

# Islamophobia, Health, and Public Health: A Systematic Literature Review

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**Background.** In 2017, a “Muslim ban” on immigrants to the United States was coupled with a continued rise in Islamophobia and hate crimes toward Muslims. Islamophobia undermines health equity, yet delineating the effects of Islamophobia globally is challenging as it affects a myriad of groups (geographically, racially, and socially). Additionally, stereotypes equate all Muslims with populations from the Middle East and South Asia. To date, health research pays insufficient attention to Islamophobia, Muslims, and those racialized to be Muslim.

**Objectives.** This literature review advances our understanding of racism and health by examining the racialization of religion, by specifically examining Islamophobia as a form of discrimination.

**Search Methods.** Per PRISMA guidelines, we conducted a search in October 2017 using PubMed–MEDLINE and a combination of terms. We identified additional articles using other search engines. For inclusion, articles needed to include a descriptor of discrimination, contain an identifier of Muslim or Muslim-like identity (i.e., groups commonly perceived as Muslim, including Arabs, Middle Easterners, North Africans, and South Asians), include a health outcome, be in English, and be published between 1990 and 2017.


**Selection Criteria.** We identified 111 unique peer-reviewed articles. We excluded articles that did not meet the following criteria: (1) examined Islamophobia, discrimination, or racism among a Muslim or Muslim-like population; (2) included a health outcome or discussion of health

disparities; and (3) was conducted in North America, Europe, Australia, or New Zealand. This yielded 53 articles.

**Results.** The majority of studies ( $n = 34$ ; 64%) were quantitative. The remaining studies were qualitative ( $n = 7$ ; 13%), mixed methods ( $n = 2$ ; 4%), or reviews ( $n = 10$ ; 19%). Most studies were based in the United States ( $n = 31$ ; 58%). Nearly half of the reviewed studies examined mental health ( $n = 24$ ; 45%), and one fourth examined physical health or health behaviors ( $n = 13$ ; 25%). Others focused on both physical and mental health ( $n = 10$ ; 19%) or health care seeking ( $n = 7$ ; 13%). Studies showed associations between Islamophobia and poor mental health, suboptimal health behaviors, and unfavorable health care–seeking behaviors.

**Conclusions.** This study elucidates the associations between Islamophobia, health, and socioecological determinants of health. Future studies should examine the intersectional nature of Islamophobia and include validated measures, representative samples, subgroup analyses, and comparison groups. More methodologically rigorous studies of Islamophobia and health are needed.

**Public Health Implications.** Addressing the discrimination-related poor health that Muslims and racialized Muslim-like subgroups experience is central to the goals of health equity and assurance of the fundamental right to health. (*Am J Public Health*. Published online ahead of print April 19, 2018; e1–e9. doi:10.2105/AJPH.2018.304402)

 See also Levin and Idler, p. 718.

## PLAIN-LANGUAGE SUMMARY

Islamophobia undermines health equity, yet little is known about how discrimination is associated with the health of Muslims. This systematic literature review describes and analyzes the current literature on Islamophobia and health. The included studies met the following criteria: they (1) were written in English; (2) examined Islamophobia, discrimination, or racism; (3) assessed a health outcome; (4) utilized a sample or population of

Muslims of any racial and ethnic origin, Middle Easterners, North Africans, or South Asians; (5) were conducted in North America, Europe, Australia, or New Zealand; and (6) were peer-reviewed articles published between 1990 and 2017. Among the 53 studies identified, most were conducted in the United States and utilized cross-sectional study designs. The studies demonstrated associations between Islamophobia and poor mental health, suboptimal health behaviors, and a lack of

health care–seeking behaviors. Fewer studies considered impacts on physical health conditions like cardiovascular disease. Future studies should examine the intersectional nature of Islamophobia, accounting for the diversity of people who are affected and making better use of validated measures and appropriate comparison groups. Additional methodologically rigorous research on Islamophobia and health is needed to address health disparities and promote health equity for all.

**D**iscrimination of Muslims is a growing phenomenon in White, Christian-majority countries. In the United States, Muslims have been included in an immigration ban, harassed on college campuses, and experienced racial profiling.<sup>1,2</sup> In 2015, hate crimes against Muslims and Arabs rose by 78% to an all-time high.<sup>3</sup> In 2015 and 2016, assaults against Muslims in the United States surpassed the modern peak reached after 9/11.<sup>1,2</sup> Considering that Islam is the world's second largest religion,<sup>4</sup> Islamophobia challenges health equity and population health.<sup>5</sup>

Islamophobia is social stigma toward Islam and Muslims, dislike of Muslims as a political force, and a distinct construct referring to xenophobia and racism toward Muslims or those perceived to be Muslim.<sup>5</sup> Delineating the effects of Islamophobia globally is challenging, as it affects diverse groups of people (geographically, racially, and socially).<sup>6</sup> For example, in the United Kingdom, Muslims are primarily immigrant South Asians.<sup>7</sup> In the United States, nearly 30% of Muslims identify as Black, another 30% are Asian (primarily South Asian), and the largest racial group of Muslims are classified as White, many of whom are from the Middle East.<sup>4,8,9</sup> Stereotypical representations equate all Muslims with populations from the Middle East and South Asia.<sup>8</sup> Since the transatlantic slave trade, Muslims in the United States have not been considered “real Americans,” and Muslim identity has been used to deny citizenship, including for Christians perceived to be Muslims.<sup>10</sup> As described by Naber,<sup>11</sup> “racialization of religion” portrays Middle Eastern immigrants as inferior to Whites and racially marked on the assumption that they are all Muslim. As such, Islamophobia targets both Muslims and those who are perceived as Muslims (e.g., Arabs, Middle Easterners, South Asians, Sikhs).

Research explicitly links discrimination at multiple levels to poor health.<sup>12–14</sup> Experiencing discrimination is associated with the onset of physiological responses to stress that have longer-term implications for health outcomes, including a “wear and tear” impact on regulatory systems.<sup>15</sup> Moreover, “context matters” as the relationships (or magnitudes) of the effects of discrimination vary by racial and ethnic groups.<sup>16,17</sup> As Gee et al. argue,<sup>16</sup> 1 race does not fit all for the relationship between discrimination and health.

To date, no reviews have considered the existing literature on the impact of Islamophobia as a form of discrimination on the health of Muslims or those who are perceived as Muslim. This literature review advances our understanding of racism and health by focusing on an understudied conceptualization on the role of racialization of religion for health—specifically, by examining the effect of Islamophobia, as stigma and a form of discrimination, and health outcomes for populations in North America, Europe, Australia, and New Zealand.

## METHODS

This systematic literature review follows the guidelines and criteria set forth by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).<sup>18</sup> We conducted a search on October 19, 2017 that used PubMed–MEDLINE and a combination of terms (in abstracts and titles; The box on page e3). For inclusion, articles needed to contain 1 of 4 descriptors of discrimination—Islamophobia, discrimination, religious discrimination, or racism—and an identifier of Muslim or Muslim-like identity (i.e., groups racialized to have a Muslim identity or those affected by Islamophobia through being perceived as Muslim, including Arabs, Middle Easterners, North Africans, and South Asians). Notably, this does not explicitly exclude other groups that could be Muslim or Muslim-like (e.g., Indonesians, African American Muslims). Studies also needed to include a health outcome, to be in English, and to be published between January 1, 1990 and October 1, 2017. We supplemented the primary search on PubMed–MEDLINE with searches on PsycINFO, the Cumulative Index of Nursing and Allied Health Literature, Academic Search Complete, Web of Science, and Google Scholar and a review of references.

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## RESULTS

The primary search produced 92 articles, and supplemental searches produced 32 articles. After we removed duplicates, the search yielded 111 articles. At least 1 of the study authors evaluated each title and abstract against the inclusion criteria. After all the authors conferred, we excluded articles that did not meet the following criteria: (1) examined Islamophobia, discrimination, or racism among a Muslim or Muslim-like population; (2) included a health outcome, structural determinant of health, or discussion of health disparities; (3) was conducted in North America, Europe, Australia, or New Zealand; (4) was a peer-reviewed article. On the basis of an evaluation of titles and abstracts, we excluded 49 articles that did not meet these criteria, yielding 62 articles. We evaluated the full texts of these 62 articles to ensure that each article was a true match. This resulted in the further exclusion of 9 articles, yielding 53 articles (Table A, available as a supplement to the online version of this article at <http://www.ajph.org>).<sup>5,17,19–69</sup> Decisions were agreed upon through review and consensus by all authors (Figure 1). Using the ROBINS-I,<sup>70</sup> we assessed the risk of bias in quantitative articles (Table B, available as a supplement to the online version of this article at <http://www.ajph.org>).

Of the 53 reviewed studies, the majority (n = 34; 64%) were quantitative (Table 1). The remaining studies utilized primary data collection for qualitative (n = 7; 13%)<sup>19,20,26,27,44,60,69</sup> or mixed methods analysis (n = 2; 4%)<sup>31,35</sup> or conducted reviews (n = 10; 19%),<sup>5,22,25,28,30,41,42,45,56,63</sup> and only 4 studies used repeated cross-sectional or longitudinal designs.<sup>43,46,50,62</sup>

The majority of studies were from the United States (n = 31; 58%).<sup>5,17,19–24,29–31,33,35–38,41,42,46,49,52–61,63,67</sup> The remaining studies were from Australia, Canada, Denmark, France, Scotland, Sweden, the Netherlands, and the United Kingdom (n = 22, 42%).<sup>25–28,32,34,39,40,43–45,47,48,50,51,62,64–66,68,69</sup>

**SEARCH TEXT ENTERED INTO PUBMED ADVANCED SEARCH BUILDER**

(((((“Islamophobia”[Title/Abstract] OR “discrimination”[Title/Abstract] OR “religious discrimination”[Title/Abstract] OR “racism”[Title/Abstract])) AND English[Language]) AND (“Muslim”[Title/Abstract] OR “Arab”[Title/Abstract] OR “Middle Eastern”[Title/Abstract] OR “North African”[Title/Abstract] OR “South Asian”[Title/Abstract])) AND (“Health”[Title/Abstract] AND (“1990/01/01”[Date - Publication]: “2017/10/01”[Date - Publication])).

Ten studies used samples from Michigan and Chicago, Illinois.<sup>17,21,23,24,29,41,57–59,67</sup> Several studies had samples of between 100 and 1000 people.

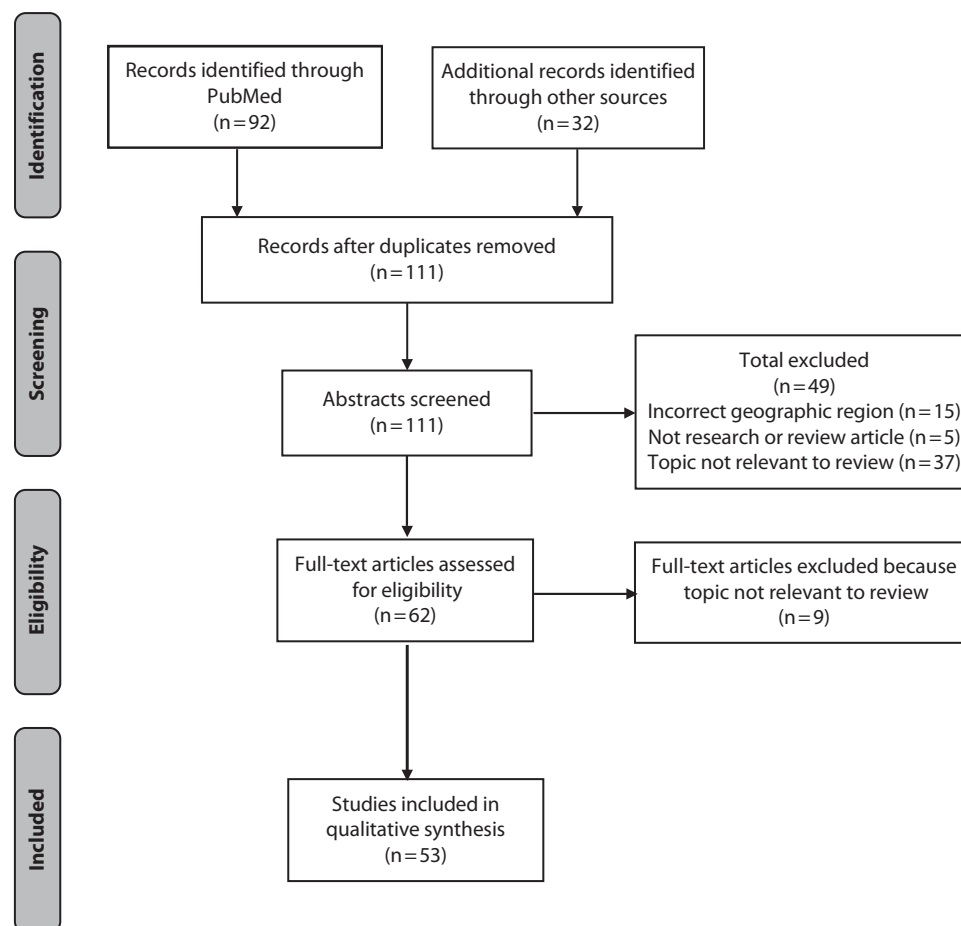
Nearly half of the reviewed studies examined mental health ( $n = 24$ ; 45%). A fourth of the studies examined physical health or health behaviors ( $n = 13$ ; 25%).<sup>19,28,29,38,43,46,53,54,64,66,68</sup> Others focused on both physical and mental health ( $n = 10$ ; 19%) or health care seeking ( $n = 7$ ;

13%).<sup>26,49,58–60,67,69</sup> Only a third of the studies ( $n = 19$ ; 36%) included a measure of religion. Bias was a serious or critical concern in most quantitative studies ( $n = 24$ ). Several studies focused on refugees<sup>31,47,50,51</sup> or women.<sup>35,46,58–60,67</sup>

**Mental Health**

The research showed consistent relationships between experiences of discrimination

and poor mental health among Muslims and Muslim-like populations. Findings of worse mental health were largely consistent, irrespective of the population or the methodology used. Four studies examined mental health of Arab and Chaldean Americans in Detroit, Michigan.<sup>17,23,24,57</sup> These studies found that ever experiencing discrimination due to race, ethnicity, or religion was associated with higher levels of psychological distress.<sup>17,23</sup> This association was observed irrespective of racial identification (White or non-White), skin color (dark–medium or light), Arab American identification (yes or no), or area of residence (in ethnic enclave or outside of ethnic enclave),<sup>17</sup> and it remained even after accounting for confounders.<sup>17,23</sup> Gender moderates this relationship, as discrimination is associated with psychological distress among men but not women.<sup>24</sup> Discrimination was also associated with higher



**FIGURE 1—Literature Review and Screening**

**TABLE 1—Islamophobia and Health Literature Review Results: October 2017**

Characteristic	Studies (n = 53), No. (%)
<b>Publication year</b>	
Before 2001	1 (1.89)
2002–2005	2 (3.77)
2006–2010	18 (33.96)
2011–2015	21 (39.62)
2016–2017	11 (20.75)
<b>Location</b>	
Australia	1 (1.89)
Canada	4 (7.55)
Denmark	2 (3.77)
France	1 (1.89)
Global or multiple countries	2 (3.77)
Netherlands	3 (5.66)
Sweden	1 (1.89)
United Kingdom	8 (15.09)
United States	31 (58.49)
Detroit, MI area	6 (11.32)
Chicago, IL area	4 (7.55)
<b>Methods</b>	
Qualitative	7 (13.21)
Quantitative	34 (64.15)
Cross-sectional	30 (56.60)
Cross-sectional (repeated)	3 (5.66)
Longitudinal	1 (1.89)
Mixed methods	2 (3.77)
Review (systematic or narrative)	10 (18.87)
<b>Included a measure or proxy measure of discrimination</b>	
No	36 (67.92)
Yes	17 (32.08)
<b>Health outcome (not mutually exclusive categories)</b>	
Mental health	24 (45.28)
Physical health and related health behaviors	13 (24.53)
Both mental and physical health	10 (18.87)
Health care seeking	7 (13.21)
<b>Sample size</b>	
None given	10 (18.87)
1–100	9 (16.98)
101–1000	23 (43.40)

*Continued*

**TABLE 1—Continued**

Characteristic	Studies (n = 53), No. (%)
> 1000	11 (20.75)
<b>Measured religion or religiosity</b>	
No	34 (64.15)
Yes	19 (35.85)
<b>Source of article</b>	
PubMed systematic search	34 (64.15)
Other	19 (35.85)
<b>Final score for bias assessment</b>	
Low	4 (7.55)
Moderate	6 (11.32)
Serious	14 (26.42)
Critical	10 (18.87)
Not applicable	19 (35.85)

levels of psychological distress among Christians but not Muslims.<sup>17</sup>

In several metropolitan areas in the United States, 2 studies found that discrimination due to Muslim identity was associated with a greater number of depressive symptoms<sup>36,37</sup> but not with substance use.<sup>36</sup> Among Arab Americans in Florida, discrimination due to Arab identity was associated with psychological distress.<sup>52</sup> Among Arab Americans in New York City, qualitative research showed fears and anxiety about potential discrimination.<sup>20</sup> Among Muslim Americans in Oklahoma, religious discrimination was associated with higher levels of paranoia among men but not women.<sup>61</sup> Among South Asians in San Francisco, California, and Chicago, Illinois, experiences of discrimination were associated with higher depressive symptoms, anger, and anxiety.<sup>55</sup> More traditional beliefs and utilizing an active coping style buffered some of these associations.<sup>55</sup> Among adolescents, perceived racism was associated with poor mental health, and both religious support and religious coping were associated with positive mental health.<sup>21</sup>

Research has also examined the association between discrimination and mental health in Europe, Canada, and Australia. Among British Muslims, experiencing a racist or discriminatory incident attributed to 9/11 was positively associated with depressive symptomology.<sup>65</sup> Describing oneself as

“highly visible as a Muslim” was associated with depression.<sup>65</sup> In Quebec, recent Arab and Haitian immigrants who experienced discrimination due to race, ethnicity, or religion had greater psychological distress.<sup>62</sup> Arab immigrants reported lower levels of discrimination than did Haitian immigrants.<sup>34</sup> In focus groups of South Asian women in the United Kingdom, religious discrimination, stereotyping, and social isolation were thought to influence self-harm.<sup>27</sup> For Australian Muslims, interpersonal discrimination was associated with lower self-esteem, whereas systemic discrimination was associated with more self-esteem.<sup>32</sup> Among Muslim-like groups in the Netherlands (e.g., South Asians, Turks, and Moroccans), perceived ethnic discrimination was associated with depressive symptoms, with religion not serving as a significant moderator.<sup>39,40</sup> Qualitative research with Pakistanis and Bangladeshis in the United Kingdom showed that experiences of racism were sources of psychological distress.<sup>44</sup> For North Africans in France, perceived ethnic discrimination was associated with more psychological distress among women but not men.<sup>48</sup>

A few studies examined discrimination and mental health among refugees. Among Middle Eastern refugees to Sweden, experiencing discrimination or status loss was correlated with symptoms of common mental disorders and posttraumatic stress disorder (PTSD).<sup>47</sup> For children and young adult refugees in Denmark, discriminating experiences due to being a foreigner were associated with internalizing behaviors.<sup>50,51</sup> For adolescent Somali refugees in the United States, greater reported everyday discriminatory events were associated with higher levels of PTSD and depression, after accounting for other trauma.<sup>31</sup>

### Physical Health and Related-Health Behaviors

The literature yielded limited published evidence on the relationship between Islamophobic discrimination and specific physical health outcomes. Lauderdale<sup>46</sup> described how there was an increase in the rates of preterm births and low birth weight among women with Arabic names in California who gave birth within 6 months after 9/11 relative to the year before. No differences were

documented among women with non-Arabic names.

Three studies assessed the relationship between discrimination and self-rated health—a valid measure of overall health<sup>38</sup> and a reliable predictor of mortality.<sup>19</sup> In Canada, mismatched racial identities corresponded with poor self-reported health, especially for respondents who considered themselves White but believed that others tended to think they were something else.<sup>66</sup> In the United States, Hodge et al. examined self-reported health among Muslims,<sup>38</sup> whereas Abdulrahim and Ajrouch considered this relationship specifically among immigrant Arab Americans.<sup>19</sup> They found no differences by gender or ethnicity, but religiosity was associated with better self-rated health. Using 46 in-depth interviews within the Detroit area, they found no mention of discrimination or stereotyping despite expecting to do so.<sup>19</sup>

Several studies considered discrimination and physical activity or nutrition. A review found that discrimination was a contributing factor to the lack of physical activity among South Asian immigrants.<sup>28</sup> In California, 822 South Asians who experienced discrimination had more activity limitation days annually than South Asians who did not report discrimination.<sup>33</sup> However, another study found that frequency of experiencing discrimination had a significantly positive effect on daily step counts for South Asians in the United States.<sup>29</sup> Relatedly, for South Asians in San Francisco and Chicago, discrimination was associated with higher consumption of sweets but not with consumption of fruits and vegetables or cardiovascular disease risk.<sup>53,54</sup> In the Netherlands, perceived discrimination was positively associated with body mass index for Turks and Moroccans, with greater effects for men than women.<sup>64</sup>

Studies from the United Kingdom provide evidence for links to chronic diseases. The relationship between psychosocial factors and coronary heart disease risk was assessed among Sikh, Hindu, and Muslim South Asians.<sup>68</sup> Muslim respondents reported the highest level of racial discrimination, chronic stress, and financial strain.<sup>68</sup> Muslims also reported lower levels of physical activity than the other religious groups. In the United Kingdom, researchers also found that Pakistanis and Bangladeshis had worsening blood pressure,

cholesterol, and self-rated health after 9/11, arguing that this was attributable to anti-Muslim discrimination.<sup>43</sup>

### Health Care–Seeking Behavior

Seven studies examined discrimination and access to health care.<sup>26,49,58–60,67,69</sup> All studies found that religious discrimination or perceived discrimination played a role in how Muslim and Muslim-like populations accessed health care. Three of these studies relied on the same survey of 240 Muslim women from mosques and Muslim organization sites in Greater Chicago.<sup>58,59,67</sup> Perceived religious discrimination in health care was negatively associated with seeking any medical care and having a mammogram in the past 2 years, but it was not associated with cervical cancer screening.<sup>58,59,67</sup> Martin used a nationwide convenience sample of 227 Muslim adults to create a Health Care Discrimination Scale,<sup>49</sup> illuminating the effects of discrimination of Muslims in the US health care system. Discrimination limited access to health care services, and women who wore the veil reported more discrimination in health care settings than women who did not.<sup>49</sup>

Three qualitative studies explored patient perceptions of discrimination in accessing health care services.<sup>26,60,69</sup> One study of 6 Muslim immigrant women identified significant gaps between existing maternity services and availability of culturally appropriate health information in Canada.<sup>60</sup> Thirty-five South Asian parents in focus groups in Scotland felt that discrimination was a barrier for professionals to meet their children's mental health needs.<sup>26</sup> In Scotland, 25 interviews of South Asian Sikh and Muslim patients showed that personal racial and religious discrimination was a barrier to accessing health care.<sup>69</sup>

## DISCUSSION

This study highlights the literature on the associations between Islamophobia, health outcomes, and socioecological determinants of health. Although it is well established that racial discrimination is a determinant of poor health,<sup>12,71</sup> the contribution of this review lies in its attention to Islamophobia, which is

currently a highly politicized and contentious topic, an example of the “racialization of religion,” and an understudied determinant of poor health outcomes. In subsequent sections, we present a summary of findings, the shortcomings of reviewed research, and suggestions for advancing future research.

### Summary of Findings

In general, discrimination was negatively associated with mental health, indicators of physical health, and health care access. Most studies occurred after 2010, and since 2001 there has been an exponential increase in studies of the effects of discrimination on the health of Muslim and Muslim-like populations. Studies were mostly in agreement that discrimination of Muslims was associated with worse mental health. Findings did not vary by race and ethnicity, but there were variations by gender and immigration status. There was a dearth of studies on the effect of Islamophobia and physical health outcomes. Typically, a specific health condition was examined by only 1 or 2 studies, thus minimizing the strength of the physical health conclusions.

Findings also showed that discrimination of Muslims was associated with poor health care-seeking behavior. Women who reported wearing religious attire also reported more discrimination in health care settings, and a study has found that religious clothing influences the care Muslim patients receive.<sup>49</sup> Notably, these studies did not clearly define religious attire (e.g., hijabs or veils). This showed how Islamophobia goes beyond our conventional understanding of the relationship between race, discrimination, and health disparities, as characteristics such as religious attire can put one at risk for less favorable treatment or outcomes.

### Measures of Islamophobic Discrimination

Studies varied in how they defined and measured Islamophobic discrimination. The majority of studies did not use a specific measure of Islamophobia or discrimination and, at most, used 1 to 5 survey items that asked about general experiences of discrimination. Among these studies, racial/ethnic discrimination was used more frequently than religious discrimination. One study used the

Schedule of Racist Events,<sup>52</sup> and one used the full Everyday Discrimination Scale.<sup>31</sup> A few studies used the Perceived Religious Discrimination Scale developed by Rippey and Newman<sup>61</sup> to measure religious discrimination of Muslims in health care.<sup>32</sup> Interestingly, some studies, using the same data, operationalized discrimination using a different number of scale items,<sup>36–38</sup> thus limiting comparability.

Islamophobia, however, encompasses several types of discrimination, including racial or religious discrimination. Studies did not differentiate between the different types of discrimination that Islamophobia comprises (e.g., racism, religious discrimination, discrimination on the basis of gender) and they infrequently used multiple, multidimensional, or multilevel measures of Islamophobia. However, many of the reviewed studies intended to examine racial, ethnic, or religious discrimination in isolation and not the more complex construct of Islamophobia. Health research should draw from race and ethnicity research that demonstrates an understanding of racialization of religion and intersectionality of Muslim identity.<sup>11</sup> Only 1 study distinguished between racial and religious discrimination and health outcomes,<sup>65</sup> highlighting the importance of choosing multiple and appropriate measures of Islamophobia.

Given shortcomings in measuring Islamophobia, future studies should focus on different dimensions of discrimination, such as religious attire or immigration status, which may capture the nuances of the harmful effects of Islamophobia. Moreover, as Martin explains,<sup>49</sup> religion-related discrimination is of interest given the heightened level of Islamophobia and that the US census does not currently document religion. Therefore, future research initiatives should collect, analyze, and disseminate data on the role of religious discrimination and health. Also, we must consider how the health impact of Islamophobia differs from the impact of religious or race-based discrimination among various groups, such as African Americans, to understand if the impact of Islamophobia is uniquely deleterious.

Importantly, the studies we reviewed focused overwhelmingly on the acts of discrimination perpetrated by 1 individual against another, meaning that the roles of

structural discrimination and Islamophobia were ignored. Because systems of oppression operate at multiple levels,<sup>13,22</sup> the effects of Islamophobia on health also have to be understood at multiple levels, ranging from the individual to the structural.<sup>5</sup> Measures of residential segregation, racialized institutional policies, and internalized Islamophobia could help researchers understand how multiple levels of Islamophobia operate to affect health. Overall, more research is needed in this area to disentangle the independent and joint influences of religion, race, and ethnicity on health.

### Mediators and Moderators

The reviewed literature omitted key variables that provide important context for Islamophobia research; namely, studies largely failed to test the moderating or mediating role(s) of measures, including status loss; refugee, immigrant, or citizenship status; gender; class; language; skin color; and religious attire. Exceptions include 3 recent studies that considered gender as a moderator,<sup>24,48,64</sup> 1 study that considered the moderating role of religion,<sup>39</sup> and 1 study that examined additional independent variables like persecution in country of origin, religious group, and length of stay in host country.<sup>62</sup>

Future research should continue to evaluate the role of religious identification as a moderator and religiosity as a mediator in the relationship between Islamophobia and health. For example, examination of religious identity as a moderator could help health researchers understand how Islamophobic discrimination affects the health of Middle Eastern immigrants who are racialized as Muslim but who may in fact be of a variety of religious affiliations. Islamophobia itself could also be a moderator or mediator of the relationship between race/ethnicity and health, particularly for groups that are racialized as Muslim.

### Subgroup Identification and Distinction

Studies generally did not include measures that capture the heterogeneity or subgroups of Muslims. The importance of delineating subgroups within this body of work is imperative. However, studies on Muslim subgroups entail a unique challenge to

researchers regarding the classification and construction of race, considering the multiple paradoxes of Muslim and Middle Eastern immigrant identities.<sup>11</sup> Relatedly, because most studies did not compare Muslim individuals with non-Latino Whites, health disparities are poorly understood. This is a noteworthy limitation because, as previously noted, many Muslims are categorized as being racially White.<sup>11</sup> Including a Middle Eastern and North African racial category would allow researchers, at the very least, to consider if that identity affects health.

Including measures that capture the diversity of experiences among Muslims will allow health researchers to explore many unanswered questions. For example, to what extent does the relationship differ by the level of one's "Whiteness" or Muslim-like appearance? Specifically, a study could examine the experiences and outcomes between women who do and do not wear hijabs (traditional religious head covering). Moreover, does the relationship differ between men and women, and if so, how? These omissions may affect individual vulnerability to discrimination (i.e., by appearing more or less Muslim) or affect what he or she attributes ambiguous experiences of discrimination to (e.g., their ethnicity, nativity, country of origin). Among immigrants, is there a difference by age at migration? How do these relationships vary between immigrants and refugees? In sum, our ability to understand the impacts of discrimination remains greatly hindered.

### Need for Validated Measures

The field can greatly benefit from the development and application of discrimination measures that are developed and validated for use among Muslim populations. Only 1 measure of religious discrimination in health care has been developed for use among Muslims.<sup>61</sup> A Perceived Islamophobia Scale has been validated across different Muslim groups in Europe and could be validated and used in other settings for health research.<sup>72</sup> We found that a majority of studies in this review adopted existing measures, and sometimes evaluated their psychometric properties among their samples.<sup>31,68</sup> For example, Hassouneh and Kulwicksi<sup>35</sup> showed that several measures of mental illness (Beck

Depression Inventory and the Center for Epidemiological Studies Depression Scale) had high Cronbach  $\alpha$  scores, suggesting high internal consistency and providing evidence that these measures may be used among Arab Americans. Relatedly, more objective measures of health outcomes (e.g., biomarkers) can circumvent the problems with validation of self-reported instruments.

Although most studies undertook a quantitative approach, several studies included qualitative or mixed methods approaches. Thus, the context in which discrimination and Islamophobia occurred could be better understood. However, with the qualitative studies, the specific way of measuring or probing for discrimination was not described in detail, making it harder to reproduce these findings. Relatedly, it is possible to expect discrimination to be a topic of discussion in interviews, but not have it arise because researchers do not specifically probe for it.

## Methodological Concerns

The present review also highlighted several important methodological and conceptual shortcomings. First, many of the studies relied on nonprobability and cross-sectional study design, which hinders the ability to draw conclusions about the impact of Islamophobia. Future studies must adopt more rigorous designs, including adopting probability samples, using longitudinal data, and using qualitative research to better understand more implicit experiences of discrimination. Multilevel and longitudinal designs are some of the ways researchers can capture structural changes in the sociopolitical climate.

Second, because many studies relied on limited or nonprobabilistic samples, there were concerns about generalizability. Most of the evidence presented in this review relied on small samples yielded primarily from convenience or snowball designs of specific populations, further limiting the representativeness of the findings for the general population. Few studies used nationally representative probability samples that would bolster generalizability. Instead, studies were limited to specific geographic areas, particularly the Detroit and Chicago areas, thereby undermining our ability to understand this phenomenon on a global level.

Third, because studies focused on limited geographic regions, we do not know if the health impact of Islamophobia operates the same way across geopolitical contexts. Future work should consider the role of geography, urbanicity, socioeconomic status, and neighborhoods. Muslims live in both rural and urban areas. Although there is scholarship on how particular cities shape Muslim experiences,<sup>8,73</sup> the health impact of Islamophobia may also vary greatly by neighborhood and by a community's socioeconomic context. Transnational studies should compare experiences of Muslims across countries. Comparative studies between North America and Europe can help determine if differences in national-level structural factors such as immigration policies, media coverage, and access to health care alter the deleterious health impact of Islamophobia on individuals. Future studies that incorporate such structural factors can guide the development of more refined theoretical frameworks for understanding discrimination for racialized religious groups and facilitate analytic approaches that include moderators, mediators, and appropriate comparison groups.

This review is subject to some limitations. Delineating the search parameters is challenging because the racialization of religion makes it hard to define Muslims and Muslim-like groups who experience Islamophobia. Even after we fully reviewed the search articles, it was difficult to capture how Islamophobia intersects with other experiences of discrimination. Although much of this area of health research is new and developing, this review systematically captures what may be Islamophobia for groups that are likely to experience it. Finally, given the quality of the reviewed articles, more methodologically rigorous studies of Islamophobia and health are needed.

Despite these limitations, capturing all the existing literature on Islamophobia and health is a crucial step in making advances in research on racism, racialization of religion, discrimination, and health. This review provides an analysis of studies assessing the relationship between Islamophobia and health, serving as a resource to researchers, practitioners, and policymakers to shape directions for future research, policies, and programmatic efforts. Addressing the discrimination-related poor health that Muslims and racialized Muslim-

like subgroups experience is central to the goals of health equity and assurance of the fundamental right to health. **AJPH**

## CONTRIBUTORS

G. Samari conceptualized and supervised the study and led the writing. H. E. Alcalá created the search strategy. M. Z. Sharif led the analyses. All authors participated in conducting the search and writing the article.

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## HUMAN PARTICIPANT PROTECTION

Institutional review board approval is not required as this is a systematic literature review of existing studies.

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