

Does contact matter?: The relative importance of contact in predicting anti-gay prejudice in

Jamaica.

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Abstract

Jamaica is seen as one of the world's most anti-gay countries. However, little empirical research has investigated methods of reducing this prejudice. Intergroup contact - (positive) interaction with someone from a different social group - is one of the most widely tested and strongly favoured methods of reducing prejudice. However, the role of contact in this specific context is not clear, particularly the relative importance of contact compared to other variables that predict (less) prejudice. This current cross-sectional research investigated that question using a large, representative sample of Jamaican participants ($N = 942$). As in prior research, contact predicted less anti-gay prejudice and the (negative) relationship between contact and anti-gay behaviours was mediated by intergroup anxiety and attitudes, even when other important predictors were taken into account. However, contact was a less important predictor than gender, education or religiosity. Implications for intergroup contact and prejudice-reduction strategies in Jamaica are discussed.

Keywords: sexual prejudice; gay; Jamaica; intergroup contact; attitudes; anxiety; predictors

Jamaica is arguably one of the most anti-gay countries in the world, presenting a very challenging, sometimes dangerous, society for the gay men and lesbians who live there (Carroll & Itaborahy, 2015; Ottosson, 2009; West, 2018). Some recent empirical research has investigated predictors of Jamaican anti-gay prejudice and ways of potentially reducing this prejudice (West, 2017; West & Cowell, 2015; West & Hewstone, 2012a; West, Husnu, & Lipps, 2015). However, this work is still relatively scarce and much more research is necessary to identify optimal prejudice-reducing strategies in this context. This current research adds to the available body of knowledge by being the first test of the Contact Hypothesis (Allport, 1954; Brown & Hewstone, 2005) in Jamaica using a large, representative participant sample. It also investigated whether key mediators of the relationship between contact and anti-gay behaviour apply in this context (i.e., intergroup anxiety and negative attitudes) and compared contact to other important predictors of anti-gay prejudice in Jamaica (such as gender, education and religiosity). As such, it offers one of the relatively few tests of the Contact Hypothesis in a developing nation, under conditions of severe prejudice (Pettigrew & Tropp, 2006), as well as one of the few tests of the importance of contact, relative to other variables that predict lower levels of prejudice.

Sexual Prejudice in Jamaica

In 2015, shortly after becoming the first Jamaican author to win the prestigious *Man Booker Prize*, Marlon James spoke of the difficulty of living in Jamaica as a gay man (James, 2015). At a certain point, he was so desperate to escape that he thought, “I had to leave my home country – whether in a coffin or a plane.” (p. 1). His fears were not unfounded. Sexual prejudice – negative beliefs, attitudes or behaviours toward others based on their sexual orientation – is a global problem (Carroll & Itaborahy, 2015; Herek, 2004). Its consequences are both wide-reaching and profound, ranging from social ostracism, avoidance and subtle negativity (Anderson & Kanner, 2011; Herek, 2004) to reduced legal rights and protections (Araiza, 2010; Hollander, 2009), to hate crimes and murder (Willis, 2004). All these forms of

prejudice, even the seemingly less severe, can have long-term negative consequences for the physical and psychological health and well-being of gay men and lesbians (Meyer, 2003).

However, despite the global nature of sexual prejudice, Jamaica is often called one of the most anti-gay countries in the world (Adepitan, 2014; Padgett, 2006; West & Geering, 2013). Though this claim is likely an exaggeration (see West, 2018), it is not entirely without merit. Anti-gay rhetoric is pervasive throughout Jamaican society, from popular entertainment to serious political discussion (Cowell & Saunders, 2011). Some of the most extreme examples can be found in ‘dancehall’ music, one of Jamaica’s most popular musical forms (Pinnock, 2007). Several dancehall songs contain lyrics that openly and explicitly encourage the murder of gay men and lesbians; examples include “‘Aal bati-man fi ded [All homosexuals must die]” (Chin, 1997, p. 128) and “‘Chi-chi man fi ded an dats a fak [Gay men should die and that’s a fact]” (Farquharson, 2005, p. 109).

Each year there are indeed several incidents in which lesbians and gay men have been attacked, beaten or killed because of their sexual orientation (J-FLAG, 2013). These attacks can be quite disturbing, such as the attack on a Jamaican university student in which a crowd of his fellow students pursued him, calling for his death (Pearson, 2012), or the killing of Dwayne Jones: a 16 year old who was beaten, stabbed, shot, and run over by a car at a party (Martinez, 2013). Gays and lesbians also receive reduced legal protection from the Jamaican state (Wheatle, 2013); consensual anal sex between adults is illegal in Jamaica (Jamaica Ministry of Justice, 1969), implicitly criminalizing sexual relationships between men and serving as grounds for community ‘justice’ against homosexuals more generally. Similar laws are found in a number of Caribbean nations; however, the extent to which they are enforced or used to guide community behaviour varies significantly between countries (Jackman, 2016)

Predictors of Prejudice Against Lesbians and Gay men in Jamaica

Very few empirical studies have investigated prejudice against gay men and lesbians in Jamaica. However, the research that has been conducted to date supports qualitative

assertions that anti-gay prejudice is prevalent throughout Jamaican society (West & Cowell, 2015), more severe than that of other countries, even neighbours in the Caribbean (Boxill et al., 2011, 2012; West & Hewstone, 2012a), and widely considered socially acceptable (West & Hewstone, 2012b). This prejudice manifests in multiple ways; a recent, large-scale representative study ($n = 1,942$) found that most Jamaicans reported very negative attitudes toward lesbians and gay men, as well as strong opposition to gay rights (West & Cowell, 2015).

An even smaller subset of empirical studies has investigated methods, or potential methods, of reducing anti-gay prejudice in Jamaica. These studies have identified numerous predictors of (more) prejudice against lesbians and gay men. In order of declining importance, as identified by West and Cowell, (2015), these predictors are (male) gender, lower levels of education, lower levels of income, a preference for dancehall music, higher levels of religiosity, and older age. The importance of gender norms has also been emphasized by subsequent research (West, 2016) suggesting that anti-gay attitudes may be a specific manifestation of more general, restrictive gender norms about sexual behaviour (see Falomir-Pichastor & Mugny, 2009 for a similar hypothesis based outside of Jamaica).

One potentially important solution, however, has thus far been absent from these representative and comparative investigations of prejudice reducing strategies in Jamaica – intergroup contact. Some research has identified contact, and related contact-based interventions, as potential solutions (West & Hewstone, 2012a; West et al., 2015), and positive contact has been suggested as a crucial addition to other strategies currently in use, such as collective action (West, 2017). However, it is important to investigate the relative potential utility of contact by comparing it to other variables that predict levels of sexual prejudice in Jamaica. Simply put, how important is contact in this context?

The Contact Hypothesis

More than 60 years ago, Gordon Allport (1954) proposed that intergroup contact - social interaction between members of opposing groups - should reduce bias and improve

relations between these groups. Since then a large volume of empirical research has supported the contact hypothesis, demonstrating intergroup contact's effects in a range of societies, with a variety of target groups (e.g., Brown, Eller, Leeds, & Stace, 2007; Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Harwood, Hewstone, Paolini, & Voci, 2005; Taschler & West, 2016; Turner, Hewstone, & Voci, 2007; Vonofakou, Hewstone, & Voci, 2007; West, Hewstone, & Lolliot, 2014). Pettigrew and Tropp (2006) conducted a meta-analysis of 515 studies on intergroup contact, confirming the robust, significant relationship between contact and prejudice, the generalizability of these effects, and the dominant causal direction of this relationship (i.e., from contact to prejudice, rather than the reverse). Given this support, it is unsurprising that contact is one of the most widely-used prejudice-reducing interventions (Hewstone, Rubin, & Willis, 2002; Oskamp & Jones, 2000).

Further refinements have been added to what eventually became Contact Theory (Brown & Hewstone, 2005). Initially, Allport (1954) hypothesized that contact would only work under certain conditions (i.e., common goals, cooperation, equal status, and institutional support). Higher-quality contact is more effective, and the importance of close, positive contact continues to be recognized (Davies et al., 2011). However, recent research has found that these conditions are optimal, but not necessary; intergroup contact can reduce prejudice even when these optimal conditions are not met (Pettigrew & Tropp, 2006).

Subsequent research also brought an improved understanding of the mechanisms through which contact reduces prejudice. Initially, it was assumed that contact's effects were due primarily to cognitive factors, such as increased knowledge about the outgroup (Allport, 1954). However, more recent research (e.g., Islam & Hewstone, 1993; Turner, Hewstone, et al., 2007; West, Hewstone, et al., 2014), including a meta-analysis of 54 studies and 91 independent samples (Pettigrew & Tropp, 2008) has more strongly supported the role of affective factors.

Indeed, intergroup anxiety - a state of negative arousal stemming from interactions (or

anticipated interactions) with members of other groups (Stephan & Stephan, 1985) - was found to be the most reliable mediator of contact's effects on intergroup attitudes (Pettigrew & Tropp, 2008). It should be noted that intergroup anxiety can function as both an antecedent and an outcome of intergroup interactions (Stephan, Stephan, & Gudykunst, 1999), and that some research suggests that intergroup anxiety is an affective dimension of prejudice, rather than a predictor of prejudice (Tropp & Pettigrew, 2005). Despite these interesting debates on the potential definitions and characterisations of intergroup anxiety, a large body of research supports the role of intergroup anxiety as a mediator of contact's effects on prejudice: both that positive intergroup contact can reduce intergroup anxiety (Voci & Hewstone, 2003; West & Hewstone, 2012a) and also that intergroup anxiety predicts more prejudice (Littleford, Wright, & Sayoc-Parial, 2005; Van Zomeren, Fischer, & Spears, 2007). Thus, intergroup anxiety is posited as mediator of this relationship in this research as well.

Investigating Contact in the Jamaican Context

Despite the support for intergroup contact as a prejudice-reducing mechanism, there are nonetheless noteworthy limitations of the body of contact research. Most contact research, including research specifically investigating contact and anti-gay prejudice, has been conducted in relatively egalitarian countries like the United States of America (Dixon, Durrheim, & Tredoux, 2005). There are exceptions to this general rule, including research on contact-based prejudice reduction strategies in Cyprus (West et al., 2015), and in Caribbean countries other than Jamaica (Jackman, 2016). Nonetheless, in the afore-mentioned meta-analysis of contact's effects (Pettigrew & Tropp, 2006), 71% of the studies were conducted in America, as were 92% of the studies specifically investigating the effect of contact on sexual prejudice. None were conducted in Jamaica or a similarly anti-gay society.

A related concern for contact research, also reflected in much other social psychological research, is the frequent use of undergraduate students as participants (Bowen & Bourgeois, 2001; Turner, Hewstone, et al., 2007). This presents several potential problems

including the typically more liberal attitudes of undergraduate students, the possible under-or over-estimation of relationships between variables, and the potential prevalence of atypical assumptions about social interactions that apply in that population, but not outside of it (Henrich, Heine, & Norenzayan, 2010; Sears, 1986).

There is only one previous empirical study on the relationship between contact and prejudice in Jamaica (West & Hewstone, 2012a). While this study is notably the only empirical research on the topic to date, that authors cautioned that it was “preliminary and suggestive, rather than definitive” (p. 59), mostly due to the relatively small ($N = 107$), non-representative sample of Jamaican undergraduate students. This current research builds on those findings by using a large, representative sample of Jamaican participants. It also offers useful practical insights by comparing contact to other possible predictors of sexual prejudice, thereby suggesting avenues of prejudice reduction that are likely to have the strongest effects. Finally, it also adds to the broader understanding of contact by testing the contact hypothesis, including key mediators of contact’s effects, in a non-Western nation. As such, it adds meaningfully to knowledge of contact’s effectiveness in high-prejudice contexts, the generalizability of its effects in under-served societies, and the relative importance of contact compared to other prejudice reducing strategies.

Current Research

This study investigated the relationship between intergroup contact and prejudice against lesbians and gay men in Jamaica using a large, representative participant sample. First, contact was compared to other predictors identified in previous research (i.e., gender, education, income, a preference for dancehall music, religiosity and age). Also, this study investigated whether the relationship between contact and reported negative behaviours, mediated by intergroup anxiety and attitudes, would be found in this sample as it had been in prior research. As much prior research has highlighted the relationship between attitudes and behaviours (Crandall & Eshleman, 2003; McConnell & Leibold, 2001) it was expected that

negative attitudes would mediate the relationship between contact and negative behaviours. Furthermore, given the established role of intergroup anxiety as a mediator of intergroup contact's effects on prejudice (Pettigrew & Tropp, 2008), it was expected that intergroup anxiety would mediate the relationship between contact and both attitudes and behaviour.

Method

Participants and recruitment. The data were obtained from a nationally representative sample of Jamaican adults, drawn from 231 communities in Jamaica. The sample contained 942 participants, 44 of whom did not identify themselves as heterosexual and were thus excluded from subsequent analyses. Of the remaining 898 participants, 414 (46.1%) were men and 484 (53.9%) were women. The median age group was 35 – 44, while the modal age group (22.3%) was 25 – 34. The data were collected by an external company hired by JFLAG – the largest gay rights organisation in Jamaica – and none of the data was collected with these hypotheses in mind. Consequently, as is the case in many reanalyses of externally obtained data, the measures are not ideal because items had to be selected from a data set not designed for this purpose. To manage this, each measured construct was clearly defined, similarities between the present scales and scales that are more widely used were outlined, and evidence was provided to indicate that the scales were reasonably internally reliable. Also, wherever possible, the items used were similar to (or the same as) those used in prior research in the same context (e.g., West, 2017; West & Cowell, 2015).

Measures. Participants indicated their gender (1 = *male*, 2 = *female*), and their age by selecting one of 6 age groups (1 = 18 – 24, 2 = 25 – 34, 3 = 35 – 44, 4 = 45 – 54, 5 = 55 – 64, 6 = 65 and older). Participants indicated their highest level of education (1 = *No formal education*, 2 = *Primary/ Prep school*, 3 = *Some secondary education*, 4 = *Completed secondary education*, 5 = *Vocational/Skills training*, 6 = *University*, 7 = *Some professional training beyond university*, 8 = *Graduate degree, e.g., MSc, PhD*). Participants indicated their level of religiosity by indicating how often they attended church (1 = *Less than once a year*, 2

= *Every year*, 3 = *2 to 3 times a year*, 4 = *Every month*, 5 = *Every Week*) and their monthly income in Jamaican dollars¹ (1 = *Under \$20,000*, 2 = *\$20,001 to \$35,000*, 3 = *\$35,001 to \$75,000*, 4 = *\$75,001 to \$125,000*, 5 = *\$125,001 to \$175,000*, 6 = *\$175,001 to \$225,000*, 7 = *\$225,001 to \$275,000*, 8 = *\$275,001 to \$325,000*, 9 = *\$325,001 to \$375,000*, 10 = *\$375,001 to \$425,001*, 11 = *\$425,001 to \$475,000*, 12 = *\$475,000 and above*). Finally, participants also indicated whether “dancehall [was] the kind of music [they] listen to the most” (0 = *no*, 1 = *yes*).

Quantity of contact was measured with a single item in which participants reported the “number of homosexuals [they] personally know”. Another item measured the closeness of these relationships: “How close are you to these persons?” (1 = *Not at all*, 5 = *Very close*). These items have high face validity, contain no deception, and are similar to quantity and quality of contact measures successfully used in prior research (e.g., Pettigrew, Christ, Wagner, & Stellmacher, 2007; West, Hewstone, et al., 2014). As both quantity and quality of contact are important, an index of positive contact was also created by using the product of participants’ quantity and quality of contact scores. This approach has also been successfully used in much prior contact research (Evans-Lacko et al., 2013; Voci & Hewstone, 2003; West & Hewstone, 2012a; West et al., 2014). Participants who had never experienced any contact with a lesbian or gay man were automatically assigned a contact score of 0.

Intergroup anxiety was assessed with three items ($\alpha = .57$) that indicated an anxious or nervous response to interactions with gay men or lesbians: “Gays/lesbians make me nervous”, “I would feel uncomfortable living with someone who is gay/lesbian”, “I would be fearful that gays/lesbians may try to approach me sexually”. Though this scale did not quite attain the conventional level of reliability, all items were retained as they closely matched the description of intergroup anxiety (Stephan & Stephan, 1985), item deletion did not result in a more reliable scale, all items loaded onto a single factor, and all factor loadings were high ($.71 < \lambda < .75$).

Anti-gay attitudes were assessed with four items ($\alpha = .67$) used in similar previous research (West, 2017; West & Cowell, 2015). Three of these items assessed emotional reactions toward gay people similar to the widely-used semantic differential scale developed by Wright, Aron, McLaughlin-Volpe and Ropp (1997 also used by West & Hewstone, 2012a to measure attitudes toward gay men in Jamaica); “I feel you can trust a person who is gay/lesbian.” (reversed), “I get annoyed, angry or feel uncomfortable when I see two gays/lesbians together in public”, and “When I see gays/lesbians I think “what a waste”. The other item assessed judgments of homosexuality similar to the Attitudes Toward Gays scale developed by Herek (1988; also used by Turner, Crisp, & Lambert, 2007); “Homosexuality is a sin.”. All items loaded onto a single factor, and all factor loadings were moderate to high ($.60 < \lambda < .80$).

Self-reported negative behaviour toward gays was assessed with five items ($\alpha = .68$) used in prior research (West, 2017; West & Cowell, 2015) with which participants indicated whether they generally behaved in specific negative ways toward lesbians and gay men. These were similar to the behavioural intentions scale developed by Tam, Hewstone, Kenworthy, and Cairns (2009; also used by West & Bruckmüller, 2013) except that they assessed past behaviour rather than future behavioural intentions; “I have threatened to hurt or damage the property of someone who is gay/lesbian”, “I am one of those who speak badly about or say negative things about gays/lesbians”, “I use terms such as faggot, sodomite, fish, battyman, sheman, when I refer to gays/lesbians”, “I tease and make jokes about gays/lesbians”, “I avoid gays/lesbians”. All items loaded onto a single factor, and all factor loadings were moderate to high ($.47 < \lambda < .77$).

Unless otherwise stated, participants responded to all items on 5-point Likert scales (1 = *Strongly disagree*, 5 = *Strongly agree*). All scales are coded so that higher values represent more negativity toward lesbians and gay men. This was done for clarity of presentation. However, it is worth noting that some items were reversed throughout the survey, which

reduced participants' tendency to respond similarly to all items. Furthermore, items selected for the same scale were not necessarily close to each other in the survey. No alternative combination of scales could be made into a single, internally reliable scale with items that loaded onto a single factor.

Results

Levels of contact and anti-gay prejudice. About half of the participants (51.2% or 440 of the 898 participants) had experienced some contact with at least one gay man or lesbian. However, these interactions were typically not very close ($M = 1.16$, $SD = 1.52$): indeed they were significantly below the midpoint of the closeness scale (3), $t(897) = 36.48$, $p < .001$. Unsurprisingly, participants also reported high levels of intergroup anxiety, ($M = 3.35$, $SD = .99$), $t(987) = 10.74$, $p < .001$, and high levels anti-gay attitudes ($M = 3.99$, $SD = .78$), $t(897) = 38.09$, $p < .001$. The mean score for negative behaviour however ($M = 2.94$, $SD = .85$), fell just below the midpoint of the scale, $t(897) = 2.05$, $p = .04$.

Relative importance of contact. Correlations between all variables can be seen in Table 1. While these analyses are useful for initially identifying relationships between variables and ruling out multicollinearity, each relationship in a correlation is tested without considering the impact of other variables. Thus, for each of the measures of bias against lesbians and gay men, multiple regression analyses were used to investigate the effects of all proposed predictors simultaneously (i.e., gender, education, income, religiosity, dancehall music, age and positive contact). This method allowed the relative importance of each predictor to be identified while taking the other predictors into account. Note that 'positive contact' in these analyses refers to the index of positive contact obtained by taking the product of contact quantity and quality. Regression weights of all predictors can be seen in Table 2.

Intergroup Anxiety. Female participants reported less intergroup anxiety ($\beta = -.22$, $p < .001$), as did more educated participants ($\beta = -.13$, $p = .007$). Religiosity predicted more intergroup anxiety ($\beta = .17$, $p < .001$) while prior contact predicted less intergroup anxiety (β

= -.12, $p = .003$). A preference for dancehall music ($\beta = -.03$, $p = .52$), age ($\beta = .03$, $p = .54$), and income ($\beta = -.003$, $p = .96$), all failed to predict intergroup anxiety.

Negative attitudes. Female gender ($\beta = -.19$, $p < .001$), higher levels of religiosity ($\beta = .18$, $p < .001$), and prior contact ($\beta = -.14$, $p = .001$) predicted less negative attitudes. Income ($\beta = -.09$, $p = .058$), education ($\beta = -.05$, $p = .26$), age ($\beta = .04$, $p = .33$), and a preference for dancehall music ($\beta = .01$, $p = .83$) all failed to predict negative attitudes.

Negative behaviours. Female participants reported less negative behaviours ($\beta = -.25$, $p < .001$), as did more educated participants ($\beta = -.12$, $p = .015$). Age ($\beta = -.07$, $p = .09$), contact ($\beta = -.06$, $p = .18$), religiosity ($\beta = .04$, $p = .41$), income ($\beta = .01$, $p = .78$), and a preference for dancehall music ($\beta = .004$, $p = .92$) all failed to predict negative behaviours.

Mediation analyses. Correlations between all variables can be seen in Table 1. The mediated relationship between positive contact, intergroup anxiety, anti-gay attitudes and negative behaviours was tested with Process Macros (Model 6; see Hayes, 2009). This method of analysis had multiple advantages: it allowed the investigation of the mediation model while taking other relevant predictors into account (i.e., gender, education, religiosity, income, age and dancehall music) by including them as covariates in each step of the model; it also tested all possible paths in the model highlighting all significant sequential relationships. Variables were transformed into standardized scores for the purpose of these analyses and standardized coefficients are reported.

The model was highly significant, $R^2 = .11$, $F(7, 564) = 9.63$, $p < .0001$, and the hypothesized mediated relationships were found. Contact predicted less intergroup anxiety ($\beta = -.13$, $p = .003$), and intergroup anxiety predicted negative attitudes ($\beta = .43$, $p < .0001$), which in turn predicted negative behaviours ($\beta = .46$, $p < .0001$). Contact also directly predicted less negative attitudes ($\beta = -.09$, $p = .03$), though not negative behaviours ($\beta = .03$, $p = .34$). Intergroup anxiety also directly predicted negative behaviours ($\beta = .19$, $p < .0001$). The total indirect relationship between contact and (less) negative behaviours was significant

($\beta = -.09$; 95% C.I. = $-.18, -.03$), as was the indirect relationship via intergroup anxiety alone ($\beta = -.02$; 95% C.I. = $-.06, -.01$), and the indirect relationship via intergroup anxiety and attitudes ($\beta = -.03$; 95% C.I. = $-.06, -.01$). The indirect relationship via attitudes alone, however, was not significant ($\beta = -.04$; 95% C.I. = $-.10, .0004$).

In summary, contact emerged as a less important predictor of anti-gay and anti-lesbian prejudice in Jamaica than gender, education or religiosity, but as a more important predictor than income, age, or a preference for dancehall music. Furthermore, even when all these other variables were taken into account, contact still predicted less anti-gay / anti-lesbian prejudice and the previously established mediated relationships between contact, intergroup anxiety, negative attitudes and negative behaviour were still found.

Discussion

Anti-gay prejudice in Jamaica is both severe and widespread, with serious or even deadly consequences; several LGBT Jamaicans live in fear of mistreatment, ostracism (even from their own families), and violent anti-gay attacks (Johnson, 2016). Very little empirical research has investigated solutions to this serious problem (though see West, 2017 for an exception). This current research was the first to compare contact to other predictors of anti-gay prejudice in Jamaica, and to investigate contact in this context using a large representative sample of Jamaican participants. The findings supported contact's potential role as a prejudice-reducing strategy. Despite high levels of prejudice nationwide and generally low levels of contact, contact still predicted less intergroup anxiety, less negative attitudes and (indirectly) less negative behaviours, even when other predictors of anti-gay bias were taken into account. This research, did not, however, find that contact was a particularly strong predictor of anti-gay bias in Jamaica. Rather, contact appeared to be less important than gender, education, and religiosity. Below, these findings are discussed with reference to study design and results, potential future research, and implications for policies to reduce sexual prejudice in Jamaica.

Research Design

This research used a large, representative sample of Jamaican participants to investigate the relative importance of contact compared to other variables that predict (less) sexual prejudice in Jamaica. Much research in social psychology, including research on intergroup contact, is criticised for using participants who are unlikely to be representative of the broader population. This includes undergraduate students, samples restricted to wealthy, Western nations, or other samples of convenience (Henrich et al., 2010; Sears, 1986). This current research, however, profited from a large, representative, non-student sample of participants drawn from a diverse array of communities and demographic backgrounds in a developing nation. As such, it adds meaningfully to the body of evidence supporting the contact hypothesis, particularly to its generalizability, and to the specific theoretical model in which contact reduces negative behaviours via reductions in intergroup anxiety and negative attitudes.

The measures used in this study were not specifically designed for this purpose. Consequently, the scales were not ideal, in that they were made of selected variables, rather than of items used in prior, established research. This limitation was managed as well as possible by clearly defining the constructs investigated, identifying similarities between these current items and those used in prior research, and by applying high standards of internal reliability. Nonetheless, future research could re-examine these hypotheses using well-established scales from published social-psychological research.

While this did impose some limitations on the study, there are ways in which it could also be seen as a strength. Some contact research has been criticised for imposing the researchers' perspectives of contact onto participants, to the detriment of participants' own interpretations of their cross-group interactions (Dixon et al., 2005). However, the items used in this research were designed by an independent Jamaican gay rights group (JFLAG) and were not designed with the contact hypothesis in mind. Similarly, demand characteristics are

less likely to be a concern as those who collected the data were not aware of the hypotheses tested here. All this adds to the confidence one can have in the findings and in the negative relationship between contact and anti-gay prejudice in Jamaica.

As is the case with all cross-sectional research, causal relationships between variables cannot be determined, regardless of the statistical techniques used (MacCallum & Austin, 2000). Thus, it cannot be inferred from these current data that contact reduces sexual prejudice in Jamaica. It remains possible that lower levels of prejudice lead to more contact, rather than (or as well as) the inverse. Much prior contact research, including longitudinal research, genuinely experimental research, and meta-analyses (Pettigrew & Tropp, 2006), has shown that the dominant causal direction is from contact to (less) prejudice, rather than from prejudice to contact. Nonetheless, future experimental and longitudinal research in this context would be helpful for establishing the causal effects of contact and ruling out alternative hypotheses.

Lastly, this research was able to consider measures of intergroup bias that were truly applicable in the Jamaican context. While some have criticised contact research for an excessive focus on the positive emotions of majority group members (Devine, Evett, & Vasques-Suson, 1996), this current research was able to include variables beyond intergroup attitudes, such as participants' willingness to behave in an aggressive or violent manner toward gay men and lesbians. This is particularly important considering the high numbers of gay men and lesbians who are violently attacked in Jamaica each year. Follow-up research could use behavioural measures, which would further increase our understanding of ways to improve the treatment of gay men and lesbians in Jamaica.

Results

Concerning the other predictors of anti-gay and anti-lesbian bias in Jamaica, these current results were similar to those of prior research in the same context (West & Cowell, 2015). For example, gender was the strongest and most reliable predictor of anti-gay and anti-

lesbian bias. One interesting difference was the role of religiosity. While it was previously found to be one of the weakest and least reliable predictors, this current research found it to be much stronger and more reliable, comparable to education. These data cannot be used to explain that difference, so any comment on it must be speculative. However, it is noteworthy that there has been an increase in pro-gay activism in recent years (West, 2017) and that much of the opposition to that activism has been religiously motivated (Skyers, 2014; Spaulding, 2014), perhaps strengthening the relationship between religious identity and anti-gay/lesbian bias.

Regardless, the current results were similar enough to prior research to permit useful comparisons to be made. Contact emerged as a statistically significant predictor of anti-gay / anti lesbian prejudice, even in this challenging context and when other predictors were taken into account. Critics of contact research have suggested that contact only works under idealised conditions, and as such is extremely limited as a prejudice-reduction strategy, particularly in high-prejudice environments (Dixon et al., 2005). However, these current findings join other research and meta analyses (Hodson, 2011; Pettigrew & Tropp, 2006) in challenging that criticism. Future research conducted in Jamaica should investigate the importance of contact's optimal conditions in this challenging context; doing so could point to ways to increase contact's effectiveness, even in strongly prejudiced societies.

This current research can be added to the larger body of work showing that the predictors of sexual prejudice vary in strength and importance between groups (Lewis, 2003). However, given the limitations of the current data, any comment on *why* contact was a less important predictor than gender, education, and religiosity in Jamaica would be speculative at best. It is noteworthy that these findings contrast with some research conducted in neighbouring Caribbean countries. For example, large scale surveys conducted in Guyana, Barbados, and Trinidad and Tobago found little evidence that education predicted support for anti-gay laws (Jackman, 2016). Also, the impact of religion on support for anti-gay laws was

only partially supported. The Caribbean is a very diverse region with a large variety of languages, indigenous cultures, and colonial histories (Sharpe & Pinto, 2006). As such, it is possible that these divergent findings point to genuine differences between Caribbean nations. However, one should also note that this previous research (Jackman, 2016) used very different measures (e.g., support for laws criminalising anal sex rather than anti-gay attitudes) and very different analysis strategies (e.g., using categorical dependent variables, rather than interval or ratio dependent variables). Thus, it also seems possible that the divergent findings are attributable to differences in methodology.

That said, research using methodology similar to that of this current research has also found varied results. For example, research using majority White participant samples in the US (Herek, 1988; Herek & Glunt, 1993) has found, in contrast with this current research, that contact was a *stronger* predictor of (less) sexual prejudice than gender, education, and religion. However, research with Mexican-American participants (Herek & Gonzalez-Rivera, 2006) found results more similar to this current research; contact was a *weaker* predictor than gender and education, and very similar to religion. Understanding why these patterns differ between cultural groups is beyond the scope of this research. Nonetheless, these findings are a useful reminder of the importance of understanding the specific cultural milieu. On a somewhat related note, future research could also explore some of the nuances that are yet to be considered in the Jamaican context, such as whether predictors of sexual prejudice are different when the targets are lesbians versus gay men (Herek, 1988), or how personality variables may predict sexual prejudice in Jamaica (Hotchin & West, 2018). These findings would be extremely helpful for developing the interventions that would be most effective in the Jamaican context, and for targeting the individuals who would most benefit from them.

Implications for Gay Rights Policy Jamaica

While contact remained a statistically significant predictor of sexual prejudice in Jamaica, this study found that it was not as a particularly strong predictor. Not only was

contact a weaker predictor than gender, education, and religiosity, the overall direct ($-.14 < \beta < -.12$) and indirect relationships ($-.09 < \beta < -.02$) between contact and (less) prejudice were fairly small. This is perhaps unsurprising. The measures of contact used in this study were not ideal. Furthermore, there are also several reasons to suspect that contact with gay men and lesbians in Jamaica is non-ideal (Brown & Hewstone, 2005); positive cross-group interactions are not supported by law or other institutions of authority, most Jamaicans are in opposition to gay rights, and according to this current data, most contact is not very close and thus unlikely to foster cross-group friendships.

That said, it is important to avoid misinterpreting these results. These findings should *not* be read as showing that contact is irrelevant. On the contrary, the finding that contact continues to significantly predict sexual prejudice even when other important variables are accounted for attests to the robust nature of contact. Nor should these findings be read as implying that high levels of sexual prejudice in Jamaica are reducing the effectiveness of contact in this context or that contact would be less effective in Jamaica (than in more egalitarian countries) even if optimal conditions were met. Those moderated hypotheses could not be investigated with these current data, and prior research suggests that the opposite is likely true; West and Hewstone (2012a) found that contact predicted (less) prejudice more strongly in a Jamaican sample than in a comparatively egalitarian British sample.

Still, a practical implication of these findings seems to be that energies would be better invested in policies that target gender norms, increase education, or challenge religious ideas, as these appear to have a larger impact on sexual prejudice than contact does. Indeed, several studies have now pointed specifically to gender and gender norms as the most important predictors of sexual prejudice in Jamaica (West, 2016, 2018; West & Cowell, 2015). Thus, strategies that target gender norms seem to be the most promising avenue for prejudice reduction. Such strategies have been applied in other countries (albeit for different purposes, such as reducing gender-based violence) and have had some success (World Health

Organisation, 2009). This includes gender-norm based interventions in non-Western nations (Pulerwitz et al., 2015), implying that similar strategies might also be successful in Jamaica.

Currently, the prejudice-reducing strategies widely employed in Jamaica do not reflect the strongest predictors of sexual prejudice. Rather than using gender norms, the focus in recent years has leaned heavily toward collective action strategies (West, 2017). These strategies strive for more equal distributions of in power and privilege between groups and may work at the expense of worsening intergroup attitudes (Dixon, Durrheim, et al., 2010; Dixon, Tropp, Durrheim, & Tredoux, 2010). Contact-based strategies have also been used in some cases (Tomlinson, 2015). Unlike collective action strategies, contact tends to reduce intergroup anxiety and improve intergroup attitudes but not necessarily improve distributions of power and privilege (Dixon, Tropp, et al., 2010; West, 2017). These strategies complement each other and appear to have met with some success. This research does not imply that these efforts should be stopped. Rather, it suggests that gender-based interventions may be a useful and powerful addition to the current list of strategies.

Conclusions

This research simultaneously found support for contact as a strategy for reducing sexual prejudice in Jamaica, and found that strategies based on other predictors might have larger effects. As in other research, gender emerged as a particularly strong predictor of sexual prejudice, suggesting that strategies targeting gender norms might be more effective than those based on contact. Education and religiosity were also stronger predictors of (less) prejudice than contact was. Nonetheless, the finding that contact continues to predict anti-gay prejudice in Jamaica, even after other important variables are taken into account, suggests that contact still has a role to play. Targeted, contact-based programmes may still be successful, particularly if they enable contact to take place under optimal conditions. This is especially the case because contact targets specific aspects of sexual prejudice, such as anxiety and attitudes, that may not be reliably reduced by other strategies. Given the scope and complexity

of the problem, it seems reasonable to suggest that many, complementary strategies are required to reduce anti-gay/lesbian prejudice in Jamaica. Though there are stronger predictors of Jamaican sexual prejudice, these findings still suggest that contact should be counted amongst the promising strategies of the future.

Compliance with Ethical Standards

Research involving animals

No animals were involved in this research. This article does not contain any studies with animals performed by any of the authors.

Research involving human participants

Ethical approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee (in this case the British Psychological Society's standards for research with human participants) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent: Informed consent was obtained from all individual participants included in the study.

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Tables*Table 1. Correlations between all variables in the model.*

	(1)	(2)	(3)	(4)	(5)	(6)
1. Contact quantity	1					
2. Contact quality	.27***	1				
3. Index of positive contact	.85***	.43***	1			
4. Intergroup anxiety	-.12***	-.26***	-.20***	1		
5. Anti-gay attitudes	-.15***	-.25***	-.22***	.54***	1	
6. Negative behaviours	-.05	-.21***	-.09**	.46**	.56***	1

Note: ** = $p < .01$, *** = $p < .001$

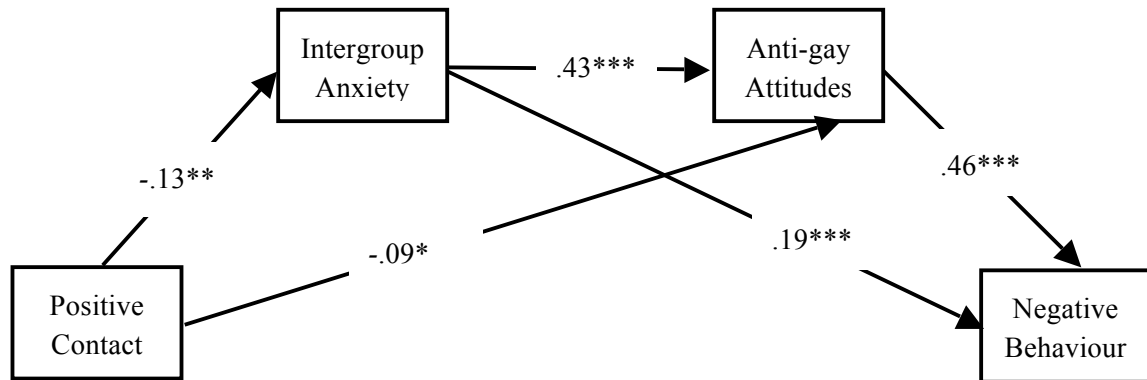
Table 2. Regression weights of all predictors of three measures of anti-gay bias.

	Intergroup Anxiety	Negative Attitudes	Negative behaviours
Gender	-.22***	-.19***	-.25***
Education	-.13**	-.05	-.12*
Religion	.17***	.18***	.04
Positive contact	-.12**	-.14**	-.06
Income	-.003	-.09	.01
Age	.03	-.04	-.07
Dancehall music	-.03	-.01	.004

Note: ** = $p < .01$, *** = $p < .001$

Figures

Figure 1: Model of the relationship between contact and prejudice in Jamaica.



Note: (1) * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

(2) Gender, education, religiosity, income, age and dancehall music are included as covariates in each step of the model.

(3) Only significant paths are shown. Standardized regression weights are reported.

Footnotes

¹ On April 1, 2017 1 US dollar was worth approximately 128.90 Jamaican dollars and 1 British pound was worth approximately 162.130 Jamaican dollars.