

Abstract

To bolster knowledge of determinants of relationship functioning among sexual minorities, the current meta-analysis aimed to quantitatively review evidence for the association between social stigma and relationship functioning as well as examine potential moderators. Thirty-five studies were identified, including 130 effect sizes (39 independent; $N = 10,745$). Across studies, evidence was found for a small but significant inverse association between social stigma and relationship functioning. Furthermore, this association was moderated by stigma type (with more deleterious associations for internalized relative to perceived stigma) and dimension of relationship functioning (with more deleterious associations for affective relative to cognitive and negative relative to positive). Evidence for demographic moderators (region, sex, race, age) was generally mixed, although important limitations related to unique characteristics of study samples are discussed. We conclude by highlighting the importance of social stigma for relationship functioning and point toward directions for future research and policy action.

Keywords: sexual minorities, romantic relationships, social stigma, perceived discrimination, internalized homophobia

Social Stigma and Sexual Minorities' Romantic Relationship Functioning:

A Meta-Analytic Review

Vigorous scrutiny of same-sex relationships has arisen in the United States following recent Supreme Court verdicts delivered in *United States v. Windsor* (2013) and *Hollingsworth v. Perry* (2013), which prohibited marital discrimination at the federal level but left this issue unresolved at the state level. As the American public and political bodies debate whether or not romantic relationships between members of the same sex should be recognized and treated equally to their heterosexual counterparts, research is just beginning to reveal that social stigma, or negative attitudes, judgments and behaviors targeting a devalued social identity, can be detrimental for the romantic relationships of members of stigmatized groups (Doyle & Molix, 2014b; Trail, Goff, Bradbury, & Karney, 2012), including sexual minorities (Fingerhut & Peplau, 2013; Rith & Diamond, 2013). One reason for neglecting to recognize social stigma as a factor in same-sex relationships may be that research on this topic has been slow to accumulate and remains somewhat disjointed in the literature. Many studies have reported mixed results regarding effects of social stigma on sexual minorities' romantic relationships, with relatively small samples (e.g., Doyle & Molix, 2014a; Lehmilller & Agnew, 2006; Mohr & Daly, 2008) and a number of moderating factors potentially confounding these results (e.g., Kamen, Burns, & Beach, 2011; Mohr & Fassinger, 2006). With these limitations of the empirical literature in mind, the primary aim of the current review was to synthesize extant studies and quantitatively assess whether social stigma is associated with romantic relationship functioning, or features most predictive of relationship success and longevity, among sexual minorities. Additionally, we sought to examine a number of factors that could potentially moderate these effects, including stigma type, dimension of relationship functioning and demographic characteristics

(region of country, sex, race and age). In the sections that follow, we begin by discussing the relevance of social stigma to sexual minorities' romantic relationships and then address each of these potential moderators in turn.

Social Stigma and Sexual Minorities' Romantic Relationships

Contrary to heteronormative beliefs of many Americans (Frost, 2011), sexual minority individuals are capable of maintaining well-functioning and stable romantic relationships (Fingerhut & Peplau, 2013); yet some evidence does point toward disparities in romantic relationship outcomes (e.g., mean relationship duration) between sexual minority and heterosexual couples (e.g., Andersson, Noack, Seierstad, & Weedon-Fekjær, 2006; Kalmijn, Loeve, & Manting, 2007; Kurdek, 2004; Lau, 2012). In light of these potential disparities, research on social stigma as a factor in relationship functioning for sexual minorities is critical. While a number of factors likely contribute to disparities in relationship outcomes (e.g., differential investments related to marriage and parenting; Herek, 2006; Peplau & Fingerhut, 2007), social stigma has been suggested as an especially relevant source of relationship stress for sexual minorities (Frost, 2011; Meyer & Frost, 2013; Rostosky, Riggle, Gray, & Hatton, 2007).

Social stigma for sexual minorities within the United States is both insidious and pervasive. Although attitudes toward sexual minorities in the United States tend to be improving, negative attitudes among the population remain vigorous. According to a recent Gallup poll, 38% of the American population personally believes that gay and lesbian relations are "morally wrong" (Gallup, 2013), and these attitudes have tangible consequences for gay men and lesbian women. Sexual minority individuals regularly encounter heterosexist hassles, such as derogatory comments and poor service, in their day-to-day lives (e.g., Silverschanz, Cortina, Konik, & Magley, 2008; Swim, Pearson, & Johnston, 2009).

One particular consequence of acculturation in such a social climate is the potential for prejudice and discrimination to become internalized. Internalized homophobia, variously referred to by researchers as internalized homonegativity, internalized heterosexism or self-stigma (Herek, Gillis, & Cogan, 2009), describes the application of prejudiced attitudes to the self among sexual minorities. Internalized homophobia has been linked to identity development models of sexual orientation (Cass, 1979; Coleman, 1982; Troiden, 1989), with higher levels of internalized homophobia associated with earlier stages of sexual minority identity formation (e.g., Peterson & Gerrity, 2006; Rowen & Malcolm, 2003). Importantly, these stages are navigated both internally for the sexual minority individual as well as in negotiation with the larger social context (Eliason & Schope, 2007). Within these models, internalized homophobia can thus be seen as a developmental hurdle that many sexual minority men and women overcome en route to an integrated and healthy sexual minority identity.

Since at least the early 1980's, researchers have speculated that social stigma, manifest in several different forms (e.g., prejudice and discrimination, internalized homophobia), might have deleterious effects on the romantic relationships of sexual minorities (e.g., Krestan & Bepko, 1980). However, it is only in the past decade or two that empirical research on this topic has begun to accumulate (with the exception of three dissertations, all studies identified for inclusion in the current review were published after 1996). While the recent published literature has tended to demonstrate deleterious associations between social stigma and romantic relationship functioning for sexual minorities (e.g., Doyle & Molix, 2014a; Frost & Meyer, 2009), results have not been entirely consistent (e.g., Balsam & Szymanski, 2005; Kamen, Burns, & Beach, 2011; Otis, Rostosky, Riggle, & Hamrin, 2006; Todosijevic, Rothblum, & Solomon, 2005). As mentioned previously, this work has been limited by relatively small samples and potential

moderating factors. Taking advantage of the greater statistical power inherent in meta-analytic techniques, the primary aim of the current review was to confirm deleterious associations between social stigma and romantic relationship functioning among sexual minorities. As a second aim, we sought to empirically investigate several potential moderators, described in the following sections.

Perceived versus Internalized Stigma

In Meyer's (2003) influential minority stress model, meant to explain the production of mental health disparities between sexual minorities and heterosexuals, he placed stigma processes along a continuum from distal to proximal. Distal processes refer to stigma that is enacted by others (e.g., via discrimination and harassment), often operationalized in survey research as perceived discrimination. On the opposite end of the spectrum, the most proximal stigma process for sexual minorities is internalized homophobia. This dichotomous categorization of stigma processes is also consistent with theory on levels of racism (Jones, 2000). Following Meyer's theory, in the current review stigma processes for sexual minorities are dichotomized into perceived stigma (i.e., distal processes) versus internalized stigma (i.e., proximal processes). Despite these distinctions, it is likely that internalized stigma develops through exposure to perceived stigma as sexual minorities are acculturated in a society that openly devalues their sexual minority identities. Consistent with other researchers (e.g., Meyer, 1995; Szymanski, Kashubeck-West, & Meyer, 2008; Williamson, 2000), we therefore view perceived stigma as the origin of internalized stigma.

Importantly, based upon theoretical and empirical evidence, there is reason to suspect that perceived and internalized stigma may have differing associations with relationship functioning. Early work on the minority stress model (e.g., Meyer, 1995) along with more recent studies

(Szymanski & Sung, 2010) have consistently found that internalized homophobia has greater influences on psychological distress relative to perceived discrimination. Internalized stigma may be especially insidious in that it operates even in the absence of prejudiced others (i.e., internalized stigma may be salient across social contexts as well as when sexual minority individuals are alone while perceived stigma becomes salient in specific social contexts that are perceived as threatening to one's sexual minority identity). Commenting on the complex position of sexual minority individuals in romantic relationships who are suffering from internalized homophobia, Mohr and Fassinger (2006) noted, "[They] are in the position of desiring a partner who possesses the very characteristic for which they reject themselves (i.e., an LGB orientation), a position that would naturally seem to engender a sense of ambivalence about the romantic relationship" (p. 1086).

Conversely, there is some evidence that perceived stigma has the potential to be protective of health and well-being under certain circumstances (cf. Crocker & Major, 1989). Although taxing in the long term, sometimes attributing negative events and outcomes to prejudice and discrimination can protect the integrity of the self by buffering negative attributions (e.g., replacing, "I am a failure," with, "He judged me unfairly"). Similarly, sexual minority men and women in romantic relationships may sometimes attribute conflict with their partners to prejudice and discrimination rather than inherent dyadic troubles, thereby protecting the health of their relationship. While the total effect of perceived stigma on relationship functioning is likely still negative, the magnitude could be attenuated by these self- or dyad-protective properties. Therefore, overall, associations between internalized stigma and relationship functioning may be greater compared to associations between perceived stigma and relationship functioning.

Dimensions of Romantic Relationship Functioning

Effects of social stigma on romantic relationship functioning have previously been framed according to theories of social stress (e.g., Doyle & Molix, 2014c; Otis et al., 2006), as posited in the minority stress model (Meyer, 2003). Under this framework, the magnitude of effects of social stigma should also depend upon the dimension of relationship functioning under investigation. Because relationship functioning is not a unidimensional construct (Fletcher, Simpson, & Thomas, 2000), but instead represents many various features of a romantic relationship (e.g., passion, strain, investment) that predict success and longevity (Le, Dove, Agnew, Korn, & Mutso, 2010), its dimensions can be subdivided according to different theoretical distinctions. Effects of social stigma on relationship functioning should be larger for dimensions of relationship functioning that are theoretically more sensitive to the deleterious consequences of stress and smaller for those that are less sensitive.

For example, past work has shown that stress is more closely linked to negative than positive constructs (including negative versus positive affect; e.g., Watson, 1988). Relationship functioning might also be divided between relatively positive dimensions (e.g., support) and relatively negative dimensions (e.g., strain). Supporting this division, within research on romantic relationships, stress spillover processes have been described whereby external stressors create tension (i.e., a negative dimension of functioning) within the romantic dyad (Bolger, DeLongis, Kessler, & Wethington, 1989; Randall & Bodenmann, 2009; Story & Bradbury, 2004). In a daily diary study on this topic, romantic partners were more likely to report negative relationship behaviors on days that they reported greater external stress (Buck & Neff, 2012). If social stigma operates as a form of external stress, it may similarly spill over into romantic

relationships with a relatively greater influence on negative dimensions of relationship functioning compared to positive dimensions.

Dimensions of relationship functioning can also be divided according to those that are relatively cognitive (e.g., investment) compared to those that are relatively affective (e.g., passion). According to the prominent transactional model of stress proposed by Lazarus (1993), stressors are filtered through cognitive appraisals but ultimately determine emotional responses. Therefore, in this model the strongest association is between stressors and affect. Recent physiological work also points to the close association between stressors and emotional dysregulation, with research showing that early life stress may have more serious and potentially irreversible effects on affective relative to cognitive systems (Pechtel & Pizzagalli, 2011). Finally, reciprocal associations between stress, emotions and romantic relationship functioning have been well documented in past research (Story & Bradbury, 2004), suggesting that affective dimensions of relationship functioning may be more vulnerable to the stress of social stigma relative to cognitive dimensions.

Demographic Characteristics

Much of the research on social stigma and romantic relationship functioning among sexual minorities has neglected to examine other relevant social identities; intersectionality, or the convergence of multiple (potentially devalued) social identities, remains an important but under-investigated topic for those working with sexual minority populations (Institute of Medicine, 2011). Levels of stigma as well as effects on a variety of health and well-being outcomes may vary for sexual minorities based upon other relevant identities (e.g., region, sex, race and age; Kertzner, Meyer, Frost, & Stirratt, 2009; Meyer, Schwartz, & Frost, 2008). However, due to the dearth of research on this topic, comparative hypotheses are presently

difficult to substantiate with empirical evidence. Therefore, in the current review it was tentatively posited that demographic characteristics (region, sex, race, age) of sexual minority study participants would influence the magnitude of observed effects, while we made no specific predictions as to directionality for these factors; these analyses were primarily exploratory in nature.

The Current Review

Here we reiterate the four primary hypotheses guiding the current review.

Hypothesis 1: Overall, social stigma will have a significant inverse association with romantic relationship functioning, such that sexual minorities who report greater levels of social stigma will also report impaired romantic relationship functioning.

Hypothesis 2: Internalized stigma will have a relatively greater deleterious association with relationship functioning compared to perceived stigma, but effects of both types of stigma will be statistically significant.

Hypothesis 3: Dimension of relationship functioning will moderate the association between social stigma and relationship functioning, with negative and affective dimensions of relationship functioning evidencing stronger associations with social stigma relative to positive and cognitive dimensions.

Hypothesis 4: Effects of stigma on romantic relationship functioning will be modified by demographic characteristics, including region of country, sample sex, predominant race and mean age.

Method

Study Identification

In order to identify studies for inclusion in the current review, we began by conducting a series of searches within databases covering relevant academic disciplines: Proquest, PsycINFO, MEDLINE and Sociological Abstracts. For each of these databases, we utilized pairs of key terms representing the two constructs of interest, social stigma (*sexual minority stigma, heterosexist stigma, minority stress, perceived discrimination, perceptions of discrimination, internalized homophobia, internalized heterosexism, internalized homonegativity*) and relationship functioning (*relationship quality, relationship satisfaction, relationship functioning, relationship trust, relationship commitment, relationship closeness, dyadic adjustment, perceived regard*). We created combinations of key terms by selecting one term from each group at a time (i.e., one social stigma synonym and one relationship functioning synonym) until all possible combinatorial permutations had been exhausted within each separate database, yielding a total of 243 studies.

To supplement our primary search method and identify further studies, including those that were unpublished, we engaged in two additional search strategies. First, we utilized the search engine, Google Scholar. Second, we posted requests for data with a description of the purpose of our review and the inclusion criteria on several listservs of societies covering relevant academic disciplines: International Association for Relationship Research, National Council on Family Relations and Society of Counseling Psychology. When relevant studies were identified but pertinent statistics were not available within the manuscripts, we directly contacted the corresponding authors to request either the statistics or raw data from the studies. Only studies reported in the English language were included in the current review. Finally, there were no restrictions at the lower end in terms of publication or study completion date, but all studies identified were conducted or published by the summer of 2013, when the search process was

terminated. A flow chart depicting the process of study identification, including reasons for exclusion at each step, is presented in Figure 1.

Selection Criteria

Studies were required to meet a series of criteria in order to be included in the current review. First, studies needed to include both a relevant independent variable (IV; i.e., social stigma) and a relevant dependent variable (DV; i.e., relationship functioning). Social stigma was operationalized as any variable that captured negative attitudes, beliefs or behaviors directed toward sexual minorities. For the DV, we took a broad definition of relationship functioning that encompassed diverse dimensions from relationship satisfaction and quality to trust and commitment. General measures of social support were not included as relevant DVs unless they referred specifically to one's romantic partner and the current relationship context. For theoretical reasons, we did not include relationship length as a relevant DV. Specifically, relationship length has often been posited as an outcome that is predicted by different aspects of relationship functioning (e.g., Rusbult, Martz, & Agnew, 1998), but longer duration does not necessarily equate to healthier relationship. Some maladaptive relationships persist for various reasons while many new relationships are quite strong and fulfilling from an early point. We also excluded studies focusing exclusively on intimate partner violence.

As a second criterion, studies had to be quantitative in nature (e.g., case studies, qualitative interviews and focus group responses that did not include quantitative data were excluded from the current review). Although we ultimately analyzed correlation coefficients in the current review, studies reporting other types of effect sizes that could be transformed into correlation coefficients (e.g., t-tests, chi-squares) were included as well.

Studies needed to include a sample of sexual minority men and/or women who were currently involved in a romantic relationship with a member of the same sex at the time the study was conducted in order to meet our third criterion for inclusion. Therefore, we excluded studies that focused on reports of past relationship functioning or expectations for future relationships. Studies with diverse sexual minority groups (e.g., gay, lesbian, bisexual) were also included as long as participants were involved in same-sex, not exclusively other-sex, relationships.

A total of 35 studies were identified that matched each of these criteria. Of these 35 studies, 19 were articles published in academic journals (54%), 15 were dissertations (43%) and 1 was a chapter published in an academic volume (3%). Meta-analyses are often limited by the “file-drawer problem,” or the tendency to publish significant results over non-significant results (Rosenthal, 1979). In the current review, this problem was investigated via examination of a funnel plot with effect sizes plotted on the x-axis and precisions (or inverse standard errors) plotted on the y-axis (Sterne, Becker, & Egger, 2005). As can be seen in Figure 2, the funnel plot appears relatively symmetrical with a narrower distribution of effect sizes at greater levels of precision and a wider distribution of effect sizes at lesser levels of precision. This pattern of effect sizes suggests that publication bias may not be a significant issue in the current review. Additionally, the current review included a relatively large proportion of dissertations, which are somewhat less likely to be influenced by publication bias (Thornton & Lee, 2000). In order to statistically confirm the symmetry of the distribution, we conducted Egger’s test of the intercept and Duval’s trim and fill procedure, as recommended by Borenstein, Hedges, Higgins and Rothstein (2009). Egger’s test of the intercept was not statistically significant, confirming the symmetry of the distribution of effect sizes. Furthermore, Duval’s trim and fill procedure

suggested that no studies should be trimmed from the current review in order to improve symmetry of the distribution.

Study Coding

Methods for coding attributes of studies and extracting the effect sizes were formulated through discussion between the authors. The first author coded all studies included in the current review. A trained research assistant independently coded a randomly selected subset of studies (approximately $1/3$, $k = 11$) in order to refine the coding system. The results indicated strong agreement among the coders (average % agreement = 94%; range = 88% to 100%). Any disagreements in coding were resolved by discussion amongst the authors and coders. The coded variables included stigma type, dimension of relationship functioning, region of country, sample sex, predominant race and mean age. Additionally, these same coders extracted all relevant effect sizes and sample sizes.

Stigma type. Any scales referring to negative attitudes, judgments or behaviors directed toward sexual minorities were considered relevant as measures of the IV, social stigma. When coding IV measures, we divided scales into those tapping perceived stigma and those tapping internalized stigma. Consistent with other theorists (e.g., Meyer, 2003), we operationalized perceived stigma as negative attitudes, judgments or behaviors perpetrated by others and internalized stigma as negative attitudes, judgments or behaviors within oneself.

Dimension of relationship functioning. Dependent variables were first extracted according to labels provided by the authors of each study as well as scales used to assess these variables (see Table 1). Based upon extracted labels and scales, these variables were then coded into one of nine dimensions. The first author determined these dimensions after a careful review of the close relationships literature, including evaluation of widely used measures and models of

relationship functioning. From the investment model (Rusbult et al., 1998), four dimensions were determined: alternatives, commitment, investment and satisfaction. Alternatives was coded as the desirability of alternative options to the relationship; commitment as intention to persist in the relationship; investment as resources (tangible and intangible) attached to the relationship; and satisfaction as global evaluations of the relationship accounting for positive and negative facets. From the perceived relationship quality components model (Fletcher et al., 2000), three dimensions were determined: intimacy, passion and trust. Intimacy was coded as closeness or connection in the relationship; passion as arousal elicited by the romantic partner and the relationship; and trust as willingness to depend upon the romantic partner and the relationship. From theory on social support (Walen & Lachman, 2000), two dimensions were determined: strain and support. Strain was coded as perceptions of conflict and criticism in the relationship; and support as perceptions of caring and understanding in the relationship. Since the overarching construct of relationship functioning was the DV of interest in the current review, the signs of effect sizes for alternatives and strain were inverted so that higher levels of the DV always indicated more positive relationship functioning. Examples of variables that were coded into each of these dimensions are available in Table 1 (see extracted versus coded relationship functioning columns).

Region of country. We divided studies according to region of the United States in which participants resided. Drawing upon census divisions, we determined five regions into which we divided the country: Midwest, Northeast, Northwest, South and West Coast. In order for a study to be coded as belonging to one of these regions, at least 60% of the sample had to be identified as being drawn from said region. Studies with participants drawn from unspecified regions (e.g.,

via internet convenience sampling) or with no region representing at least 60% of the sample were coded as mixed.

Sample sex. Sex was coded at the level of the effect size. When studies included only one sex, the sex of the effect size sample matched the study sample. Some studies included both sexual minority men and women in the total sample, but separated effects by sex. Other studies included both sexual minority men and women but did not separate effects by sex. These effects were coded as mixed, resulting in three levels of coded sex.

Predominant race. Any race that was described as primary identification for at least 60% of the sample was coded as the predominant race. Because the only race that was represented via this method was White, we divided this variable into a dichotomy of White and mixed samples. The latter categorization was reserved for samples in which less than 60% of participants identified as White. Studies that did not present these data were coded as “N/A.” The percentage of minority or non-White participants in the sample was also extracted as a continuous variable (0-100%).

Mean age. The mean age of the sample included in the study was extracted and coded in years.

Analyses

Analyses for the current review were conducted in Comprehensive Meta-Analysis Version 2.0 (Borenstein & Rothstein, 1999). To begin, we computed weighted average effect sizes for the association between social stigma and relationship functioning across all studies (utilizing Fisher’s r -to- z transformation prior to aggregation; Hedges & Olkin, 1985). Random-effects models were examined in the current review in order to extrapolate beyond the observed effect sizes and make generalizations about a broader population of effect sizes (Hedges &

Vevea, 1998). Additionally, 95% confidence intervals (CIs) are reported around all effect sizes presented in the current review. For the overall weighted average effect size, we also present a 90% prediction interval (PI), a measure of the dispersion of effect sizes, and tau (T), the estimated standard deviation of the true effect sizes, as recommended by Borenstein and colleagues (2009). We also calculated the degree of heterogeneity present within the total group of effect sizes by evaluating the Q statistic (Cochran, 1954), which is distributed as a chi-square with $k - 1$ degrees of freedom and I^2 , an alternative index of heterogeneity that can be interpreted as the percentage of total variability in effect sizes attributable to between-studies variability (Higgins & Thompson, 2002).

A number of studies included in the current review reported multiple relevant effect sizes within the same samples (i.e., multiple effect sizes with different measures of the DV). Because we could not assume independence of the error variances for these effect sizes, we calculated the mean effect size within each sample prior to aggregating effect sizes across studies. Similarly, mean effect sizes were computed within studies including multiple time points or both members of the same couple. When studies reported multiple effect sizes for independent samples, as when studies included separate samples of sexual minority men and women, effect sizes between these groups were allowed to remain independent. Therefore, single studies were able to contribute more than one effect size to the overall analysis as long as the samples were independent.

Once we had assessed heterogeneity of the observed effect sizes, we examined whether each of the proposed moderators explained a significant proportion of the variability. For categorical moderators, we conducted analogues of mixed-effects analysis of variance (ANOVA; Hedges & Olkin, 1985; Hedges & Pigott, 2004). In these analyses, weighted average effect sizes

are presented at each level or group of the moderator variable. Furthermore, the Q_B statistic that is reported represents a test of the significance of heterogeneity in effect sizes between levels of the moderator variable (analogous to the F test in ANOVA). For continuous moderators, we conducted analogues of fixed-effects regression analysis (Hedges & Olkin, 1985; Hedges & Pigott, 2004). In these analyses, the b coefficient represents the unit change in effect size for a one-unit change in the value of the moderator variable. The statistical significance of this effect is tested via the Q_R statistic, which refers to the proportion of variability in effect sizes explained by the regression model.

Results

A total of 35 studies were included in the current review, yielding 130 total effect sizes. Of these effect sizes, 39 were deemed to be independent (including effect sizes calculated from the mean of non-independent effects). All effects and relevant coding are presented in Table 1. The total N for the current review was 10,745, with individual samples sizes ranging from 45 (Doyle & Molix, 2014a) to 1,823 (Jones, 2011) and a mean sample size of 270. The earliest date for an included study was 1986 (Romance, 1986) and the latest was 2014 (Doyle & Molix, 2014a). Overall, effects for internalized stigma ($k = 34$, 68%) were reported about twice as often as effects for perceived stigma ($k = 16$, 32%). The most frequently reported dimension of relationship functioning was satisfaction ($k = 71$, 55%), while the least frequently reported was trust ($k = 2$, 1.5%).

The majority of studies were conducted with samples of mixed regional origin ($k = 24$, 62%), and smaller numbers of studies were conducted with samples from the West Coast ($k = 5$, 13%), Midwest ($k = 4$, 10%), Northeast ($k = 3$, 8%), South ($k = 2$, 5%) and Northwest ($k = 1$, 3%). The mean age across all samples was 35.33 ($SD = 4.21$), with mean ages of individual

studies ranging from 22.65 (Mohr & Daly, 2008) to 45.00 (Brownson, 1998). The vast majority of studies identified for the current review were conducted with samples predominantly composed of White participants ($k = 36$, 92%). Only 2 studies included samples coded as mixed race (5%; 1 study did not report this information) and, on average, racial minorities comprised only about 18.41% of each sample. An equal number of studies included samples composed of sexual minority men ($k = 16$, 41%) and sexual minority women exclusively ($k = 16$, 41%), while 7 studies included samples of mixed sex (18%).

Average Association between Social Stigma and Romantic Relationship Functioning

To test the primary hypothesis of the current review, that social stigma would be inversely associated with romantic relationship functioning, the weighted average effect size for the association between social stigma (collapsed across stigma type) and romantic relationship functioning (collapsed across all dimensions) among sexual minorities was first computed. Under a random-effects model, the weighted average effect size across studies was $r = -.17$, $p < .001$ ($T = 0.06$; 95% CI [-.20, -.14]; 90% PI [-.27, -.07]). According to guidelines provided by Cohen (1988), this represents a small inverse association between social stigma and relationship functioning. Considering the point estimates included within the 95% CI as well as the 90% PI, this association can be considered both statistically as well as practically significant (Ferguson, 2009). Analyses also revealed significant heterogeneity among the effect sizes included in the current review, $Q(38) = 74.52$, $p < .001$. Evaluation of the I^2 index indicated that almost 50% of the variability in the observed effect sizes was due to between-studies variability, $I^2 = 48.81$.

Moderator Analyses

Results of moderator analyses are displayed in Table 2.

Stigma type. First, the relative effects of perceived versus internalized stigma were examined. Perceived stigma evidenced a small inverse association with relationship functioning, $r = -.12, p < .001$, while internalized stigma evidenced a slightly larger inverse association, $r = -.18, p < .001$. Results revealed that perceived and internalized stigma had differing associations with relationship functioning (collapsed across all dimensions), $Q_B(1) = 5.79, p = .02$. Consistent with our hypotheses, effects of internalized stigma were somewhat larger than effects of perceived stigma on average. However, after considering stigma type, we still found evidence of heterogeneity among effects of internalized stigma, $Q(33) = 75.12, p < .001, I^2 = 56.07$, but not among effects of perceived stigma, $Q(15) = 17.15, p = .31, I^2 = 12.52$.

Dimension of relationship functioning. Next, dimension of relationship functioning was evaluated as a moderator in the current review. Consistent with hypotheses, effects of social stigma (collapsed across stigma type) significantly differed by dimension of relationship functioning, $Q_B(8) = 17.91, p = .02$. Estimates of weighted average effect sizes in order of magnitude from greatest to least were as follows: passion, $r = -.29, p < .001$, satisfaction, $r = -.17, p < .001$, intimacy, $r = -.16, p < .001$, strain, $r = -.16, p < .001$, support, $r = -.13, p < .001$, commitment, $r = -.12, p < .001$, trust, $r = -.11, p = .03$, alternatives, $r = -.10, p = .13$, and investment, $r = -.04, p = .34$. Of note, effects of social stigma on alternatives and investment were not statistically significant. While social stigma had the largest association with passion, only 3 effect sizes were available for this analysis and thus it should be interpreted with caution. Also consistent with hypotheses, social stigma appeared to be associated with the more affective dimensions of relationship functioning (e.g., passion) to a greater degree than the more cognitive dimensions (e.g., investment). The association of social stigma with the most prototypical negative dimension (strain) fell on the higher end of the effect size spectrum (representing the

third largest effect size, along with intimacy) and was larger than the most prototypical positive dimension (support).

To further examine dimension of relationship functioning, we assessed effects separately for perceived and internalized stigma (see Table 3). Of note, dimension of relationship functioning emerged as a significant moderator among effects of internalized stigma, $Q_B(7) = 21.19^{**}$, $p < .01$, but not perceived stigma, $Q_B(5) = 6.76$, $p = .24$. This difference is likely due in part to the fact that far fewer studies examined perceived stigma compared to internalized stigma. In addition to absolute number of studies, perceived stigma was not examined in association with intimacy, passion or strain, while internalized stigma was examined in association with all dimensions except alternatives. The only two statistically significant associations for perceived stigma were with commitment, $r = -.13$, $p < .01$, and satisfaction, $r = -.12$, $p < .001$ (though most estimates were based on only a small number of studies). The pattern for internalized homophobia better matched the overall pattern collapsed across forms of social stigma, with the largest associations with passion, $r = -.29$, $p < .001$, and satisfaction, $r = -.21$, $p < .001$.

Demographics

Region of country. Analyses for region of country revealed the following mean effects in ascending order of magnitude: West Coast, $r = -.13$, $p < .001$, Northeast, $r = -.15$, $p < .001$, Mixed, $r = -.16$, $p < .001$, South, $r = -.21$, $p < .001$, Midwest, $r = -.24$, $p < .001$, and Northwest, $r = -.40$, $p < .001$. Region explained a significant proportion of variability in observed effects, $Q_B(5) = 11.57$, $p = .04$. These results indicate that social stigma has more deleterious associations with relationship functioning for individuals in the South and Midwest and less deleterious associations for individuals in the Northeast and West Coast, with mixed samples

falling in the middle. Social stigma had the most deleterious associations for those in the Northwest; however, because this estimate was based on only one study (and this study included only one relevant effect size; Henderson et al., 2009), it should be interpreted with caution. As a sensitivity analysis, we reanalyzed these data excluding the study from the Northwest and found that region was no longer a statistically significant moderator, $Q_B(4) = 4.83, p = .31$.

Sample sex. Estimates of the association between social stigma (collapsed across stigma type) and relationship functioning (collapsed across all dimensions) did not differ greatly between sexual minority men, $r = -.18, p < .001$, sexual minority women, $r = -.17, p < .001$, and samples of mixed sex, $r = -.16, p < .001$. In fact, sample sex did not significantly influence observed effect sizes, $Q_B(2) = .10, p = .95$. Interestingly, evaluation of the I^2 index indicated that while only about 30% of the variability in effect sizes observed among sexual minority women was due to between-studies variability (a non-significant proportion, $Q(15) = 20.92, p = .14$), more than 70% of the variability in effect sizes observed among sexual minority men was due to between-studies variability (a significant proportion, $Q(15) = 52.19, p < .001$). This suggests that although sample sex did not significantly explain variability in the observed effect sizes, most of the variability in effect sizes was due to samples composed of sexual minority men exclusively.

Predominant race. As mentioned previously, only three studies included samples coded as mixed race. Comparisons between mixed race samples, $r = -.18, p < .001$, and predominantly White samples, $r = -.17, p < .001$, revealed no significant differences, $Q_B(1) = .03, p = .86$. Percentage of racial minorities within the study sample was also not a significant moderator of observed effects, $Q_R(1) = .21, p = .65$.

Mean age. We did find evidence of a small but significant effect of mean age on observed effect sizes, $Q_R(1) = 4.18$, $p = .04$, such that studies with samples that were older on average reported effects of a weaker magnitude, $b = .006$, $SE = .003$. That is, the effects of social stigma (collapsed across stigma type) on relationship functioning (collapsed across all dimensions) were more deleterious for samples composed of relatively younger sexual minorities.

Discussion

Previous reviews of research on same-sex couples have indicated the need for greater attention to the deleterious effects of social stigma on romantic relationships (e.g., Fingerhut & Peplau, 2013; Rith & Diamond, 2013), yet to our knowledge the current synthesis is the first to provide quantitative evidence for the robust and detrimental role of social stigma in the romantic relationships of sexual minorities. Overall, we found evidence of a small but both statistically and practically significant inverse association between social stigma and relationship functioning. Stigma has been shown to be an important determinant of population health (Hatzenbuehler et al., 2013), and deleterious associations with romantic relationship functioning may be one avenue by which psychological and physical health become impaired for sexual minorities (Doyle & Molix, 2014c). Additionally, we suspect that these processes are not unique to sexual minorities, but also operate among members of other devalued groups (e.g., racial minorities, women; e.g., Doyle & Molix, 2014a, 2014b, 2014c; Lincoln & Chae, 2010; Trail et al., 2012). However, prejudice and discrimination may be especially important sources of stress for sexual minority relationships because negative attitudes and behaviors directed toward sexual minorities often stem from or include reference to their sexual and romantic partners (i.e., members of the same sex). Perhaps due to this fact, there has been a somewhat greater interest in

the effects of prejudice and discrimination on romantic relationship functioning among sexual minorities compared to other devalued groups, facilitating the current empirical review of this literature.

Another important finding to emerge in the current review was that stigma type significantly moderated the observed effects. As hypothesized, and as one might intuit, internalized stigma was found to be more strongly associated with relationship functioning compared to perceived stigma. However, it is worth noting that perceived stigma also demonstrated a statistically significant inverse association with relationship functioning across studies, only slightly weaker in magnitude compared to internalized stigma. A few different individual studies investigating social stigma and relationship functioning among sexual minorities have previously reported null main effects for perceived stigma (e.g., Kamen et al., 2011; Otis et al., 2006). The current review, bolstered by the relatively greater statistical power inherent in meta-analyses, provides evidence refuting an overall null main effect of perceived stigma, suggesting that this is an important topic for further investigation. Furthermore, if perceived stigma in one's social environment is the root of internalized stigma, as has been suggested by others (e.g., Meyer, 1995; Szymanski et al., 2008; Williamson, 2000), then combatting both forms of social stigma will ultimately require remediation of prejudiced attitudes and discriminatory behaviors of heterosexual individuals and the institutions that they control.

Another contribution of the current review is to highlight the importance of considering how romantic relationship functioning is operationalized when conducting research on social stigma, and perhaps when conducting close relationships research more broadly (Fincham & Bradbury, 1987). Consistent with hypotheses, we found that associations with social stigma

were more exaggerated for the relatively affective components of relationship functioning (e.g., passion, intimacy) and less exaggerated for the relatively cognitive components (e.g., investment, alternatives). Analyses from the current review also revealed that it might be important to consider both positive and negative dimensions of relationship functioning (Kiecolt-Glaser & Newton, 2001) when evaluating the effects of social stigma. Associations of stigma with relationship strain (i.e., a negative dimension) were among the greatest in magnitude. These findings are also consistent with work that has proposed that social stigma can lead to impaired relationship outcomes via its effects on emotion dysregulation and negative affectivity (Doyle & Molix, 2014c; Frost & Meyer, 2009; Trail et al., 2012), likely to manifest in destructive relationship behaviors.

Results from the analyses of our exploratory moderators confirm a widely understood but often problematic issue in social science research: the importance of demographic diversity. It is vital that researchers probe the intersections of sexual orientation with other demographics, such as region, sex, race and age (Bowleg, 2012; Institute of Medicine, 2011), especially when examining the effects of social stressors (Meyer et al., 2008). Region of country was a significant moderator (although not robust in our sensitivity analysis), suggesting that researchers should better attend to the social environment surrounding sexual minorities in their samples. The pattern of relatively larger mean effects for the Midwest and South relative to the Northeast and West Coast could be explained by a variety of systematic differences in structural factors, such as public policy, laws, religious beliefs and political attitudes, within these regions (Barth & Overby, 2003; Hatzenbuehler, 2014; Lax & Phillips, 2009). Although sample sex did not significantly moderate the association between stigma and relationship functioning in the current review, almost a fifth of all studies included samples of mixed sex, overlooking any potential

variation between sexes. Similarly, race was virtually impossible to examine as a moderator in the current review as all but two studies included samples predominantly composed of Whites, contributing to the invisibility of ethnic minorities in research on sexual minority populations (Moradi, DeBlaere, & Huang, 2010). Finally, results revealed that age was a significant moderator of observed effects, such that the association between social stigma and relationship functioning was more exaggerated among samples composed of relatively younger participants. This may be an effect of age, whereby sexual minorities become more adept at managing stigma as they grow older. However, it is also possible that older participants may have been somewhat more likely to be in more committed or serious relationships, which may buffer some of the deleterious effects of social stigma (Doyle & Molix, 2014b).

Analyses of heterogeneity of variance in effect sizes within groups also revealed important directions for future work. For example, significant heterogeneity was identified for associations of romantic relationship functioning with internalized stigma but not with perceived stigma. It may be that broader conceptualization and operationalization of internalized homophobia (which sometimes overlaps with other relevant constructs, such as concealment) between the studies identified in the current review led to greater variability in effect sizes. In the future, researchers should work to better refine this construct and delineate its borders. Additionally, greater heterogeneity of effect sizes was observed for samples exclusively composed of men relative to women. Researchers should further investigate factors that may cause some sexual minority men to be more vulnerable to the effects of social stigma compared to others.

Limitations

Limitations of the current review mirror limitations in the extant literature on social stigma and romantic relationship functioning among sexual minorities. To begin with, although growing at a steady rate, this literature remains relatively small. In conducting this review, we were able to identify only 35 studies reporting relevant effect sizes, and nearly half of these studies were not published in academic journals. Several of these studies were also primarily focused on other topics (e.g., characteristics of women's same-sex interracial relationships; Jeong & Horne, 2009). The current review is also limited due to the marked lack of experimental work on this topic. No research of which we are aware has experimentally examined the effects of social stigma on relationship functioning among sexual minorities (although evidence from one study employing an experimental paradigm suggests that stigma salience may be capable of affecting romantic relationships for members of various devalued groups; Doyle & Molix, 2014b). Therefore, while the current review provides evidence for such an association among sexual minorities, the direction of any effect remains speculative at this stage. It is vital that future research examine causal directions via experimental and longitudinal designs.

Relatedly, it is not adequate to simply uncover associations between stigma and relationship functioning; researchers must begin to focus greater attention on the mechanisms responsible for the proposed effects of social stigma. At a general level, consistent with social stress theories of prejudice and discrimination (e.g., Clark, Anderson, Clark, & Williams, 1999; Meyer, 2003) along with the literature on stress and relationship functioning (Randall & Bodenmann, 2009), social stigma may act as an external stressor that taxes close relationships and leads to detrimental outcomes for members of devalued groups (Doyle & Molix, 2014a, 2014c; Lincoln & Chae, 2010; Otis et al., 2006). While the social stress hypothesis is both

plausible and parsimonious as an explanation for impaired relationship outcomes, it is important for researchers to continue to consider alternative as well as more proximal pathways. Some examples of more specific potential mechanisms linking social stigma to relationship functioning that have been proposed in past work include, emotion dysregulation (Doyle & Molix, 2014c; Frost & Meyer, 2009; Trail et al., 2012), chronic inflammation (Doyle & Molix, 2014c) and impaired self-image (Doyle & Molix, 2014a). As this body of research builds, future reviewers may be able to test specific pathways in the association between social stigma and relationship functioning among sexual minorities.

Conclusion

Sexual minorities have already overcome numerous socially imposed burdens on the path to equality (D'Emilio, 1998). Rather than portraying sexual minorities as victims of society, researchers have recently moved toward conceptualizing sexual minorities as active agents constructing their own futures and working to cope with virulent prejudice and discrimination (Kwon, 2013). The fight for marriage equality is one more step along that path. Despite still prevalent stereotypes of same-sex couples as unstable and dysfunctional (Rostosky et al., 2007; Testa et al., 1987), sexual minorities continue to form and maintain lasting and loving long-term romantic relationships (Fingerhut & Peplau, 2013; Kurdek, 2005; McWhirter & Mattison, 1985; Patterson, 2000). The recent repeal of critical aspects of DOMA and successful challenges to same-sex marriage prohibitions in many states are important barriers that have been broken down, but there is still much work to be done. It is vital for researchers, clinicians, policy makers and the general public to understand that social stigma, manifest in diverse forms including discriminatory public policy, intolerant behaviors, prejudiced attitudes and internalized

homophobia, is associated with impaired relationship outcomes for sexual minorities, contributing to an inequitable burden for members of this population.

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Table 1

Publication	Stigma Type	Region	Rel. Func.	Sex	Race	% Minority	Mean Age	<i>r</i>	<i>N</i>	Extracted Rel. Func. Label	Extracted Scale
Balsam & Szymanski (2005)	Int.	MX	Sat.	F	W	15.00	34.75	-0.26	186	Quality	DAS
	Per.	MX	Sat.	F	W	15.00	34.75	-0.02	186	Quality	DAS
	Per.	MX	Sat.	F	W	15.00	34.75	0.01	186	Quality	DAS
Boita (2006)	Int.	MX	Sat.	F	W	16.90	37.90	-0.15	232	Adjustment	DAS
	Int.	MX	Sat.	F	W	16.90	37.90	-0.09	232	Satisfaction	DAS
Bradley (2007)	Int.	MX	Sat.	M	W	20.00	37.00	0.07	85	Satisfaction	IMSAT
Brownson (1998)	Int.	WC	Int.	F	W	17.00	45.00	-0.15	46	Cohesion	DAS
	Int.	WC	Sat.	F	W	17.00	45.00	-0.27	46	Satisfaction	DAS
	Int.	WC	Pas.	F	W	17.00	45.00	-0.25	46	Affectional Expression	DAS
	Int.	WC	Sup.	F	W	17.00	45.00	-0.41	46	Consensus	DAS
Bryce (2012)	Int.	MX	Sat.	M	W	15.10	34.62	-0.61	93	Satisfaction	RAS
	Int.	MX	Sat.	M	W	15.10	34.62	-0.58	93	Satisfaction	RAS
	Int.	MX	Sat.	M	W	15.10	34.62	-0.61	93	Satisfaction	RAS

Clausell (2011)	Per.	MW	Sat.	M	W	17.00	33.00	-0.16	60	Satisfaction	DAS
	Per.	MW	Sup.	M	W	17.00	33.00	-0.13	60	Emotional Tone	IDCS
Doyle & Molix (2014a)	Per.	MW	Sat.	M	W	29.80	34.49	-0.24	46	Quality	IMS
Fingerhut & Maisel (2010)	Int.	WC	Sat.	F	W	25.50	40.50	-0.15	81	Satisfaction	RAS
	Int.	WC	Inv.	F	W	25.50	40.50	0.09	81	Investments	IMS
	Per.	WC	Sat.	F	W	25.50	40.50	0.00	81	Satisfaction	RAS
	Per.	WC	Inv.	F	W	25.50	40.50	0.03	81	Investments	IMS
	Int.	WC	Sat.	M	W	25.50	40.50	-0.11	81	Satisfaction	RAS
	Int.	WC	Inv.	M	W	25.50	40.50	0.17	81	Investments	IMS
	Per.	WC	Sat.	M	W	25.50	40.50	-0.17	81	Satisfaction	RAS
	Per.	WC	Inv.	M	W	25.50	40.50	-0.01	81	Investments	IMS
Frost & Meyer (2009)	Int.	NE	Str.	MX	MX	66.00	32.43	-0.20	184	Strain	ICS
Hamilton (2005)	Int.	MX	Sup.	F	W	19.50	33.75	-0.15	783	Equality	RES
Henderson (2001)	Int.	MX	Com.	F	W	13.45	37.66	-0.12	383	Commitment	IMS
	Int.	MX	Com.	F	W	13.45	37.66	-0.15	383	Exit	RAD
	Int.	MX	Sup.	F	W	13.45	37.66	-0.03	383	Voice	RAD

	Int.	MX	Com.	F	W	13.45	37.66	0.02	383	Loyalty	RAD
	Int.	MX	Str.	F	W	13.45	37.66	-0.12	383	Neglect	RAD
	Int.	MX	Com.	M	W	13.45	37.66	-0.11	474	Commitment	IMS
	Int.	MX	Com.	M	W	13.45	37.66	-0.16	474	Exit	RAD
	Int.	MX	Sup.	M	W	13.45	37.66	-0.07	474	Voice	RAD
	Int.	MX	Com.	M	W	13.45	37.66	0.05	474	Loyalty	RAD
	Int.	MX	Str.	M	W	13.45	37.66	-0.17	474	Neglect	RAD
Henderson et al. (2009)	Int.	NW	Pas.	F	W	17.00	33.40	-0.40	110	Satisfaction	GMSEX
Houts & Horne (2008)	Int.	MX	Sat.	M	W	14.30	39.70	-0.11	175	Satisfaction	MAT
	Int.	MX	Sat.	M	W	14.30	39.70	0.01	175	Satisfaction	MAT
	Int.	MX	Sat.	M	W	14.30	39.70	0.00	175	Satisfaction	MAT
Jeong & Horne (2009)	Int.	MX	Sup.	F	W	19.50	33.70	-0.21	830	Equality	RES
	Int.	MX	Sat.	F	W	19.50	33.70	-0.16	830	Satisfaction	MAT
	Int.	MX	Sup.	F	W	19.50	33.70	-0.05	830	Support	MSPSS
Jones (2011)	Int.	WC	Sat.	MX	W	14.00	41.00	-0.14	1823	Satisfaction	CSI
	Int.	WC	Int.	MX	W	14.00	41.00	-0.14	1823	Closeness	CIFA

	Int.	WC	Sup.	MX	W	14.00	41.00	-0.17	1823	Openness of Communication	CIFA
	Int.	WC	Str.	MX	W	14.00	41.00	-0.16	1823	Intrusiveness	CIFA
Kamen et al. (2011)	Int.	MX	Sat.	M	W	19.00	34.00	-0.14	142	Satisfaction	KMS
	Int.	MX	Com.	M	W	19.00	34.00	-0.14	142	Commitment	IMS
	Int.	MX	Tru.	M	W	19.00	34.00	-0.14	142	Trust	TS
	Per.	MX	Sat.	M	W	19.00	34.00	-0.05	142	Satisfaction	KMS
	Per.	MX	Com.	M	W	19.00	34.00	0.09	142	Commitment	IMS
	Per.	MX	Tru.	M	W	19.00	34.00	-0.07	142	Trust	TS
Lehmiller & Agnew (2006)	Per.	MX	Sat.	F	W	15.20	31.23	-0.10	45	Satisfaction	IMS
	Per.	MX	Inv.	F	W	15.20	31.23	0.05	45	Investments	IMS
	Per.	MX	Alt.	F	W	15.20	31.23	-0.03	45	Alternatives	IMS
	Per.	MX	Com.	F	W	15.20	31.23	-0.09	45	Commitment	IMS
	Per.	MX	Sat.	M	W	15.20	31.23	-0.30	45	Satisfaction	IMS
	Per.	MX	Inv.	M	W	15.20	31.23	-0.03	45	Investments	IMS
	Per.	MX	Alt.	M	W	15.20	31.23	-0.18	45	Alternatives	IMS

	Per.	MX	Com.	M	W	15.20	31.23	-0.33	45	Commitment	IMS
Lehmiller & Agnew (2007)	Per.	MX	Sat.	MX	W	16.00	31.79	-0.17	61	Satisfaction	IMS
	Per.	MX	Alt.	MX	W	16.00	31.79	-0.14	61	Alternatives	IMS
	Per.	MX	Alt.	MX	W	16.00	31.79	-0.08	61	Alternatives	IMS
	Per.	MX	Sat.	MX	W	16.00	31.79	-0.13	61	Satisfaction	IMS
	Per.	MX	Inv.	MX	W	16.00	31.79	-0.07	61	Investments	IMS
	Per.	MX	Inv.	MX	W	16.00	31.79	-0.04	61	Investments	IMS
	Per.	MX	Com.	MX	W	16.00	31.79	-0.35	61	Commitment	IMS
	Per.	MX	Com.	MX	W	16.00	31.79	-0.33	61	Commitment	IMS
	Per.	MX	Com.	MX	W	16.00	31.79	-0.33	61	Commitment	IMS
	Per.	MX	Com.	MX	W	16.00	31.79	-0.17	61	Commitment	IMS
McGuire (1996)	Int.	MW	Sat.	F	W	2.00	37.50	-0.30	88	Satisfaction	DAS
	Int.	MW	Int.	F	W	2.00	37.50	-0.30	88	Intimacy	PAIR
Melamed (1993)	Int.	MX	Sat.	F	W	5.80	36.00	-0.25	446	Adjustment	DAS
	Int.	MX	Sat.	F	W	5.80	36.00	-0.15	446	Adjustment	DAS
	Int.	MX	Inv.	F	W	5.80	36.00	-0.22	446	Investments	IMS

	Int.	MX	Inv.	F	W	5.80	36.00	-0.09	446	Investments	IMS
Meyer & Dean (1998)	Int.	NE	Str.	M	W	13.00	36.00	-0.11	332	Problems	N/A
	Int.	NE	Com.	M	W	13.00	36.00	-0.11	332	Breakup Thoughts	N/A
Mohr & Daly (2008)	Int.	MX	Sat.	MX	W	25.00	22.65	-0.33	51	Attractions	MDRCI
	Int.	MX	Inv.	MX	W	25.00	22.65	-0.15	51	Constraints	MDRCI
	Int.	MX	Sat.	MX	W	25.00	22.65	-0.09	51	Satisfaction	KMS
	Int.	MX	Sat.	MX	W	25.00	22.65	-0.46	51	Attractions	MDRCI
	Int.	MX	Inv.	MX	W	25.00	22.65	-0.10	51	Constraints	MDRCI
	Int.	MX	Sat.	MX	W	25.00	22.65	-0.24	51	Satisfaction	KMS
Mohr & Fassinger (2006)	Per.	MX	Sat.	MX	W	14.30	36.24	-0.15	922	Quality	Composite
	Per.	MX	Sat.	MX	W	14.30	36.24	-0.21	922	Quality	Composite
Otis et al. (2006a)	Int.	MX	Sat.	MX	W	16.55	38.00	-0.23	131	Satisfaction	RAS
	Int.	MX	Sat.	MX	W	16.55	38.00	-0.14	131	Satisfaction	RAS
	Per.	MX	Sat.	MX	W	16.55	38.00	-0.02	131	Satisfaction	RAS
	Per.	MX	Sat.	MX	W	16.55	38.00	-0.12	131	Satisfaction	RAS
Otis et al. (2006b)	Int.	S	Sat.	F	W	14.00	32.40	-0.34	90	Satisfaction	RAS

	Int.	S	Sup.	F	W	14.00	32.40	-0.12	90	Support	QRI
	Int.	S	Int.	F	W	14.00	32.40	-0.06	90	Depth	QRI
	Int.	S	Str.	F	W	14.00	32.40	-0.28	90	Conflict	QRI
	Int.	S	Int.	F	W	14.00	32.40	-0.28	90	Intimacy	TLS
	Int.	S	Com.	F	W	14.00	32.40	-0.15	90	Commitment	TLS
	Int.	S	Pas.	F	W	14.00	32.40	-0.19	90	Passion	TLS
Reeves & Horne (2009)	Int.	MX	Sat.	F	W	14.00	33.54	-0.22	754	Satisfaction	MAT
Roberts (2006)	Int.	MX	Sat.	M	W	14.20	MX	-0.26	156	Satisfaction	QRI
Romance (1986)	Int.	S	Sat.	M	W	14.50	36.30	-0.25	172	Satisfaction	DAS
Romano (1990)	Int.	NE	Sat.	F	W	15.70	38.50	-0.21	102	Adjustment	DAS
	Per.	NE	Sat.	F	W	15.70	38.50	-0.16	102	Adjustment	DAS
	Per.	NE	Sat.	F	W	15.70	38.50	-0.16	102	Adjustment	DAS
Ross & Rosser (1996)	Int.	MW	Sat.	M	N/A	N/A	37.00	-0.26	184	Satisfaction	N/A
	Int.	MW	Sat.	M	N/A	N/A	37.00	-0.29	184	Satisfaction	N/A
	Int.	MW	Sat.	M	N/A	N/A	37.00	-0.08	184	Satisfaction	N/A
	Per.	MW	Sat.	M	N/A	N/A	37.00	-0.25	184	Satisfaction	N/A

Sanchez et al. (2009)	Int.	WC	Sat.	M	MX	42.40	34.08	-0.17	114	Satisfaction	RAS
	Int.	WC	Sat.	M	MX	42.40	34.08	-0.11	114	Satisfaction	RAS
Szymanski & Hilton (2013)	Int.	MX	Sat.	M	W	15.00	33.00	-0.43	88	Quality	DAS
Taylor (2012)	Int.	MX	Sat.	MX	W	22.15	29.95	-0.17	149	Satisfaction	DAS
	Int.	MX	Sat.	MX	W	22.15	29.95	-0.14	149	Satisfaction	DAS
	Per.	MX	Sat.	MX	W	22.15	29.95	0.19	149	Satisfaction	DAS
Todosijevic et al. (2005)	Int.	MX	Sat.	F	W	17.50	44.19	-0.21	398	Satisfaction	DAS
	Per.	MX	Sat.	F	W	17.50	44.19	-0.19	398	Satisfaction	DAS
	Per.	MX	Sat.	F	W	17.50	44.19	-0.25	398	Satisfaction	DAS
	Per.	MX	Sat.	F	W	17.50	44.19	-0.06	398	Satisfaction	DAS
	Per.	MX	Sat.	F	W	17.50	44.19	-0.18	398	Satisfaction	DAS
	Per.	MX	Sat.	F	W	17.50	44.19	-0.14	398	Satisfaction	DAS
	Per.	MX	Sat.	F	W	17.50	44.19	-0.19	398	Satisfaction	DAS
	Per.	MX	Sat.	M	W	17.50	44.19	-0.12	228	Satisfaction	DAS
	Per.	MX	Sat.	M	W	17.50	44.19	-0.01	228	Satisfaction	DAS
	Per.	MX	Sat.	M	W	17.50	44.19	-0.07	228	Satisfaction	DAS

	Per.	MX	Sat.	M	W	17.50	44.19	-0.13	228	Satisfaction	DAS
	Per.	MX	Sat.	M	W	17.50	44.19	-0.01	228	Satisfaction	DAS
	Per.	MX	Sat.	M	W	17.50	44.19	-0.02	228	Satisfaction	DAS
	Per.	MX	Sat.	M	W	17.50	44.19	0.07	228	Satisfaction	DAS
Wonch (2007)	Int.	MX	Sup.	F	W	11.50	30.00	-0.14	96	Equality	RES
	Int.	MX	Sat.	F	W	11.50	30.00	-0.25	96	Satisfaction	MAT

Table abbreviations: Stigma Type: Per. = Perceived; Int. = Internalized. Region of Country: MW = Midwest; MX = Mixed Region; NE = Northeast; NW = Northwest; S = South; WC = West Coast. Dimension of Relationship Functioning: Alt. = Alternatives; Com. = Commitment; Int. = Intimacy; Inv. = Investment; Pas. = Passion; Sat. = Satisfaction; Str. = Strain; Sup. = Support; Tru. = Trust. Sex: F = Female; M = Male; MX = Mixed Sex. Race: W = Predominantly White; MX = Mixed Race. Relationship Functioning Scale: CIFA = California Inventory of Family Assessment (Green & Werner, 1996); CSI = Couple Satisfaction Index (Funk & Rogge, 2007); DAS = Dyadic Adjustment Scale (Spanier, 1976); GMSEX = Global Measure of Sexual Satisfaction (Lawrance & Byers, 1995); ICS = Inventory of Chronic Strains (Turner, Wheaton, & Lloyd, 1995); IDCS = Interactional Dimensions Coding System (Kline et al., 2004); IMS = Investment Model Scale (Rusbult, Martz, & Agnew, 1998); IMSAT = Index of Marital Satisfaction (Hudson, 1982); KMS = Kansas Marital Satisfaction Scale (Schumm, Nichols, Schectman, & Grigsby, 1983); MAT = Marital Adjustment Test (Locke & Wallace, 1959); MDRCI = Multidimensional Determinants of Relationship Commitment Inventory (Kurdek, 1995a); MSPSS = Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988); PAIR = Personal Assessment of

Intimacy in Relationships (Schaefer & Olson, 1981); QRI = Quality of Relationship Inventory (Pierce, Sarason, & Sarason, 1991); RAD = Responses to Accommodative Dilemmas (Rusbult, Verette, Whitney, Slovik, & Lipkus, 1991); RAS = Relationship Assessment Scale (Hendrick, 1988); RES = Relationship Equality Survey (Kurdek, 1995b); TLS = Triangular Love Scale (Sternberg, 1997); TS = Trust Scale (Rempel, Holmes, & Zanna, 1985); Please note that studies sometimes utilized subscales or other abbreviated versions of complete scales, therefore coded dimensions do not necessarily correspond across effects utilizing the same general scale.

Table 2

Moderator Analyses

	Q_B/Q_R	df	k	r	95% CI
Stigma Type	5.79*	1			
Perceived Stigma			16	-.12***	-.16, -.08
Internalized Stigma			34	-.18***	-.21, -.15
Dimension of Relationship Functioning	17.91*	8			
Alternatives			4	-.10	-.23, .03
Commitment			16	-.12***	-.17, -.06
Intimacy			5	-.16***	-.23, -.10
Investment			12	-.04	-.12, .04
Passion			3	-.29***	-.42, -.15
Satisfaction			71	-.17***	-.20, -.14
Strain			6	-.16***	-.19, -.13
Support			10	-.13***	-.18, -.08
Trust			2	-.11*	-.20, -.01
Region of Country	11.57*	5			
Midwest			4	-.24***	-.33, -.14
Northeast			3	-.15***	-.23, -.07
Northwest			1	-.40***	-.54, -.23
South			2	-.24***	-.35, -.12
West Coast			5	-.13***	-.19, -.07
Mixed Region			24	-.16***	-.20, -.12

Sample Sex	.10	2		
Sexual Minority Women			16	-.17*** -.20, -.13
Sexual Minority Men			16	-.18*** -.25, -.10
Mixed Sex			7	-.16*** -.20, -.13
Predominant Race	.03	1		
Predominantly White			36	-.17*** -.20, -.14
Mixed Race			2	-.18*** -.29, -.06
Percent Minority	.21	1		
Mean Age	4.18*	1		

Note. The column labeled Q_B/Q_R displays the statistic for the test of heterogeneity of effect sizes either between studies (for categorical moderators) or explained by the regression coefficient (for continuous moderators). The column labeled k displays the number of effect sizes included within each category. * $p < .05$, *** $p < .001$.

Table 3

Analyses of Moderation for Dimension of Relationship Functioning by Stigma Type

	Q_B	df	k	r	95% CI
Perceived Stigma	6.76	5			
Alternatives			4	-.10	-.23, .03
Commitment			7	-.13**	-.36, -.04
Investment			6	-.01	-.10, .09
Satisfaction			31	-.12***	-.15, -.08
Support			1	-.13	-.37, .13
Trust			1	-.07	-.20, .06
Internalized Stigma	21.19**	7			
Commitment			9	-.09**	-.15, -.04
Intimacy			5	-.16***	-.23, -.10
Investment			6	-.05	-.18, .07
Passion			3	-.29***	-.42, -.15
Satisfaction			40	-.21***	-.25, -.18
Strain			6	-.16***	-.19, -.13
Support			9	-.13***	-.18, -.08
Trust			1	-.14*	-.27, -.01

Note. The column labeled Q_B displays the statistic for the test of heterogeneity of effect sizes between studies. The column labeled k displays the number of effect sizes included within each category. * $p < .05$, ** $p < .01$, *** $p < .001$.

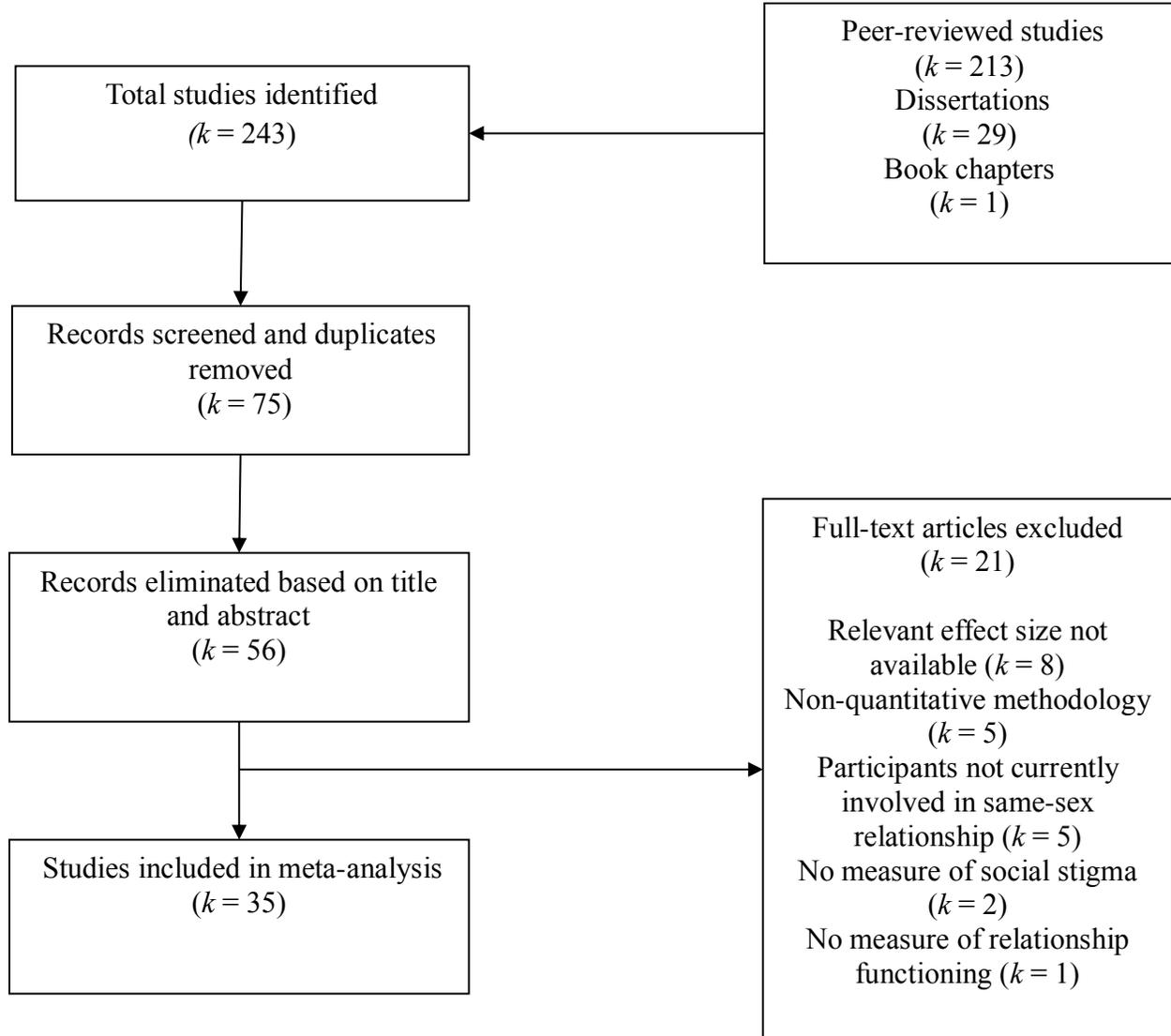


Figure 1 Flow chart depicting process of study identification.

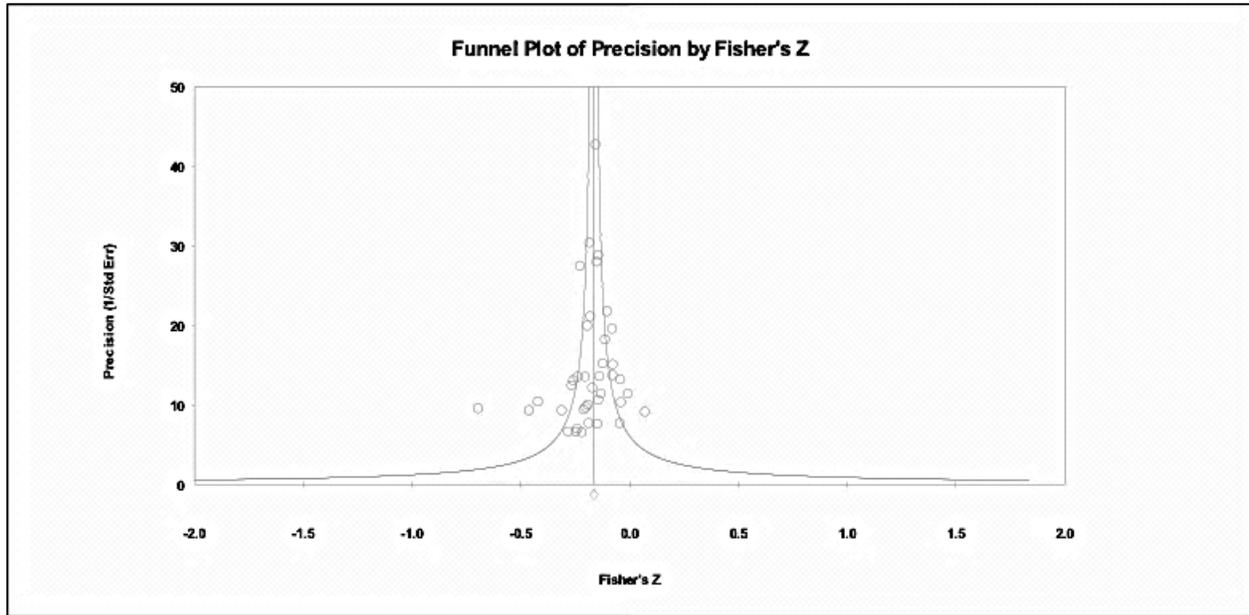


Figure 2 Funnel plot displaying effect sizes (Fisher's Z) by precision (inverse standard error).

Note. The relatively symmetrical and funnel-shaped distribution presented in this figure indicates a low likelihood of significant publication bias in the current review. Egger's test of the intercept as well as Duval's trim and fill procedure statistically confirm the symmetry of this plot.