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ORIGINAL ARTICLE

Homosexuality as *Haram*: Relations among Gender, Contact, Religiosity, and Sexual Prejudice in Muslim Individuals

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Abstract

Most research on sexual prejudice has focused on Western and Christian samples. Using the framework of social identity theory, we investigated the relations among gender, contact, religiosity, and sexual prejudice in a sample of 166 heterosexual Muslim individuals (70.7% from Saudi Arabia) residing in the United States. Consistent with prior research, men reported higher levels of prejudice than women did, especially toward gay men. Higher levels of religiosity predicted higher levels of sexual prejudice for both men and women, but the association was stronger for women. Additionally, more frequent and positive contact with friends and/or family members who were lesbian or gay predicted less sexual prejudice. However, contact was more strongly associated with less sexual prejudice in women than in men. Exploratory analyses revealed that more time spent in the United Sates predicted lower levels of sexual prejudice, and participants from Saudi Arabia reported more sexual prejudice than Muslims from other countries. The current research contributes to the understanding of factors that influence sexual prejudice within Islam and sheds light on the heterogeneity of attitudes within this group of individuals. Furthermore, our findings may help inform efforts to decrease sexual prejudice and increase awareness, advocacy, and future research within Islamic cultures.

Keywords Sexual prejudice · Islam · Religiosity · Gender · Contact

Despite shifts toward greater acceptance of people with diverse sexual orientations, prejudice and discrimination toward sexual minorities is still a contentious social issue worldwide (Baunach 2012). There is great variability among countries in their treatment of sexual minorities, ranging from allowing same-gender couples to adopt a child to execution for engaging in same-gender sexual behavior (International Lesbian, Gay, Bisexual, Trans and Intersex Association 2017). Accurate statistics on hate crimes against sexual minorities can be difficult to obtain (Herek 2017); nevertheless, sexual minorities are highly stigmatized and are often the targets of increased discrimination and prejudice at the individual, state, national, and international levels. Important advances have been made in identifying and understanding factors that predict prejudice toward sexual minorities, or sexual prejudice, however, much of this research has been conducted on predominantly Christian and Western samples, thus limiting its external validity. *Sexual prejudice* refers to negative attitudes toward a diverse group of people who may identify as gay, lesbian, bisexual, asexual, pansexual, queer, or orientations other than heterosexual. Most of the research on the variables of interest have focused on gay men and lesbians, hence our focus is on those two groups in the current study. We used the framework of social identity theory (SIT) to examine gender, contact, and religiosity as factors that predict sexual prejudice toward lesbians and gay men in Muslim individuals living in the United States. Most of our participants were from Saudi Arabia, a country that has received very little research attention in the sexual prejudice literature.

According to SIT (Tajfel and Turner 1986), individuals seek to maintain or achieve positive self-esteem by differentiating themselves from an out-group on some valued dimension of identity (e.g., race, gender, sexual orientation). When group membership is salient, people perceive the in-group positively and out-groups, or groups to which an individual

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does not belong, negatively. Consequently, these perceptions may exert an influence on one's attitudes toward others because individuals ascribe traits (e.g., stereotypes) to others based on perceived group membership (Kilianski 2003; Tajfel and Turner 1986). The high power and status that heterosexual individuals have in most societies may aid in bolstering in-group favoritism. Subsequently, sexual prejudice is likely to be directed at those who threaten the heterosexual in-group, such as gay men or lesbians, especially when conflict, boundaries, or in-group importance are salient (Fiske 2010).

Gender, Contact, Religiosity, and Sexual Prejudice

Gender is one of the most robust predictors of sexual prejudice, with studies from several countries indicating that heterosexual men endorse more negative attitudes toward sexual minorities than heterosexual women do (Adams et al. 2016; Falomir-Pichastor and Mugny 2009; Herek 1988, 2000a, 2002; Keiller 2010; Kite and Whitley 2003; Lehavot and Lambert 2007; Ratcliff et al. 2006). Because sexual prejudice is strongly influenced by beliefs about personal identity, individuals tend to express negative attitudes toward gay men and lesbians differently (Glotfelter and Anderson 2017; Kilianski 2003). Heterosexual men's attitudes toward gay men are generally more negative and hostile than their attitudes toward lesbians are (Herek 2000a; Herek and McLemore 2013). In contrast, results on heterosexual women's attitudes toward gay men and lesbians are mixed. Some studies demonstrate that heterosexual women have similar warmth ratings and prejudice levels for gay men and lesbians (Glotfelter and Anderson 2017; Herek 2000a), whereas other studies suggest that heterosexual women express more discomfort around lesbians than gay men (Herek 2002).

The gender differences in sexual prejudice among men from Western countries may be due in part to rigid expectations regarding masculine behavior, notably the rejection of femininity and a strong adherence to heterosexuality (Kimmel 1997). In other words, heterosexual men may be particularly sensitive to violations of these masculine gender norms (Blashill and Powlishta 2009; Nagoshi et al. 2018; Vandello and Bosson 2013; Wellman and McCoy 2014). Due to the feelings of anxiety and threat that arise in the presence of perceived gender role transgressions, endorsing antigay attitudes may serve to reaffirm one's masculinity and positive in-group identification, while preserving social status and power in society. On the other hand, women are thought to have greater gender role flexibility and are likely to hold more tolerant attitudes than men do toward people who do not conform to traditional gender norms, such as lesbians and gay men (Herek and McLemore 2013; LaMar and Kite 1998).

Among the many factors thought to predict sexual prejudice, religiosity may be especially important in exerting influences on one's internalized belief systems, as well as an individual's sense of well-being and identity (Herek 2000b). Although religion as an entity has many nuances, *religiosity* is broadly conceptualized as the importance of religion in one's life and the various aspects of religious activity, dedication, and beliefs in which a person engages (Herek and McLemore 2013). Research has established a relatively consistent association between high levels of sexual prejudice and high levels of religiosity. In particular, religious fundamentalism, or belief that one's own religion comprises the basic, fundamental and intrinsic truths about human nature, is strongly related to sexual prejudice (Herek and McLemore 2013; Nagoshi et al. 2018). Consistent with SIT, it is likely that individuals with strong fundamentalist beliefs derive an important part of their social identity and self-esteem from being members of religious institutions that explicitly and implicitly devalue sexual minorities. Thus, more conservative religious sects, such as Evangelical Christians and Muslims, tend to harbor more hostile attitudes toward sexual minorities than less conservative sects do because they may view the gay and lesbian community as being antithetical to and incompatible with religious values regarding family, sexuality, and traditional gender roles (Olson et al. 2006; Siraj 2009). For example, in a survey of Americans, Muslims were somewhat more supportive of same-sex marriage than White Evangelical Protestants were (44% versus 31%, respectively), although Muslims were much less supportive than Buddhists and Unitarian/Universalists were (85% and 94%, respectively; Piacenza and Jones 2017). Thus, lesbians and gay men may often be perceived as out-groups that violate strict moral standards and threaten deeply held value systems (Marsh and Brown 2011; Whitley 2009); consequently, they may be subjected to hostility and antipathy (Hunsberger and Jackson 2005; Tajfel and Turner 1986).

Allport's (1954) contact hypothesis is a leading theory of prejudice reduction that emphasizes the importance of intergroup contact and operates in accordance with SIT, whereby people attribute more positive characteristics to the in-group. This broad theory posits that positive contact and interaction with members of stigmatized groups can lead to more positive attitudes toward the individual, and by extension, the out-group as a whole. Although research is mixed regarding the factors that must be present to influence attitudes (e.g., equal status, common goals, cooperation, institutional support; West and Hewstone 2012), contact with individual lesbians and gay men predicts lower levels of prejudice toward lesbians and gay men as a group (Cunningham and Melton 2013; Smith et al. 2009). Possible mechanisms of prejudice reduction include reducing intergroup anxiety and threat, and increasing empathy (Collier et al. 2012; Cunningham and Melton 2013). These mechanisms of prejudice reduction can be witnessed in

friendships between gay men or lesbians and heterosexual individuals (Pettigrew 1997; Schiappa et al. 2005) as well as familial relationships. Friendships and familial relationships may involve long-term and positive contact which may lead to decreased intergroup anxiety and increased empathy. In addition, the gay man's or lesbian's membership in the in-group of friend or family member may be more salient than their membership in the out-group of homosexual (Baunach et al. 2010; Paolini et al. 2010), which could also decrease negative attitudes.

Islam and Sexual Prejudice

Muslims today are continuously re-examining human rights issues in light of Qur'anic teachings, including rights for lesbians and gay men (Jahangir and Abdul-Iatif 2016). Although Islam represents the third largest religion in the United States (Pew Research Center 2014) and arguably the fastest-growing religion worldwide, there is a relative paucity of research specifically investigating sexual prejudice among Muslims (Saraç 2012). Islam, by definition, is conceived as a fundamentalist tradition that has rigid views on expressions of sexuality that exist beyond the framework of heterosexual marriage (Shannahan 2009; Siraj 2012; Yip 2009). The emphasis on the condemnation of sexual acts is especially pertinent, given that many Muslims do not feel entitled to judge same-gender attractions. Rather, Allah is the final judge for the homosexual mindset. Furthermore, many Muslims view homosexuality as a choice, and perceive gay men and lesbians as actively choosing to defy the will of Allah (Bonthuys and Erlank 2012; Hooghe et al. 2010; Siraj 2012). Therefore, same-gender relationships are considered deviant and viewed as *haram*, or forbidden, in the eyes of Allah (Hooghe et al. 2010; Yip 2009). These beliefs have been strengthened and sanctioned in many predominantly Muslim countries in the Middle East and Africa by the absence of legal protections and the presence of severe penalties for sexual minorities that further engender intolerance (International Lesbian, Gay, Bisexual, Trans and Intersex Association 2017). The country of origin of most of our participants, Saudi Arabia, has been and continues to be a socially conservative society with very traditional gender roles and strict punishments for homosexual behavior. For example, homosexual behavior can be punished by prison sentences, whipping or flogging, and/or execution in Saudi Arabia (Equaldex 2018c).

Consistent with gender differences found in other countries, Muslim boys and men living in Turkey (Gelbal and Duyan 2006) and Belgium (Hooghe 2011; Hooghe and Meeusen 2012) report more sexual prejudice than do Muslim girls and women. An exception was a study by Anderson and Koc (2015) which found no significant gender differences in implicit and explicit sexual prejudice toward gay men and lesbians among Turkish individuals. Much of the focus on same-gender sexuality in Islam has been on gay men (Siraj 2012). As a consequence, very few studies of Muslim participants have included comparisons between attitudes toward gay men and lesbians. Nevertheless, two studies with Turkish participants found that attitudes tended to be more positive toward lesbians than toward gay men (Anderson and Koc 2015; Gelbal and Duyan 2006) which supports results from predominantly Christian and/or Western samples.

As members of a predominantly fundamentalist religion, it is not surprising that Muslim adolescents and young adults endorsed more sexual prejudice than atheist, non-religious, and Christian/Catholic participants do (Turkish – Anderson and Koc 2015; Belgian – Hooghe 2011; Hooghe and Meeusen 2012). Nevertheless, as with Christian samples, the degree of Muslim individuals' religiosity is also an important factor. Religiosity, as measured by strong religious beliefs (Turkish – Gelbal and Duyan 2006), a higher frequency of attending religious services (Belgian – Hooghe and Meeusen 2012), more importance of religion to one's personal life (Belgian – Hooghe 2011; British – Siraj 2009), and a higher degree of religious fundamentalism (Turkish – Anderson and Koc 2015), predicted more prejudice toward gay men and lesbians. Furthermore, the association between religiosity and sexual prejudice may be moderated by religious affiliation. Specifically, in a sample of Ghanaian Muslims and Christians, Hunsberger et al. (1999) found that the correlation between religious fundamentalism and sexual prejudice was stronger for the Muslim than for the Christian participants.

Similar to gender differences in sexual prejudice, the effects of contact on attitudes toward gay men and lesbians in Muslim samples generally mirrors results on Christian and/or Western samples. Knowing or being friends with a gay man or lesbian (Turkish – Gelbal and Duyan 2006; Belgian – Hooghe and Meeusen 2012), and spending time with and closeness to lesbians and gay men (Turkish – Anderson and Koc 2015) predicted less explicit sexual prejudice, but not less implicit sexual prejudice (Anderson and Koc 2015). Interestingly, decreases in sexual prejudice over time were found among young adult men, but not among young adult women, who had friends of a different sexual orientation (Hooghe and Meeusen 2012), suggesting that contact may be especially important in reducing men's negative attitudes. However, the influences of contact with someone of a different sexual orientation may depend on the type of relationship. For example, Bonthuys and Erlank (2012, p. 280) studied a community of South African Muslims and found that disapproval of same-gender sexuality was stronger toward family members than toward non-Muslims, perhaps because of "the desire to maintain family status in the community and the expectation that Muslims would be more scrupulous in adhering to strict sexual codes than non-Muslims."

The preceding review suggests that some of the factors that predict sexual prejudice toward gay men and lesbians among predominantly Western and Christian individuals may also be predictive of sexual prejudice among Muslim individuals. Specifically, these factors include gender, religiosity, and contact with lesbians and gay men. We tested the following four hypotheses: (a) Men will report more sexual prejudice than women will (Hypothesis 1); (b) There will be an interaction between gender of participant and gender of the target of prejudice such that men will report more sexual prejudice toward gay men compared to lesbians, whereas women's attitudes will not significantly differ based on the gender of the target (Hypothesis 2); (c) Higher levels of religiosity will predict more sexual prejudice (Hypothesis 3); and (d) Individuals who report more frequent and positive contact with lesbians and gay men will have less sexual prejudice than those who report less frequent and less positive contact (Hypothesis 4). Finally, we explored the possible influence of country of origin and time spent in the United States on sexual prejudice, contact, and religiosity.

Method

Participants

Initial participants included 246 Muslim individuals living in the United States recruited through a snowball sampling by initially contacting individuals in a variety of groups, such as Muslim student groups and language programs for university students. These groups were from mid-sized, U.S. Midwestern universities and consisted of both international and domestic students. Additionally, the primary investigator utilized contacts within the Muslim community to identify other potential participants and then asked those participants to forward the study information to other interested individuals. Participants were at least 18 years of age and self-identified as ascribing to the Muslim faith. They were not screened based on the sect of Islam to which they ascribed (e.g., Shia, Sunni). Data were excluded from 60 individuals with excessive missing data (> 10%), 12 participants who identified as homosexual or bisexual, and 8 participants who did not provide information on their sexual orientation. This left a final sample of 166 participants (67 women and 99 men).

The average age of participants was 25.7 years ($SD = 5.9$, $mdn = 25$) with a range of 18–67 years. Men ($M = 26.4$, $SD = 7.0$, $mdn = 25$) and women ($M = 24.7$, $SD = 3.4$, $mdn = 25$) did not differ significantly in age, $t(147) = -1.73$, $p = .085$, $d = .29$. The majority of participants were graduate students ($n = 77$, 47.5%), followed by juniors ($n = 28$, 17.3%), seniors ($n = 26$, 16%), first-year students ($n = 24$, 14.8%), and sophomores ($n = 7$, 4.3%). Four people did not indicate their year in school. A higher percentage of men than women were undergraduates ($n = 60$ or 61.2% of men; $n = 25$ or 39.1% of women) and a higher percentage of women than men were graduate students ($n = 38$ or 38.8% of men; $n = 39$ or 60.9% of women), $\chi^2(1, n = 162) = 7.63$, $p = .006$, Cramer's $V = .22$. Of the participants who indicated their race/ethnicity, 75% ($n = 123$) identified as Middle Eastern, 13% ($n = 23$) as Asian/Asian American, 3.7% ($n = 6$) as "other," 3% ($n = 5$) as White/Caucasian, 2.4% ($n = 4$) as Black/African American, and the remaining 1.8% ($n = 3$) as Multiracial. Of those who responded to the question on their country of origin ($n = 164$), 70.7% ($n = 116$) were from Saudi Arabia, 14.6% were from other countries (4 each from Pakistan and Palestine; 2 each from Bahrain, Bangladesh, and Kuwait; 1 each from Egypt, India, Indonesia, Iraq, Jordan, Libya, Malaysia, Morocco, Tunisia, and United Arab Emirates), and 14.6% were from North America (2 from Canada and 22 from the United States). The mean time spent in the United States ($n = 155$) was 6.8 years ($SD = 8.9$, $mdn = 3.5$), but the range was less than one month to 67 years.

Procedure and Measures

Participants were provided a link to the Qualtrics survey and the link was also posted on private social media sites such as Facebook. All participants read an informed consent, and if they agreed to participate, they were taken to the rest of the survey. If they disagreed after reading the informed consent, they were taken to the end of the survey. All questionnaires were translated into Arabic and back-translated into English by individuals proficient in both Arabic and English. Participants had the option of completing the survey in English only (58, 34.9%), Arabic only (47, 28.3%), or Arabic/English (61, 36.7%). Participants were randomly assigned to one of four orders of the measures—Multidimensional Measure of Attitudes toward Lesbians and Gay Men, Santa Clara Strength of Religious Faith Questionnaire, Contact with Sexual Minorities Questionnaire, and the Social Desirability Scale-17—using partial counterbalancing with a Latin-square design. There were approximately 41 participants for each of the four orders. All participants completed the demographics questionnaire, including their year in school (if relevant), age, country of origin, length of time in the United States if they were born outside of the United States, primary language, ethnicity, gender, and sexual orientation, last. As an incentive, participants had the option of entering a drawing for one of four $50 Amazon.com gift cards. If participants chose to enter into the drawing, they were directed to a separate and secure page to provide their email address; their data were not connected to their contact information. The study was reviewed and deemed exempt by the university's Institutional Review Board.

Multidimensional Scale of Attitudes toward Lesbians and Gay Men

Sexual prejudice was measured with the Multidimensional Scale of Attitudes toward Lesbians and Gay Men (Gato et al. 2012). This measure consists of 27 items and four subscales. However, we only used the total score in analyses because the four subscales were significantly and highly correlated with the total score (*r*s = .89–.95) and we did not have specific hypotheses regarding the separate subscales. However, for some of the analyses we were interested in differentiating between attitudes toward lesbians and gay men; therefore, we split three items into parallel items and analyzed them separately. The three pairs of items were "[Gay men/lesbian women] make me nervous"; "If I were a father or mother, I could accept my [son/daughter] being gay"; and "I would not mind working with a [lesbian woman/gay man]." Scores were based on the average of the responses to the items and ranged from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher averaged scores indicating higher levels of sexual prejudice. Gato et al. (2012) found good construct validity and internal consistency for the four original dimensions, with Cronbach's α levels ranging from .79–.91. In the current study, Cronbach's alpha coefficients for the overall score were .97 for the total sample, .98 for women, and .94 for men. For the lesbian subscale, alpha coefficients were .70 for the total sample, .83 for women, and .59 for men. For the gay men subscale, alpha coefficients were .74 for the total sample, .84 for women, and .60 for men.

Santa Clara Strength of Religious Faith Questionnaire

Religiosity was assessed with the Santa Clara Strength of Religious Faith Questionnaire (SCSORF; Plante and Boccaccini 1997), a ten-item questionnaire designed to measure one's strength of religious faith, independently of religious affiliation. The SCSORF focuses on intrinsic religiosity (e.g., "I look to my faith as a source of inspiration") as opposed to more extrinsic religiosity such as religious service attendance. Participants rated items on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Scores were based on the average of the responses to the items, with higher averaged scores indicating greater levels of religiosity. The SCSORF has been widely used with college students and has high internal reliability, convergent validity, and discriminant validity (Huelsman et al. 2006; Storch et al. 2004). Additionally, the originally normed population for the SCSORF included Christian, Jewish, and Muslim populations; thus, it is appropriate for use in Abrahamic religious traditions (Plante and Boccaccini 1997). Pakpour et al. (2014) used the SCSORF to measure strength of religious faith in an Iranian Muslim population and found favorable reliability, convergent validity, and divergent validity, reporting a Cronbach's alpha level of .89. The alpha coefficients for the current study were .95 for the total sample, .95 for women, and .94 for men.

Contact Measure

We developed a ten-item measure to assess contact with sexual minorities for the current study (see the online supplement). Items were adapted from previous studies assessing quantity of contact with sexual minorities (e.g., Cunningham and Melton 2013) as well as quality of contact with lesbians and gay men (e.g., Binder et al. 2009). Quantity of contact was assessed with four items rated on a 5-point Likert scale ranging from 1 (*none*) to 5 (*very frequent*), (e.g., "How much contact have you had with gay men/lesbian women in the last year?") and 1 (*none*) to 5 (*very often*), (e.g., "How often do you spend time with gay men/lesbian women?"). The items assessing amount of contact and time spent were significantly correlated ($r = .66$, $p < .001$) for both lesbians and gay men; therefore, they were combined to create two overall quantity of contact measures: one for lesbians and one for gay men. Two items assessed quality of interactions on a 5-point Likert scale ranging from 1 (*very negative*) to 5 (*very positive*) (e.g., "How would you describe the interactions you have had with lesbian women/gay men?"). The remaining four items were measured with a Yes/No format and assessed whether participants had friends and family members who were gay or lesbian. Very few people responded affirmatively to having a family member who was gay (9 or 5.5%) or lesbian (5 or 3.1%). Therefore, these four items were collapsed into two variables that assessed contact with lesbian family members and/or friends (37, 22.7%) and gay family members and/or friends (50, 30.5%).

Social Desirability Scale-17

The Social Desirability Scale-17 (SDS-17; Stöber 2001) consists of 16 true and false items designed to measure the extent to which participants are responding in socially desirable ways. The scale was established to reflect socially sanctioned behaviors that infrequently occur, and is especially useful in prejudice research because individuals may be more likely to present themselves in socially desirable ways. An example item is "I always eat a healthy diet." Scores were based on the average of the responses to the items and ranged from 1 to 2, with higher averaged scores indicating greater levels of social desirability. Stöber (2001) found good discriminant validity, convergent validity, and good internal consistency for the SDS-17, reporting Cronbach's alpha levels ranging from .74 to.78. Alpha coefficients in the current study were .80 for the total sample, .84 for women, and .77 for men.

Results

Age of participants did not correlate significantly with social desirability, prejudice, religiosity, and contact measures, *p*-s > .35. Women ($M = 1.64$, $SD = .24$) and men ($M = 1.68$, $SD = .21$) did not significantly differ on the social desirability scores, t (160) = −1.27, $p = .205$, $d = .20$. Because of the higher percentage of women than men who were graduate students, we calculated two-way ANOVAS on overall sexual prejudice and religiosity scores as a function of gender and education level (undergraduate versus graduate), while controlling for social desirability. No significant effects of education level were found for either sexual prejudice, $F(1,153) = .78$, $p = .379$, $\eta_p^2 = .005$, or religiosity, $F(1,152) = .51$, $p = .476$, $\eta_p^2 = .003$. Additionally, there was no significant interaction between gender of participant and education level on either prejudice, $F(1,153) = .21$, $p = .650$, $\eta_p^2 = .001$, or religiosity, $F(1,152) = .08$, $p = .785$, $\eta_p^2 < .001$. The main effects of gender will be described later.

Women's higher social desirability scores were associated significantly with higher levels of religiosity, overall sexual prejudice, prejudice toward lesbians, and prejudice toward gay men (*r*s ranged from .46 to .55, *p*s < .001), and less positive interactions with gay men and lesbians and less contact with gay men (*r*s ranged from −.39 to −.47, *p*s ranged from .013 to .001). Men's higher social desirability scores correlated significantly with higher levels of overall sexual prejudice ($r = .30$, $p = .003$) and prejudice toward lesbians ($r = .23$, $p = .023$), and less contact with gay men ($r = −.29$, $p = .036$). Because of these significant correlations, scores on the SDS-17 were used as a covariate for analyses. (See the online supplement, Table 1s, for correlations among all study variables for women and men.)

Sexual Prejudice

Gender Comparisons

An ANCOVA was used to test the hypothesis that men would report greater levels of overall sexual prejudice than women would. Gender was the independent variable, social desirability was the covariate, and overall sexual prejudice was the dependent variable. See Table 1 for the means and standard deviations for women and men on the sexual prejudice variables. Social desirability was significant, $F(1, 159) = 30.66$, $p < .001$, $\eta_p^2 = .16$. Also, women had significantly lower overall sexual prejudice scores than men did, $F(1, 159) = 7.53$, $p = .007$, $d = .44$, which supported Hypothesis 1.

To test the second hypothesis that men would exhibit more prejudice toward gay men than toward lesbians and women's levels of prejudice toward gay men and lesbians would be similar, we calculated a two-way repeated measures ANCOVA. Gender of participant was the between-subject variable, gender of target person (lesbians or gay men) was the within-subject variable, social desirability was the covariate, and prejudice scores for gay men and lesbians were the dependent variables. The main effect for social desirability was significant, $F(1, 159) = 18.04$, $p < .001$, $\eta_p^2 = .10$; however, the interaction between social desirability and target gender was not significant, $F(1, 159) = 2.02$, $p = .157$. The main effects for neither participants' gender, $F(1, 159) = 3.42$, $p = .066$, nor targets' gender, $F(1, 159) = 2.90$, $p = .091$, was

Table 1 Means, standard deviations, and partial correlations by gender of participant

Variables	Women	Men	Partial correlations (Controlling for social desirability)							
	M (*SD*)	*M* (*SD*)	1	2	3	4	5	6	7	8
1. Overall prejudice	3.7 (1.5)$_a$	4.3 (1.0)$_b$	–	.90***	.94***	.56***	−.61***	−.61***	−.69***	−.75***
2. LW prejudice	3.8 (1.6)$_a$	4.0 (1.3)$_a$	.78***	–	.95***	.57***	−.67***	−.67***	−.65***	−.71***
3. GM prejudice	3.6 (1.6)$_a$	4.4 (1.3)$_b$	.85***	.83***	–	.53***	−.65***	−.67***	−.63***	−.72***
4. Religiosity	3.5 (.6)$_a$	3.6 (.6)$_a$	.22*	.20*	.17	–	−.38*	−.23	−.31	−.24
5. LW contact	2.6 (.7)$_a$	2.4 (.8)$_a$	−.31	−.31	−.34*	−.24	–	.52**	.55**	.40*
6. GM contact	3.0 (1.1)$_a$	2.7 (.9)$_a$	−.42**	−.31*	−.34*	−.27	.73***	–	.45*	.56***
7. LW interactions	3.5 (1.1)$_a$	3.1 (.9)$_a$	−.46**	−.51***	−.40*	−.28	.31	.40*	–	.70***
8. GM interactions	3.9 (1.1)$_a$	3.0 (.7)$_b$	−.52***	−.49***	−.57***	.02	.23	.22	.32	–

Means with different subscripts in each row differed significantly ($p < .05$). Women's (*n*s = 31 to 65) correlations are above the diagonal and men's (*n*s = 37 to 97) correlations are below the diagonal. Scores could range from 1 to 6 for the prejudice measures, 1–4 for religiosity, and 1–5 for the contact measures. Higher scores indicated higher levels of sexual prejudice and religiosity, more contact, and more positive interactions.

LW Prejudice, Prejudice toward lesbians; *GM*, Prejudice = Prejudice toward gay men; *LW Contact*, Amount of contact and time spent with lesbians; *GM Contact*, Amount of contact and time spent with gay men; *LW Interactions*, Quality of interactions with lesbians; *GM Interactions*, Quality of interactions with gay men

* $p < .05$. ** $p < .01$. *** $p < .001$

significant. However, the predicted interaction between participants' gender and targets' gender was significant, $F(1, 159) = 33.31$, $p < .001$, $\eta_p^2 = .17$. Post hoc analyses indicated that women had significantly higher levels of prejudice toward lesbians than toward gay men, $t(66) = -3.35$, $p = .001$, $d = .41$, and men had significantly higher levels of prejudice toward gay men than toward lesbians, $t(98) = 5.58$, $p < .001$, $d = .56$ (see Table 1). Furthermore, compared to men, women had significantly lower levels of prejudice toward gay men, $t(164) = -3.09$, $p = .002$, $d = .49$; however, the gender difference for prejudice toward lesbians was not significant, $t(164) = -.47$, $p = .640$, $d = .07$. Thus Hypothesis 2 was only partially supported.

Religiosity

Women and men did not differ significantly on religiosity levels when controlling for social desirability, $F(1, 161) = .17$, $p = .680$, $d = .07$ (see Table 1). Because of the strong and significant correlations between lesbian prejudice and gay prejudice for women, $r(62) = .94$, $p < .001$, and men, $r(94) = .85$, $p < .001$, we only used the overall sexual prejudice scores for analyses on religiosity and contact. To test our third hypothesis that higher levels of religiosity would predict higher levels of sexual prejudice, we calculated correlations between religiosity and the overall sexual prejudice scores while controlling for social desirability (see Table 1). In support, of Hypothesis 3, higher levels of religiosity significantly predicted more overall sexual prejudice for both women and men. Notably though, Fisher's standardized z-test indicated that the correlation between overall sexual prejudice and religiosity was stronger for women than for men, Fisher's $z = 2.47$, $p = .014$.

Contact

A one-way MANCOVA was calculated to compare quantity and quality of contact as a function of gender while controlling for social desirability. The multivariate tests for social desirability, $F(4, 53) = 2.94$, $p = .029$, $\eta_p^2 = .18$, and gender, $F(4, 53) = 3.00$, $p = .026$, $\eta_p^2 = .19$, were significant (see Table 1). Univariate analyses revealed that compared to men, women reported more positive interactions with gay men, $F(1, 56) = 11.22$, $p = .001$, $d = .87$. None of the other contact measures differed significantly between women and men.

Correlations between contact and sexual prejudice measures are in Table 1. In support of Hypothesis 4, women's lower levels of sexual prejudice were significantly correlated with more positive interactions and more contact time with lesbians and gay men, while controlling for social desirability. However, only two contact variables significantly predicted men's lower levels of sexual prejudice: more contact time and more positive interactions with gay men. None of the contact measures correlated significantly with religiosity for women; however, men's higher levels of religiosity significantly correlated with less contact time with gay men and less positive interactions with gay men and lesbians. Also, positive interactions with lesbians and gay men correlated significantly with amount of contact for women but not for men.

A 2 × 2 ANCOVA was calculated to compare levels of sexual prejudice as a function of participants' gender and whether or not participants had contact with friends and/or family members who were gay and/or lesbian (Yes contact or No contact). The variables assessing contact with friends and/or family members who were gay and those who were lesbian were combined because of small sample sizes in some of the cells. We included gender of participants because gender moderated some of the associations between the contact variables and sexual prejudice (see preceding paragraph), and, although not significant, a higher percentage of women (42.4%) than men (28.6%) reported knowing a friend and/or family member who was gay and/or lesbian, $\chi^2(1, N = 164) = 3.37$, $p = .067$, Cramer's $V = .143$. Social desirability scores were the covariate. Individuals who reported contact ($M = 3.16$, $SD = 1.37$, had significantly lower prejudice scores than those who did not report contact ($M = 4.59$, $SD = .93$), $F(1, 156) = 45.32$, $p < .001$, $d = 1.32$. The main effect for gender was significant, $F(1, 156) = 8.09$, $p = .005$, $\eta_p^2 = .05$; however, of more interest was the significant interaction between gender of participant and contact, $F(1, 156) = 5.86$, $p = .017$, $\eta_p^2 = .04$. Post-hoc analyses indicated that men ($M = 4.63$, $SD = .85$) and women ($M = 4.57$, $SD = 1.05$) who did not have contact did not differ significantly on their overall prejudice levels, $t(106) = -.33$, $p = .744$, $d = .07$. In contrast, for those who did report contact, women ($M = 2.65$, $SD = 1.40$) had significantly lower prejudice scores than did men ($M = 3.67$, $SD = 1.15$), $t(54) = -2.99$, $p = .004$, $d = .80$. These results suggest that contact with friends and/or family members who were gay or lesbian was more strongly associated with lower levels of prejudice for women than for men.

Exploratory Analyses

Length of Time in United States

There were no significant differences between women ($M = 100.67$ months, $SD = 106.39$) and men ($M = 69.62$ months, $SD = 105.38$) in the length of time spent in the United States, $t(153) = 1.78$, $p = .077$, $d = .29$. Controlling for social desirability, more time in the United States significantly correlated with lower sexual prejudice

scores for both women, $r(55) = -.43$, $p = .001$, and men, $r(89) = -.48$, $p < .001$. Religiosity scores and time spent in the United States did not correlate for women, $r(55) = -.25$, $p = .06$, or men, $r(89) = -.02$, $p = .847$.

Country of Origin

Country of origin was divided into three categories: participants from Saudi Arabia ($n = 116$), other countries (e.g., Kuwait, Pakistan, etc.; $n = 24$), or from North America (Canada and U.S.; $n = 24$). Gender comparisons for country of origin revealed that a higher percentage of men than women were from Saudi Arabia (78.8% of men; 58.5% of women), roughly equal percentages of women and men were from other countries (13.1% of men; 16.9% of women), and a higher percentage of women than men were from North America (8.1% of men, 24.6% of women), $\chi^2(2, n = 164) = 10.01$, $p = .007$, Cramer's $V = .25$. Also, time spent in the United Sates differed significantly as a function of country of origin, $F(2, 152) = 124.4$, $p < .001$, $\eta_p^2 = .62$. Post hoc Tukey's HSD tests indicated that, not surprisingly, Canadian and U.S. participants ($M = 272.00$ months, $SD = 141.18$) reported significantly more time than participants from other countries ($M = 93.86$ months, $SD = 87.59$), $p < .001$, who reported significantly more time than participants from Saudi Arabia ($M = 37.77$ months, $SD = 21.61$), $p = .001$.

To examine country of origin differences in sexual prejudice and religiosity, we combined women and men because of small sample sizes in some of the cells. Analyses indicated significant differences in overall sexual prejudice, $F(2, 156) = 27.47$, $p < .001$, $\eta_p^2 = .26$, and religiosity, $F(2, 155) = 5.73$, $p = .004$, $\eta_p^2 = .07$, as a function of country of origin, while controlling for social desirability. Post hoc tests indicated that North Americans ($M = 2.41$, $SD = .98$) had significantly lower prejudice scores than did participants from other countries ($M = 3.55$, $SD = 1.51$), $t(46) = 3.26$, $p = .002$, $d = .94$, and from Saudi Arabia ($M = 4.57$, $SD = .91$), $t(138) = 10.50$, $p < .001$, $d = 2.35$. Participants from other countries had significantly lower prejudice scores than did those from Saudi Arabia, $t(138) = 4.19$, $p < .001$, $d = .78$. Additionally, Saudi Arabian participants had the highest levels of religiosity ($M = 3.72$, $SD = .42$) compared to those from North America ($M = 3.20$, $SD = .80$), $t(135) = 4.62$, $p < .001$, $d = .82$, or other countries ($M = 3.35$, $SD = .70$), $t(135) = 3.64$, $p < .001$, $d = .68$. North Americans and participants from other countries did not differ significantly on their levels of religiosity, $t(46) = .62$, $p = .539$.

Fewer participants from Saudi Arabia (21.9%) and other Muslim countries (45.8%) reported having contact with a gay or lesbian family member and/or friend compared to those from North America (83.3%), $\chi^2(2, N = 162) = 34.63$, $p < .001$, Cramer's $V = .46$. Interestingly, social desirability scores differed significantly as a function of country of origin, $F(2, 157) = 31.67$, $p < .001$, $\eta_p^2 = .29$. Tukey's HSD post hoc analyses indicated that participants from North America had significantly lower social desirability scores ($M = 1.39$, $SD = .29$) than did participants from Saudi Arabia ($M = 1.73$, $SD = .16$) or other countries ($M = 1.64$, $SD = .20$), $ps < .001$; however, the latter two groups did not differ significantly, $p = .137$.

Survey Language

The language in which participants opted to complete the survey differed as a function of country of origin, $\chi^2(4, n = 164) = 62.67$, $p < .001$, Cramer's $V = .44$. Participants from Saudi Arabia were more likely to take the survey in Arabic only (37.1%) or English and Arabic (46.6%), whereas those from other countries (66.7%) and North America (91.7%) were more likely to take the survey in English only.

As with country of origin results, there were significant differences in overall sexual prejudice, $F(2, 158) = 30.37$, $p < .001$, $\eta_p^2 = .28$, and religiosity, $F(2, 157) = 7.15$, $p = .001$, $\eta_p^2 = .08$, as a function of survey language, while controlling for social desirability. Post hoc tests indicated that English only participants ($M = 3.19$, $SD = 1.26$) had significantly lower prejudice scores than did English/Arabic participants ($M = 4.50$, $SD = 1.12$), $t(117) = -6.05$, $p < .001$, $d = 1.11$, and Arabic only participants ($M = 4.79$, $SD = .80$), $t(103) = -7.59$, $p < .001$, $d = 1.49$. English/Arabic participants did not differ significantly from Arabic only participants in levels of prejudice, $t(106) = 1.52$, $p = .132$. Arabic only participants also had the highest levels of religiosity ($M = 3.81$, $SD = .30$) compared to English only participants ($M = 3.35$, $SD = .70$), $t(101) = -4.24$ $p < .001$, $d = .84$, and English/Arabic participants ($M = 3.65$, $SD = .51$), $t(104) = 2.01$, $p = .047$, $d = .39$. English/Arabic participants had significantly higher religiosity scores than did English only participants, $t(115) = -2.65$, $p = .009$, $d = .49$.

Hierarchical Regression

We conducted a hierarchical regression analysis to explore the relative contributions of gender of participant, country of origin, contact with family members and/or friends who were gay and/or lesbian, and religiosity to the overall prejudice scores. As recommended by Aiken and West (1991), the religiosity scores were centered. Social desirability scores were entered in the first step, gender and country of origin in the second step, religiosity and contact in the third step, and the interaction between gender and religiosity in the fourth step (see Table 2). Social desirability and gender were not significant predictors in the final model. Being

Table 2 Hierarchical regression analysis predicting sexual prejudice

Variables	Step 1			Step 2			Step 3			Step 4		
	β	b	*t*	β	b	*t*	β	b	*t*	β	b	*t*
Social desirability	.41	2.41	5.67***	.13	.76	1.78	.07	.41	1.05	.05	.27	.70
Gender				.09	.24	1.40	.09	.23	1.47	.10	.25	1.64
Country of origin				−.52	−.91	−6.86***	−.35	−.60	−4.63***	−.32	−.56	−4.29***
Religiosity							.23	.53	3.74***	.70	1.58	3.41***
Contact							.27	.73	4.17***	.25	.69	3.96***
Gender x Religiosity										−.47	−.64	−2.38*
F		32.10***			33.35***			31.86***			28.31***	
d		1			3			5			6	
df_{error}		156			154			152			151	
R^2		.17			.39***			.51***			.53***	
ΔR^2					.22***			.12***			.02*	

Gender 1 = Women, 2 = Men; Country of Origin 1 = Saudi Arabia, 2 = Other Countries, 3 = North America; Contact 1 = Yes, 2 = No. Higher scores indicated higher levels of religiosity and more sexual prejudice

**p* < .05. ****p* < .001

from Saudi Arabia, having higher levels of religiosity, and having less contact with gay/lesbian friends/family members predicted more sexual prejudice. The interaction between gender and religiosity was also significant. Higher levels of religiosity predicted higher levels of prejudice for women and men; however, as corroborated by the significant gender difference in the correlations reported previously, religiosity was a stronger predictor for women (slope of 1.74) than for men (slope of .44.)

Discussion

As predicted, heterosexual Muslim men reported more sexual prejudice than did heterosexual Muslim women, especially toward gay men. Heterosexual women reported more prejudice toward lesbians than toward gay men. Religiosity was a significant predictor for both women's and men's sexual prejudice, although the association was stronger for women than for men. In addition, contact with gay men and lesbians, particularly friends and/or family members, demonstrated stronger associations with sexual prejudice for women than for men. Exploratory analyses revealed that participants who had been in the United States for the shortest time, were from Saudi Arabia, and took the survey in Arabic only or Arabic/English had the highest levels of sexual prejudice.

Gender and Sexual Prejudice

Men's higher levels of overall sexual prejudice as well as men's more negative attitudes toward gay men than lesbians are consistent with prior research on participants from Western countries (Blashill and Powlishta 2009; Glotfelter and Anderson 2017; Herek 2002; Herek and McLemore 2013; LaMar and Kite 1998; Nagoshi et al. 2008; Ratcliff et al. 2006; Wellman and McCoy 2014; see Nagoshi et al. 2018 for an exception) and Muslim participants (Anderson and Koc 2015; Gelbal and Duyan 2006; Hooghe 2011; Hooghe and Meeusen 2012). Traditionally, many Western countries such as the United States, as well as predominantly Muslim countries, have supported an ideological system that focuses on men's social status and power in society (Falomir-Pichastor and Mugny 2009; Mata et al. 2010). Individuals who are perceived as threatening this social status and power by violating gender norms, such as sexual minorities, may become targets of prejudice. In addition, homosexuality has traditionally been viewed as a gender role violation and as *haram* in Islamic societies (Bonthuys and Erlank 2012; Hooghe et al. 2010; Siraj 2012). Heterosexual men may be especially sensitive to perceived gender role violations of other men, such as gay men (Keiller 2010; Lehavot and Lambert 2007; Nagoshi et al. 2018), because gay men are perceived as threating heterosexual men's masculinity (Vandello and Bosson 2013). Lesbians pose less of a threat to heterosexual men's masculinity (Herek 2000a; Kimmel 1997; Schope and Eliason 2004; Whitley 2001), and as a consequence, heterosexual men tend to express less negative attitudes toward lesbians. Furthermore, in many predominantly Muslim countries, sanctions against homosexuality have focused more on same-sex behavior between men and less on women (Siraj 2012); this may make gay men as a group more salient than lesbians and therefore more likely to be identified as a potential threat to heterosexual men.

Heterosexual women in our sample reported more prejudice toward lesbians than toward gay men which supports results by Herek (2002). Although women from Western countries generally exhibit more positive attitudes toward flexible gender roles than men do, "discomfort with sexual role violations" (Adams et al. 2016, p. 193) may still underlie some women's sexual prejudice (see also Nagoshi et al. 2008; Parrott and Gallagher 2008). Muslim community structures tend to sanction conservative gender roles—for example, more men than women in religious and leadership positions, restricted women's rights, and gender segregation (Abdel-Khalek 2012; Read 2003). Therefore, these traditional gender role attitudes may be associated with heterosexual women's prejudice toward lesbians because lesbians are also seen as transgressing the gender binary, threatening conservative attitudes toward the female gender role, and challenging the differential status of men and women (Kite and Whitley 1996; Wilkinson 2006).

Religiosity and Sexual Prejudice

We found support for our third hypothesis predicting that Muslim individuals with higher levels of religiosity would also have higher levels of overall sexual prejudice. This finding enhances the external validity of previous research that has focused on religiosity and sexual prejudice in predominantly Christian samples (Herek and McLemore 2013; Johnson et al. 2012; Marsh and Brown 2011) and is consistent with research on Turkish (Anderson and Koc 2015; Gelbal and Duyan 2006), Belgian (Hooghe 2011; Hooghe and Meeusen 2012), Ghanaian (Hunsberger et al. 1999) and British Muslims (Siraj 2009). In particular, individuals who are more religiously fundamentalist and ascribe to more literalist interpretations of key texts, such as the Bible and the Qu'ran, tend to be more socially conservative, to espouse traditional gender norms (Altmeyer and Hunsberger 1992), and to exhibit prejudice toward individuals who threaten their religious values (Woodford et al. 2013). The scant research that directly examines Muslim attitudes toward sexual minorities indicates that there is little cultural flexibility for any acts that challenge religious views toward gender norms, such as same-gender relations or promiscuity (Hooghe and Meeusen 2012; Hunsberger et al. 1999; Saraç 2012; Siraj 2009).

Interestingly, the current study revealed a stronger relationship between religiosity and sexual prejudice for women than for men. Also, the interaction between gender of participants and religiosity was a stronger predictor of sexual prejudice than gender by itself. Within Islam, women are not granted the same degree of sexual freedom as men (Bonthuys and Erlank 2012; Siraj 2012). Thus, for women, religiosity may become more salient when issues related to sexuality are raised. For example, within Saudi Arabia, from which a majority of our participants came, appropriate interactions between men and women and dress codes are regulated by religious police and leave little room for gender role flexibility, especially for women (al-Sharif 2017). Although there has been an increased push for women's rights in the last several years, for example allowing women to drive (Hubbard 2018), the Saudi Arabian government imposes restrictions on women's involvements in civic spheres, such as voting and limiting women's organizations (Kucinskas 2010). These results highlight the possible dynamics that gender plays in how individuals' religious beliefs are enacted, especially within religious groups where men and women do not have equal religious and social freedoms.

Contact and Sexual Prejudice

In support of our fourth hypothesis, as well as research on Turkish (Anderson and Koc 2015; Gelbal and Duyan 2006) and Belgian Muslims (Hooghe and Meeusen 2012), more positive and frequent contact with gay men and lesbians more generally, as well as contact with friends and/or family members who were lesbian or gay, significantly predicted lower levels of overall sexual prejudice for women and men (see also Cunningham and Melton 2013; Hodson 2011; Wood and Bartkowski 2004). Interactions with sexual minorities, especially positive interactions (Barlow et al. 2012), may alleviate the fear and apprehension associated with intergroup anxiety (Allport 1954; Schiappa et al. 2005) and cultivate empathy for outgroup members (Batson et al. 1997), leading to lower levels of prejudice.

There were gender differences in some of the contact variables. For example, women reported more positive interactions with gay men than did men, and women's contact and positive interactions with gay men and lesbians predicted lower levels of sexual prejudice, whereas only contact and positive interactions with gay men predicted men's lower levels of sexual prejudice. Anderson and Koc (2015) found that contact (i.e., a combined measure of time spent with and closeness to gay men and lesbians) predicted more positive attitudes toward lesbians and gay men, regardless of the participant's gender. Similarly, Gelbal and Duyan (2006, p. 577) found that "students who personally knew a homosexual person" had more positive attitudes toward lesbians and gay men, although these results were not presented separately for women and men. We also found that the amount of time spent with gay men and lesbians was significantly related to the perceived quality of these interactions for women but not for men. Furthermore, although sexual prejudice levels were similar among women and men who did not report contact with friends and/or family members who were gay or lesbian, women who had contact had significantly lower levels of sexual prejudice than did men who had contact.

The results on country of origin may offer an explanation for the gender differences. Participants from North America,

most of whom were women, were more likely to report having contact with friends and/or family members who were lesbian or gay than were participants from Saudi Arabia and other countries and these women had the lowest levels of sexual prejudice. In other words, gender may be confounded with the country of origin, which could affect both levels of contact and sexual prejudice. Taken together, our results suggest differences in the saliency and meaning of interactions with lesbians and gay men for Muslim women and men, although additional research is needed to confirm our speculation.

Time in the United States and Country of Origin

More time in the United States correlated with lower levels of sexual prejudice, suggesting that spending more time in the United States may increase the opportunities to interact with gay men and lesbians. Also, participants from North America were more likely than were participants from Saudi Arabia and other countries to report having contact with a friend and/or family member who was gay or lesbian. Shannahan (2009) posited that Islamic culture is generally characterized by denying the existence of homosexuality, which may further perpetuate the lack of (known) contact with sexual minorities (Bonthuys and Erlank 2012). Furthermore, compared to many Muslim majority countries, sexual minority groups in the United States are probably more likely to be represented positively in popular culture, politics, and media. This additional indirect exposure may also contribute to lower levels of prejudice (Schiappa et al. 2005). Participants who had been in the United States for longer periods of time also had lower levels of religiosity, likely related to coming from Muslim majority countries where devout adherence to their faith is institutionally and culturally emphasized more than it is in the United States.

Country of origin remained a significant predictor of sexual prejudice even after controlling for gender, contact, and religiosity. A large portion of our sample came from Saudi Arabia, a historically conservative country regarding gender equality, religious conservatism, and the enforcement of religious laws. Consistent with this conceptualization, participants from Saudi Arabia had the highest levels of both sexual prejudice and religiosity compared to participants from other Muslim countries (e.g., Pakistan, Kuwait) and North America. Islam is the official state religion within Saudi Arabia, and attitudes that are perceived to threaten the social fabric of gender relations, sexuality, and religious dedication to Islam are met with strong repression and opposition (Kucinskas 2010), including severe punishments and even execution for same-sex behavior (Equaldex 2018c). Thus, individuals from Saudi Arabia, who also reported having been in the United States for a shorter period of time than other participants, may be more likely to endorse stronger religious beliefs and more negative attitudes toward sexual minorities.

Individuals from other countries with large Muslim populations had significantly lower levels of sexual prejudice than did those from Saudi Arabia. These non-Saudi participants represented several different countries, including Egypt, Bahrain, Pakistan, Kuwait, and Iraq among others, so caution must be taken in drawing conclusions from such a heterogeneous group. There are very likely cultural differences among these different countries in factors that may influence sexual prejudice. Legal restrictions and protections regarding same-sex behavior vary among some of the predominantly Muslim countries and such differences may influence people's attitudes toward gay men and lesbians. For example, homosexual activity is legal for females but not males in Kuwait (Equaldex 2018b), whereas such activity is technically not illegal in Bahrain although other laws have been used to prosecute people who engage in same-sex behavior (Equaldex 2018a). We also found that non-Saudi individuals did not differ significantly from North Americans in their levels of religiosity, although they had significantly higher levels of prejudice than did those from North America (see also Pew Research Center 2013), possibly highlighting the more traditional and conservative views on gender and sexuality to which individuals in other Muslim countries adhere. Finally, as we mentioned previously, because more men than women were from Saudi Arabia and more women than men were from North America, gender and country of origin may be confounded. Having more men among the Saudi participants may have negatively skewed our country of origin results. These findings highlight the importance of examining religious, cultural, and gender dynamics in these countries, and how those dynamics relate to sexual prejudice.

Limitations and Future Research Directions

Although self-report measures are common in sexual prejudice research, they may not accurately assess individual beliefs, opinions, and behaviors in real-life settings. Another limitation with self-report measures is the potential for socially desirable responding, especially given not only the sensitive nature of the topic, but also the transparency of research questions. However, the present study reduced this limitation by including a measure of social desirability. Nevertheless, research using other measures of sexual prejudice such as observational studies of interactions between people of different sexual orientations and implicit measures (e.g., Anderson and Koc 2015) are needed. Also, social desirability scores correlated significantly with more of women's than men's sexual prejudice, contact, and religiosity scores and differed significantly as a function of the country of origin. These findings suggest potential gender, cultural, and societal influences on social desirability that deserve further investigation.

The use of a predominantly college student population also limits the generalizability of our results because education

may influence attitudes toward sexual minority groups (Herek and Gonzalez-Rivera 2006). Related, there may be fundamental differences between participants who have the opportunity to study abroad compared to those with more limited opportunities to travel or those who do not want to study abroad. We also used a primarily U.S. Midwestern sample, and it is possible that attitudes toward sexual minorities may vary as a function of the region of the United States (Glick and Golden 2010). The age range of our participants was fairly large (18 to 67 years); however, age did not correlate significantly with levels of sexual prejudice, supporting results of a survey of predominantly Muslim countries that generally found no significant age differences in the acceptance of homosexual behavior (Pew Research Center 2013). Nevertheless, a majority of our participants were under 27-years-old, and some studies indicate that younger people tend to have more accepting attitudes toward same-sex behavior and civil rights for sexual minorities than older people do (Pew Research Center 2013; Smith et al. 2014) although there may be significant country differences in these age effects (Pew Research Center 2013). Further research is needed on the relations among age, sexual prejudice, contact, and religiosity among Muslim individuals from different countries. A larger sample size would also allow for more statistical power to investigate additional interaction effects. Additionally, the convenience snowball sample limits the generalizability of results to broader populations because some Muslim individuals who were recruited and willing to participate in our study may have already had open and progressive views toward sexual diversity.

Given that this line of research is in its infancy, some of the measures we used have not been widely validated within Muslim populations (e.g., Multidimensional Scale of Attitudes toward Lesbians and Gay Men; Gato et al. 2012). Scales that more comprehensively examine attitudes toward lesbians and gay men separately (e.g., the Modern Homonegativity Scale; Morrison and Morrison 2002) should be used with Muslim participants. Sexual prejudice research has tended to focus on lesbians and gay men, although it should be broadened to examine the effects of religiosity and contact on prejudice toward other individuals who identify as bisexual, asexual, pansexual, and queer (among others). Other measures may assess religiosity within Islam more reliably and validly than the Santa Clara Strength of Religious Faith Questionnaire (Plante and Boccaccini 1997); however, religiosity was not the sole focus of the current study and a longer measure assessing Muslim religiosity was not warranted.

For the present study, we developed a contact measure based on prior research examining the quality and quantity of contact (Binder et al. 2009; Cunningham and Melton 2013). Although our findings converge with results of other research on contact and sexual prejudice, future research should develop a more comprehensive measure of contact with sexual minorities including both direct (e.g., having friends and family members) and indirect (e.g., exposure to media representations) contact. In addition, the effects of sustained exposure to sexual minority individuals should be studied because some research has suggested changes over time in the relation between contact with friends who are lesbian or gay and sexual prejudice (Hooghe and Meeusen 2012). Given the influence of gender role expectations on sexual prejudice and the more traditional gender roles within Islam (Abdel-Khalek 2012; Read 2003), future studies should investigate other factors found to be related to sexual prejudice in non-Muslim samples, such as attitudes toward femininity (Wilkinson 2006), masculinity (Wellman and McCoy 2014), gender egalitarianism (Kucinskas 2010), and authoritarianism (Whitley and Ægisdottir 2000).

A majority of our sample was from Saudi Arabia with smaller numbers from other countries. Saudi Muslims tend to be predominantly Sunni, one of the major branches of Islam, whereas some of our other participants may follow the other major Islamic branch of Shia or even the Suffi mystical form of Islam. We could not separate the effects of cultural differences from Muslim religious beliefs within our sample, and therefore we cannot generalize our findings to Muslim individuals in other countries. In addition, both Sunni and Shia have smaller sects that may endorse different interpretations of Islam (Information is Beautiful 2014) that in turn may differentially affect attitudes toward sexual minorities.

Potential problems related to translating and back-translating measures may also serve as a limitation, insofar as meanings may not be accurately communicated by the Arabic translations. Finally, giving participants the choice to take the study in Arabic may prime individuals to think about their own cultural background as it relates to the questions being asked. Indeed, individuals who responded to the Arabic or Arabic/English versions of the study reported higher levels of sexual prejudice and religiosity than did those who took the survey in English only, although survey language was confounded with country of origin. An intersectionality framework would be fruitful in examining the importance of the salience of various social identities such as nationality, gender, and religious identities as well as the possible interactions among those social identities on attitudes toward sexual minorities (Worthen 2013).

Practice Implications

Although there are positive changes in the treatment of sexual minority individuals worldwide, they continue to be targets of prejudice and discrimination at individual and group levels. Research and clinical psychologists have important roles in advocating on behalf of individuals who are sexual minorities, and they have an ethical responsibility to investigate and

educate themselves on the various diversity factors that influence these individuals' psychological health, well-being, and behavior (American Psychological Association 2009, 2010). As indicated in the current study, one of those factors is religion and adherence to religious doctrines. Muslims are often judged as a homogeneous group (American Psychological Association 2015) even though there are cross-cultural variations within Islam regarding attitudes toward individuals who are sexual minorities, as suggested by some of our results. They are also the targets of negative stereotypes, prejudice, and discrimination (Allen 2015; Choma et al. 2016). Thus, clinical and counseling psychologists who are knowledgeable about these dynamics, risk-factors, and the influence that the Muslim faith has on gender role expectations and beliefs about morality would be better prepared to provide culturally competent care. It is incumbent upon researchers and practitioners to assess how their own biases and attitudes toward sexual minority and Muslim individuals influence their research questions and treatment of their clients; psychologists are not immune to covert and overt expressions of prejudice (King 2015).

Such recommendations are not restricted to psychologists in the United States. Psychologists from predominantly Muslim countries are also calling for more research on and the development of ethical guidelines for working with sexual minority individuals (e.g., in Iran; Yadegarfard and Bahramabadian 2014). By openly addressing and managing these potential biases and identifying the unique challenges Muslim sexual minority individuals face, researchers, practitioners, and social activists may be better prepared to identify beneficial resources and advocate for community support.

Conclusions

Strong prohibitions against same-sex behavior and lack of legal protections for sexual minority individuals exist in many countries around the world, including countries that are predominantly Muslim (Equaldex 2018a, b, c; Pew Research Center 2013). Also, debates continue regarding the compatibility of Islam and homosexuality (Halstead 2005; Merry 2005). Nevertheless, despite the long-standing notion that homosexuality is *haram* and therefore incompatible with Islam (Siraj 2012), some writers have delineated interpretations of Islam that are more accepting of people of diverse sexual orientations (Jahangir and Abdul-Iatif 2016) and others have written stories of the experiences of sexual minority individuals who are Muslim (e.g., Jama 2014). In addition, there are many Muslim individuals who strive to reconcile their faith and sexuality (Dalslåen 2017; Siraj 2012), and there is strong support within subsets of the Muslim community for these individuals. These subsets are becoming more active and visible, and they are represented by the first few gay Imams or religious leaders, as well as several Muslim advocacy and support groups for sexual and gender minority individuals (e.g., Al-Fatiha Foundation and Muslims for Progressive Values in the United States, Imaan LGBTQI in the United Kingdom, and Bedayaa in Egypt and Sudan). This visibility and acceptance of sexual diversity also lends credence to our results delineating a wide range of dynamics that influence these attitudes (e.g., gender, contact, levels of religiosity, country of origin) and provide evidence against the perceived incompatibility of homosexuality and Islam.

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Compliance with Ethical Standards

This manuscript is not under consideration for publication anywhere else nor has it been published previously in whole or in part. Our study was approved by Indiana State University's Institutional Review Board and we followed American Psychological Association ethical guidelines in conducting our research.

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