

# Religious Anti-Gay Prejudice as a Predictor of Mental Health, Abuse, and Substance Use

Babucarr J. Sowe, Alan J. Taylor, and Jac Brown

Macquarie University

Anti-gay, or homonegative, prejudice is generally considered harmful to the wellbeing of sexual minority individuals. However, the origins or nature of such prejudice may vary. Despite a sizable body of literature suggesting homonegative prejudice is frequently religious-based, the psychological impact of exposure to *religious* anti-gay prejudice remains largely undetermined. Addressing this research gap, the authors examined whether opposition to same-sex sexuality on religious grounds predicted detrimental outcomes among same- and both-sex attracted individuals, as well as their heterosexual counterparts. A nationwide U.S. sample of 1600 individuals—recruited using contemporary online crowd-sourcing techniques designed to limit selection bias—completed a novel inventory assessing interpersonal exposure to religious (as well as nonreligious) homonegative disapproval. Outcome variables assessed included a number of clinically relevant measures spanning general mental health, social support, suicidality, abuse, and substance use. Analyses revealed that greater exposure to religious anti-gay prejudice predicted higher levels of anxiety, stress, and shame; more instances of physical and verbal abuse; and more problematic alcohol use. Furthermore, while sexual minority individuals tended to fare more poorly than their heterosexual counterparts on almost every outcome measure assessed, homonegative prejudice predicted poorer outcomes among all respondents regardless of their sexual orientation or religious identification. Hence, results are among the first to demonstrate that anti-gay religious exposure is associated with substantial threats to wellbeing, and that such effects may be observed beyond religious sexual minorities. Overall, findings imply that homonegative religious social conditions may be of broader health and mental health concern than is conventionally recognized.

## *Public Policy Relevance Statement*

Exposure to religious anti-gay prejudice predicted poorer mental health, abuse, and alcohol use outcomes among both sexual minority and heterosexual individuals. Social, legal, and institutional policies—as well as clinical and pastoral care practices—that facilitate the expression of anti-gay prejudice on religious grounds may therefore pose broad and substantial threats to wellbeing.

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**H**omonegativity refers to the disapproval or devaluation of same-sex sexuality—and same-sex attracted persons—by individuals, groups and broader society (Mayfield, 2001). Exposure to homonegative, or “anti-gay,” prejudice is generally thought to undermine the health and

wellbeing of lesbian, gay, bisexual (LGB) or otherwise same-sex attracted persons. Although a large body of literature suggests that anti-gay prejudice frequently has a religious basis, few studies have explored the relationship between religious forms of homonegativity and harm. Existing empirical research in this area has typically failed to distinguish between “religiousness” and anti-gay religious exposure, or has been limited to LGB persons involved in faith community contexts. As a result, the impact of religious homonegativity more broadly on the wellbeing of unaffiliated, formerly affiliated, and nonreligious sexual minorities—as well as their heterosexual counterparts—has not been adequately examined. The current study sought to address these oversights to determine whether anti-gay religious exposure predicted detrimental outcomes across a variety of clinically relevant measures.

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Babucarr J. Sowe, Alan J. Taylor, and Jac Brown, Department of Psychology, Macquarie University.

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Correspondence concerning this article should be addressed to Babucarr J. Sowe, Department of Psychology, Macquarie University, North Ryde, NSW 2109, Australia. E-mail: [babucarr.sowe@mq.edu.au](mailto:babucarr.sowe@mq.edu.au)

## Anti-Gay Prejudice and Harm

LGB populations repeatedly demonstrate poorer physical, behavioral, and mental health outcomes than their heterosexual counterparts (e.g., Cochran, Grella, & Mays, 2012; Hatzenbuehler, Pachankis, & Wolff, 2012; Oswalt & Wyatt, 2011; Shilo & Mor, 2014). One theoretical explanation for these discrepancies is the notion of social factors as fundamental causes of poor health (Link & Phelan, 1995). When social conditions—including relationships to other people, and positions within social and economic structures—are stigmatizing, sexual minority individuals are thought to have fewer community resources, diminished social support, and increased exposure to stress because of their sexual orientation; resulting in heightened mental and physical adversity (Hatzenbuehler, 2010; Link & Phelan, 1995). Minority stress theory similarly asserts that chronically stigmatizing environments create conditions of unique psychosocial stress for sexual minority individuals as a result of their devalued minority status. For LGB persons, harm may be enacted through minority stress processes involving actual *events* of anti-gay discrimination and victimization; ongoing *expectations* of rejection that induce anxiety and hypervigilance; and *the internalization* of negative societal attitudes regarding homosexuality (Meyer, 1995). In accordance with these perspectives, evidence from multiple studies (e.g., Keyes, Hatzenbuehler, & Hasin, 2011; Russell, Sinclair, Poteat, & Koenig, 2012; Shilo & Mor, 2014) suggests that the disproportionately high rates of mental and physical adversity observed among LGB populations mirror the disproportionately prejudicial social conditions they experience.

## Religion and Anti-Gay Prejudice

While homonegative prejudice is generally understood to be harmful, the origins or nature of such prejudice may vary. Research has previously differentiated between specific types of homonegativity, drawing particular distinction between general nonmoralistic forms of homonegative prejudice (e.g., intolerance toward homosexuals as an out-group; concerns about the demands of sexual minorities for rights) and more moralistic opposition to homosexuality on religious grounds (Doebler, 2015; Morrison & Morrison, 2002). Unlike more general anti-gay prejudice, the specific measurement of religious-based homonegativity has been largely absent in empirical studies, although the connection between (predominantly Christian<sup>1</sup>) religion and anti-gay prejudice has been widely documented. For example, individuals who report higher levels of religiosity (Chonody, Woodford, Smith, & Silverschanz, 2013), stronger religious adherence (Roggemans, Spruyt, Van Droogenbroeck, & Keppens, 2015), more frequent religious participation (Wright, 2014), greater religious commitment (Leak & Finken, 2011), or stronger integration into a religious institution (Gerhards, 2010) tend to harbor higher levels of anti-gay prejudice. Similarly, having a Christian religious affiliation (Woodford, Atteberry, Derr, & Howell, 2013), residing in a more religious region (van den Akker, van der Ploeg, & Scheepers, 2013), or viewing God as actively involved in the world (Whitehead, 2010) generally predicts greater disapproval of homosexuality and less support for LGB civil rights. Religious individuals also appear to be less willing to provide assistance to gay (than straight) persons (Batson, Floyd, Meyer, & Winner, 1999), are more likely to aggress against

gay (than straight) targets (Blogowska, Lambert, & Saroglou, 2013), and are more likely than nonreligious individuals to view homosexuality as a choice or a disorder (Hon et al., 2005; Whitehead, 2010). Taken together, this evidence strongly suggests that although religion should not be considered invariably anti-gay, anti-gay prejudice may frequently be religious-based.

## Assessing Religious Anti-Gay Prejudice and Harm

Inherent to the concept of religious-based homonegativity is the recognition that this form of prejudice is neither inert nor “simply a practice of religious expression; rather, it may have distinct negative health and mental health consequences” for LGB persons (Newman & Fantus, 2015, pp. 58–59). These consequences may be particularly pronounced among those who develop distressing *intrapersonal* conflict between their religious identity and sexual orientation (e.g., Subhi & Geelan, 2012). From empirical literature, LGB persons who are more religious, or who demonstrate greater religious participation and commitment, have been found to report higher levels of internalized homonegativity; more sexual risk-taking and self-harm; more instances of discrimination and violence; less family and friend support; greater loneliness; and lower self-esteem (e.g., Longo, Walls, & Wisneski, 2013; Meanley, Pingel, & Bauermeister, 2016; Severson, Muñoz-Laboy, & Kaufman, 2014; Shilo & Savaya, 2012). LGB youth attending religious schools have also been found to report more harmful alcohol use than those attending nonreligious institutions (Stewart, Heck, & Cochran, 2015). Alarming, Meyer, Teylan, and Schwartz (2015) also noted that LGB persons who reported seeking help from a religious advisor had greater odds of subsequently attempting suicide than those who sought no help at all. Collectively, these findings suggest that religious LGB persons—presumably due to their heightened exposure to anti-gay religious messages—are at risk of more deleterious outcomes than those who are less religiously involved. However, without actually assessing religious homonegativity, these studies are unable to distinguish between simply “being religious” and the actual nature of a person’s religious exposure.

Partially addressing this shortfall, several studies have assessed the experiences of sexual minorities within the context of affirming versus condemnatory religious faith communities. In general, LGB persons attending more homonegative faith communities have been found to report more detrimental psychological outcomes, including higher levels of internalized homonegativity, anxiety, and depression (e.g., Hamblin & Gross, 2013; Lassiter, 2014). However, those situated within more gay-friendly religious environments have tended to report more positive outcomes on these indices (e.g., Barnes & Meyer, 2012; Gattis, Woodford, & Han, 2014; Grigoriou, 2014). This pattern of results supports the notion that anti-gay religious exposure (rather than simply being

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<sup>1</sup>The term “Christian” is associated with a diverse variety of traditions, doctrines, beliefs, practices, and levels of meaning. The use of this term in the current study (and the basis by which Christians have been classified in empirical literature) broadly refers to those who believe in Jesus Christ as the Son of God, or who otherwise self-identify as Christian or report affiliation with a Christian church or tradition.

religious) is associated with psychological adversity—at least among LGB persons within faith community contexts.

Given that the participation of sexual minorities in organized religion is generally low however (Herek, Norton, Allen, & Sims, 2010), and that many religious LGB persons are not actively involved with a place of worship (Rodriguez, 2006), a substantial number of religious sexual minorities are likely to be overlooked in studies that focus on these contexts. For this reason, Sowe, Brown, and Taylor (2014) sampled LGB persons beyond these environments, examining individuals who *identified* as religious irrespective of their involvement in organized religion. The authors found that LGB Christians who perceived more anti-gay sentiment in their religious and family circles reported higher levels of internalized homonegativity and religion-sexuality distress. Additionally, *former* Christians were found to report higher levels of religion-sexuality distress than respondents who had never been religious at all. This latter observation is in line with the findings of Yakushko (2005), who noted that LGB persons who had *ever* attended a nonaffirming church at some point in the past reported greater sexual orientation distress and lower self-esteem than those who had not. Gibbs and Goldbach (2015) likewise found that LGB persons who had previously been religious, but who had left their religion because of its negative stance toward homosexuality, were at an increased risk of suicidal ideation and behavior. Collectively, these findings suggest that the impact of anti-gay religious exposure is potentially enduring and that, aside from sexual minorities who identify as religious, those most negatively affected may include those who are no longer religious at all.

Indeed, from a minority stress perspective, it would be erroneous to assume that religious anti-gay prejudice is purely a “religious” phenomenon—that is, of consequence only to religious sexual minorities. Although nonreligious LGB individuals may be less likely than their religious counterparts to attend a place of worship or internalize anti-gay doctrines, they may nonetheless *experience* (or *expect* to experience) homonegativity from religious individuals and groups they encounter. In fact, a majority of American LGB adults perceive most religious groups as being unfriendly toward them, whether they are religious themselves or not (Pew Research Center, 2013). However, no empirical methodology to date has assessed interpersonal anti-gay religious exposure in a way that includes, or applies to, both religious and nonreligious LGB persons. Nor has anti-gay religious exposure been assessed across multiple life contexts other than one’s family circle and place of worship. Because studies attempting to examine religious anti-gay prejudice have typically failed to incorporate a heterosexual comparison group, the extent to which LGB persons are differentially affected by this form of prejudice is also unknown. Such a comparison is particularly warranted because anti-gay social conditions and religious climates may negatively impact persons of *all* orientations to some degree (e.g., Fanucce & Taub, 2010; Hatzenbuehler et al., 2012; Lick, Tornello, Riskind, Schmidt, & Patterson, 2012; Peter, Taylor, & Chamberland, 2015). For example, Blumenfeld (2000) outlines a number of ways in which homonegativity can be harmful to heterosexuals—notably, that it can inhibit the ability of heterosexuals to form close attachments with members of the same sex; that it can be used to stigmatize, slander, and target *any* individual who is not perceived to be “straight”; and that it can strain or rupture the family systems of which heterosexuals are a part. To determine the impact of

anti-gay religious exposure beyond the narrow domain of religious sexual minorities, a more comprehensive measurement approach addressing these oversights is required.

## Social Support, Suicidality, and Substance Use

Although exposure to religious homonegativity may be harmful, religion more broadly may actually function as a positive or protective force in the lives of many individuals—including sexual minorities who may retain their religious faith as a source of strength, meaning, and resiliency (e.g., Hamblin & Gross, 2014; Severson et al., 2014). In the general population, being religious is frequently associated with better mental health (e.g., Weber & Pargament, 2014), as well as lower suicidality and substance use (e.g., Kelly, Polanin, Jang, & Johnson, 2015; Rasic et al., 2009). Better mental health outcomes may in part be the result of enhanced levels of social support that many faith communities (including affirming faith communities for LGB persons) are likely to provide, while moral and doctrinal objections toward suicide and substance abuse may play a role in inhibiting these particular tendencies (e.g., Lawrence, Oquendo, & Stanley, 2016; Weber & Pargament, 2014).

On the other hand, it is less clear to what extent substance use and suicidality would relate to anti-gay religious exposure. For example, research suggests that substance use among LGB persons may often be the product of sociocultural factors surrounding gay community involvement—including the use of bars and clubs as social resources, and the presence of drug tolerant norms within LGB subcultures—over and above, or in addition to, minority stress factors (e.g., Cochran et al., 2012; McKirnan & Peterson, 1989; Stall et al., 2001). A review of literature (see McDaniel, Purcell, & D’Augelli, 2001) also suggests that anti-gay stressors—even when related to poorer mental health—are not invariably linked to suicidal ideation and behavior among LGB persons (e.g., Hershberger & D’Augelli, 1995). Rather, in accordance with a minority stress perspective (Meyer, Frost, & Nezhad, 2014), suicidality may be more accurately conceptualized as a complex interplay of multiple risk and protective factors, such that the *balance* between these factors determines whether an individual is suicidal, resilient, or somewhere in-between (Fenaughty & Harré, 2003; Russell & Toomey, 2013). Accordingly, whether anti-gay religious exposure relates directly to these particular outcomes requires clarification.

## Self-Responsibility

Finally, in addition to being affected by anti-gay prejudice, mental health outcomes may also be affected by how susceptible individuals are to external influences more generally. That is, poorer outcomes may be particularly likely among individuals—of all orientations—who have less internal “authorship” or self-responsibility over their lives. According to Realo, Koido, Ceulemans, and Allik (2002), individuals with mature self-responsibility consider themselves to be causally effective agents, and as such take personal responsibility for making their own decisions, and for guiding and directing their own lives. In being autonomously self-guided, such individuals trust more in their own authority, and are less governed by, or susceptible to, external influences. Im-

pairments in these abilities appear to be associated with multiple forms of psychopathology (e.g., Halvorsen et al., 2009; Ross & Mirowsky, 2013; Ryan & Deci, 2006), and may also leave LGB individuals more vulnerable to internalizing the harmful homonegative attitudes or doctrines of others (Harris, Cook, & Kashubeck-West, 2008; Sowe et al., 2014). Together, this suggests that possessing more mature self-responsibility would be associated with better mental health outcomes.

## Hypotheses

On the basis of the evidence presented above, several specific hypotheses—as well as exploratory research questions—were generated.

*Hypothesis 1:* First, it was hypothesized that higher levels of exposure to religious homonegativity would predict poorer general mental health among LGB respondents (including greater religion-sexuality conflict among LGB Christians specifically). The current study also *explored* whether or not anti-gay religious exposure was associated with (a) suicidality and substance use, and (b) poorer outcomes among heterosexuals.

*Hypothesis 2:* It was also hypothesized that LGB persons would demonstrate poorer outcomes than heterosexuals on measures of general mental health, social support, abuse, suicidality, and substance use.

*Hypothesis 3:* It was further hypothesized that (Christian) religious individuals would report lower levels of substance use and suicidality, and higher levels of social support satisfaction, than other respondents. After accounting for differences in social support and anti-gay religious exposure, the current study also *explored* (a) whether or not religious identification was related to general mental health, and (b) whether or not former Christians demonstrated poorer outcomes than other respondents.

*Hypothesis 4:* Finally it was hypothesized that, among all respondents, possessing more mature self-responsibility would predict better general mental health outcomes.

## Method

### Participants

LGB individuals constitute a minority population whose members may conceal their sexuality—or be difficult to identify and sample beyond known LGB platforms. As such, researchers frequently recruit participants through community groups, venues, and networks that are known to cater to sexual minority individuals. This methodology however can introduce a number of problematic biases that may distort mental health indices (see Meyer & Wilson, 2009). In particular, minorities who are less “out” or less connected to the LGB community—who have different psychological and risk profiles (Ramirez-Valles, 2002)—may not be represented. The sampling techniques employed in the current study were therefore designed to minimize this problem, such that respondents were not targeted based on aspects of their sexuality or their LGB community affiliation. Instead, recruitment occurred

through a more neutral and broad-reaching online crowd-sourcing platform—Amazon Mechanical Turk (“MTurk”)—comprising a diverse pool of more than 500,000 anonymous “workers” (Amazon Mechanical Turk, n.d.). In support of this methodology, samples of MTurk workers have been shown to be more demographically diverse than samples of students and social media recruits (Casler, Bickel, & Hackett, 2013), and to be more demographically representative of the US population than convenience samples (Berinsky, Huber, & Lenz, 2012). North American MTurk workers have also been shown to provide high quality data that is both reliable and concordant with established findings obtained using traditional samples (e.g., Bates & Lanza, 2013). Furthermore, the anonymity and accessibility of such an Internet-based platform make it ideal for sampling underrepresented populations (e.g., Mustanski, 2001) and for collecting sensitive and sexual data.

Using this platform, the current study was posted as a survey task on the MTurk website, available to U.S. workers aged 18 years and older. Eligibility for completing the questionnaire was determined using a single-item screener assessing sexual attraction, which allowed for a quota of heterosexual respondents. Of those who completed the questionnaire, a small number of respondents were omitted from the dataset due to inconsistent responding, the failing of attention-checking items, overly rapid completion of the questionnaire, or duplicate responding. The final nationwide sample comprised 1600 respondents (51.7% female, 48.0% male, as well as 0.3% other), ranging from 18 to 75 years old ( $M = 29.69$ ,  $SD = 9.69$ ) who identified as opposite-sex attracted (“heterosexual”;  $n = 600$ ), both-sex attracted (“bisexual”;  $n = 716$ ), and same-sex attracted (“SSA”;  $n = 284$ ). Respondents self-identified as being White ( $n = 1215$ ), Asian/South Asian ( $n = 123$ ), Black/African American ( $n = 117$ ), Latino/Hispanic ( $n = 87$ ), Native American/Alaska Native ( $n = 8$ ), Native Hawaiian/Pacific Islander ( $n = 3$ ), Middle Eastern ( $n = 3$ ), or Other/Mixed ( $n = 44$ ).

### Measures

The initial screener asked respondents to indicate whether they were primarily attracted to the same sex, the opposite sex, or both sexes, or whether they otherwise identified as asexual, intersex, or transgender. Following the screener, eligible respondents were surveyed on age, sex and gender identity, ethnicity, and U.S. region of residence. Sexual orientation was further confirmed via three additional items spanning sexual attraction/arousal, sexual behavior, and sexual fantasies/desires with responses given on a Likert-type scale from 1 = *opposite sex only* to 7 = *same sex only*. Original measures that were created or adapted for use in the current study are described below, with additional published measures listed thereafter.

**Religious identification.** Items were developed to measure both past and current religious affiliation, using religious classifications adapted from the U.S. Religious Landscape Survey (Pew Forum, 2008) and the RELTRAD classification scheme proposed by Steensland et al. (2000). Christian classifications included *Catholic*, *Orthodox*, *Evangelical Protestant*, *Black Protestant*, *Mainline Protestant*, *Mormon*, *Jehovah’s Witnesses*, or *Other Christian*. To facilitate accurate self-classification, each Protestant category listed a number of examples of churches and

denominations belonging to each tradition. Non-Christian religious groupings included: *Jewish, Muslim, Buddhist, Hindu, and other non-Christian*. The remaining response options—*New-Age/Spiritual/Animist (with no belief in a God, deity or set of religious doctrines)* and *Atheist/Agnostic/No religious or spiritual beliefs*—were both treated as nonreligious classifications. This approach recognized that many nonreligious individuals may still have a spiritual outlook despite holding no religious beliefs of their own. From these patterns of past and current religious affiliation, three levels of *religious identification* were developed for use in the current study: “Christian” ( $n = 423$ , those who identified as Christian both currently and in the past); “former Christian” ( $n = 729$ , those who previously, but no longer, identified as Christian); and “nonreligious” ( $n = 326$ , those with no current or prior religious identification). Remaining respondents had either converted to Christianity at a later point in life ( $n = 17$ ), or else reported diverse patterns of past and current affiliation with other non-Christian religions ( $n = 105$ ). The small size and heterogeneity of these latter groups of respondents precluded them from analyses involving religious identification.

**Religion-sexuality conflict.** Expanding beyond the single item measure of religion-sexuality distress used by Sowe et al. (2014), five items were created for the current study to gauge the degree to which individuals felt their same-sex sexuality was incompatible, or in conflict, with their *personal* faith or religious beliefs. These items (“My personal religious beliefs make it difficult for me to embrace my same-sex sexuality”; “I have to struggle against my same-sex sexuality to live according to my religious convictions”; “I feel as though I have to choose between my personal religious beliefs, and my same-sex sexuality”; “From a religious perspective, I personally do not believe there is anything wrong with same-sex sexuality”; and “My personal religious beliefs, and my same-sex sexuality, fit together in harmony”) were applicable only to nonheterosexual religious respondents, with the latter two items requiring reverse scoring (overall Cronbach’s  $\alpha = .87$ ). Agreement with each of the statements was indicated on a Likert-type scale from 1 = *not at all true of me* to 5 = *extremely true of me*, and the mean was calculated for each respondent.

**Homonegative prejudice inventory (HPI).** The HPI was developed for the current study. The primary purpose of the HPI was to assess the extent to which individuals *perceived* or *encountered* disapproval of same-sex sexuality among people in their lives on religious grounds (“RelPrej”). Respondents rated the extent of RelPrej that they felt existed among nine groups of people spanning multiple life domains (e.g., family members, friends, school/workplace personnel, faith communities, etc.) on a scale ranging from 0 = *no, not at all* to 4 = *yes, to a very large extent*. This enabled a cumulative total score of prejudice to be established based on both the strength of disapproval reported and its pervasiveness across multiple life sources (Cronbach’s  $\alpha = .81$ ). If respondents indicated that a group did not apply to them (e.g., they had no siblings), a score of 0 was applied to that item (i.e., no accumulation of prejudice from this source). Importantly, items examined subjective perceptions—not only specific events—of prejudice given that same-sex sexuality may be chronically devalued in subtle or covert ways that do not

involve explicit homonegative incidents. To ensure the measure could be included across all analyses, the HPI was specifically designed to be applicable to all respondents—including those who were heterosexual and nonreligious.

A second version of the inventory (Cronbach’s  $\alpha = .84$ ) asked respondents to rate these nine groups of people again in terms of more general (i.e., not religious-based) homonegative prejudice (“GenPrej”). This meant it was possible to compare the extent to which the associations between RelPrej and outcome variables were similar to those observed for GenPrej—although GenPrej in and of itself was not the focus of current research. (See supplemental material for additional information regarding the HPI).

**Experiences of abuse.** Three items were created to measure different forms of abuse, with respondents asked to indicate during the last 12 months how many times (if at all) they had been “physically assaulted, or experienced physically harmful violence from someone?”; “verbally assaulted, or experienced harmful verbal attacks from someone?”; and “sexually assaulted, or been made to undergo unwanted sexual activity from someone?.” Respondents indicated the number of occasions to the best of their knowledge from 0 to 100.

**Drug use.** A measure of drug use was developed for the current study, adapted from items used by Hamilton and Mahalik (2009) and the drug categories included in the 2012 National Survey on Drug Use and Health (Substance Abuse and Mental Health Services Administration, 2013). Thirteen items assessed the use of (a) marijuana and/or cannabis derivatives; (b) cocaine and/or crack; (c) heroin; (d) ecstasy/MDMA/MDA; (e) hallucinogens; (f) stimulants; (g) inhalants; (h) opiates and/or nonprescribed pain-relievers; (i) nonprescribed tranquilizers, benzodiazepines, and/or anxiolytics; (j) ketamine; (k) mephedrone; (l) GHB; and (m) “other” illicit nonprescribed substances. Common examples and informal names of drugs belonging to each category were also provided. Respondents indicated usage frequency on an ordinal scale that contained 8 descriptors ranging from 1 = *use yearly or less* to 7 = *use daily* (with 0 = *have never used*). For each respondent, the number of *different types of drugs* used was recorded. Usage frequency scores across all drug categories were also summed to provide a *total score* of illicit drug use behavior (Cronbach’s  $\alpha = .83$ ). Because these total scores were based on both the *number* of drugs used and *frequency* of use, results will be described in terms of higher or lower “levels” of illicit drug use. However, given that the legality of cannabis varies across U.S. jurisdictions, cannabis use frequency was scored separately from this total measure.

**Alcohol Use Disorders Identification Test (AUDIT).** The AUDIT (Babor, de la Fuente, Saunders, & Grant, 1989) screens for excessive drinking across three conceptual domains: hazardous drinking patterns that increase the risk of adverse outcomes; harmful alcohol use that results in physical, social, and mental health consequences; and the results or indicators of alcohol dependence. Although the AUDIT is typically used as a single factor, principal component analysis (using varimax rotation with Kaiser normalization) supported the use of two factors in the current study that distinctly emerged in line with conceptual do-

main. The first factor (eigenvalue = 5.3; 52.5% of total variance; Cronbach's alpha = .88), labeled "harmful drinking consequences," included all of the 7 items that reflected the ramifications of harmful alcohol use and dependence (e.g., "Have you, or someone else, been injured because of your drinking?"). The second factor (eigenvalue = 1.1; 10.9% of total variance; Cronbach's alpha = .79), labeled "risky drinking," comprised the 3 remaining quantity/frequency drinking items used to assess potentially hazardous drinking patterns (e.g., "How often do you have six or more drinks on one occasion?"). Because different items are rated using different units of measurement (quantity, incidence, or frequency), results for these factors will be described in terms of higher or lower "levels" of risky drinking or consequences.

#### **Depression Anxiety Stress Scales–21 (DASS–21).**

The DASS–21 (Lovibond & Lovibond, 1995) contains 21 items, rated on a 4-point Likert-type scale, assessing negative emotional experiences of depression ( $\alpha = .81$ ), anxiety ( $\alpha = .73$ ), and stress ( $\alpha = .81$ ). The internal reliability of these factors in the current study was .92, .85, and .88, respectively.

**Personal Feelings Questionnaire-2 (PFQ2).** Feelings of shame were assessed using the "shame" factor of the PFQ2 (Harder & Zalma, 1990), which contains 10 descriptors rated on a 5-point Likert-type scale ( $\alpha = .78$ ). Internal reliability in the current study was .89.

**Suicidal Behaviors Questionnaire—Revised (SBQ-R).** The SBQ-R (Osman et al., 2001) assesses an individual's lifetime history of suicidality; suicidal ideation; the threat of suicidal behavior; and the likelihood of future suicide attempts, using four items rated on diversiform Likert-type scales ( $\alpha = .76$ –.88). Internal reliability in the current study was .82.

**Social Support Questionnaire– 6 (SSQ6).** The "satisfaction" dimension of the 6-item SSQ6 (Sarason, Sarason, Shearin, & Pierce, 1987) was used to assess the extent to which individuals were satisfied with the social support available to them, indicated on a 6-point Likert-type scale ( $\alpha = .90$ –.93). Internal reliability in the current study was .93.

**The Three-Component Individualism Scale (3C-IND-24).** Self-responsibility was assessed using the "self-responsibility" factor of the 3C-IND-24 (Realo et al., 2002), which contains seven statements rated on a 6-point Likert-type scale ( $\alpha = .76$ ). Internal reliability in the current study was .75.

**Religious Commitment Measure.** The Religious Commitment Measure (Krause, 2009) assesses the importance, and implementation of, religion in one's daily life using three items rated on a 4-point Likert-type scale ( $\alpha = .91$ ). Internal reliability in the current study was .93.

## **Procedure**

The project was reviewed and approved in full by the Macquarie University Human Research Ethics Committee ("Religion and sexuality: A study of mental health outcomes"; Ref: 5201300467). The survey was designed using Qualtrics software and was posted

as a task on the MTurk website. The description and aims of the study were kept brief and general and the characteristics of desired respondents were not disclosed. Workers were advised that the survey required less than 30 min to complete and involved two phases: a single-item screener (paying USD\$0.05 credit) and a questionnaire (paying USD\$2.00 credit—a respectable amount given that the average MTurk worker receives less than USD\$2.00 per hour of tasks completed; Ross, Irani, Silberman, Zaldivar, & Tomlinson, 2010). Clicking on an embedded URL directed respondents to an information and consent form. After indicating consent respondents completed the screener, which implemented branch logic to filter respondents into sexual orientation categories. Respondents who indicated same- or both-sex attraction (or opposite-sex attraction for those within the quota of heterosexuals) were able to continue with the questionnaire, whereas ineligible respondents were directed to the survey conclusion. After providing demographic and religious identification data, additional branch logic meant respondents who were religious completed the Religious Commitment Measure, and nonheterosexual religious respondents further completed the measure of religion-sexuality conflict. The remaining measures were completed by all respondents in the order: HPI, SSQ6, 3C-IND-24, DASS–21, PFQ2, drug use, AUDIT, experiences of abuse, and SBQ-R. This general sequence was used so that the most potentially emotive and sensitive items in the survey (e.g., sexual abuse, suicidality, etc.) would not unduly affect responses to other measures. The Qualtrics survey website placed an HTTP cookie on respondents' Internet browsers to prevent them from completing the survey multiple times.

## **Results**

### **Data Analysis**

Data were analyzed using IBM SPSS Statistics version 21.0.

**Outcomes.** The distributions of most outcome variables were positively skewed to the extent that an ordinary least squares regression method was not suitable even when appropriate transformations were used. For this reason outcome measures were treated as ordinal data and collapsed into ordered response categories for analyses. Data were analyzed using ordinal logistic regression (OLR) models, which produce odds ratios (*ORs*) denoting how the odds of responses being in a higher (rather than a lower) category of the outcome (e.g., stress) change with a one unit increase in the predictor (e.g., RelPrej). For the purpose of interpretation, these results will be described in terms of positive and negative relationships.

When the effect of a predictor was not uniform across all levels of the outcome variable—for instance, a predictor might only differentiate between responses in the highest versus the lowest category of an outcome, but no other pairs of categories—it was necessary to use the related procedure of nominal logistic regression (NLR) instead. In these cases, the specific nature of the effect required elaboration in text. When the distribution of a variable was skewed to the extent that it was only possible to create binary outcome categories—that is, outcome occurred, or did not occur—binary logistic regression (BLR) was used for analyses. However, because binary categories were not supported when examining

cocaine, heroin, ketamine, mephedrone, or GHB use individually—as very few respondents reported using these substances—these items were examined only as part of total measures of drug use.

Finally, in the interests of brevity (given the different scales and levels of measurement of the outcome variables), *higher* scores on measures of mental ill-health, suicidality, abuse, drinking, illicit drug use, and religion-sexuality conflict, and *lower* scores on social support satisfaction, will typically be referred to as “worse” or “poorer” outcomes on these measures.

**Predictors.** The variables *RelPrej*, *orientation*, *religious identification*, and *self-responsibility* were included in each model as primary predictors. *Age*, *sex*, and *ethnicity* were included as controls. When *social support satisfaction* was not being examined as an outcome variable of interest, it was also included as a control variable across analyses. This ensured that any differences in outcomes on the basis of orientation, sex, ethnicity or religious identification were not merely because of differences in social support between groups of respondents. Furthermore, *religious commitment* was controlled for in models that predicted the outcome of *religion-sexuality conflict*—which was only relevant to nonheterosexual respondents who identified as Christian. Tests indicated that multicollinearity among independent variables was uniformly low (VIFs ranged from 1.015 to 1.973).

Given the large sample size and the considerable number of analyses to be performed, an overall criterion of  $\alpha = .01$  was chosen for individual main effects to exercise some degree of control over Type I error. A criterion of  $\alpha = .001$  was used for interactions to avoid retaining—and attempting to interpret—trivial interaction effects that were of little practical significance, particularly given the very large number of possible interactions that were tested. Bonferroni adjustments were also applied when following up significant effects.

## Prejudice

RelPrej was a significant predictor of multiple outcomes (see supplemental table 1 for a summary of the significant predictors of each outcome). Higher levels of RelPrej predicted higher levels of *stress*, *shame*, and *depression*, although after controlling for social support satisfaction the effect of RelPrej on depression was only approaching significance ( $p = .0266$ ). Higher levels of RelPrej also predicted more *anxiety* among respondents, with this effect observed when comparing the highest category of anxiety with each of the other lower anxiety categories. Furthermore, as RelPrej increased, respondents reported experiencing more occasions of *verbal* and *physical abuse* in the prior 12 months, while nonheterosexual Christian respondents also reported experiencing greater *religion-sexuality conflict*. In addition, RelPrej was the only variable in the model to predict *harmful drinking consequences*, with higher levels of RelPrej associated with worse outcomes on this measure. In predicting *risky drinking* however, RelPrej approached, but did not reach, significance ( $p = .0204$ ).

With regard to *social support satisfaction*, a 2-way interaction between RelPrej and orientation was observed. As RelPrej increased, bisexual and SSA individuals reported a more marked reduction in social support satisfaction than heterosexuals did. There was no direct effect of prejudice on social support for

heterosexuals ( $OR = 1.00$ ,  $p = .9062$ ), whereas a direct negative relationship existed between RelPrej and social support satisfaction for bisexual ( $OR = 0.97$ ,  $p = .0002$ ) and SSA respondents ( $OR = 0.92$ ,  $p < .0001$ ). There were no further interactions involving orientation, indicating that when RelPrej was significant this variable predicted worse outcomes across all orientations included in analyses.

When GenPrej was entered instead of RelPrej in supplementary analyses, a similar pattern of results emerged; with the exception that GenPrej remained a significant predictor of *depression* even once social support satisfaction was controlled for ( $OR = 1.02$ ,  $p = .0016$ ). Unlike RelPrej, higher levels of GenPrej also predicted more frequent *opiate* use ( $OR = 1.02$ ,  $p = .0046$ ), as well as higher levels of *risky drinking* such that respondents were more likely to be in the highest, rather than any other lower, drinking category as GenPrej increased.

When both GenPrej and RelPrej were entered into models together, these variables were found to make a unique contribution in predicting a number of outcomes despite each being adjusted for the effect of the other. In each case, the direction of the relationship with the outcome remained consistent with results observed when not adjusting for the other variable. Specifically, GenPrej remained a significant predictor of *verbal abuse*, *physical abuse*, *risky drinking*, *harmful drinking consequences*, and *opiate* use when adjusted for RelPrej ( $p$  values ranged from .0009 to .0079). On the other hand, when predicting the less general, more religiously underpinned outcome of *religion-sexuality conflict*, RelPrej made a unique contribution over and above GenPrej ( $p = .0067$ ). Hence, despite the correlation between these factors and their similar relationships with outcomes, these results suggest each variable was nonetheless measuring distinct aspects of prejudice.

In summary, higher levels of RelPrej directly predicted a number of detrimental outcomes among respondents. This was evident in relation to indices of mental health and religion-sexuality conflict—in support of hypothesis one—as well as social support, abuse, and harmful alcohol use. Furthermore, the effects of RelPrej were, for the most part, independent of orientation and applied to all respondents. Supplementary analyses confirmed that broader general anti-gay prejudice was associated with a similar pattern of detrimental outcomes, although each form of prejudice appeared to be somewhat distinct.

## Orientation

The majority of outcomes assessed were also found to differ according to orientation. Orientation contrasts indicated that bisexuals, relative to heterosexuals, reported higher levels of *depression*, *stress* and *shame*; were more likely to be in the highest category of *anxiety* (rather than any of the lower anxiety categories); were more likely to have been *sexually abused* in the prior 12 months; and reported more occasions of *physical* and *verbal abuse*. Compared with heterosexuals, bisexuals reported higher levels of *overall suicidality*, including a greater number of previous *suicide attempts*, and higher levels of *suicidal ideation* in the prior 12 months. Compared with heterosexuals, bisexuals also used a greater number of *different types of drugs*, and reported higher levels of *illicit drug* use overall (including more frequent *opiate* use and a greater likelihood of using *ecstasy*, *hallucinogens*, and

*tranquilizers*). Bisexuals were also more likely than heterosexuals to be in the highest category of *cannabis* use frequency (rather than both lower *cannabis* use categories).

SSA individuals also fared more poorly than heterosexuals on measures of *stress*, *shame*, *physical abuse*, *sexual abuse*, *illicit drug use* (including *inhalants*) and *overall suicidality* (including *prior suicide attempts*, and *suicidal ideation*). Further contrasts approaching significance indicated that SSA individuals tended toward poorer outcomes than heterosexuals on measures of *depression* ( $p = .0298$ ), *anxiety* ( $p = .0590$ ), *verbal abuse* ( $p = .0047$ ), and the number of *different types of drugs* they used ( $p = .0040$ ). No contrasts between SSA and bisexual individuals were found to reach significance.

In summary, despite adjusting for variables including social support and exposure to homonegative prejudice, sexual minority individuals continued to fare more poorly than heterosexuals on a range of mental health, suicidality, and substance abuse outcomes in general support of hypothesis two. Although this was particularly the case for bisexuals, SSA respondents (who constituted a much smaller portion of the sample than bisexuals) still tended to fare worse than heterosexuals across these outcome measures.

## Religious Identification

Religious identification remained a significant predictor of several outcomes after adjusting for other variables in analyses. Follow-up contrasts revealed that former Christians fared more poorly than Christians on measures of *social support satisfaction*, *overall suicidality* (including *suicidal ideation*), *hallucinogen use*, and the number of *different types of drugs* used overall. Compared with Christians, former Christians were also more likely to be in the highest (rather than the lowest) category of *risky drinking*, and to be in either of the two higher categories of *cannabis* use frequency (compared with never using *cannabis*).

Nonreligious respondents also fared worse than Christians on measures of *social support satisfaction*, *hallucinogen use*, and the number of *different types of drugs* they used. They were also more likely than Christians to be in the highest category of *cannabis* use frequency (compared with never using *cannabis*). Nonreligious respondents tended to report higher levels of *overall suicidality* than Christians ( $p = .0062$ ), and lower levels than former Christians ( $p = .0078$ ), although these contrasts did not reach significance.

Overall then, significant differences based on religious identification were evident when assessing substance use, suicidality, and social support. In line with hypothesis three, Christians tended to fare better on these outcomes than other respondents, particularly in comparison to former Christians. However, religious identification was not a predictor of other general mental health indices.

## Self-Responsibility

Finally, self-responsibility was negatively associated with *depression*, *stress*, *shame*, *social support satisfaction*, and *overall suicidality* (including *suicidal ideation*). As self-responsibility increased, respondents were less likely to be in the highest category of *anxiety* (compared with any of the lower anxiety categories) and were more likely to be in the lowest category of *anxiety* (com-

pared with any of the higher anxiety categories). Respondents were also more likely to be in either of the two higher categories of *cannabis* use frequency (compared with never using *cannabis*), and reported using a greater number of *different types of drugs*, as self-responsibility increased. Hence, although mature self-responsibility was associated with some aspects of elevated drug use, it was also associated with better general mental health outcomes in accordance with hypothesis four.

## Discussion

It was hypothesized that exposure to religious anti-gay prejudice would predict poorer mental health outcomes among LGB respondents. In line with this hypothesis, higher levels of RelPrej predicted worse outcomes on all general mental health indices including anxiety, depression, stress, and shame. Controlling for social support, however, meant that the effect of RelPrej on depression only approached significance. Additionally, higher levels of RelPrej predicted more occasions of verbal and physical assault, suggesting that more prejudicial contexts may also leave individuals more prone to abusive experiences. Furthermore, these outcomes were observed independently of whether LGB respondents identified as religious or not. As such, the current study is among the first to demonstrate that religious anti-gay prejudice—measured across a variety of life domains beyond faith community contexts—is associated with a range of harmful outcomes among LGB persons generally and not only among those who are religious. This finding makes sense from a minority stress perspective, given that both religious *and* nonreligious individuals may be exposed to—or expect to experience—religious anti-gay prejudice from religious people in their lives. Hence, regardless of whether or not LGB persons possess any religious beliefs of their own, they may nonetheless be harmed via stress processes involving *experiences* and *expectancies* of religious-based rejection. In addition to these processes, religious LGB individuals may also be harmed when they *internalize* the homonegative religious doctrines they have been exposed to, which may generate distressing intrapersonal conflict. Accordingly, among LGB Christians in the current study, those exposed to higher levels of RelPrej also reported greater conflict between their same-sex attraction and the religious beliefs they had come to adopt.

Of further note, the effects of RelPrej were largely observed independently of sexual orientation. That is, exposure to religious anti-gay prejudice predicted poorer outcomes among all respondents, including heterosexuals. This finding is particularly remarkable as it suggests that the adverse effects of anti-gay religious exposure may extend not only beyond *religious* sexual minorities, but also beyond *sexual minorities* themselves. In this way anti-gay religious exposure may have the potential to harm everyone—which is consistent with the findings of a small number of studies suggesting that individuals of all orientations may be adversely affected by anti-gay social conditions (e.g., Fanucce & Taub, 2010; Hatzenbuehler et al., 2012; Lick et al., 2012). Given that religion has been connected with multiple types of prejudice (e.g., Allport & Ross, 1967) it could be argued that social environments with high amounts of religious homonegativity are also likely to feature other types of prejudice or moral policing that individuals of all orientations experience as oppressive. If this were the case—

that RelPrej predicts poorer mental health and abuse outcomes among heterosexuals simply because of its association with other forms of oppression—one might also expect that *both* heterosexual and LGB persons would report less social support as RelPrej increases. Alternatively, if RelPrej were not serving as a litmus test for other forms of oppression, one might expect that social support among heterosexuals would not be substantially diminished, given that most heterosexuals would not be routinely ostracized because of anti-gay prejudice alone. In accordance with the latter scenario, analyses revealed that higher levels of RelPrej predicted less social support satisfaction *only* among LGB respondents, with RelPrej unrelated to social support among heterosexuals. Hence, it may be that religious homonegativity in and of itself contributes to a more hostile (and therefore harmful) social environment for persons of all orientations (e.g., Blumenfeld, 2000), while also depleting the social support of sexual minority targets.

In the current study, the consequences of prejudice did not appear to directly extend to indices of suicidality, as RelPrej was unrelated to suicidal thoughts and behaviors despite predicting poorer mental health and abuse outcomes. In line with a minority stress framework and the findings of a number of studies (e.g., Fenaughty & Harré, 2003; Hershberger & D'Augelli, 1995; Meyer et al., 2014), this result indicates that suicidal tendencies may best be understood as the product of a complex interplay of risk and resiliency factors rather than the direct consequence of anti-gay prejudice alone. Given that the single largest predictor of suicidality is thought to be the presence of a mental health disorder (Haas et al., 2011), bolstering the mental health of sexual minorities by reducing their exposure to religious homonegativity may play a protective role in a complex matrix of suicidality factors. Furthermore, RelPrej was unrelated to quantity-frequency measures of drug and alcohol use. This supports the notion that substance use, at least among sexual minorities, may be more strongly related to sociocultural aspects of gay community involvement and drug tolerant norms within sexual minority subcultures (Cochran et al., 2012; McKirnan & Peterson, 1989; Stall et al., 2001). Strikingly however, RelPrej was the *only* significant predictor of harmful drinking consequences, suggesting that while religious anti-gay prejudice may not predict the use of alcohol in general, it does predict problematic alcohol use disorders and drinking patterns otherwise resulting in harm.

Although the effects of homonegativity appeared to be harmful regardless of orientation, sexual minority respondents nonetheless tended to fare more poorly than heterosexuals on almost every outcome measure, in support of hypothesis two. In the current study—and in line with existing literature (e.g., Oswalt & Wyatt, 2011)—bisexuals appeared to be particularly at risk, evidencing poorer outcomes than heterosexuals on all mental health, social support, abuse, and suicidality indices, as well as overall measures of illicit drug and cannabis use. SSA respondents similarly reported worse outcomes than heterosexuals across measures of stress, shame, social support, physical and sexual abuse, all suicidality indices, and total illicit drug use—whereas no differences between bisexual and SSA respondents were observed. Furthermore, these patterns persisted despite accounting for the effect of interpersonal anti-gay prejudice. As such, discrepancies between heterosexual and sexual minority individuals across outcome measures were not wholly attributable to differing levels of homonegative exposure. It is possible that prior—not only current—

experiences of prejudice alter the developmental and mental health trajectories of sexual minority individuals. Additionally, structural forms of stigma embedded in social, legal, and institutional policies may disadvantage LGB persons and deprive them of social and financial resources whether they experience interpersonal prejudice or not (Hatzenbuehler, 2010). Hence, many of these persisting discrepancies may be explained by anti-gay social disadvantage more broadly.

Compared with differences by orientation, differences on the basis of religious identification were less extensive. Christians were found to report more social support satisfaction than other respondents, in accordance with hypothesis three. However, after taking social support and homonegative exposure into account, identifying as religious was unrelated to other general mental health outcomes. Hence, the apparent benefits of religious involvement on mental health described in literature may partially be the product of elevated levels of social support.

Nevertheless, controlling for social support, Christians still reported less suicidality than former Christians, in further support of hypothesis three. Christians also tended to report less suicidality than nonreligious respondents, whereas nonreligious individuals in turn tended to report less suicidality than former Christians. Although these latter contrasts were only on the verge of significance, the overall pattern of results suggests that former Christians are particularly at risk of suicidality relative to other individuals. A possible explanation for this finding is that many formerly religious individuals may have foreclosed on their religious identity due to negative or condemnatory religious experiences (e.g., Gibbs & Goldbach, 2015) that, along with religious identity loss, continue to exert an ongoing psychological toll.

A loss of religiosity over time has also been associated with increased substance use (Kerestes, Youniss, & Metz, 2004), and in the current study former Christians reported higher levels of risky drinking than Christians did. Additionally, both former Christians and nonreligious respondents reported using more types of drugs, and more frequent cannabis use than Christians, in accordance with hypothesis three. Overall then, irrespective of orientation, Christians generally appeared to be at the lowest risk of suicidality and substance use—potentially owing to religious proscriptions against such behaviors—while former Christians tended to demonstrate particularly detrimental outcomes in these areas.

Suicidality and substance use were also related to self-responsibility. Individuals with more mature self-responsibility reported less overall suicidality (including suicidal ideation), as well as better outcomes on all indices of mental health and social support satisfaction, in accordance with hypothesis four. A large body of literature suggests that individuals with less authorship over their lives in general—who are less self-guided or autonomous, and more vulnerable to external controls and influences—are more susceptible to stress, psychopathology, and dysfunctional views of self (e.g., Halvorsen et al., 2009; Ross & Mirowsky, 2013). In contrast, self-guided individuals tend to look within themselves rather than to others for authority on how they should lead and direct their lives, and are therefore less prone to adopting the prescriptions (or homonegative attitudes) of others. This tendency may also explain the seemingly paradoxical finding that individuals with greater self-responsibility reported using a greater number of different types of drugs, and more frequent cannabis use. That is, if self-guided individuals are less influenced by

external pressures and controls, they may also be less likely to conform to social, legal, or religious injunctions against substance use, compared with those who are more influenced by external demands.

## Implications

Overall, the findings of the current study provide both novel and corroborative insight into the psychological implications of anti-gay prejudice. Most basically, the study demonstrates that anti-gay prejudice may have both religious and nonreligious underpinnings, and that both forms of prejudice are associated with widespread harm. Although the association between general anti-gay prejudice and harm has been recognized for some time, very few studies have explicitly examined whether religious homonegativity is similarly detrimental. The current findings suggest the health and mental health implications of anti-gay religious exposure may be both extensive—given the variety of deleterious outcomes this form of prejudice predicted—and pervasive—insofar as these outcomes extend to nonreligious sexual minorities and heterosexuals more broadly.

Moreover, the measurement of prejudice in the current study was not restricted to overt and hostile forms of anti-gay aggression, but was based upon the disapproval of same-sex sexuality. Results therefore suggest that aside from overt religious abuse, a basic *lack of approval* of same-sex sexuality among religious others may jeopardize the wellbeing of sexual minority—and potentially heterosexual—individuals. In this way, the religious-based disapproval of homosexuality may amount to more than a harmless expression of religious beliefs, instead operating as a distinct form of oppression with potential psychological consequences. Ironically then, attempts to demonstrate love and tolerance toward homosexuals while continuing to “hate the sin” of homosexuality may undermine the objectives and mental health obligations of religious pastoral care (see e.g., Clinebell, 2011). Such deficits in care may explain why LGB persons who seek help from religious advisors appear to be more likely to attempt suicide than those who do not seek help at all (Meyer et al., 2015). Religious leaders, chaplains, counselors, and clinicians should therefore be aware that good-intentioned approaches to care that exclude the affirmation of same-sex attraction might instead perpetuate psychological harm and identity conflict.

On the other hand, current findings suggest that “being religious” per se is in no way inherently harmful, and may infer specific protective benefits—especially compared with those who apostatize. Clinicians should be sensitive to the religious histories of clients, recognizing that negative religious experiences and intrapersonal conflict may precede the abandonment of religion, and may continue to exert substantial psychological influence. Rather than encouraging clients to disavow or dismiss their religious identity, clinicians should assist clients in finding and developing their own sense of personal authority over their religious beliefs and values, enabling them to make self-guided religious and life decisions (Harris et al., 2008). Therapeutic approaches that foster mature self-responsibility are also likely to enable LGB persons to refute—and adaptively distance themselves from—the homonegative teachings and attitudes of others so that they can develop and assert a positive sexual identity.

Furthermore, social, legal, and institutional policies may represent one means of reducing anti-gay social conditions and, therefore, exposure to homonegative stressors (Hatzenbuehler, 2010). Policies that foster equality may protect LGB individuals from bias-based harassment, discrimination, and bullying by creating more hospitable environments for diversity. On the other hand, legal and institutional discrimination, as well as ballot measures and referendums that incite debate around the civil rights of sexual minorities, are likely to leave individuals increasingly exposed to anti-gay stressors and experiences of prejudice that occur outside of their control (Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010). The same may be observed when schools and workplaces fail to enact policies against anti-gay bullying and prejudice, or when inclusive curricula and LGB-supportive programs are discouraged (e.g., Black, Fedewa, & Gonzalez, 2012). Prejudice may be further facilitated through exemptions to anti-discrimination policies that allow religious businesses and institutions to deny employment, academic enrollment, or the provision of goods and services to sexual minority individuals. The current findings suggest that policies purporting to protect religious freedoms are likely to do so at the expense of sexual minority wellbeing, insofar as these policies legitimize expressions of prejudice on the basis of anti-gay religious beliefs.

## Limitations and Future Research

In their review of literature on religion and wellbeing among sexual minorities, Hamblin and Gross (2014) note that investigations to date have generally been restricted to self-selected individuals who identify as being gay or lesbian—overlooking other same-sex attracted individuals who do not personally or publically identify this way, and those attracted to both sexes. Furthermore, rather than assessing exposure to religious anti-gay prejudice, most studies have relied on discordant measures of religion and religiosity in predicting aspects of psychological wellbeing. In doing so (a) research has generally been confined to a narrow sector of actively religious individuals, or those involved in faith community contexts; (b) past religious affiliation (and apostasy) has generally been overlooked; and (c) both nonreligious and heterosexual participants have been omitted. The current study goes some way in addressing each of these shortfalls.

However, several limitations warrant mentioning. For instance, data collection relied on self-report methods using an online (MTurk) survey format. Although this approach is useful for collecting sensitive data among traditionally underrepresented populations, additional research is needed to confirm that the current findings extend to individuals who are not members of this online platform. The current study was also limited in that it did not examine homonegative exposure among other gender/sexual minorities—including transgender, intersex, or asexual individuals— or among *non-Christian* religious individuals, such that findings cannot be generalized to these groups. In addition, because the current study did not explore the religious histories of *former* Christians, it is not possible to fully determine which background factors were responsible for detrimental outcomes among these respondents.

Furthermore, although the development of the HPI and a brief, reliable scale of religion-sexuality conflict may offer a number of benefits over existing measurement techniques, the absence of

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validity data for these measures is a limitation—one that is inherent within research dealing with hitherto unmeasured constructs. Although additional research is required to establish the broader psychometric properties of both measures, preliminary investigations bearing on the validity of the HPI produced promising results. However, individuals might not always be able to identify whether the anti-gay sentiments of others are religiously underpinned, such that RelPrej scores may only offer a conservative indication of religion-based homonegative exposure. Additionally, prejudice from different life domains may be of greater or lesser salience to different individuals. Because structural forms of stigma and homonegativity are also likely to influence the social conditions surrounding an individual, these elements should also be accounted for in future research.

Empirical research is also needed to clarify the specific mechanisms through which anti-gay social conditions may affect the health and wellbeing of heterosexual individuals. Research might also explore whether specific *types* and *sources* of social support are of particular psychological benefit to individuals of different sexual orientations. For example, aside from general social support, *sexuality-specific* support (including that from religious LGB support groups) may offer distinct protective benefits to sexual minority individuals exposed to anti-gay prejudice.

It must also be noted that the statistical findings of regression analyses are correlational in nature and as such cannot denote causality between variables. This being said, findings implicating prejudice as a predictor of poor psychological outcomes are in accordance with models of minority stress processes and numerous accounts from qualitative investigations—suggesting that the directionality of this pathway is both theoretically and intuitively sensible. In further clarifying this pathway, future research should examine which personal and contextual factors mediate or moderate this relationship, and assess whether this relationship extends to broader indices of physical ill-health.

## Conclusion

In summary, insofar as exposure to religious anti-gay prejudice is associated with a range of harmful outcomes—including poorer general mental health, more problematic alcohol use, and more instances of abuse—“hating the sin” of homosexuality cannot be viewed merely as an innocuous expression of faith. Rather, homonegative religious exposure may be of greater health and mental health concern than is conventionally recognized, potentially undermining the wellbeing of both religious and nonreligious LGB persons as well as their heterosexual counterparts. Furthermore, these deleterious outcomes may be observed irrespective of the intrapersonal (e.g., self-authorship) and interpersonal (e.g., social support) resources that individuals may possess. Taken together then, the findings of the current study imply that both broad and substantial harm may ensue when religious bodies and faith adherents—including clinicians and pastoral care workers—espouse, and expose others to, anti-gay religious ideology.

**Keywords:** anti-gay prejudice; mental health; religion; sexual minority; substance use

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