support	.02	.04	-.10	.30**	1				
<b>Psychological Outcomes</b>									
6. Total	.27**	.32**	.29**	-.24**	-.38**	1			
7. Depression	.14	.20**	.23**	-.27**	-.44**	.91**	1		
8. Anxiety	.31**	.36**	.31**	-.15*	-.28**	.87**	.65**	1	
9. Stress	.31**	.31**	.27**	-.21**	-.29**	.93**	.78**	.74**	1
Mean (SD)	4.32 (.75)	2.46 (.82)	20.38 (5.65)	28.01 (6.61)	65.73 (13.47)	15.04 (13.92)	4.97 (5.71)	3.99 (4.50)	6.07 (5.19)
Actual Range	1.79-5.89	1-5	6-31.38	5-35	15-84	0-57	0-21	0-19	0-21
Possible Range	0-6	0-5	6-30	5-35	12-84	0-63	0-21	0-21	0-21
Cronbach Alpha	.83	.77	.88	.95	.93	.95	.93	.84	.88

\*\* correlation is significant at  $p < .01$

\* correlation is significant at  $p < .05$

Table 5

*Moderation Analysis Predicting Anxiety (n=188)*

Variable	<i>B</i>	<i>SE B</i>	95%CI	<i>T</i>	<i>df</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>
Model 1:					5	.52	.27	13.62*
Societal Anti-Muslim Discrimination	.87	.45	[-.01, 1.75]	1.95				
Vigilance	.13	.06	[.01, .08]	2.19*				
Age	-.06	.03	[-.12, .005]	-1.80				
COVID-19 Stressors	.66	.16	[.36, .97]	4.25*				
Interaction	.21	.07	[.08, .34]	3.14*				

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Note: \*  $p < .05$

Table 6

*Moderation Analysis Predicting Depression (n=188)*

Variable	<i>B</i>	<i>SE B</i>	95%CI	<i>T</i>	<i>df</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>
Model 1:					5	.57	.33	17.78
Interpersonal Anti-Muslim Discrimination	.98	.46	[.08, 1.87]	2.16*				
Social Support	-.15	.03	[-.20, -.10]	-5.60*				
Age	-.04	.04	[-.12, .04]	-.97				
COVID-19 Stressors	.77	.19	[.40, 1.15]	4.03*				
Interaction	-.06	.03	[-.13, .004]	-1.86				

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Note: \*  $p < .05$

## Appendix A

### Literature Review

The current study explored the potential moderating role of vigilance, community connectedness, and social support to better understand the relationship between perceived anti-Muslim discrimination and psychological outcomes in Muslim Americans. Literature on discrimination, minority stress, and community connectedness are reviewed in the following sections. These constructs are described within the context of Muslim Americans.

#### Conceptualizing Islamophobia

##### *Muslims in the United States*

Islam is the second largest faith in the world (Samari, 2016). The diverse composition of Muslims in the United States encompasses a wide range of cultures, races, and ethnicities (e.g., Black, Asian, White, Arab/Middle Eastern, etc.; Ashraf & Nassar, 2018; Mogahed & Chouhoud, 2017; Samari et al., 2018), totaling an estimated 3.45 million worshippers. Approximately 42% of Muslims in America were born in the United States while a little over half (58%) are immigrants originating from over 75 countries, making it one of the most diverse religious communities in the country (Lipka, 2017; Pew Research Center, 2017). Projections estimate that Islam will be the second largest religious group in the United States by 2050 (Lipka, 2017).

##### *Islamophobia*

With the rapid growth of Islam, Islamophobia—which refers to negative anti-Muslim attitudes, emotions, and behaviors (Uenal et al., 2020)—has also been increasing (Samari, 2016). The term Islamophobia first appeared in academia in 1997 where it was defined as, “unfounded hostility towards Islam and a fear or dislike of all or most Muslims (Runnymede Trust

Commission, 1997).” Since then, the definition of Islamophobia has expanded to encompass social stigma, religious discrimination, hostile attitudes and behaviors, environmental stress, and an attitude of xenophobia and racism directed towards anyone perceived to be Muslim (Abu-Ras et al., 2018; Samari, 2018). This surge of hostility and discrimination emerged primarily in the aftermath of the 9/11 attacks.

However, animosity towards Muslims has existed in American history long before September 11<sup>th</sup>, 2001. In fact, mainstream society has marginalized Muslims for decades. Researchers have documented anti-Muslim sentiment as early as the transatlantic slave trade (Ogan et al., 2014). American courts even denied citizenship to those assumed to be Muslim or of Muslim ancestry prior to 1944 (Rana, 2007). This pervasive dislike of Muslims has also been generalized towards anyone perceived to be Muslim. In recent years, negative media coverage of Islam has stereotypically labelled Muslims, Arabs/Middle Easterners, and Sikhs as “terrorists” (Khan & Ecklund, 2012; Love, 2009). A study examining the effects of negative media representation of Islam found that negative media representation activates identity threats, similar to experiences of discrimination (Saleem & Ramasubramanian, 2017). Associations between Islam and violence, which have been propagated through the media, amplify negative perceptions of Muslims and fuel suspicion, fear, and discrimination.

Anti-Muslim sentiment has escalated in the United States and globally (Kunst, Sam, & Ullberg, 2012; Samari, 2016). In 2015, approximately 67% of Americans reported having an unfavorable attitude towards Muslims (Samari, 2016). Assault and violent discrimination towards Muslims increased substantially in 2016 (Pew Research Center, 2017). These findings can be understood within an American sociopolitical context where anti-Islam rhetoric is

rampant in public discourse, particularly from right-wing conservative politicians who have popularized and normalized Islamophobia (Ogan et al., 2014). Hostility towards Muslim Americans is openly expressed in policies that profile Muslims (Samari, 2018), campaigns that encourage bans on Muslim immigrants (Abu-Ras et al., 2018; Helms, 2016; Samari, 2018), and proposals for Muslims to be placed in a national registry (Helms, 2016) or carry religious identification cards (Saleem & Ramasubramanian, 2017). Overall, Muslims have been framed as a threat to national security (Abu-Ras et al., 2018). This constructs a sociopolitical climate where Muslims are viewed as foreigners who are antithetical to American society. Moreover, some Muslims expressed fear for their safety after the 2016 election (Mogahed & Chouhoud, 2017). Trends such as these suggest that Muslims in America remain vulnerable to prejudiced beliefs and discrimination from the surrounding sociopolitical environment.

This background exposes a critical need for increased scholarship regarding the psychological health of Muslims. Research has largely documented how other groups perceive Muslims, which excludes the narrative of Muslims within the larger dialogue (Mogahed & Chouhoud, 2017). For example, the Pew Research Center found that Americans consistently view Muslims and Atheists as the coldest and least favorable religious groups compared to Jewish or Catholic counterparts (Pew Research Center, 2017). In fact, 60% of Americans reported having distasteful attitudes towards Muslims (Samari, 2016). The consequential psychological effects on Muslims have yet to be thoroughly investigated.

While negative attitudes towards Muslims have been widely reported in the literature (Abu-Ras et al., 2018; Samari, 2016), little is known about how Muslims perceive themselves in relation to their surrounding environment. This excludes their perspective from mainstream

academic discourse. Current studies also underscore a need to explore potential moderators, which remain largely unknown (Samari, 2016; Samari et al., 2018). Moreover, the existing scholarship on Muslim Americans implements a deficit approach, which focuses on the adverse mechanisms afflicting minoritized communities. Damage-centered research has been criticized for its pathologizing tendency that serves as a tool of oppression towards marginalized communities (Hailes et al., 2020). Adopting a strength-based approach by focusing on distinct assets within a community assists in shifting the narrative and leveling inherent power dynamics in research (Hailes et al., 2020). The present study sought to address these concerns by exploring the experiences of Muslim Americans through a strengths-based approach.

## **Theoretical orientation**

### ***Minority Stress Theory***

Meyer's (2003) well-established Minority Stress Theory has been used as a conceptual framework to understand how environmental stressors influence mental health, particularly for individuals with marginalized identities (Balsam et al., 2011; Meyer, 2003). Although the Minority Stress Theory was originally developed to examine mental health in sexual minorities, the theory has been widely expanded for use on other communities to demonstrate the noxious health outcomes afflicting minority groups due to their identity status (Mereish & Poteat, 2015).

The theory acknowledges that everyone experiences stress and adversity to a certain degree. However, individuals who belong to marginalized minority groups likely experience an additional and unique kind of stress, called minority stress, due to their minority social position and conflicting values with the dominant culture (Meyer, 2003). This incongruence often creates a hostile and pernicious environment for those with marginalized identities where they are

negatively and stereotypically evaluated by others (Allport, 1954; Meyer, 2003). Stress originating from the social environment permeates into mental health inequities experienced by stigmatized minority groups (Balsam et al., 2011; Meyer, 2003). Overall, the minority stress theory illustrates how environmental circumstances, such as discrimination, introduce chronic stressors in the lives of minoritized individuals that lead to adverse health outcomes such as depression, anxiety, or substance use (Meyer, 2015).

Components of minority stress require that it is: unique (greater than general stressors universally experienced by others), chronic (the stress is relatively stable) and socially based (originates directly from social structures and processes; Meyer, 2003). The model posits that minorities encounter stressors directly related to their minority identity that have detrimental effects on mental health. These socially based stressors exist on a continuum ranging from distal to proximal (Meyer, 2015). Distal stressors, such as discrimination or microaggressions, are external objective sources of stress that exist outside of the individual (Mereish & Poteat, 2015; Meyer, 2015). Proximal stressors, such as internalized stigma or concealment, refer to the internalization of negative societal attitudes (Mereish & Poteat, 2015; Meyer, 2003; Meyer, 2015). Vigilance, which refers to the expectation of discriminatory events, lies somewhere between the two ends; however, Meyer (2015) has most recently considered it a proximal stressor as well. Excess distal and proximal stressors contribute to health concerns and societal inequities. This has been thoroughly documented in LGB literature where sexual minorities experience discrimination and subsequently anticipate rejection from others (vigilance), causing them to hide their identity out of fear (concealment) or internalize the stigma (internalized

homophobia) as a response (Meyer, 2003). Likewise, it can be postulated that Muslims are engaging in similar practices as a defensive response to minority stress from the environment.

However, not all minority individuals respond to minority stress in the same way. Although the minority stress theory largely conceptualizes how social stressors contribute to health disparities for marginalized individuals, the effects differ depending on certain factors. For instance, the extent to which an individual identifies with their minority identity will influence their exposure to minority stress as well as their opportunities for coping and resilience (Meyer, 2015). Likewise, individuals with multiple minoritized identities may be prone to experiencing cumulative and multidimensional stress based on their intersecting identities (Balsam et al., 2011; Priscilla Lui & Quezada, 2019), placing them at an increased risk of poor mental and physical health (Balsam et al., 2011). They may also face additional burdens trying to decipher which intersecting identities contribute to instances of discrimination (e.g., discriminatory event may have occurred due to race, gender, religion, or a combination of identities; Priscilla Lui & Quezada, 2019). These circumstances add a degree of complexity when conceptualizing the impact of minority stress.

The minority stress theory also accounts for the unique protective factors of the minority group. Allport (1954) suggested that minority groups display resilience following prejudice (Meyer, 2003), which has been documented in marginalized communities (Bowleg et al., 2003). Positive coping, access to resources, group cohesiveness, social support, and strong community bonds are all methods of promoting positive well-being despite adverse external influences (Meyer, 2003). These may even buffer negative environmental influences so that negative health outcomes are mitigated (Meyer, 2015). One primary model of stress buffering implements a

moderation approach where high or low levels of the buffer will adjust the influence of stress on health outcomes (Meyer, 2015). Therefore, the minority stress theory also strives to uncover minority group strengths that protect them from detrimental mental health outcomes, which aligns closely with the principle of implementing a strengths-based research approach.

Consistent with the minority stress framework, the present study sought to understand the unique protective and risk factors that exist within the Muslim American community as they respond to perceptions of anti-Muslim discrimination in their external environment. The study implemented moderation analyses to remain congruent with the buffer model outlined by Meyer (2015). Specifically, vigilance was conceptualized as a proximal stressor that exacerbates the effect of perceived anti-Muslim discrimination on psychological outcomes. Community connectedness and social support, on the other hand, were conceptualized as protective factors that buffer the influence of perceived anti-Muslim discrimination on psychological outcomes. Examining these potential moderators is essential for the advancement of multiculturally attuned research and the promotion of mental health in minority groups.

### **Discrimination and Health**

Discrimination refers to differential treatment of members from a certain social group, which can function at an individual or institutional level (Priscilla Lui & Quezada, 2019). Perceived discrimination is an evaluation of negative social experiences that encompasses subtler forms of discrimination as well (e.g., microaggression; Todorova et al., 2010). Existing literature has identified discrimination as a crucial component when examining health disparities in racial and ethnic minority groups (Todorova et al., 2010). In fact, extant bodies of research have found robust evidence supporting the relationship between discrimination and other forms of

oppression on poor mental and physical health (Samari et al., 2018; Szymanski & Lewis, 2016; Todorova et al., 2010). This may be especially evident in individuals who experience cumulative minority stress based on their identities (Balsam et al., 2011).

Racism and perceived discrimination have serious implications for health through three main pathways—unequal socioeconomic structures, restricted access to health services, and increased psychological distress from poor physical and mental health (Todorova et al., 2010; Williams & Collins, 1995). The present study focused on how the latter pathway operates in a sample of Muslim Americans.

### ***Impact on Mental Health***

Discrimination and the internalization of discrimination serve as chronic stressors (Meyer, 2015). Discriminatory experiences have been linked to elevated depressive symptoms and perceived stress, poor mental health outcomes, higher psychological distress, and reduced quality of life (Sutter & Perrin, 2016; Todorova et al., 2010). These associations have been moderated by coping, social support, and religious involvement (Todorova et al., 2010). A meta-analysis found that perceived racism was related to psychological distress and poor physiological outcomes in Black American adults (Pieterse et al., 2012). Perceived racial discrimination also predicted posttraumatic stress symptoms when controlling for general stress (Wei et al., 2012).

In a subsample of Muslims, religious discrimination was negatively associated with life satisfaction and well-being (Vang et al., 2019). The same study found that religiosity reduced the negative effects of perceived religious discrimination across faith groups (Vang et al., 2019). For sexual minorities, discrimination can also lead to the internalization of negative self-perceptions through internalized homophobia or concealment motivation, which have been associated with

poorer quality relationships, less social support, loneliness, and poorer health (Mereish & Poteat, 2015). These results suggest that experiences of perceived discrimination are unique stressors that contribute to a plethora of negative mental health outcomes in minoritized groups.

### ***Discrimination Towards Muslims***

Consistent with other minority groups, Muslims have been subjected to discriminatory practices at an individual and institutional level (Helms, 2016). In 2016, approximately 60% of Muslim Americans reported experiencing religious discrimination within the past year (Mogahed & Chouhoud, 2017). Samari and colleagues (2018) conceptualize Islamophobia as a form of discrimination based on race, appearance, and religion, which can be viewed more broadly as a public health concern. Although the term “Muslim” does not refer to any specific racial or ethnic group, the distinction between religious and racial discrimination is often indistinguishable when considering the effects of Islamophobia. This is because individuals who appear “Muslim like” based on skin color, appearance, or clothing are all at an elevated risk of experiencing anti-Muslim discrimination as well (Samari, 2016). Targets of Islamophobia include Muslims and anyone perceived to be Muslim (e.g., Middle Easterners/Arabs, South Asians, Sikhs; Samari et al., 2018).

The long history of anti-Muslim sentiment operates at an interpersonal and institutional level contributing to societal level marginalization, misconceptions about Islam, and attitudes of racism and xenophobia (Haque et al., 2018; Helms, 2016; Samari, 2016). Examples of anti-Muslim discrimination include employment discrimination (Di Stasio et al., 2019; Rooth, 2010; Wallace et al., 2014; Wright et al., 2013), hostile street harassment (Allen, 2015; Mason-Bish & Zempi, 2019), negative media representation (Kunst, Sam, & Ullberg, 2012; Saleem &

Ramasubramanian, 2017), racial profiling and surveillance (e.g., profiling Muslim airline passengers, monitoring Muslim university students, or secondary screenings for Muslim travelers; Mogahed & Chouhoud, 2017; Moradi & Hasan, 2004; Hopkins, 2011), hate crimes (Moradi & Hasan, 2004), and a federal immigration ban (Samari, 2016; Samari et al., 2018).

At an institutional level, Muslim Americans report startling levels of religious discrimination and an overall dissatisfaction with media representation (Saleem & Ramasubramanian, 2017). In fact, the media negatively frames Muslims in the United States as a threat to security (Ogan et al., 2014). Similar trends have occurred on social media platforms such as Facebook and Twitter (Awan, 2014; Oboler, 2016) which have been criticized for normalizing and propagating anti-Muslim hate speech.

The effects of these messages can be seen in hiring practices for Muslim job applicants. One study sent fictional resumes to job openings in the Southern United States under the guise of a religious group. They found that perceived Muslims and Atheists encountered the highest level of employment discrimination (Wallace et al., 2014). Specifically, Muslims received 38% fewer emails and 54% fewer phone calls in response to job openings. They were also consistently ranked the lowest in terms of employer preference (Wallace et al., 2014). Similar findings were detected in the Northeast United States where Muslims were 47% less likely to receive a phone call in response to a job opportunity (Wright et al., 2012). This pattern of employment discrimination suggests that some Muslims could be engaging in “resume whitening,” a strategy that attempts to circumvent discrimination by concealing marginalized identities (Di Stasio et al., 2019). Engaging in practices such as “resume whitening” may be one way that Muslims anticipate discrimination from the environment and adjust accordingly.

At an individual level, evidence from research has documented street harassment towards Muslim women (Allen, 2015; Mason-Bish & Zempi, 2019), campus harassment of young Muslim college students (Samari et al., 2018), and hate crimes (Moradi & Hasan, 2004). Visible Muslim women who wear a head covering (*hijab*) are vulnerable to misogynistic and Islamophobic verbal and physical threats (Mason-Bish & Zempi, 2019). Likewise, about 24% of Muslim physicians reported frequent religious discrimination in the workplace (Padela et al., 2015). Similar findings are prevalent in Muslim youth with over 50% of young Muslims in the United States reporting being bullied at school, which is nearly twice the national average (Mogahed & Chouhoud, 2007; Samari, 2016; Tahseen et al., 2019). Various forms of discrimination in the workplace, schools, or the general public have serious implications when considering the cumulative nature of stress over the course of a lifetime.

In addition to Islamophobia's prevalence in employment, media, and interpersonal experiences, Muslims also face barriers in healthcare, further exacerbating health inequalities. Perceived discrimination was negatively related to seeking medical care and access to healthcare services (Samari et al., 2018) for Muslims. One study on perceived discrimination in healthcare found that almost one third of Muslims reported experiencing discrimination including offensive insults, being ignored/excluded, or physical assaults in healthcare settings (Martin, 2015). Similarly, Muslim refugees described the healthcare system as patronizing and laden with stereotypical attitudes towards Muslim women (Samari, 2016). This was particularly evident for hijab-wearing Muslim women who reported experiencing higher levels of discrimination in healthcare settings (Samari, 2016). It also introduces the risk of premature termination from therapy and mental health services, which has been documented in Muslims and other minority

groups in the United States (Amer & Bagasra, 2013; Haque et al., 2018). These findings are consistent with well-established literature documenting the effects of perceived discrimination on medicine, mental health, and public health (Suite et al., 2007).

### ***Mental Health of Muslims***

Prior research on minority populations has linked perceived discrimination with an increase in psychological distress, depression, anxiety, shame, embarrassment, and in-group identification (Budhwani & Hearld, 2017; Kunst, Sam, & Ullberg, 2012). Stress in Muslim Americans is comparable to stress levels of other marginalized minority groups in the United States (Haque et al., 2018). Islamophobia increases stress in Muslim Americans (Samari, 2016) particularly due to their targeted faith identity. Stress related to frequent identity threats permeates into daily life for some Muslims through microaggressions, trauma, and isolation (Haque et al., 2018; Nadal et al. 2012).

Qualitative reports from Muslim Americans highlight the prolonged stress caused by Islamophobia and xenophobia (Ahmed, 2020). Participants in interviews recounted instances of public assaults, persistent questioning, media bias, and verbal harassment (Ahmed, 2020; Haque et al., 2018). Moreover, vicarious exposure to Islamophobia was found in Muslims who heard about discriminatory practices or observed other Muslims being harassed (Ahmed, 2020).

A review of articles on Muslims found a consistent pattern of discriminatory experiences being related to poor mental health and psychological distress irrespective of race, skin color, or residence (Samari et al., 2018). A notable moderator appeared when considering the influence of gender, with discrimination leading to psychological distress in men but not women (Samari et al., 2018). This has led to a number of young Muslim men engaging in identity concealment or

internalizing Islamophobia stereotypes, potentially intensifying negative health outcomes (Samari, 2016).

Perceived discrimination has been associated with symptoms of major depression, generalized anxiety, and subclinical paranoia in Muslim Americans, which was exacerbated by having a strong Muslim identity (Lowe et al., 2019; Rippy & Newman, 2006). Having a strong affiliation with Islam also exacerbated the negative relationship between perceived discrimination and well-being, while spirituality and engaging in Islamic practices served as a buffer (Hodge et al., 2016; Jasperse et al., 2012). Overall, anti-Muslim discrimination has been linked with depressive symptoms, psychological distress, anxiety about potential discrimination, paranoia, anger, and being “highly visible as a Muslim” (Ahmed, 2020; Ashraf & Nassar, 2018; Samari et al., 2018). Women who were more visibly Muslim perceived greater discrimination (Jasperse et al., 2012) and were more likely to be targets of discrimination. Prior studies have identified active coping, religious support, spirituality, and religious coping as buffers that were associated with positive mental health outcomes in Muslims (Hodge et al., 2016; Samari et al., 2018). Despite the prevalence of Islamophobia, not all Muslim Americans experience negative mental health consequences, highlighting a need to examine potential protective factors.

The effects of Islamophobia are particularly evident on Muslim young adults whose formative years have been marred by stereotypes regarding their identity. Adolescence/young adulthood is a developmentally sensitive period of time where cultural and personal identities are formed (Erikson, 1980). Having an identity that is largely opposed by the dominant culture through institutions, social attitudes, and the media can be particularly challenging for young adults to navigate (Sirin & Fine, 2007). Muslim Americans are the youngest faith group with a

third under the age of thirty (Mogahed & Chouhoud, 2017). Young Muslim Americans have unique developmental challenges where they must grapple with their Muslim identity and their American identity. They are also more likely to experience religious based prejudice (Mogahed & Chouhoud, 2017). We anticipated that younger Muslims may be particularly vulnerable to the effects of Islamophobia as they navigate their identity development.

## **Responses to Stress**

### ***Stress Ameliorating Factors***

**Social support.** As mentioned, researchers have emphasized the importance of identifying strength and resilience factors when working with minority groups (Hailes et al., 2020; Haque et al., 2018). Social support is one such protective factor that is well-documented and positively related to mental health (Cohen & Wills, 1985). Consistent with the minority stress theory, coping and social support can buffer the negative effects of environmental stressors such as discrimination (Meyer, 2015) when considering the relationship between stress and health outcomes.

Generally, individuals with social support from family, friends, or significant others tend to experience positive outcomes such as improved self-esteem and well-being compared to those with less social support (Cohen & Wills, 1985). Social support encompasses individual level resources including receipt of instrumental and emotional support from family, friends, or organizations (Breese et al., 2000). Prior literature has established a buffering effect of social support that protects against the deleterious effects of psychological distress (Bailey et al., 1996; Nguyen et al., 2016).

Cogent research has suggested that social support can promote psychological well-being, encourage resiliency, and protect vulnerable populations from adverse environmental influences

(Brown, 2008). For instance, empirical evidence has documented the beneficial mental health effects of social support in a sample of African American participants (Nguyen et al., 2016) which has contributed to resilience in this population (Brown, 2008). On the other hand, poor social support, such as loneliness, has been related to poor mental and physical health (Mereish & Poteat, 2015). More research is needed regarding the role of social support in the lives of Muslim Americans, who experience multifaceted forms of discrimination.

**Community connectedness.** Community connectedness derives from the basic human desire to belong and shares similarities with social support (Frost & Meyer, 2012; Meyer, 2015). Meyer (2015) conceptualizes this as community resilience, which is a type of minority coping. It refers to an individual's sense of belonging within a larger social group (Whitlock, 2007) that constructs a collective identity (Frost & Meyer, 2012). This idea is rooted in Phinney's (1991) seminal work on sense of belonging in racial and ethnic minorities. Belonging to a community has been identified as a protective factor against detrimental health outcomes such as emotional distress, negative body image, and drug use (Whitlock, 2007).

Regarding minority coping, research has demonstrated the importance of belonging to a community, feeling strong connections with others, and identifying positive role models (Meyer, 2015). Community groups who share a common identity can promote a sense of belonging and serve as an additional form of social support (Ahmed, 2006). Community connectedness may lead to a stronger affiliation with the minority community which can buffer against the influence of environmental stress (Meyer, 2003). The beneficial effects of community connectedness have been demonstrated in studies on mental health and minority well-being (Frost & Meyer, 2012). For instance, college students reported feeling better when they are around people with similarly

stigmatized identities (Meyer, 2003). Likewise, Black women relied on their families and the Black community to buffer them from racism and sexism related stress (Bowleg et al., 2003). Individuals who belong to marginalized groups may find community cohesiveness to be a source of psychological well-being (Meyer, 2003).

When considering the relationship between perceived discrimination and community connectedness, perceived discrimination was related to poorer well-being due to low levels of connectedness in a sample of Asian Americans (Yoon et al., 2012). Similar findings emerged in a sample of Chinese international students where strong levels of ethnic social connectedness weakened the relationship between perceived racial discrimination and posttraumatic stress symptoms (Wei et al., 2012). Connectedness to an ethnic community also buffered the effects of racial microaggressions and anxiety symptoms in a sample of Black Americans (Liao et al., 2016). Thus, community connectedness has been found to moderate the relationship between discrimination and psychological outcomes. Likewise, it may be possible that Muslims experience a similar sense of protection from strong community bonds.

Compared to Western individualistic societies, collectivist cultures like that of many Islamic cultural communities emphasize the importance of family and community (Ahmed, 2006). Muslim youth in America may be socialized to maintain connectedness with their family and community groups. For Muslims, this may look like interacting socially with other Muslims, attending religious services at the mosque, feeling valued within the Muslim community, or communicating with their local imam/clergy (Ali, 2016). Muslim faith leaders, such as imams, play an integral role in the community and are often used as a resource for mental health support, despite their lack of formal training (Ali et al., 2005; Ciftci et al., 2013). Thus, some Muslims

may be turning to their faith communities to provide support. This may buffer the negative effects from the environment and point to potential avenues for future interventions.

It is important to note the distinctions between community connectedness and other analogous constructs. Social support and community connectedness differ in the fact that the latter includes both tangible and intangible resources that are available at a community level (Meyer, 2015). Although similar, receiving support from the community encompasses shared “values, role models, and opportunities for social support” that may assist in reducing minority stress (Meyer, 2015, p. 211). Likewise, community connectedness is distinct from community participation with the former representing an affective construct (e.g., emotional connection to a community) and the latter representing a concrete construct (e.g., membership in community organizations; Frost & Meyer, 2012).

It is also important to acknowledge that not all members of a minority community benefit equally from community support due to inequalities that may exist within the community (Meyer, 2015). For instance, barriers such as racism, sexism, and classism may introduce challenges for a Muslim to connect with the Muslim community. When framing discussion surrounding the Muslim community, it is crucial to recognize its heterogeneous composition of various racial/ethnic, social, and sexual/gender identities. Nevertheless, community connectedness is a valuable construct to explore when identifying potential protective and resiliency factors in a minority community (Frost & Meyer; 2012; Meyer, 2015).

### ***Stress Exacerbating Factors***

**Increased vigilance.** Heightened vigilance refers to the tendency to focus excess attention on threat related cues in the environment (Himmelstein, 2015; Hur & Shackman, 2019).

Vigilance is often related to anxiety and negative disposition due to the fixation on threatening targets (Hur et al., 2019) or on stressors that are not immediately present (Clark et al., 2006). For minority individuals, vigilance can be used to identify and protect against anticipated threatening events, such as discrimination (Tummala-Nara, 2016). Researchers consider vigilance to be a form of defensive coping that is used to monitor and adjust behavior based on the expectation of a discriminatory event (Allport, 1954; Himmelstein, 2015; LaVeist et al., 2014; Meyer 2003; Meyers 2015). This may cause certain groups of people who carry marginalized identities to act cautiously, especially in public. It refers to the overall feeling of having to stay “on guard” and remain constantly mindful of potential prejudice from the environment (Meyer, 2003).

However, vigilance often comes at the cost of increased levels of anxiety (Hur et al., 2019). In fact, anticipating discrimination has been associated with increased stress and stress-related cardiovascular functioning (e.g., blood pressure and heart rate) in samples of Black and Latinx participants (Clark et al., 2006; Sawyer et al., 2012). Psychologically, it may appear as rumination or prolonged worry (Sawyer et al., 2012) that has been linked to physiological concerns such as weakened immunology, reduced sleep, and increased blood pressure (Hicken et al., 2013; Himmelstein et al., 2015). Therefore, chronic vigilance, especially related to discrimination, has serious adverse health consequences.

Minorities tend to engage in more vigilance following discrimination, yielding poor mental health outcomes (Budhwani & Hearld, 2017). When an individual perceives discrimination in the surrounding environment, they may be vigilant when interacting with dominant group members (Meyer, 2003). Research has found that anxiety about future identity-related rejection can develop from past discriminatory experiences or vicarious exposure to

discrimination (Saleem & Ramasubramanian, 2017). A study comparing depression in Black and White participants found that vigilance in Black participants was associated with elevated depression (LaVeist et al., 2014), suggesting that vigilance may be a risk factor for depression as well. Like other minority groups, Muslim Americans may learn to anticipate anti-Muslim discrimination from the surrounding environment, especially due to negative media representation, thus contributing to negative mental health outcomes. Media outlets frequently link Muslims with aggression and violence (Helms, 2016; Saleem & Ramasubramanian, 2017), contributing to a heightened level of vigilance and paranoia in Muslim Americans (Rippy & Newman, 2006). This may be especially evident for Muslims who are externally identifiable due to their appearance.

Religious and ethnic groups who appear “Muslim-like” are subjected to the anti-Muslim discrimination as well. Middle Eastern Americans, who may possess “Muslim markers” (such as skin tones or names) consistent with the stereotypical appearance of a Muslim (Samari, 2016), may be at an increased risk of being exposed to overt Islamophobia. However, there are a number of additional arbitrary external markers such as wearing a turban, having an accent, or appearing “foreign” that subject other groups to anti-Muslim discrimination. Sometimes, Middle Eastern Christians or South Asian Sikhs are mistaken as Muslims due to their physical attributes and are thus vulnerable to Islamophobia as well (Love 2009; Samari, 2016). They may be engaging in similar patterns of vigilance based on the effects of Islamophobia.

Compared to other faith groups, Muslim women are more likely to have a visible marker of their faith. Muslim women, specifically those who choose to wear a *hijab* or *niqab* (head or face coverings), may experience a heightened level of vigilance in public spaces where their

“Muslim marker” is noticeable. Wearing a hijab increases the likelihood that a Muslim woman could become a target of discrimination (Mogahed & Chouhoud, 2017). Researchers have found that heightened vigilance was associated with depression in Muslim American women (Budhwani & Hearld, 2017). It may be possible that Muslim women may implement a unique form of vigilance due to their intersectional identities.

Evidence has also suggested that experiences of perceived discrimination may be related to increased vigilance, suspicion, and wariness (Himmelstein et al., 2015; Rippey & Newman, 2006). In a sample of Muslim American men, perceived religious discrimination was positively related to increased vigilance, mistrust, and suspicion (Rippey & Newman, 2006). It is possible that perception of a hostile environment contributes to a heightened awareness of identity. Researchers also note that high levels of vigilance, known as hypervigilance, may lead an individual to engage in social withdrawal or isolation to avoid adverse social situations (Rippey & Newman, 2006). This may further exacerbate the negative effects of perceived discrimination on psychological outcomes.

### **Summary**

Although Islamophobia has been documented in the literature, questions remain regarding how anti-Muslim discrimination influences psychological health in Muslim Americans. Exploring potential moderators, such as vigilance, community connectedness, or social support that may exacerbate or buffer the effects of perceived Islamophobia could address this gap. Understanding how these moderators influence psychological outcomes may identify potential avenues of treatment to heal from the effects of perceived anti-Muslim discrimination.

Overall, perceived anti-Muslim discrimination can have psychological repercussions and potential future implications on the psychological health of Muslim Americans.

## Appendix B

## Interpersonal Anti-Muslim Discrimination Index (Ahmed, 2021)

*We are interested in whether the following events ever happened, or you felt happened to you, because you are Muslim. For each item, tell us if the event happened to you and how much it bothered you.*

*Response scale: This event has never happened to me (1), This event happened but did not bother me (2), This event happened and I was slightly bothered (3), This event happened and I was upset (4), This event happened and I was extremely upset (5), Prefer not to answer (0)*

1. A mosque in your community is attacked (e.g., vandalism, burglary, arson).
2. In public settings (e.g., stores, parks, airports), people seem uneasy (e.g., stares, avoidance) around you because you are Muslim.
3. You are treated poorly in health care settings (e.g., doctor's office, hospital, clinic) because you are Muslim.
4. You are stopped for additional security screenings at the airport because you are Muslim.
5. Your home has been vandalized (e.g., graffiti, dead animals left on property) because you are Muslim.
6. You have been physically attacked (e.g., someone hits you, throws something at you) because you are Muslim.
7. Non-Muslims have made negative comments about Muslims/Islam in front of you.
8. You have been called derogatory names used for Muslims (e.g., terrorist, sand n\*gger, towel head).
9. Someone tells you to "go back to your country" or to "go back to where you came from."

## Appendix C

## Societal Anti-Muslim Discrimination Index (Ahmed, 2021)

*The following items are about how Muslims are treated and perceived in the U.S. For each item, tell us how much you agree or disagree with the statement.*

*Response scale: Strongly disagree (1), Disagree (2), Somewhat disagree (3), Somewhat agree (4), Agree (5), Strongly agree (6), Prefer not to answer (0), Don't know/not sure (0)*

1. Muslims are under government (e.g., Homeland Security, FBI, police) surveillance in the U.S.
2. U.S. news media reports on Muslims are primarily about violent incidents (e.g. terrorism, conflict in Muslim-majority countries).
3. Depictions of Muslims in popular media (e.g., fictional movies and television shows) are generally negative.
4. Muslims are held responsible for acts of terrorism carried out by members of their religion.
5. In the U.S., non-Muslims are welcoming of Muslims. \*
6. In the U.S., non-Muslims perceive Muslims as being backwards.
7. In the U.S., non-Muslims perceive Muslims as being dangerous.
8. Muslims are respected in the U.S. \*
9. In the U.S., non-Muslims perceive Muslim women as being oppressed.
10. Muslim men who wear Islamic clothes (e.g., kufi, thobe) are often harassed in public (e.g., verbal and physical harassment).
11. Muslim women who wear Islamic clothes (e.g., hijab, abaya, niqab) are often harassed in public (e.g., verbal and physical harassment).
12. Muslims frequently encounter difficulties when traveling by plane (e.g., additional security screenings, delays with boarding).
13. Muslims have historically not been welcomed in the U.S.
14. Hate crimes (e.g. vandalism of mosques, physical attacks on Muslims) against Muslims are a problem in the U.S.
15. It is easy to build a mosque in the U.S. \*
16. It is difficult to establish a Muslim cemetery in the U.S.
17. Muslims have a difficult time getting jobs in the U.S.
18. Muslims have a harder time getting religious accommodations (e.g., diet, prayer times, religious holidays) in the U.S. than members of other religious groups.
19. In the U.S., Muslim students are treated unfairly by school staff (e.g., teachers, principals) in comparison to non-Muslim students.

## Appendix D

## Heightened Vigilance Scale (Clark et al., 2006)

*Response scale:*

- |   |                      |
|---|----------------------|
| 1 | <i>Very often</i>    |
| 2 | <i>Fairly often</i>  |
| 3 | <i>Not too often</i> |
| 4 | <i>Hardly ever</i>   |
| 5 | <i>Never</i>         |

In dealing with day-to-day experiences as a Muslim American, how often do you...

1. Think in advance about the kinds of problems you are likely to experience?
2. Try to prepare for possible insults before leaving home?
3. Feel that you always have to be very careful about your appearance to get good service or avoid being harassed?
4. Carefully watch what you say and how you say it?
5. Carefully observe what happens around you?
6. Try to avoid certain social situations and places?

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Scoring Instructions: All items on this measure are reverse scored

## Appendix E

## Social Connectedness in Ethnic Community Scales (SCETH; Yoon et al., 2012)

*Please indicate your agreement with the following items using the 1–7 scale below. There are no right or wrong answers. Please be open and honest in your responding.*

- 1     *strongly disagree*
- 2     *disagree*
- 3     *slightly disagree*
- 4     *neither agree nor disagree*
- 5     *slightly agree*
- 6     *agree*
- 7     *strongly agree*

Note: The term “Muslim” will be used to fill in the blank on the SCETH scale

1. I feel a sense of closeness with \_\_\_\_\_ Americans
2. I feel a sense of belonging to the \_\_\_\_\_ American community
3. I feel accepted by \_\_\_\_\_ Americans
4. I feel like I fit into the \_\_\_\_\_ American community
5. I feel connected with the \_\_\_\_\_ American community.

## Appendix F

## Multidimensional Scale of Perceived Social Support (Zimet et al., 1988)

*Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement*

*Circle the "1" if you Very Strongly Disagree*

*Circle the "2" if you Strongly Disagree*

*Circle the "3" if you Mildly Disagree*

*Circle the "4" if you are Neutral*

*Circle the "5" if you Mildly Agree*

*Circle the "6" if you Strongly Agree*

*Circle the "7" if you Very Strongly Agree*

1. There is a special person who is around when I am in need. (SO)
2. There is a special person with whom I can share my joys and sorrows. (SO)
3. My family really tries to help me. (FAM)
4. I get the emotional help and support I need from my family. (FAM)
5. I have a special person who is a real source of comfort to me. (SO)
6. My friends really try to help me. (FRI)
7. I can count on my friends when things go wrong. (FRI)
8. I can talk about my problems with my family. (FAM)
9. I have friends with whom I can share my joys and sorrows.(FRI)
10. There is a special person in my life who cares about my feelings. (SO)
11. My family is willing to help me make decisions. (FAM)
12. I can talk about my problems with my friends. (FRI)

The items tended to divide into factor groups relating to the source of the social support, namely family (FAM), friends (FRI) or significant other (SO).

## Appendix G

## DASS-21 (Lovibond &amp; Lovibond, 1995)

*Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement. The rating scale is as follows:*

- 0 Did not apply to me at all*
- 1 Applied to me to some degree, or some of the time*
- 2 Applied to me to a considerable degree or a good part of time*
- 3 Applied to me very much or most of the time*

- 1 (s) I found it hard to wind down
- 2 (a) I was aware of dryness of my mouth
- 3 (d) I couldn't seem to experience any positive feeling at all
- 4 (a) I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)
- 5 (d) I found it difficult to work up the initiative to do things
- 6 (s) I tended to over-react to situations
- 7 (a) I experienced trembling (e.g. in the hands)
- 8 (s) I felt that I was using a lot of nervous energy
- 9 (a) I was worried about situations in which I might panic and make a fool of myself
- 10 (d) I felt that I had nothing to look forward to
- 11 (s) I found myself getting agitated
- 12 (s) I found it difficult to relax
- 13 (d) I felt down-hearted and blue
- 14 (s) I was intolerant of anything that kept me from getting on with what I was doing
- 15 (a) I felt I was close to panic
- 16 (d) I was unable to become enthusiastic about anything
- 17 (d) I felt I wasn't worth much as a person
- 18 (s) I felt that I was rather touchy
- 19 (a) I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)
- 20 (a) I felt scared without any good reason
- 21 (d) I felt that life was meaningless

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(d) = Depression

(a) = Anxiety

(s) = Stress

## Appendix H

## Demographic Questionnaire

1. What is your age?

- Enter age: \_\_\_\_\_

2. How would you identify your religion/spirituality?

- Agnostic
- Atheist
- Buddhist
- Catholic
- Christian
- Hindu
- Jewish
- Mormon/Latter-Day Saints
- Muslim
- Sikh
- Unitarian Universalist
- No religious affiliation
- Other Faith/Religious Tradition (please specify): \_\_\_\_\_
- Prefer not to answer

3. What religious sect do you belong to?

- Sunni
- Shia
- Nondenominational
- Other (please specify): \_\_\_\_\_
- Prefer not to answer

4. To what degree do you practice the religious/spiritual tradition(s) indicated above?

- Not at all/Not applicable
- To a small degree
- To a moderate degree
- To a considerable degree
- To a great degree
- Prefer not to answer

These set of statements seek to assess the extent to which you are visibly Muslim. Please respond as truthfully and accurately as possible. Keep in mind that all of your responses are anonymous.

5A. How frequently do you wear **an Islamic headscarf** (e.g., abaya, burqa, hijab, niqab, and/or other) excluding during prayer?

- Never
- Rarely
- Occasionally
- Frequently
- Always
- Not applicable to me

5B. How frequently do you have a **beard** or wear **Islamic clothing** (e.g., thawb, kurta, kufi/topi, turban) excluding during prayer?

- Never
- Rarely
- Occasionally
- Frequently
- Always
- Not applicable to me

6. Which of the following best describes your gender identity?

- Woman
- Man
- Non-binary
- Other: I describe my gender identity as: \_\_\_\_\_
- Prefer not to answer

7. Which of the following best describes your racial or ethnic identity? (please select all that apply)

- Arab/ Middle Eastern
- Asian/Asian American: *For example, Chinese, Filipino, Japanese, Korean, Vietnamese, Cambodian, and so on.*
- South Asian: *For example, Pakistani, Indian, Bengali, Kashmiri, Sri Lankan*
- Black/African American: *For example, African American, Haitian, Nigerian, and so on.*
- White/European American: *For example, German, Irish, French, and so on.*
- Latinx: *Please note that this category historically has been referred to as "Hispanic," for example, Mexican, Mexican American, Puerto Rican, Cuban, Argentinian, Colombian, Dominican, Nicaraguan, Salvadoran, and so on.*

- Native/Native American/Indigenous People: *For example, Navajo, Mayan, Tlingit, and so on*
- Native Hawaiian
- North African
- Pacific Islander: *For example, Guamanian or Chamorro, Samoan, Fijian, Tongan, and so on.*
- Other: I describe my racial or ethnic identity as: \_\_\_\_\_
- Prefer not to answer

8. Which of the following best describes your generational status?

- First generation (I was NOT born in the US)
- Second generation (I was born in the US but at least one of my parents or guardians were not born in the US)
- Third generation and beyond (My parents and I were born in the US)
- I don't know
- Other: \_\_\_\_\_
- Prefer not to answer

9. What is your political identity?

- Very Conservative
- Conservative
- Moderate
- Liberal
- Very Liberal
- Other (please specify): \_\_\_\_\_
- Prefer not to answer

10. How would you identify your sexual identity/sexual orientation?

- Asexual
- Bisexual
- Heterosexual/Straight
- Lesbian/Gay
- Queer
- Questioning
- Other: I Identify as \_\_\_\_\_
- Prefer not to answer

11. In which socio-economic class have you spent the majority of your life?

- Lower Class
- Working Class
- Middle Class
- Upper Middle Class

- Upper Class
- Other (please specify): \_\_\_\_\_
- Prefer not to answer

12. What stressors related to the COVID-19 pandemic have you experienced? Please select all that apply.

- Financial distress
- Sleep disturbances
- Changes in eating/appetite
- Social isolation
- Academic concerns
- Worry about personal health
- Worry about health of family, friends, and loved ones
- Relationship difficulty

13. What support/treatment services have you used, if any? Check all that apply.

- Individual counseling
- Group counseling
- Community support groups
- Religious counseling
- Pre-marital/marital counseling
- Other \_\_\_\_\_
- Prefer not to answer

If yes is selected for Question 13:

The following question will give you an opportunity to tell us more about your experience. We are interested in understanding your experiences with counselors, therapists, and mental health providers. Please answer openly and truthfully.

What was your experience like receiving support services or therapeutic treatment? Please include information on what went well and what did not. You can be as detailed as you would like.

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