

The Association between Religious Discrimination and Health: Disaggregating by Types of Discrimination Experiences, Religious Tradition, and Forms of Health

CHRISTOPHER P. SCHEITLE 
West Virginia University

JACQUI FROST
Purdue University

ELAINE HOWARD ECKLUND 
Rice University

Research finds that experiences of religious discrimination are often associated with poorer health outcomes. However, there remain important questions to consider gaps, including whether religious discrimination has similar health impacts on religious minority groups and religious majority groups, whether religious discrimination is equally harmful for both mental and physical health, and whether specific types of discrimination have different impacts on health. Using survey data from a probability sample of U.S. adults and measures representing a variety of discrimination experience types, our analyses suggest that religious discrimination is indeed harmful for health, but that experiences of religious discrimination do not universally affect mental and physical health in the same ways. Rather than significant differences in the health impacts of religious discrimination across different religious groups, we find more variation in the health impacts of different types of experiences with discrimination. Further, we find that mental health is negatively impacted by a wider range of experiences with religious discrimination than physical health. These findings are in line with social psychological research on the differential health impacts of discrimination, and they highlight the importance of context in studies of the health effects of religious discrimination.

Keywords: health, discrimination, victimization, violence.

INTRODUCTION

The United States has seen a marked increase in discrimination and violence targeting religious minorities (DOJ 2020), including an increase in reports of workplace discrimination on the basis of religion (EEOC 2021) and an increase in reports of hate crimes against religious minorities made to the police (Levin and Reitzel 2018). These trends are troubling not only because they signal a lack of religious equality and increased social and economic barriers for religious minorities, but also because discrimination—which we mean here to refer to a wide variety of

Funding acknowledgment: This research was supported by a grant from the National Science Foundation (Award #1754015 and #1753972; Christopher P. Scheitle and Elaine Howard Ecklund, Principal Investigators) and by a grant from Rice University's Faculty Initiatives Fund (Elaine Howard Ecklund, Principal Investigator).

Correspondence should be addressed to Christopher P. Scheitle, Department of Sociology and Anthropology, West Virginia University, PO Box 6326, Morgantown, WV 26506-6326.
E-mail: cpscheitle@mail.wvu.edu

Journal for the Scientific Study of Religion (2023) 0(0):1–24

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bias-motivated adverse experiences—often correlates with worse health outcomes that can further harm marginalized groups.

Numerous studies have documented the negative health effects of experiencing mistreatment based on one's gender, race, sexuality, and other marginalized social locations (Kessler, Michelson, and Williams 1999; Krieger 2014; Lewis, Cogburn, and Williams 2015; Pascoe and Richman 2009; Williams et al. 2019). However, there are relatively few studies that specifically examine the relationship between *religious* discrimination and health. The research that has been done in this area finds that, in the United States, religious minority groups—particularly Muslims and Jews—are more likely to experience religious discrimination than majority religious groups (Scheitle and Ecklund 2020; Vang, Hou, and Elder 2019; Wu and Schimmele 2019) and that religious discrimination is harmful for both mental health (Jordanova et al. 2015; Wu and Schimmele 2019) and physical health (Abbott and Mollen 2018; Doane and Elliott 2015).

However, there remain important gaps in our understanding of the ways religious discrimination impacts health and whether religious discrimination affects health in the same ways as other forms of discrimination. To start, the findings are inconsistent regarding whether religious discrimination has similar health impacts across different religious groups. While some studies suggest that discrimination targeted toward religious minorities results in worse health outcomes for these groups (Hu, Yang, and Luo 2017; Van de Velde, Buffel, and Praag 2020), other studies find no significant differences in religious discrimination's effects across religious groups (Jordanova et al. 2015; Wu and Schimmele 2019). Results from these studies reveal that the increased rates of discrimination experienced by religious minorities can compound into worse health outcomes, but also that religion may be a more effective “buffer” against discrimination for religious minorities in ways that may even out the impacts of religious discrimination on health outcomes between minority and majority religious groups (Shah 2019; Vang, Hou, and Elder 2019).

Second, a majority of the research on the health effects of religious discrimination focuses only on the relationship between religious discrimination and *mental* health, leaving a gap in knowledge regarding how religious discrimination impacts *physical* health and whether one aspect of health is impacted more than another by experiences of religious discrimination. While there is plenty of evidence to suggest that discrimination is harmful for all aspects of health (Lewis, Cogburn, and Williams 2015), many studies suggest that discrimination is more harmful for mental health than it is for physical health (see Paradies 2006). These relationships, however, have not yet been tested in relation to religious discrimination.

Finally, analyses of the relationship between religious discrimination and health typically focus only on a single measure of religion-based discrimination or combine a range of measures that span different forms of discrimination into one scale variable. This is problematic because research in social psychology shows that the type of discrimination and the context in which it occurs matter for whether and how discrimination impacts health (Krieger 2014; Williams et al. 2019). Not only are people less likely to report discrimination directed at themselves than they are to report discrimination directed at their group (Postmes et al. 1999; Ruggiero and Taylor 1997; Taylor et al. 1990), interpersonal forms of discrimination are also found to be more harmful for health than more organizational or institutional forms of discrimination (Armenta and Hunt 2009; Bourguignon et al. 2006). But studies in this area typically focus on discrimination based on race or gender differences, and it has yet to be tested if these processes work similarly for experiences of religious discrimination.

Taken together, we know that religious discrimination is harmful for health, but there is still very little research on the nuances of these relationships. Are the effects of religious discrimination on health universal across different religious groups? Is religious discrimination equally harmful for both mental and physical health? Do specific contexts or types of religious discrimination matter more than others for how that experience impacts someone's health? In this study, we start to address these gaps by drawing on recent survey data collected from a sample of U.S. adults that utilizes multiple measures of religious discrimination, as well as measures of both

mental and physical health. We examine the effects of religious discrimination on both mental and physical health across a range of different religious groups. We also assess the individual associations between our physical and mental health outcomes with 15 distinct types of religious discrimination that span both interpersonal forms of discrimination, such as being the target of verbal insults or physical violence, as well as experiences of discrimination stemming from interactions with individuals acting on behalf of organizations, such as being denied employment or housing.

We find that religious discrimination is indeed harmful for health, but that experiences of religious discrimination do not universally affect mental and physical health in the same ways. In line with other studies in this area (Jordanova et al. 2015; Wu and Schimmele 2019), we largely do not find significant differences in the health impacts of religious discrimination across different religious groups. Rather, we find more variation in the health impacts of different *types* of experiences with discrimination. This is in line with previous social psychological research on the differential health impacts of discrimination (Armenta and Hunt 2009; Bourguignon et al. 2006). Further, we find that mental health is more negatively impacted by a wider range of experiences with religious discrimination than physical health.

These findings have important implications for how we understand the effects of religious discrimination, and how we might help mitigate these effects in the future. While there are rich lines of theorizing about the relationships between discrimination and health, religion is an understudied axis of difference in this research. Furthermore, past research on religious discrimination, in particular, has largely focused on examining differences in the health impacts of discrimination across religious groups but has ignored how other factors identified in the social psychological literature—like the context of the discriminatory experience and the social role of the perpetrator—might matter for if and how health is impacted. We show that contextual factors do matter for how religious discrimination impacts health, and we provide a new lens into the mechanisms through which religious discrimination impacts health.

RELIGIOUS DISCRIMINATION AND HEALTH

While religious involvement is often linked to better mental and physical health due to the social, psychological, and material resources that religion can provide (George, Ellison, and Larson 2002; Hackney and Sanders 2003), it can also be the basis for discrimination in ways that are harmful for health. Scheitle and Ecklund (2020) find that Christians, Muslims, Jews, and atheists all report experiences of hostility, discrimination, and violence due to their religiosity, though Muslims and Jews report these experiences at higher rates. Experiences of religious discrimination have been reported in the workplace (Cragun et al. 2012; Scheitle and Corcoran 2018; Wallace, Wright, and Hyde 2014; Wright et al. 2013), at schools (Cragun et al. 2012; Pfaff et al. 2021), and in everyday interactions with family, friends, and peers (Aidenberger and Doehne 2021; Scheitle and Ecklund 2020).

Much of the research on religious discrimination's effects on health focuses on a specific religious minority group. For example, perceived religious discrimination has been linked to anxiety, paranoia, psychological distress, reduced life satisfaction, and reduced self-esteem among Muslims (Ghaffari and Ciftci 2010; Hashem and Awad 2021; Jasperse, Ward, and Jose 2012). Similarly, perceived discrimination among atheists has negative effects on their psychological and physical well-being (Abbott and Mollen 2018; Doane and Elliott 2015).

Studies that take a more comparative approach show that religious minority groups are more likely to encounter religious discrimination than religious majority groups (Scheitle and Ecklund 2020), but there are conflicting findings regarding whether religious minorities are more or less likely to experience negative health effects as a result of that discrimination. Some studies suggest that higher rates of discrimination among religious minorities result in worse health outcomes for

these groups (Hu, Yang, and Luo 2017; Van de Velde, Buffel, and Praag 2020). Other studies find that religious minorities experience fewer negative health effects as a result of religious discrimination, suggesting that religion is a stronger coping mechanism for marginalized groups and that it may buffer the negative health effects of religious discrimination for religious minorities more than for majority religious groups (Bierman 2006; Jordanova et al. 2015; Shah 2019). Still, other studies find no difference in the health effects of religious discrimination across religious groups (Vang, Hou, and Elder 2019; Wu and Schimmele 2019).

Not only are there conflicting findings about the relationships between religious discrimination and health across religious groups, but there are surprisingly few studies investigating the physical health effects of religious discrimination in general. Almost every study in this area focuses on a single measure of mental health, such as self-rated mental health, self-esteem, or psychological distress. However, physical health may also be impacted by experiences of religious discrimination, and mental health is closely related to physical health in many ways. Discrimination is a psychological stressor that is typically uncontrollable and often unpredictable (Pascoe and Richman 2009), which is particularly harmful for health. Repeated exposure to this type of psychological stressor can result in a range of physiological responses, including elevated blood pressure, heart rate, and cortisol secretions, all of which can result in increased cardiovascular disease risk and higher blood pressure (Richman et al. 2010). Experiences with discrimination can also increase participation in unhealthy behaviors, such as drinking or drug use, and can decrease participation in healthy behaviors (Pascoe and Richman 2009).

Thus, both mental and physical health have been found to be impacted by discrimination, and they, in many ways, have a mutually reinforcing relationship. However, some studies suggest that discrimination is more harmful for mental health than it is for physical health (Paradies 2006) and some experiences with discrimination may affect one form of health more than another. For example, being verbally attacked may affect mental health but not necessarily physical health, while being denied service by a medical provider could have more direct impacts on physical health. This points to the need for better understandings of the *contexts* of religious discrimination and the ways they might differentially impact health.

THE CONTEXTS OF RELIGIOUS DISCRIMINATION

There are a variety of contextual factors that influence whether and how discrimination influences health. To start, religion intersects with numerous other social locations that might mitigate or compound the effects of religious discrimination. A person's age, race, and gender influence whether or not they will be discriminated against due to their religion and the kinds of resources they have for coping with the stress of that experience. Jordanova et al. (2015) find that religious discrimination is more prevalent among younger people than older people, as well as among unmarried people than married people. Edgell, Frost, and Stewart (2017) find that nonreligious women are more likely to be discriminated against than nonreligious men.

Race is a particularly important social location to consider in studies of religious discrimination in the United States because religious minority groups are often racialized in ways that can make it difficult to separate out the effects of racial versus religious discrimination (Ferguson, Scheitle, and Ecklund 2023). For example, Gerteis, Hartmann, and Edgell (2020) find that Muslims are socially excluded in American society at higher rates than other religious minorities groups because Muslims are seen as both racial *and* religious outsiders. Jordanova et al. (2015) find that people of color are much more likely to report experiences of religious discrimination than white people. This can lead to what scholars call a "double disadvantage" (e.g., Grollman 2012) where individuals who perceive multiple forms of discrimination have worse physical and mental health outcomes than those reporting only one form of discrimination. Compounded with the fact that people of color in the United States tend to report lower physical and mental health

more generally (Crimmins and Zhang 2019) and that marginalized groups generally have fewer resources to manage the negative effects of discrimination (Link and Phelan 2001), these factors can come together to compound the negative health effects of religious discrimination for religious minorities groups who are racialized.

Another contextual factor that is important to account for when examining the relationship between religious discrimination and health is the level at which the discrimination occurs. Social psychological research on the health effects of discrimination shows that people are more likely to perceive discrimination in some contexts than others, and that certain types of discrimination tend to be more harmful for health than others. For example, people are less likely to report discrimination directed at themselves than they are to report discrimination directed at their group (Postmes et al. 1999; Ruggiero and Taylor 1997; Taylor et al. 1990). Many argue that this discrepancy stems from people's desire to minimize discrimination directed at themselves as a way to maintain self-esteem, while discrimination directed at their group is seen as less stressful because of the salutary effects of shared group identity (Branscombe, Schmitt, and Harvey 1999). When discrimination leads an individual to identify more strongly with their stigmatized group, this can help bolster self-esteem and positive affect (Bourguignon et al. 2006).

As a result, more interpersonal forms of discrimination are often found to be more harmful for health than more organizational or institutional forms of discrimination (Armenta and Hunt 2009; Bourguignon et al. 2006). Models of stress and coping suggest that more subtle forms of discrimination at the interpersonal level often produce more stress for individuals because of the ambiguous nature of these interpersonal interactions, whereas discrimination stemming from interactions with an organization tend to take on more recognizable forms (Pascoe and Richman 2009). When an individual has a clearer mental representation of how a stressor will play out, they can more readily activate coping mechanisms to reduce that stress.

These theories are supported by a recent article examining the types of religious discrimination experienced in the workplace by Schneider et al. (2022). They found that their respondents were more likely to describe interpersonal experiences of religious discrimination, such as feeling excluded or stereotyped by their coworkers, than they were to report being discriminated against at the organizational level by their workplace. They explain that while most research in this area focuses on workplace religious discrimination at the organizational level, such as studies about hiring and firing discrimination (e.g., Wallace, Wright, and Hyde 2014; Wright et al. 2013), interpersonal forms of discrimination in the workplace are understudied. They argue, "Although things such as teasing, name-calling, offensive comments, and social othering fall into murkier legal territory, these kinds of behaviors can still be detrimental to employee well-being and mental health, job satisfaction, and morale" (Schneider et al. 2022: 2).

Thus, there are important differences in the perceptions and health effects of different types of religious discrimination, particularly regarding whether they are perceived to be at the individual or organizational level. However, current studies on the relationship between religious discrimination and health typically rely only on a single survey measure of discrimination—either a measure focused on just one setting, such as discrimination in the workplace (e.g., Scheitle and Corcoran 2018), at school (Pfaff et al. 2021) or "everyday interactions" (Aidenberger and Doehne 2021), or they rely on a single measure that combines a variety of settings and experiences (e.g., Shah 2019; Vang, Hou, and Elder 2019). Relatedly, current studies in this area tend to focus on one specific religious group and often only investigate one axis of difference, such as gender (Jasperse, Ward, and Jose 2012) or immigrant status (Rippy and Newman 2006). However, there have yet to be any studies comparing the health effects of religious discrimination *across* these various contexts, which social psychological research on the differential impacts of discrimination on health suggests may matter.

Given the research reviewed here, we set out to answer three interrelated research questions left unanswered by the current research on relationships between religious discrimination and health. (1) Does religious discrimination impact mental and physical health in the same ways?

(2) Do these relationships vary depending on one's religious tradition? (3) Do these relationships vary depending on the specific type of discrimination or the context in which the discrimination takes place? By utilizing a survey that allows us to disaggregate a range of different types of religious discrimination and assess their impact on both mental and physical health, we contribute to understandings of the ways context shapes the health impacts of religious discrimination.

DATA

This study utilizes survey data produced from the 2019 Experiences with Religious Discrimination Study (ERDS). The ERDS survey was administered using the Gallup Panel. The Gallup Panel is a representative sample of U.S. adults recruited through address- and random digit dialing-based sampling methods. In total, the panel contains about 100,000 individuals. About 80,000 of the panelists complete surveys online, while about 20,000 panelists without internet access complete surveys through the mail.

A total of 10,198 panelists were invited to complete the ERDS survey. This consisted of 5131 randomly selected individuals along with targeted oversamples of individuals who had previously indicated that they were Muslim, Jewish, Buddhist, Hindu, or atheist on previous panel surveys. Individuals were provided a \$2 prepaid incentive. Of the 10,198 individuals invited to complete the ERDS survey, there were 4774 completions. Gallup computed weights to account for the oversampling of certain religious groups and patterns of nonresponse. The 2017 Current Population Survey and aggregate data from the Gallup Daily Tracking Survey were utilized to generate targets for the weighting. The weights project the data to the U.S. adult population.

MEASUREMENT

While some previous surveys have included one or two questions about religious discrimination or victimization, the ERDS was designed specifically to measure and document individuals' experiences with, fears of, and responses to hostility, discrimination, threats, and violence due to their religion or, in the case of individuals who do not identify with a religion, because they do not have a religion. Because of the survey instrument's dedicated focus, this study has a variety of measures to assess both the focal predictors and outcomes of interest.

Outcomes: Physical and Mental Health

We consider two outcomes in this study representing different aspects of an individual's well-being. The first outcome is the individual's self-reported health that is assessed using a single item. The ERDS survey asked, "Would you say your health in general is excellent, very good, good, fair, or poor?" Responses were coded (1) poor, (2) fair, (3) good, (4) very good, and (5) excellent. For the analyses below, we dichotomize these responses to compare the poor/fair/good health responses (0) to the very good/excellent responses (1). As we will see when examining the descriptive statistics, this operationalization divides the distribution of responses roughly in half.

The second outcome represents an individual's level of mental distress. This is measured with six items that comprise the widely used scale known as the K6 scale of mental distress (Kessler et al. 2003). These items began with the prompt, "During the past 30 days, about how often did you feel..." Six items were then presented for individuals to respond to: (a) nervous, (b) hopeless, (c) restless or fidgety, (d) so depressed that nothing could cheer you up, (e) that everything was an effort, and (f) worthless? To mirror the positive-oriented coding of the self-reported health outcome, responses were coded so that higher values represent less mental distress: (1) all of the time, (2) most of the time, (3) some of the time, (4) a little of the time, and (5) none of the time. Given this, we refer to this outcome as representing mental health rather than mental distress.

Predictors: Religious Discrimination and Religious Victimization

The ERDS survey instrument included a series of items asking about organizational forms of religious discrimination that began with the following statement: “These next questions ask whether you have experienced discrimination because of your religion in different organizational and institutional settings.” Note that the emphasis on the “because of your religion” phrase was present on the survey itself. The survey then asked, “Since you reached the age of 16, how often do you suspect you have experienced the following kinds of incidents because of your religion?” Nine experiences were offered: (a) been denied employment, (b) been fired from a job, (c) received an unfair work evaluation, (d) been treated unfairly by a school, college, or other educational institution, (e) been evicted or denied housing, (f) been refused services when trying to purchase goods or services (e.g., restaurant, hotel, bank, grocery store, etc.), (g) been treated unfairly by a doctor, nurse, hospital, or other medical provider, (h) been treated unfairly when traveling (e.g., in a taxi, airport, etc.), and (i) been harassed by the police.¹ Individuals could say that they experienced each of these, (0) none, (1) once, or (2) twice or more. It is important to note that the following instruction was provided for those who do not identify with a religion to clarify the relevance of these items to them: “If you identify as an atheist, agnostic, or otherwise do not have a religion, please respond to these questions to tell us whether you have experienced discrimination because of these identities or because you do not have a religion.” We summed these items to create a total count of experiences, although this count is obviously restricted given that the individual items have a maximum value of “twice or more.”

Another group of items on the ERDS survey asking about bias-motivated harassment, threats, violence, or other forms of more interpersonal forms of religious victimization began with the statement, “We now want to turn our attention to incidents of harassment, threats, and violence due to beliefs or identities that you hold.” Individuals were then asked, “Since you reached age 16, how often do you suspect you have experienced the following kinds of incidents because of your religion?” Six experiences were offered: (a) had verbal insults directed at you, (b) been threatened with physical violence, (c) had your personal property damaged or destroyed, (d) been chased or followed, (e) been physically assaulted, and (f) had your home vandalized. As with the discrimination items above, individuals could say that they experienced each of these (0) none, (1) once, or (2) twice or more. A similar clarification statement as the one above was provided for those who do not identify with a religion. Similar to the discrimination items, we summed responses to create a scale of religious victimization experiences.

We employ these items in a couple different ways in the analyses below. In some models, we examine the impact of the total number of experiences with religious discrimination and religious victimization. We also estimate models where each discrimination and victimization experience type is considered individually. A majority of the research in this area focuses on either one type of discrimination—for example, discrimination at work or “everyday discrimination”—or they utilize a single-scale measure of all types of discrimination experiences. Social psychological research shows that there are different types of discrimination one can experience—for example, institutional, interpersonal, or structural (Krieger 2014; Williams et al. 2019)—and that the contexts of a discrimination experience matter for if and how it will impact health (Armenta and Hunt 2009; Bourguignon et al. 2006). This is why we break each type of discrimination out in our analyses in order to assess their individual impacts on health and to determine if we can discern any clear patterns in religious discrimination’s effects on health.

¹On the survey, the police harassment item was included with the victimization items. However, we consider it here a better example of a form of organizational or institutional discrimination.

Moderator

One of the questions of interest in this study is whether religious discrimination and victimization experiences impact individuals differently depending on their religious tradition. To assess this, in some models, we include interaction terms between such experiences and religious tradition. Religious identity was measured with a question asking, "Religiously, do you consider yourself to be Protestant, Catholic, Jewish, Muslim, Hindu, Buddhist, atheist, or something else? If more than one, mark the one that best describes you." Twenty-four responses were offered including the ability to choose and specify "something else." These 24 responses were recoded into the following categories for this study: (1) Christian, (2) Jewish, (3) Muslim, (4) Buddhist, (5) Hindu, (6) Some other religion, and (7) No religion. The latter includes individuals who chose the responses of atheist, agnostic, and no religion. As with any "other" category, the "some other" religion group is diverse. However, it does consist of a substantial proportion of individuals identifying with terms such as pagan, Wiccan, and other related identities.

Controls

Our analysis accounts for several other measures that could be associated with an individual's frequency of experiences with religious discrimination and victimization and their physical and mental health. That is, we aim to isolate the associations between religious discrimination and victimization and individuals' well-being from any confounding associations with, say, religious identity, race and ethnicity, socioeconomic status, and other social locations.

We also include measures representing individuals' self-reported religiosity and religious service attendance. The former comes from a question asking, "To what extent do you consider yourself a religious person?" Responses were coded (1) not at all religious, (2) slightly religious, (3) moderately religious, or (4) very religious. Religious service attendance comes from a question asking, "How often do you attend religious services?" Responses ranged from (1) never to (9) more than once a week.

The analysis also accounts for individuals' race or ethnicity, gender, and age. The survey asked, "Which of the following best represents your race or ethnicity? You may mark more than one." Offered responses were: (1) White, Caucasian, European, (2) Black, African, Caribbean, (3) Hispanic, Latino, (4) Middle Eastern, Central Asian, Northern African, Arab, (5) East Asian (Chinese, Japanese, Korean, Taiwanese, etc.), (6) South Asian (Indian, Pakistani, Bangladeshi, etc.), (7) Native American, American Indian, (8) Pacific Islander, and (9) Other, specify. Due to the small number of cases in some of these categories and the selection of multiple responses among some individuals, they were recoded into the following for this study: (1) White, Caucasian, European, (2) Black, African, Caribbean, (3) Hispanic or Latino, (4) Middle Eastern, Central Asian, Northern African, Arab, (5) East Asian, (6) South Asian, (7) Some other race or ethnicity, and (8) Multiple races or ethnicities. The White category serves as the reference group in the analyses. The survey also asked individuals, "What is your gender?" Possible responses were (1) man, (2) woman, (3) nonbinary, and (4) other, please specify. Due to the small number of cases, we combine the latter two categories. The man category serves as the reference group in the analyses. From the Gallup Panel's background data on panelists, we include measures representing individuals' age, education, income, and number of children. Age is measured continuously and ranges from 18 to 96. Education is measured on an eight-point scale ranging from (1) less than a high school diploma to (8) postgraduate or professional degree. Income, which refers to individuals' "total family income, from all sources, before taxes," is measured on a 13-point scale ranging from (1) less than \$30,000 to (13) \$250,000. Number of children represents the number of individuals under 18 currently living in the individual's household.

ANALYTIC STRATEGY

We began our analysis by examining descriptive statistics for all the measures discussed above, with a particular interest in assessing the overall frequency of religious discrimination and victimization experiences among our sample and the overall proportions and means for our measures of physical and mental health. We then conducted bivariate analyses comparing proportions and means for our well-being outcomes between individuals reporting a religious discrimination or victimization experience and those individuals who do not report such an experience. This provided an initial assessment of whether religious discrimination and victimization are equally harmful for both physical *and* mental health, as well as whether more interpersonal forms of religious victimization impact health in similar ways as experiences of religious discrimination that are more at the organizational level or perpetrated by someone acting on behalf of an organization.

The next stage of our analysis consisted of logistic and ordinary least squares (OLS) regression models predicting our health outcomes while accounting for our control measures. We also examined models featuring interaction terms between discrimination or victimization experiences and religious tradition. These models allowed us to assess whether such experiences are particularly consequential for individuals belonging to particular traditions. Finally, we examined logit and OLS in which each specific type of religious discrimination or victimization experience is considered individually to further assess how the type and context of the discriminatory experience differently shapes health outcomes. All analyses were conducted in Stata/SE 18 and employed survey weights to account for the oversampling of respondents who identified as Muslim, Jewish, Buddhist, Hindu, or atheist.

RESULTS

Table 1 presents descriptive statistics for all the measures examined in our analysis. Looking at the outcome measures, we see that just over 55% of U.S. adults report being in very good or excellent health. In turn, this means that about 45% report being in only poor, fair, or good health. The mean score on our scale of mental well-being is 4.05. This means that across the six items included in this scale, the average response is closest to the “a little of the time” response (i.e., feeling nervous a little of the time in the past 30 days).

Turning to our focal predictors, we see that the discrimination item with the highest mean is “treated unfairly by a school or college.” The victimization item with the highest mean is having verbal insults directed at the individual. Figure 1 presents the means for the summed discrimination and victimization measures by religious tradition. Muslims score particularly high when it comes to both discrimination and victimization experiences. Jews also score high on both types of experiences relative to Christians.

Effects of Any Experience with Religious Discrimination

Table 2 presents an initial examination of the association between experiences with religious discrimination, religious victimization, and health. The top-half of the table presents a cross-tabulation of the percentage of individuals reporting very good or excellent health by whether they report *any* experience with religious discrimination or victimization (i.e., they score higher than zero on the summed discrimination or victimization items). We see that—among those who do not report any experience with religious discrimination—56% report very good or excellent health. This declines to just under 50% among those who do report such an experience. This difference is statistically significant ($p < .05$). We see a similar gap when comparing those who report an experience with religious victimization with those who do not. Just over 57% of those who have not experienced religious discrimination report very good or excellent health, compared to 50%

Table 1: Descriptive statistics

	Mean or percent- age	Linearized standard error	Min- Max
Very Good\Excellent Health	55.38%	–	0–1
Mental Health (K6, reverse coded)	4.05	.01	1–5
Count of Experiences with Organizational Religious Discrimination	.41	.03	0–18
Count of Experiences with Interpersonal Religious Victimization	.80	.03	0–12
Organizational Religious Discrimination Experiences			
Denied employment	.03	–	0–2
Fired from job	.02	–	0–2
Unfair work evaluation	.05	–	0–2
Treated unfairly by school\college	.10	–	0–2
Evicted or denied housing	.01	–	0–2
Refused services by business	.02	–	0–2
Treated unfairly by medical provider	.05	–	0–2
Treated unfairly while travelling	.05	–	0–2
Harassed by police	.05	–	0–2
Interpersonal Religious Victimization Experiences			
Had verbal insults directed at you	.47	–	0–2
Been threatened with physical violence	.12	–	0–2
Personal property damaged	.07	–	0–2
Chased or followed	.07	–	0–2
Physically assaulted	.03	–	0–2
Home vandalized	.02	–	0–2
Religion			
Christian	62.64%	–	–
Jewish	1.94%	–	–
Muslim	1.02%	–	–
Buddhist	0.76%	–	–
Hindu	0.75%	–	–
Some other religion	9.10%	–	–
No religion (ref.)	23.79%	–	–
How religious	2.34	.02	1–4
Religious service attendance	3.72	.05	1–9
Race or ethnicity			
White	67.27%	–	–
Black	12.84%	–	–
Hispanic or Latino	7.38%	–	–
Arab, North African	0.18%	–	–
East Asian	0.22%	–	–

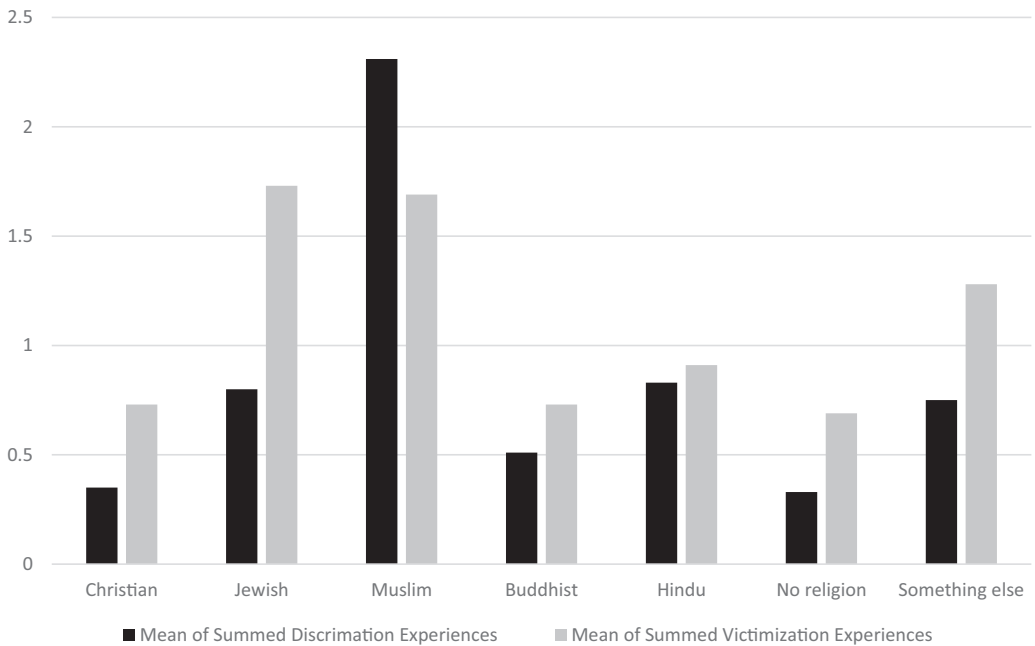
(Continued)

Table 1: (Continued)

	Mean or percentage	Linearized standard error	Min-Max
South Asian	0.74%	–	–
Some other race or ethnicity	1.72%	–	–
Multiple race or ethnicities	9.65%	–	–
Gender			
Man	48.08%	–	–
Woman	50.05%	–	–
Nonbinary	1.28%	–	–
Some other gender	0.59%	–	–
Age	45.47	.38	18–93
Education	4.05	.04	1–8
Income	5.95	.07	1–13
Children	.64	.02	0–4

Note: Data from Experiences with Religious Discrimination Study (ERDS) Survey; *N* = 4428; Data weights applied.

Figure 1
Means for summed religious discrimination and victimization experiences by religious tradition



of those who do report at least experience with religious victimization. Again, this difference is statistically significant ($p < .01$).

The bottom-half of Table 2 compares the mean mental health score for those who have experienced religious discrimination to those who have not. We see that the mean mental-health score for those who have not experienced religious discrimination is 4.11. This compares to 3.74 for those who have experienced at least one type of religious discrimination. We find a similar gap

Table 2: Bivariate differences in health by experiences with religious discrimination and religious victimization

Self-Reported Health	Organizational religious discrimination experiences		Interpersonal religious victimization experiences	
	None	Any	None	Any
Poor\Fair\Good	43.57%	50.26%	42.39%	49.68%
Very Good\Excellent	56.43%	49.74%	57.61%	50.32%
<i>Total</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>
Design-Based <i>F</i> -test <i>p</i> -value	<i>p</i> < .05		<i>p</i> < .01	

Mental Well-being	Organizational religious discrimination experiences		Interpersonal religious victimization experiences	
	None	Any	None	Any
Mean Score	4.11	3.74	4.14	3.86
Difference between means	<i>p</i> < .001		<i>p</i> < .001	

Note: Data from Experiences with Religious Discrimination Study (ERDS) Survey; $N = 4428$; Data weights applied.

when looking at religious victimization (4.14 compared to 3.86). The differences between these means are statistically significant ($p < .001$).

The comparisons presented in Table 2 provide initial support for the hypothesis that experiencing religious discrimination and victimization is associated with a decline in physical and mental health. This is in-line with previous research. However, Table 2 obviously does not account for other potential factors shaping both health and experiences with religious discrimination and victimization. It is possible, for instance, that older individuals have had more time to be exposed to religious discrimination and victimization—and therefore, they may be more likely to report having had such an experience—when compared to younger individuals. Older individuals may also tend to report poorer health compared to younger individuals. Given such possibilities, we must control for potential confounding variables. Moreover, Table 2 does not address other questions of interest in this study. For example, does the association between discrimination or victimization and well-being differ across religious traditions? And are particular types of religious discrimination or victimization more strongly associated with declines in health than other types? To consider begin considering such questions, we first turn to Table 3.

The left side of Table 3 presents logistic regression models predicting whether individuals report very good or excellent health, while the right side presents OLS regression models predicting individuals' scores on the mental health scale. Model 1 considers the independent association between the number of experiences with religious discrimination, religious victimization, and reporting very good or excellent health. We find that the number of religious victimization experiences is significantly associated with reduced logged odds of reporting very good or excellent health independent of the number of religious discrimination experiences, religious tradition, religiosity, and a variety of sociodemographic measures. This finding reinforces the baseline pattern seen in Table 2. On the other hand, the number of religious discrimination experiences an individual reports does not have a significant independent association with self-reported health after

Table 3: Logistic and OLS regression models predicting physical and mental health by any experience with religious discrimination or religious victimization

	Logit predicting excellent\very good self-reported health			OLS predicting mental well-being score		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Summed Organizational Religious Discrimination Experiences	-.01	.01	-.01	-.05*	-.02	-.05*
Summed Interpersonal Religious Victimization Experiences	-.10**	-.10**	-.06	-.04**	-.04**	-.02
Religion						
Christian (ref.)	-	-	-	-	-	-
Jewish	.07	.03	.01	-.02	-.03	-.04
Muslim	.51	-.09	.06	-.10	-.01	-.08
Buddhist	.04	-.01	.08	-.10	-.12	-.10
Hindu	-.19	.30	.02	-.28	-.15	-.38*
No religion	-.06	-.02	.01	-.09*	-.08	-.07
Something else	-.24	-.19	-.14	-.18**	-.12	-.07
Religious Discrimination X Religion						
Religious Discrimination X Christian (ref.)	-	-	-	-	-	-
Religious Discrimination X Jewish	-	.03	-	-	-.01	-
Religious Discrimination X Muslim	-	.27*	-	-	-.08	-
Religious Discrimination X Buddhist	-	.09	-	-	.02	-
Religious Discrimination X Hindu	-	-.72*	-	-	-.28	-
Religious Discrimination X No religion	-	-.13	-	-	-.02	-
Religious Discrimination X Something else	-	-.10	-	-	-.10*	-
Religious Victimization X Religion						
Religious Victimization X Christian (ref.)	-	-	-	-	-	-
Religious Victimization X Jewish	-	-	.01	-	-	.01
Religious Victimization X Muslim	-	-	.34	-	-	-.02
Religious Victimization X Buddhist	-	-	-.04	-	-	.01
Religious Victimization X Hindu	-	-	-.14	-	-	.11*
Religious Victimization X No religion	-	-	-.11*	-	-	-.02
Religious Victimization X Something else	-	-	-.09	-	-	-.09
How religious	-.09	-.09	-.09	-.01	-.01	-.01
Religious service attendance	.08**	.08**	.08**	.03**	.03**	-.03**
Race and ethnicity						
White (ref.)	-	-	-	-	-	-
Black	-.43**	-.43**	-.43**	.05	.05	.05
Hispanic	.01	.01	.01	-.09	-.08	-.08
Arab, North African	.12	-.14	-.05	.20	.32	.21
East Asian	-.17	-.19	-.21	-.03	-.02	-.03

(Continued)

Table 3: (Continued)

	Logit predicting excellent\very good self-reported health			OLS predicting mental well-being score		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
South Asian	.20	.43	.02	.02	.18	.03
Other	.84	.82	.82	.30*	.28*	.28*
Multiple	.11	.12	.11	.02	.02	.02
Gender						
Man (ref.)	—	—	—	—	—	—
Woman	.01	.01	.01	-.09**	-.08**	-.08**
Nonbinary	-.29	-.23	-.26	-.64**	-.62**	-.65**
Other	1.56*	1.46*	1.56*	-.31	-.37	-.34
Age	-.01*	-.01*	-.01	.01**	.01**	.01**
Education	.12**	.13**	.12**	-.01	-.01	-.01
Income	.11**	.11**	.11**	.04**	.04**	.04**
Children	-.04	-.04	-.04	.01	-.01	-.01
Constant	.54	-.62	-.60	3.16	3.14	3.16
<i>N</i>	4428	4428	4428	4428	4428	4428
<i>R</i> ²	—	—	—	.22	.22	.22

Note: Data from Experiences with Religious Discrimination Study (ERDS) Survey; Data weights applied; * $p < .05$ ** $p < .01$; Logit coefficients represent effects on logged odds; OLS coefficients are unstandardized.

accounting for victimization experiences, religious tradition, and our other controls. The initial association seen in Table 2 between religious discrimination and self-reported health could have been a function of the overlap between experiencing discrimination and victimization, but this model suggests that—net of victimization experiences—religious discrimination is not associated with self-reported health.

Looking at the control measures in model 1, we do not find any independent associations between religious tradition—relative to Christians—or self-reported religiosity and the logged odds of reporting very good or excellent health. We do find, though, that religious service attendance is positively associated with the logged odds of reporting very good or excellent health. Turning to the more demographic measures, we see that Black individuals report significantly reduced logged odds of having very good or excellent health compared to White individuals. We also see that age is associated with reduced logged odds of reporting very good or excellent health, while education and income are both independently associated with increased logged odds of an individual saying they have very good or excellent health.

Model 2 considers whether the overall effect of religious discrimination on self-reported health seen in model 1 differs by religious tradition. Remember that this overall effect was not significant, so we are essentially considering whether religious discrimination might matter for specific groups even if it does not matter overall. To assess this, we introduce a series of interaction terms between experiencing religious discrimination and religious tradition. We see that the interaction term for Hindu is statistically significant and negative. This suggests that, while religious discrimination might not have an overall independent association with self-reported health, it does negatively impact self-reported health for Hindus. On the other hand, we find that the interaction term for Muslims is significant and in the positive direction, meaning that religious discrimination is associated with better self-reported health for Muslims. This is a somewhat surprising

effect that we will discuss later, although one possibility is that—for some groups—experiences of discrimination strengthen one's sense of identity and community, which could have health benefits. Model 3 assesses whether the overall effect of religious victimization seen in model 1 differs across religious traditions. The only interaction term that is statistically significant is that for those who say they have no religion. The analysis finds that the overall negative association between religious victimization and self-reported health is somewhat stronger for those with no religion.

We now turn to models 4–6 in Table 3, which present OLS regression models predicting individuals' scores on the mental health scale. In model 5, we find that religious discrimination experiences are significantly associated with reduced mental health scores—*independent of religious victimization experiences and other religious and demographic measures*. We also see that religious victimization experiences are significantly associated with reduced mental health scores—*independent of religious discrimination and other controls*. Remember that only religious victimization experiences had an independent association with self-reported health in model 1, but here we find that both types of experiences matter by themselves. This suggests that religious discrimination can impact mental health even in the absence of religious victimization, while it tends to impact physical health only to the extent that the individual has also experienced religious victimization.

Looking at the other control measures in model 4, we find that those saying that their religion is “something else” or “no religion” have significantly reduced mental health scores relative to Christians. We also find that religious service attendance is positively associated with mental health above and beyond the other measures in the model. Women and nonbinary individuals report lower mental health scores relative to men, while older individuals and those with higher incomes report higher mental health scores.

Model 5 assesses whether the overall effect of religious discrimination on mental well-being varies by religious tradition. As with models 2 and 4, we introduce interaction terms to assess this question. The interaction term for the “something else” religious category is statistically significant and negative. This indicates that experiences of religious discrimination for this group have a larger association with reduced mental well-being than what is seen among Christians. Model 6 includes interaction terms between religious victimization experiences and religious tradition. Somewhat surprisingly, we find that the interaction term for Hindus is significant and positive, meaning that religious victimization experiences have a weaker or null association with mental health for this group.

The findings presented in Table 3 consider the *total* number of religious discrimination and victimization experiences reported by an individual. It is possible, though, that specific types of religious discrimination or specific types of religious victimization are more or less consequential to an individual's physical or mental health. We now turn to consider this question.

Effects of Specific Experiences

Table 4 presents logistic regression models predicting self-reported health that mirror models 1 and 3 in Table 3. However, in these models, we assess each specific type of religious discrimination and victimization individually. Note that all the control measures included in Table 3 are also included in these models, but we do not present them in Table 4. Models 1–9—shown in the top-half of Table 4—present the findings for specific religious discrimination experiences.

We see that most of the coefficients for the discrimination experiences are in the expected direction—with discrimination being associated with reduced logged odds of reporting very good or excellent health. Only the measure indicating discrimination by a medical provider, however, shows a statistically significant negative association with self-reported health. That is, discrimination in healthcare settings appears to have a particularly definitive association with an individual's reported health.

Table 4: Logistic regression models predicting physical health by specific religious discrimination and religious victimization experiences

<i>Organizational Religious Discrimination</i>	<i>Logistic regression models predicting excellent\ very good self-reported health</i>								
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Been denied employment	-.43*	-	-	-	-	-	-	-	-
Been fired from a job	-	-.46	-	-	-	-	-	-	-
Received an unfair work evaluation	-	-	-.29	-	-	-	-	-	-
Treated unfairly by school\college	-	-	-	-.17	-	-	-	-	-
Evicted or denied housing	-	-	-	-	-.33	-	-	-	-
Refused services at business	-	-	-	-	-	.49	-	-	-
Treated unfairly by medical provider	-	-	-	-	-	-	-.58**	-	-
Treated unfairly when travelling	-	-	-	-	-	-	-	.01	-
Harassed by police	-	-	-	-	-	-	-	-	-.16
Controls	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428
<i>N</i>	4428	4428	4428	4428	4428	4428	4428	4428	4428

(Continued)

Table 4: (Continued)

	<i>Logistic regression models predicting excellent\very good self-reported health</i>					
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
<i>Interpersonal Religious Victimization</i>						
Verbal insults	-.26**	-	-	-	-	-
Threatened with physical violence	-	-.14	-	-	-	-
Personal property damaged	-	-	-.29*	-	-	-
Chased or followed	-	-	-	-.39**	-	-
Physically assaulted	-	-	-	-	-.20	-
Home vandalized	-	-	-	-	-	-.30
Controls	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428
<i>N</i>	4428	4428	4428	4428	4428	4428

Note: Data from Experiences with Religious Discrimination Study (ERDS) Survey, *N* = 4428; Data weights applied; **p* < .05 ***p* < .01; Logit coefficients represent effects on logged odds.

Surprisingly, though, we find that individuals who say that they have been refused services or goods by a place of business actually have higher logged odds of reporting very good or excellent health. This is counter to what we would theoretically expect and goes against the pattern seen across the other measures. We will discuss this further below, but one possibility for this finding is that individuals with particularly good health are more likely to be active and social, on average, and therefore, more likely to be exposed to discrimination as they are more frequently engaged in consumer or business interactions. Better health may therefore increase the risk of discrimination rather than experiences with discrimination influencing health.

The bottom-half of Table 4 presents the models for the specific religious victimization experiences. In these models, we find that only three of the six religious victimization experiences are significantly associated with self-reported health. Individuals who have received verbal threats, had personal property damaged, or been chased or followed have significantly reduced logged odds of saying that they have very good or excellent health. While the coefficients are in the expected negative direction, we do not find significant differences in self-reported health for those who have been threatened with physical violence, been physically assaulted, been harassed by the police, or had their home vandalized. However, these are generally rarer incidents, so it is possible that this is more an issue of statistical power than these incidents having no real association with individuals' health.²

Table 5 is similar to Table 4 but it presents OLS regression models predicting our mental health outcome. In the top-half of Table 5, we see the models for the individual types of religious discrimination experiences. As with Table 4, the control measures are included in the model but are not shown in this table. We find that, with one exception, all of the specific religious discrimination experiences are significantly associated with reduced scores on the mental health scale. The one exception is with the measure indicating an experience with being refused goods or services in a place of business, which does not show a statistically significant association with mental health. Remember that this measure was also one of the exceptions to the findings for self-reported health. A similar logic could be relevant here. That is, individuals with better mental health are more socially engaged or active, and therefore, more exposed to religious discrimination in consumer or business settings. This could run counter to the expected negative association between experiencing discrimination and mental health. Finally, the bottom-half of Table 5 presents the findings for the specific religious victimization experiences. Here we find that all six of the specific victimization experiences are significantly associated with reduced mental health scores.³

DISCUSSION

As reports of religious discrimination in the United States continue to rise, we need more research into the different contexts in which people experience religion-based discrimination and the various health effects of these experiences. Research to date has focused largely on assessing differences in the health effects of religious discrimination across different religious groups, but less work has been done to examine whether the health effects of religious discrimination are shaped by the type of discrimination experienced or the contexts in which the discrimination takes place. Research on the relationship between religious discrimination and health tends to utilize a singular measure of discrimination that combines a range of different contexts and forms

²If we include all of the individual items simultaneously, then the denied employment becomes nonsignificant, refused service becomes significant, and medical provider remains significant in the top-half of the table. In the bottom-half of the table, the personal property damaged becomes nonsignificant but others remain significant.

³If we include all individual items simultaneously, the school and medical provider remain significant in the top-half of the table. In the bottom-half of the table, insults and threats remain significant, while others become nonsignificant.

Table 5: OLS models predicting mental health by specific religious discrimination and religious victimization experiences

<i>Organizational Religious Discrimination</i>	<i>Ordinary least squares regression models predicting mental health</i>								
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Been denied employment	-.27**	-	-	-	-	-	-	-	-
Been fired from a job	-	-.34*	-	-	-	-	-	-	-
Received an unfair work evaluation	-	-	-.19*	-	-	-	-	-	-
Treated unfairly by school\college	-	-	-	-.20**	-	-	-	-	-
Evicted or denied housing	-	-	-	-	-.53**	-	-	-	-
Refused services at business	-	-	-	-	-	-.02	-	-	-
Treated unfairly by medical provider	-	-	-	-	-	-	-.35**	-	-
Treated unfairly when travelling	-	-	-	-	-	-	-	-.14**	-
Harassed by police	-	-	-	-	-	-	-	-	-.18**
Controls	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428
<i>N</i>	4428	4428	4428	4428	4428	4428	4428	4428	4428

(Continued)

Table 5: (Continued)

	<i>Ordinary least squares regression models predicting mental health</i>					
<i>Interpersonal Religious Victimization</i>	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
Verbal insults	-.11**	-	-	-	-	-
Threatened with physical violence	-	-.20**	-	-	-	-
Personal property damaged	-	-	-.21**	-	-	-
Chased or followed	-	-	-	-.21**	-	-
Physically assaulted	-	-	-	-	-.14*	-
Home vandalized	-	-	-	-	-	-.20*
Controls	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428	Controls in model 4428
<i>N</i>	4428	4428	4428	4428	4428	4428

Note: Data from Experiences with Religious Discrimination Study (ERDS) Survey. *N* = 4428; Data weights applied; **p* < .05 ***p* < .01; Coefficients are unstandardized.

of discrimination, ignoring potential differences in the health effects of different types of discrimination. Further, the majority of work in this area focuses on religious discrimination's impacts on mental health, leaving a gap in our understandings of how religious discrimination impacts physical health.

Our study builds on this past research, but innovates in important ways. First, we examined the effects of religious discrimination on both mental *and* physical health across a range of different religious groups. We also investigated the individual associations between our physical and mental health outcomes with 15 distinct types of religious discrimination that span both interpersonal forms of discrimination, such as being the target of verbal insults or physical violence, as well as experiences of discrimination stemming from interactions more at the organizational level, such as being denied employment or housing.

We find that, rather than significant differences in the health impacts of religious discrimination across different religious groups, what seems to matter more is the *context* in which the discrimination happens. In our models, interpersonal forms of religious victimization were more consistently associated with reduced well-being than were experiences of discrimination that were the result of interactions with an organization's representatives. This is in line with previous social psychological research that suggests adverse experiences at the interpersonal level often produces more stress for individuals because of the unpredictable and ambiguous nature of these interactions, whereas adverse experiences stemming from interactions with an organization tends to take on more recognizable forms in ways that people can more easily deploy coping mechanisms to manage it (Armenta and Hunt 2009; Bourguignon et al. 2006; Pascoe and Richman 2009). In this analysis, we show that these social psychological theories, which have until now largely ignored religion as an axis of discrimination on its own terms, are in many ways applicable to understand the health effects of religious discrimination.

There continue to be ongoing debates and inconsistent findings about whether religious discrimination is more harmful for some religious groups than others. We found very few significant differences in the health impacts across religious groups. We did find that religious discrimination appears to have a stronger negative impact on the self-reported health of Hindus. In a couple of cases, though, we found that some religious minority groups appear to be less impacted by religious discrimination and victimization. The negative association between discrimination and self-reported health appears to be attenuated or even eliminated among Muslims, for instance. Social psychological research suggests that religion may be a stronger coping mechanism for religious minority groups, which can reduce the negative health effects of all forms of discrimination (Bierman 2006; Jordanova et al. 2015; Shah 2019). This could help explain why we found so few differences across religious groups.

By far the biggest differences we found in our analyses were the differences between religious discrimination's impacts on mental health versus physical health. We found that, across both interpersonal and organizational types of religious discrimination, mental health was more likely to be negatively impacted than physical health. Indeed, while mental health and physical health can be connected, they are by no means perfectly correlated. Even in the data analyzed above, the correlation between the two is strong but not overwhelmingly so ($r = .50$). This is in line with previous research in the health literature that finds other forms of discrimination (e.g., racial discrimination) are more harmful for mental health than physical health (Paradies 2006). However, the cross-sectional nature of our survey is an important limitation in this sense. Experiences with discrimination tend to be more immediately harmful to mental health, but repeated exposure to the psychological stress caused by discrimination can set off a range of harmful physiological responses (Pascoe and Richman 2009; Richman et al. 2010). Thus, the physical health consequences of discrimination often take longer to manifest than the mental health consequences, and so, we are likely not able to capture the full effect of religious discrimination on physical health with our cross-sectional data.

Despite these limitations, our study is one of the first to compare the mental and physical health effects of religious discrimination, and we need more studies investigating the mechanisms through which religious discrimination can be harmful for physical health. This is especially important given our finding that religious discrimination by a medical provider is one of the more common experiences of religious discrimination at the organizational level, and it is the only organizational measure we had that was significantly related to physical health. Cheng, Pagano, and Shariff (2019) explain that despite doctors and clinicians receiving training to work with diverse religious groups, the majority may be less religious than their patients, and doctors have been found to make poorer clinical judgments for patients whose religious beliefs they are less familiar with. This highlights the need for healthcare providers and institutions to consider how they engage with patient's religious identities, beliefs, and behaviors and the health consequences of adverse encounters on patients.

Although this study has several strengths relative to past research, it is not without its own limitations. While not unusual in this area of research, it is worth acknowledging that our measures are of a self-report nature. That is, we are asking individuals about their *perceptions* of experiences that they see as being due to their religion. Such perceptions are going to be driven by a number of social psychological mechanisms, and we are not able to make claims about the objective nature of the experiences themselves. Moreover, our data are cross-sectional in nature which obviously limits our ability to determine causation with certainty. As we suggested above, this limitation could play a role in explaining some of our findings. It could explain the lack of significant relationships we find with physical health. Our analysis found that individuals who report experiencing religious discrimination in consumer or business settings actually report better physical health than those who do not report such experiences. Again, it is possible that those in better physical health are more socially active and therefore exposed to this form of discrimination. Health, then, may lead to increased discrimination experiences.

An argument could also be made that individuals with poorer mental well-being, for instance, might be more likely to perceive some experiences as bias-motivated. That is, it is possible that poor physical or mental well-being could be causing perceptions of religious discrimination and victimization rather than being caused by such perceptions. While this may occur in some cases, there are strong theoretical reasons to see well-being as largely the outcome of religious discrimination and victimization rather than the predictor of such experiences. Finally, our only available measure of physical health was a single-item measure, while our measure of mental health was more robust. This could have impacted the outsized impact of our discrimination on mental health in our analyses, though a variety of studies across different populations have shown these types of measures of self-reported health to be valid indicators of health (e.g., Fosse and Haas 2009; Gyasi and Phillips 2018; Miilunpalo et al. 1997).

Taken together, in this article, we have improved upon past research on the health impacts of religious discrimination by moving beyond focusing solely on differences between religious groups to start investigating how different *contexts* of religious discrimination might differentially impact mental and physical health across religious groups. We find that context does matter, and perhaps matters more than religious affiliation. These findings point to the need for more research on the mechanisms through which religious discrimination impacts health so that we can create more and better social policies to help minimize its effects.

REFERENCES

- Aidenberger, Amelie and Malte Doehne. 2021. Unveiling everyday discrimination: Two field experiments on discrimination against religious minorities in day-to-day interactions. *British Journal of Sociology* 72(2):328–46.
- Abbott, Dena and Debra Mollen. 2018. Atheism as a concealable stigmatized identity: Outness, anticipated stigma, and well-being. *The Counseling Psychologist* 46(6):685–707.

- Armenta, Brian and Jennifer Hunt. 2009. Responding to societal devaluation: Effects of perceived personal and group discrimination on the ethnic group identification and personal self-esteem of Latino/Latina adolescents. *Group Processes & Intergroup Relations* 12(1):23–39.
- Bierman, Alex. 2006. Does religion buffer the effects of discrimination on mental health? Differing effects by race. *Journal for the Scientific Study of Religion* 45(4):551–65.
- Bourguignon, David, Eleonore Seron, Vincent Yzerbyt and Ginette Herman. 2006. Perceived group and personal discrimination: Differential effects on personal self-esteem. *European Journal of Social Psychology* 36:773–89.
- Branscombe, Nyla, Michael Schmitt and Richard Harvey. 1999. Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology* 77:135–49.
- Cheng, Zhen Hadassah, Louis A. Pagano, Jr. and Azim F. Shariff. 2019. The development and validation of the microaggressions against religious individuals scale (MARIS). *Psychology of Religion and Spirituality* 10(2):327–38.
- Cragun, Ryan, Barry Kosmin, Ariela Keysar, Joseph Hammer and Michael Nielsen. 2012. On the receiving end: Discrimination toward the non-religious in the United States. *Journal of Contemporary Religion* 27(1):105–27.
- Crimmins, E. M. and Y. S. Zhang (2019). Aging Populations, Mortality, and Life Expectancy. *Annual Review of Sociology*, 45(1):869–89. <https://doi.org/10.1146/annurev-soc-073117-041351>
- Department of Justice. 2020. 2019 Hate Crimes Statistics Report (Retrieved February 21, 2022 from <https://www.justice.gov/crs/highlights/FY-2019-Hate-Crimes>)
- Doane, Michael and Marta Elliott. 2015. Perceptions of discrimination among atheists: Consequences for atheist identification, psychological and physical well-being. *Psychology of Religion and Spirituality* 7(2):130–41.
- Edgell, Penny, Jacqui Frost and Evan Stewart. 2017. From existential to social understandings of risk: Examining gender differences in nonreligion. *Social Currents* 4(6):556–74.
- EEOC (Equal Employment Opportunity Commission). 2021. Section 12: Religious Discrimination.
- Ferguson, Jauhara, Christopher P. Scheitle and Elaine Howard Ecklund. 2023. Religion, race, and perceptions of police harassment. *Social Problems* 70(3):735–754. <https://doi.org/10.1093/socpro/spac040>
- Fosse, Nathan E. and Steven A. Haas. 2009. Validity and stability of self-reported health among adolescents in a longitudinal, nationally representative survey. *Pediatrics* 123(2):e496.
- George, Linda, Christopher Ellison and David Larson. 2002. Explaining the relationship between religious involvement and health. *Religion and Psychology* 13(3):190–200.
- Ghaffari, Azadeh and Ayse Ciftci. 2010. Religiosity and self-esteem of Muslim immigrants to the United States: The moderating role of perceived discrimination. *The International Journal for the Psychology of Religion* 20:14–25.
- Gerteis, Joseph, Douglas Hartmann and Penny Edgell. 2020. Racial, religious, and civic dimensions of anti-Muslim sentiment in America. *Social Problems* 67(4):719–40.
- Grollman, Eric Anthony. 2012. Multiple forms of perceived discrimination and health among adolescents and young adults. *Journal of Health and Social Behavior* 53(2):199–214.
- Gyasi, Razak M. and David R. Phillips. 2018. Gender, self-rated health and functional decline among community-dwelling older adults. *Archives of Gerontology and Geriatrics* 77:174–83.
- Hackney, Charles and Glen Sanders. 2003. Religiosity and mental health: A meta-analysis of recent studies. *Journal for the Scientific Study of Religion* 42(1):43–56.
- Hashem, Hanan and Germine Awad. 2021. Religious identity, discrimination, and psychological distress among Muslim and Christian Arab Americans. *Journal of Religion and Health* 60:961–73.
- Hu, Anning, Xiaozhao Yousef Yang and Weixiang Luo. 2017. Christian identification and self-reported depression: Evidence from China. *Journal for the Scientific Study of Religion* 56(4):765–80.
- Jasperse, Marieke, Colleen Ward and Paul Jose. 2012. Identity, perceived religious discrimination, and psychological well-being in Muslim immigrant women. *Applied Psychology: An International Review* 61(2):250–71.
- Jordanova, Vesna, Mike Crawford, Sally McManus, Paul Bebbington and Traolach Brugha. 2015. Religious discrimination and common mental disorders in England: A nationally representative population-based study. *Social Psychiatry and Psychiatric Epidemiology* 50:1723–29.
- Kessler, Ronald C., Peggy R. Barker, Lisa J. Colpe, Joan F. Epstein, Joseph C. Gfroerer, Eva Hiripi, Mary J. Howes, Sharon-Lise T. Normand, Ronald W. Manderscheid, Ellen E. Walters and Alan M. Zaslavsky 2003. Screening for serious mental illness in the general population. *Archives of General Psychiatry* 60(2):184–89.
- Kessler, Ronald, Kristin Michkelson and David Williams. 1999. The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior* 40:208–30.
- Krieger, Nancy. 2014. Discrimination and health inequities. *International Journal of Health Services* 44(4):643–710.
- Levin, Brian and John David Reitzel. 2018. Report to the Nation: Hate Crimes Rise in U.S. Cities and Counties in Time of Division and Foreign Interference. Report for Center for the Study of Hate & Extremism.
- Lewis, Tene, Courtney Cogburn and David Williams. 2015. Self-reported experiences of discrimination and health: Scientific advances, ongoing controversies, and emerging issues. *Annual Review of Clinical Psychology* 11:407–40.
- Link, Bruce and Jo Phelan. 2001. Conceptualizing stigma. *Annual Review of Sociology* 27(1) 363–85.

- Miilunpalo, Seppo, Ilkka Vuori, Pekka Oja, Matti Pasanen and Helka Urponen. 1997. Self-rated health status as a health measure: The predictive value of self-reported health status on the use of physician services and on mortality in the working-age population. *Journal of Clinical Epidemiology* 50(5):517–28.
- Paradies, Yin. 2006. A systematic review of empirical research on self-reported racism and health. *International Journal of Epidemiology* 35(4):888–901.
- Pascoe, Elizabeth and Laura Smart Richman. 2009. Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin* 135(4): 531–54.
- Pfaff, Steven, Holder Kern, Charles Crabtree and John Holbein. 2021. Do street-level bureaucrats discriminate based on religion? A large-scale correspondence experiment among American public school principals. *Public Administration Review* 81:244. <https://doi.org/10.1111/puar.13235>.
- Postmes, Tom, Nyla Branscombe, Russell Spears and Heather Young. 1999. Comparative processes in personal and group judgments: Resolving the discrepancy. *Journal of Personality and Social Psychology* 76(2):320–38.
- Richman, Laura Smart, Jolynn Pek, Elizabeth Pascoe and Daniel Bauer. 2010. The effects of perceived discrimination on ambulatory blood pressure and affective responses to interpersonal stress modeled over 24 hours. *Health Psychology* 29(4):403–11.
- Rippy, Alyssa and Elana Newman. 2006. Perceived religious discrimination and its relationship to anxiety and paranoia Among Muslim Americans. *Journal of Muslim Mental Health* 1:5–20.
- Ruggiero, K. M. and D. M. Taylor (1995). Coping with discrimination: How disadvantaged group members perceive the discrimination that confronts them. *Journal of Personality and Social Psychology*, 68(5):826–838. <https://doi.org/10.1037/0022-3514.68.5.826>
- Ruggiero, Karen and Donald Taylor. 1997. Why minority group members perceive or do not perceive the discrimination that confronts them: The role of self-esteem and perceived control. *Journal of Personality and Social Psychology* 72(2):373–89.
- Scheitle, Christopher and Elaine Howard Ecklund. 2020. Individuals' experience with religious hostility, discrimination, and violence: Findings from a new national survey. *Socius* 6:1–15.
- Scheitle, Christopher and Katie Corcoran. 2018. Religious tradition and workplace religious discrimination: The moderating effects of regional context. *Social Currents* 5(3):283–300.
- Schneider, R. C., D. Carroll Coleman, E. Howard Ecklund and D. Daniels (2022). How Religious Discrimination is Perceived in the Workplace: Expanding the View. *Socius: Sociological Research for a Dynamic World*, 8, 237802312110709. <https://doi.org/10.1177/23780231211070920>
- Shah, Sarah. 2019. Does religion buffer the effects of discrimination on distress for religious minorities? The case of Arab Americans. *Society and Mental Health* 9(2):171–91.
- Taylor, Donald, Stephen Wright, Fathali Moghaddam and Richard Lalonde. 1990. The personal/group discrimination discrepancy: Perceiving my group, but not myself, to be a target for discrimination. *Personality and Social Psychology Bulletin* 16(2):254–62.
- Van de Velde, Sarah, Veerle Buffel and Lore Van Praag. 2020. Depressive feelings in religious minorities: Does the religious context matter? *Journal of Religion and Health* 59:2504–30.
- Vang, Zoua, Feng Hou and Katharine Elder. 2019. Perceived religious discrimination, religiosity, and life satisfaction. *Journal of Happiness Studies* 20:1913–32.
- Wallace, Michael, Bradley Wright and Allen Hyde. 2014. Religious affiliation and hiring discrimination in the American South: A field experiment. *Social Currents* 1(2) 189–207.
- Williams, David R., Jourdyn Lawrence, Brigitte David and Cecilia Vu. 2019. Understanding how discrimination can affect health. *Health Services Research* 54:1374–88.
- Wright, Bradley, Michael Wallace, John Bailey and Allen Hyde. 2013. Religious affiliation and hiring discrimination in New England: A field experiment. *Research in Social Stratification and Mobility* 34:111–26.
- Wu, Zheng and Christoph Schimmele. 2019. Perceived religious discrimination and mental health. *Ethnicity & Health* 26(7):963–80.