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Unhealthy Closets, Discriminatory Dwellings: The Mental Health Benefits and Costs of Being Open about One's Sexual Minority Status

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Abstract

Rationale

With a *concealable* stigmatized identity, sexual minorities not only face discrimination but the burden of deciding when to be open about their sexuality. What are the mental health costs and benefits to openness about sexual minority status? On the one hand, openness fosters integration within the LGBTQ+ community (yielding downstream benefits), but it also heightens perceptions of discrimination towards oneself and the group at large (yielding downstream costs for mental health).

Objective

Previous research has focused on openness as reflecting either a cost or a benefit to sexual minorities' mental health, resulting in apparent conflict. We propose an integrated view of openness as leading to both costs and benefits that work in tandem to steer mental health.

Method

In two pre-registered studies with nearly 4,000 ethnically diverse, sexual minority participants, we propose a theoretically-driven serial mediation model to test opposing mediating mechanisms of LGBTQ+ identity importance, community integration, and perception of discrimination. Specifically, we determine how the relationship between openness about sexual minority status fosters LGBTQ+ identity importance, community integration, and perception of discrimination.

Results

Being more (vs. less) open strengthens LGBTQ identity importance, facilitating integration in the LGBTQ+ community, which benefits mental health. However, openness and strengthened identity importance simultaneously prompt increased perceptions of discrimination, the burden of which adversely affects mental health. Together these opposing forces explain the weak association between greater openness and mental health – an association that indicates, overall, that openness does have a net benefit for LGBTQ+ individuals' mental health.

Conclusions

By identifying opposing mechanisms that underlie the relationship between openness and mental health, we have provided a more integrated perspective on the role that openness plays on sexual minorities' mental health. Openness is associated with stronger group identity importance, greater community integration, and heightened perception that the group (and self) face discrimination.

Keywords: sexual minorities; LGBT; mental health; Wellbeing; Concealment; Stigma

Highlights

- Openness (being “out”) has mental health *benefits* and *costs* for LGBTQ+ individuals
- Benefit route: more open individuals experience more LGBTQ+ community integration
- Cost route: more open individuals perceive greater LGBTQ+ discrimination
- Openness strengthened LGBTQ+ identity importance, augmenting costs and benefits
- Benefits and costs occur in tandem, yet openness has a net benefit on mental health

“The true ugliness of the closet is its subtlety. It eats away at your soul bit by bit and you don't even realize it. If you never deal with it or come to terms with it, then ultimately the closet will destroy you.”

— Gar McVey-Russell, Sin Against the Race

As members of a stigmatized group, sexual minority individuals (e.g., lesbian, gay, bisexual, queer) face unique challenges in their day-to-day life that lead to increased stress (Meyer, 2003; Pachankis, 2007). As a consequence, sexual minorities are more likely than their heterosexual counterparts to suffer from anxiety and depression (e.g., Frable et al., 1998; Hatzenbuehler, 2009; Cochran & Mays, 2009), and to report worse mental health (for a review, see Quinn & Earnshaw, 2011). Given the ubiquitous nature of intolerance, some individuals are not open about their sexual minority status (i.e., they remain “in the closet”) in an effort to minimize personal experiences with discrimination and, hence, protect themselves from its harmful consequences. Whether doing so is beneficial for one’s subjective well-being and mental health has been the topic of much scientific inquiry, with mixed findings.

Concealing sexual minority status has both been found to be unrelated as well as positively and negatively related to mental health (Pachankis et al., 2020). In the current research, we examined whether these findings appear to conflict because of opposing, yet simultaneously occurring, mediating mechanisms. In two studies, we examined the mental health and subjective well-being implications of increased openness about sexual minority status, and the degree to which these relationships are explained by (a) increased LGBTQ+ community integration (having positive implications for health and well-being), and (b) perceptions of discrimination towards sexual minorities (having negative implications). Moreover, we

examined how both increased LGBTQ+ community integration *and* perceptions of discrimination can arise from (c) enhanced importance of one's identity as a sexual minority. As such, we hope to paint a more nuanced picture of how being open can incur benefits (and costs) to sexual minorities and why this may be the case (see Figure 1 for a conceptual model).

To Be Open or Not?

Unlike many stigmatized social identities such as gender and race, sexual minority status is a relatively concealable identity. On the surface, concealability may seem beneficial – sexual minorities can decide when to be open – but in reality, it is cognitively taxing to conceal information from others. To do so requires a great deal of monitoring and vigilance about the risks that may come with being open (Slepian et al., 2017; Smart & Wegner, 1999). The burden of concealability is seen downstream: compared to those with a readily detectable stigma, those with a concealable stigmatized identity – including sexual minority status – are more likely to report worse physical and mental health (Hatzenbuehler, 2009; for review, Camacho et al., 2020).

Given the relative choice that sexual minorities have to be open about their status, much research has focused on whether concealing sexual minority status is beneficial or harmful to the individual. Sexual minorities may not be open about their sexual orientation to protect themselves from exposure to discrimination (Herek, 2009; D'Augelli et al., 1998; Ragins et al., 2007), or social rejection (Pachankis & Goldfried, 2006; Safren & Pantalone, 2006). Such efforts may pay off: Several studies have shown that sexual minorities who were more (vs. less) open about their sexual identity reported experiencing more discrimination across the lifespan (Croteau & Lark, 1995; D'Augelli et al., 1998; White & Stephenson, 2014). Furthermore, the

experience of past discrimination has been linked to increased fears around openness, even if those experiences are not directly linked to current levels of openness (Ragins et al., 2007).

Other research, however, has indicated that sexual minorities' decisions and behavior around openness do not provide protection from bias. Recent work has shown that, at least in a liberal context, when sexual minorities disclosed their status (vs. withheld that information), straight peers displayed similar levels of bias towards them (Goh et al., 2019). In addition, the strategy to conceal one's sexual orientation for fear of negativity may backfire and ironically lead to social rejection; concealing a stigmatized identity has been shown to lead to worse impressions from a non-stigmatized interaction partner (e.g., Newheiser & Barreto, 2014, for review, Baum & Critcher, 2020 and Camacho et al., 2020).

Taken together, existing studies of the relationship between openness and mental health problems have yielded seemingly contradictory associations—from positive to negative to null. Indeed, a recent meta-analysis of 193 empirical studies by Pachankis and colleagues (2020) found a small positive association between sexual orientation concealment (including general lack of openness) and mental health problems, suggesting that greater openness incurs some benefits, albeit small. Still, much between-study heterogeneity remained.

Why might past studies' findings conflict? Being open is essential for sexual minorities to develop a sense of community with other sexual minorities, but it also changes how sexual minorities view the status of their group. As we will outline below, openness likely activates different social psychological mechanisms that operate on subjective well-being and mental health – some beneficial and some adverse. Together, these potentially opposing mediators lead to the weak association between openness and both subjective well-being and mental health – an association that, at the aggregate level, masks the importance of these distinct forces.

Benefits: Openness as Path to Community Integration

Openness affords sexual minorities a chance to be integrated in the large cultural and social network of other sexual minorities (the LGBTQ+ community), which can ultimately foster a sense of belongingness and social support, and are invaluable for well-being (see Outten et al., 2009). Not being open deprives sexual minorities access to the LGBTQ+ community (see, Quinn & Earnshaw, 2011), and leads to a loss of social support (Weisz et al., 2016). Indeed, openness about sexual orientation has been shown to facilitate receiving social support which, in turn, leads to better subjective well-being and fewer depressive symptoms (e.g., Chaudoir & Fisher, 2010). Daily diary work has, for example, shown that on days when sexual minorities are more (vs. less) open, they report less depression and anxiety, and that this effect is mediated by the amount of social support received that day (e.g., on days they were not open, they received less support, which led to them experiencing greater depression and anxiety, Beals et al., 2009). By this account, we expect that being socially integrated (i.e., feeling connected with and supported by the sexual minority community) is an important mediator to explain the well-being benefits of being open.

Costs: Openness as a Path Towards Perceiving Discrimination

Members of stigmatized groups who perceive more (vs. less) group-based discrimination experience worse subjective well-being and mental health (Bahamondes et al., 2019; Napier et al., 2020a; Suppes et al., 2019). We consider whether openness may play a part in heightening individuals' perceptions of discrimination. Specifically, openness may both subject people to more personal discrimination, and heighten awareness of discrimination toward one's social group (while concealment may generally limit this exposure). Thus, being open may be

associated with worse mental health and well-being because one is more readily cognizant of and exposed to discrimination.

Researchers are also beginning to consider whether motivational processes may shape individuals' level of vigilance to and perceptions of discrimination: specifically, might overlooking discrimination from time to time serve a palliative function by helping stigmatized group members meet psychological needs (e.g., feeling better, see Napier et al., 2020b)? According to system justification theory, people are fundamentally motivated to see the world they live in as fair (Jost & Banaji, 1994). Stigmatized individuals must square this fundamental motivation to see the system as fair with their marginalized status within that system. A readily accessible way to justify the group's relatively low-status is to overlook or downplay the injustice they face – a process that is likely more challenging for those who are more (vs. less) open about their sexual orientation. While researchers can never know the objective level of exposure to discrimination or injustice a person has had, we know that American sexual minorities are subject to both legal and normative hostility towards their group (Ofosu et al., 2019; Charlesworth & Banaji, 2019). Therefore, while personal experiences of discrimination will vary, research has shown that perceptions of discrimination (and injustice) are systematically related to a person's belief that the system is fair and legitimate (Major, et. Al., 2002; Bahamondes et al., 2020).

We argue that while there is an overall benefit to being more (vs. less) open (Pachankis et al., 2020), the benefit dampens as greater openness lends itself to a (potentially motivated) heightened awareness of personal and group-based discrimination.

Openness Affords Opportunities for Growth in Sexual Minority Identification, with Associated Costs and Benefits

In considering the potential mental health implications of being open about one's sexual minority status, it is also important to consider how openness can shape one's internalization of that identity and the relative importance they place on that identity. Theory on social identity and intragroup relations posits, for example, that when individuals have more opportunities to interact with, and feel valued by, others within a group, they are more likely to place psychological importance on that group membership (i.e., stronger group identification; Begeny et al., 2018; Tyler & Blader, 2002).

Social identities can, in turn, be key to promoting individuals' health and well-being (Haslam et al., 2018). This is in part because with a strong group identification, individuals experience what we call *community integration*: they feel that they can more readily call upon or rely on that group as a resource, both as a source of social support and connection (Haslam et al., 2012) and as a means for providing key psychological needs, including a need to belong (Greenaway et al., 2016) – both of which help promote and maintain health and well-being. In this way, if greater openness leads to a rise in the importance of sexual minority identity, this should in turn facilitate a greater sense of *community integration*, which we expect to be beneficial to mental health.

At the same time, evidence indicates that alongside these benefits there can be costs to having a stronger group identification, particularly for members of stigmatized social groups (for an overview, see Jetten et al., 2017). In this vein, findings specific to sexual minorities are mixed. While some researchers find positive relationships between identification and well-being among sexual minorities (Doyle & Molix, 2014; Fingerhut et al., 2010; Bourguignon et al., 2020), others do not. Begeny and Huo (2017), for example, showed that sexual minority identification has certain indirect costs for mental health, because it heightens minorities'

vigilance (and thus perceptions of) the group-based discrimination around them (in line with evidence found in other stigmatized group contexts; Begeny & Huo, 2018; Leach et al., 2010; Operario & Fiske, 2001; Sellers & Shelton, 2003).

Together, these lines of research suggest that strong sexual minority identification augments what we have already laid out as benefits *and* costs for mental health and well-being. Namely, greater openness may facilitate a stronger identification, and that strengthened identification may provide individuals with a sense of support and belonging (i.e., a stronger sense of community integration), but may also heighten perceptions of discrimination. By extension, this suggests that individuals' openness about their sexual minority status may have both benefits and costs, explained through these distinct identity-based pathways.

The Current Research

The following hypotheses were pre-registered at: https://osf.io/yge7j/ Any deviations from those original pre-registrations are explained in the supplemental material and available on OSF.

H1: Being more open about sexual minority status will lead to better subjective well-being and mental health compared to being less open.

In addition, we derived three possible mediators (H2-H4) to help explain differences in well-being and mental health between those who are more (vs. less) open:

H2: Being open may afford sexual minorities access to the large cultural and social network of other sexual minorities. The relationship in H1 will be, in part, mediated by *LGBTQ+ community integration*.

H3: Being open may lead sexual minorities to perceive more group-based or personal discrimination. The relationship in H1 will be, in part, mediated by the *perception of*

personal discrimination and the *perception that sexual minorities face discrimination as a group.*

H4: Being open affords sexual minorities a shared social identity with other sexual minorities. The relationship in H1 will be, in part, mediated by *importance of LGBTQ+ identity*. Notably, identity importance will have opposing indirect effects (vs. direct effect) on mental health through LGBTQ+ community integration (H2) and a perceptions of discrimination (H3).

These hypotheses will be tested in two studies using the serial mediation described in Figure 1. Cumulatively, these hypotheses reflect an integration of previous insights that, to our knowledge, have not yet been brought together and simultaneously tested. That is, instead of identifying both the potential benefits and costs of openness, previous work has seemed to illustrate one or the other, thus giving the impression that findings are conflicting. Yet, as we can test here, these previous findings are not necessarily conflicting: instead, they are limited in their ability to explicate and examine both the potential benefits and costs simultaneously.

Study 1

Method

Participants and procedure. In 2010, the Social Justice and Sexuality Survey interviewed 4,953 U.S. residents who identify as sexual or gender minorities (see Battle, Pastrana & Daniels, 2013). Participants were recruited through community organizations and by venue-based, snowball, or online sampling. The self-administered questionnaire was available in both English and Spanish.

Because we were interested in LGBTQ+ participants, we excluded participants if they identified as both heterosexual and cisgender, or if they were missing data on either their self-reported gender or sexual orientation (*n*=362), or if they were from outside one of the 50 US states (n=663). Finally, we excluded those who were missing data on our key variables of interest (*n*=334). This left us with a sample of 3,594 participants (M_{age}=35.63, *SD*=13.00) which was racially diverse: 22.9% White; 33.6% Black; 13.9% Hispanic/Latinx; 5.4% Asian/Pacific Islander; 2.2% Native American; 22.0% multiracial, other, or missing.

Participants were asked if they currently identified with one or more of the following five gender identities: male, female, transgender male-to-female, transgender female-to-male, or "other". Those who only indicated a female or male gender identity (not multiple) and reported the corresponding gender assignment at birth were considered cisgender (sample total of 41.0% as female, 48.9% as male). Participants were considered gender diverse (sample total of 8.3%) if they indicated they were transgender male-to-female (2.6%), transgender female-to-male (1.5%), "other," or inconclusive (6.0%). Regarding sexual orientation, participants identified as gay (40.0%), lesbian (25.1%), bisexual (11.7%), queer (7.2%), same-gender loving (5.5%), two spirit (2.2%) or other/missing (8.3%). 52.3% of the participants had at least a 2-year college degree.

Variables. Bivariate correlations are presented in Table 1.

***Independent variable*.** Openness was calculated using the raw mean of responses to "How many of your {Family/Friends/coworkers/people online} are you out to?", which were each rated from 1=*none* to 5=*all* (α=.85; *M*=3.90, *SD*=1.12).

Mediating variables. LGBTQ+ community integration was measured with the following three items, coded on a 6-point scale: "I feel connected with my local LGBT community," "I feel that the problems faced by the LGBTQ+ community are also my problem," and "I feel a bond

with other LGBT people" (α=.75; *M*=4.74, *SD*=1.50). LGBTQ+ identity importance was measured with one item, coded on a 6-point scale, "Do you feel that your sexual orientation is an important part of your identity?" (*M*=4.12, *SD*=1.27). Perception of *group* discrimination was based on the following three items, coded on a 6-point scale: "Homophobia is a problem in my neighborhood," "Homophobia is a problem within my racial or ethnic community," and "In general, homophobia is a problem within all communities of color," (α=.73; *M*=4.26, *SD*=1.27).

Dependent variable. Four items assessed respondents' subjective well-being, measured on a 4-point scale (Over the past week have you felt, "That you were just as good as other people," "Hopeful about the future?," "Happy," "That you enjoyed life" (α=.88, *M*=3.32, *SD*=.74).

***Adjustment variables*.** Person-level adjustment variables included: two dummy codes for gender (cis-female and gender diverse compared to cis-male); race/ethnicity (Black, Hispanic, and "Other," compared to White), age, age squared (Blanchflower & Oswald, 2008), political conservatism (6-point scale), education (7-point scale), religious community involvement (4-point scale), and income (12-point scale).

Results

We conducted the serial mediation model described in Figure 2 using the PROCESS macro in SPSS (Model 82; Hayes, 2018, pp 180-183). In this model, we assumed that our three mediators (identity importance, community integration, and perceived discrimination) operated in a casual chain: that is, openness operated on identity importance (M1), which in turn operated on both community integration (M2) and perceived discrimination (M3). Therefore, in addition to testing for the direct effect among the focal variables (summarized in Table 2), and for indirect effects of openness on mental health through community integration (M2) and perceived

discrimination (M3), this model tested for how openness indirectly operated on mental health from M1→M2 and M1→M3. That is, how the indirect effect of openness on mental health first operated through identity importance, followed by either community integration or perceived discrimination. This allows us to understand both how these focal variables operated on mental health alone (without the serialization) and together (through indirect effects). For indirect effects, we ran 5,000 bootstrap samples and examined the confidence interval of those effects. A post-hoc Monte Carlo power analysis determined that we had sufficient power to detect both direct and indirect effects (see Supplemental Material).

Subjective well-being. Supporting Hypothesis 1, there was a significant, positive direct effect of openness (vs. being more "closeted") on subjective well-being, b=.07, SE=.01, p<.001, CI[.04, .09]. Furthermore, greater (vs. less) LGBTQ+ community integration was linked to higher subjective well-being, b=.08, SE=.01, p<.001, CI[.06, .10]; perceiving more discrimination (vs. less) was also linked to worse well-being, b=-.04, SE=.01, p<.001, CI[-.06, -.02]. Confirming Hypothesis 2, we found that openness influenced subjective well-being through its effect on community integration. Shown in the first column of Table 3, the confidence interval for the indirect effect of openness on subjective well-being through community integration did not include zero.

Turning to Hypothesis 3, we looked at the relationship between perceptions of group-based discrimination and wellbeing. While there is a significant and costly direct effect between perceiving more (vs. less) discrimination and worse subjective wellbeing, we found that openness had a *beneficial* indirect effect on subjective well-being through perceived discrimination. However, when accounting for LGBTQ+ identity importance (Hypothesis 4) this relationship between openness, perceived discrimination and subjective well-being flipped, and

became costly to subjective wellbeing. Confirming Hypothesis 4, while openness did not have an indirect effect on subjective well-being through identity importance alone (the confidence interval included zero), identity importance had a role in the relationship between openness and subjective well-being when both accounting for its *beneficial* influence on LGBTQ+ community integration (H2) and its *adverse* influence on perception of LGBTQ+ group discrimination (H3). That is, both the indirect effect of (1) *openness→LGBTQ+ identity importance→community integration →subjective well-being* and (2) *openness→LGBTQ+ identity importance→perception of group discrimination→subjective well-being* did not include zero. Importantly, these two indirect effects are opposing; participants who reported higher (vs. lower) LGBTQ+ identification were both *more* integrated in the LGBTQ+ community and were *more* likely to perceive group discrimination. This means that, while LGBTQ+ identity importance was associated with an increase in one's sense of community integration – which is associated with better well-being– it is also associated with an increased perception of discrimination – which is associated with worse well-being.

Demographic differences

To probe known personal moderators (Pachankis, et. al., 2020) we conducted a series of stratified analyses, running the serial mediation model on subgroups, including by age, gender, and sexual orientation. Results are summarized in the Supplemental Material. By and large, stratified analyses were parallel to the original analysis (see Table S2-S4). However, the level of disclosure is higher among our lesbian and gay-identified sexual minorities (M=4.07, SD=1.04) than our bisexual or queer respondents (M=3.55, SD=1.24) and this difference was statistically significant, t=9.36, p< .001. Furthermore, gender diverse participants reported worse subjective wellbeing, b=-.17, SE=.05, p=.002, CI [-.27,-.07].

Discussion

In Study 1, we found that greater (vs. less) openness was associated with better subjective well-being. Importantly, Study 1 offers a deeper understanding of how openness may lead to better well-being: namely, in addition to direct effects on the proposed mediators, openness facilitated an increased LGBTQ+ identity importance, which, in turn, led to both greater LGBTQ+ community integration and greater perception of LGBTQ+ discrimination. Together these processes suggest that the fabric of a person's life changes when they are more (vs. less) open about their sexual minority status: they become integrated in a community, and their view of that community's discrimination changes as well.

Unlike previous researchers who have found that gender moderates the health-risks of greater (vs. less) openness (Pachankis, Cochran & Mays, 2015), we did not find a difference between cis-female and cis-male participants. However, it is possible that among bisexual and queer individuals, the relationship between openness, perceived discrimination and subjective wellbeing is not as robust as it is for gay and lesbian individuals. Finally, some of the items in our measure of perceived discrimination focus on communities of color (vs. the broader LGBTQ+ community), and it will be important to see if the pattern holds for a more general (vs. community specific) measure of perceived discrimination in Study 2.

Study 2 aims to (1) replicate the serial mediation proposed, (2) transition from measures of subjective wellbeing to traditional measures of mental health, and (3) understand if perceived *personal* discrimination, which was not measured in Study 1, is part of the mediation process.

Study 2

Method

Participants and procedure. We used data from Project Stride, a study of identity, stress, and health among sexual minority individuals (Meyer et al., 2006). Data were collected between February 2004 and January 2005 from New York City residents, recruited from various sampling venues (e.g., business establishments, social groups) and through snowball referrals (see Meyer et al., 2006, for more survey details). While attitudes towards sexual minorities have continued to improve since these data were collected there is still pervasive hostility towards sexual minorities (Charlesworth & Banaji, 2019).

After excluding respondents who reported that they were heterosexual (*n*=128), data were available for 396 non-heterosexual respondents, half of whom identified as female (50.0%). The sample was racially diverse: 33.8% identifying as White, 33.1% as Black, and 33.1% as Latinx. Participants identified as gay (*n*=178), lesbian (*n*=111), queer (*n*=15), bisexual (*n*=71), homosexual (*n*=16), and "other LGBT" (*n*=5). Roughly half the sample was below 30-years-old (49.6%) and had at least a bachelor's degree (54.1%).

Measures.

Bivariate correlations are presented in Table 4.

Predictor variables. *Openness* was computed by taking the mean of five responses to, "How much you are out of the closet to the following groups of people [family/GLB friends/straight friends/co-workers/health-care providers] in your life," which were each rated from 1=*out to none* to 5=*out to all* (α=.75). *LGBTQ+ community integration* was assessed with eight items measuring how integrated respondents felt to New York City's LGBTQ+ community (e.g., "You feel you're a part of NYC's LGBT community", on a 4-point scale; α=.80). Perception of *group-based discrimination* was assessed with six items tapping participants' expectations of rejection and discrimination of sexual minorities as a group (e.g., "Most people

would willingly accept [a gay man] as a close friend") on a 4-point scale (α=.88). Perception of *personal discrimination* was assessed with the sum of frequency for having experienced 8 forms of everyday discrimination because of sexual orientation (e.g., having ever been, "treated with less respect"). *LGBTQ+ identity importance* was assessed by the rank of sexual orientation (vs. 11 other self-descriptive identities, roles or traits) on a scale of 3="Most Important", 2="Second most important", 1="Third most important", to 0="Listed but not ranked" .

Mental health. The survey included six measures of mental health. *Social well-being* was assessed with 15 items measuring respondents' perception of their social environment on a 7-point scale (α=.78). *Psychological well-being* was assessed with 18 items measuring self-acceptance, positive relations with others, purpose in life, and feelings of efficacy. Items were rated on a 7-point scale (α=.75). *Self-esteem* was assessed with 10 items, answered on a 4-point scale (α=.86). *Mastery* was assessed with a seven-item scale that assessed the extent to which respondents felt they had control over certain aspects of their lives. Responses were given on a 3-point scale (α=.64). *Depression* was measured by the Center for Epidemiological Studies–Depression (CES-D), in which respondents rated the frequency of 20 depressive symptoms on a 4-point scale (α=.92). *Guilt* was assessed with four items measuring feelings of wrong-doing or personal blame within the past year, with responses rated on a 5-point scale (α=.69).

Demographic variables. We adjusted for gender (female vs. male as data were only available on binary gender), race (Black and Latino vs. White), age category, age category squared, education (college degree or higher vs. otherwise), and income (33-point scale). All predictor variables were mean-centered or dummy-coded.

Results

We used the same analytic approach described in Study 1 to test the model shown in Figure 3. We computed a z-score of the six dependent variables described in the Methods and found they constitute a reliable single measure of mental health (α=.85). Therefore, we present results from that composite. Results for each dependent variable can be found in Table S5-S6, though the pattern of results for individual dependent variables mirrors what is presented. A post-hoc Monte Carlo power analysis determined that we had sufficient power to detect key direct and indirect effects (for detail and exceptions, Supplemental Material).

Direct effects among focal variables.

Summarized in Table 2, we see many similarities between our studies. Participants who were more open (vs. less) experienced greater identity importance and greater community integration. Those who experienced greater identity importance also experienced greater community integration and perceived more personal discrimination in their day-to-day life. Furthermore, in Study 2 we found a positive direct effect of openness on the perception of both group-based and personal discrimination, suggesting respondents who were more (vs. less) open perceived more discrimination. Additionally, we found a positive direct effect of identity importance on perception of personal discrimination, but no significant direct effect of identity importance on perceptions of group-based discrimination.

Direct and indirect effects on mental health. Those who experienced greater community integration reported *better* mental health, *b*=.320, *SE*=.076, *p*<.001, CI[.170, .469]. Those who perceived more discrimination (either personal or group-based) reported worse mental health (for personal *b*=.-.075, *SE*=.019, *p*<.001, CI[.-.113, -.037] , for group-based, *b*=.-.231, *SE*=.052, *p*<.001, CI[-.334, -.129]. There were no direct effects of identity importance on mental health, *b*=.003, *SE*=.029, *p*=.909, CI[.-.054, .061].

Like Study 1, we find support for Hypothesis 1: those who were more (vs. less) open reported better mental health, *b*=.149, *SE*=.051, *p*=.005, CI[.047, .251]. In addition to this direct effect, openness had both *beneficial* and *costly* indirect effects on mental health through community integration, perception of both group and personal discrimination and, to some extent, identity importance.

Confirming Hypothesis 2 and shown in Table 2, bootstrap confidence intervals indicated there was a *beneficial* indirect effect of openness on mental health through increased community integration. Confirming Hypothesis 3, openness had a costly indirect effect on mental health through greater (vs. less) perception of discrimination. Put another way, given the association, greater openness may lead to greater perception of both group-based and personal discrimination, the burden of which, in turn, led to worse mental health.

Turning to Hypothesis 4, there was no indirect effect of openness on mental health through identity importance alone. Instead, identity importance comes into play when considering its relationship with community integration and perception of personal discrimination. Confirming Hypotheses 2 and 4, outness has a *beneficial* indirect effect on mental health through an *openness→identity importance→community integration* path. At the same time, confirming Hypotheses 3 and 4, outness has a *costly* indirect effect on mental health measures through the *openness→identity importance→perception of personal discrimination* path.

Discussion

In Study 2, we again found evidence that openness has both beneficial and costly effects on sexual minorities' well-being. Those who were more (vs. less) open, held their LGBTQ+ identity as more important, which in turn, was associated with greater LGBTQ+ community

integration. Together, this path was associated with better mental health. These data replicated our findings from Study 1. Study 2 differs from Study 1 regarding openness and perception of group-based discrimination. In Study 1 we found a *negative* (vs. positive) direct effect of openness on perception of group-based discrimination. However, we replicate the pattern that openness can have a *costly* indirect effect on well-being: that is, greater openness is associated with increased identity importance which, in turn, is associated with greater perception of both group-based and personal discrimination.

One limitation of Study 2 is that it was conducted over 15 years ago when attitudes towards sexual minorities in the US were more hostile (Flores, 2019). However, while absolute levels of discrimination and comfort with openness may have improved since these data were collected – and so *mean levels* of these factors may have changed – the *process* by which openness influences discrimination and mental health are likely be stable. By confirming results from Study 1, this pre-registered study lends support to the stability of this process even as social conditions improve– though still far from equitable (Meyer, 2016).

General Discussion

Across two studies, we find evidence that there are mental health benefits and costs for sexual minorities who are more (vs. less) open about their sexual minority status. On the one hand, being more (vs. less) open is associated with greater community integration, which has direct benefit for mental health. Furthermore, in addition to the direct association between both openness and community integration on mental health, we find that, sexual minorities who are more open tend to consider their LGBTQ+ identity to be more important to their self-concept, which, in turn, helps them feel even more integrated in the LGBTQ+ community. Previous research has found that the perception of community integration and support is one of the most

robust psychological predictors of health and subjective well-being (for reviews, see Haslam, 2018; Uchino, 2009). Our findings are in line with this.

At the same time, our findings suggest that greater openness goes hand in hand with perceiving LGBTQ+-based discrimination which is costly to mental health. This is true for LGBTQ+ group-based discrimination (Studies 1 and 2), and personal discrimination based on sexual minority status (Study 2). In Study 1, we saw the effects indirectly through changes in identity importance: sexual minorities with stronger (vs. weaker) LGBTQ+ identity tended to perceive more group-based discrimination. In Study 2, we saw the same indirect effect as in Study 1. We also found a direct effect, such that those who were more (vs. less) open tended to perceive both group and personal discrimination.

By directly addressing both the benefits and costs for sexual minorities of being more (vs. less) open about their status, we have uncovered one reason that openness is not more strongly associated with benefits for subjective well-being and mental health. While there are enormous gains to being open, namely in terms of the growth of an LGBTQ+ identity and access to a vibrant community, openness exposes sexual minorities to discrimination and hostility. This is not to say that perceiving more (vs. less) discrimination does not motivate levels of openness; indeed, active concealment of a stigmatized identity can be driven by fears of discrimination (Camacho et al., 2020). Interestingly, we did not observe a zero-order correlation between levels of openness and perception of discrimination towards sexual minorities as a group. This could relate to differences between actively concealing status in the moment to avoid discrimination (vs. a more general level of openness, see, Quinn, Weisz & Lawner, 2017). Though it is possible that those who are more open also experience more discrimination (and therefore perceive more discrimination), research suggests that those who conceal their sexual minority status are treated

similarly to those who reveal, at least in certain (particularly progressive) contexts. For example, Goh and colleagues (2019) found that in face-to-face interactions at a liberal university, sexual minorities experienced similar levels of discrimination regardless of whether they were open about their sexual orientation (Goh et al., 2019). Importantly, this work highlights the lingering trauma of past discrimination (either personal or visceral) and the importance of creating safe environments for openness. Furthermore, perceptions of group-based discrimination (e.g., perceptions of how much discrimination sexual minorities face as a group vs. how much one has faced personally) should not be contingent on one's own experience of discrimination, particularly in America, the site of both surveys. While attitudes are improving – and have continued to improve since these datasets were collected – most Americans continue to express explicit preference for straight (vs. gay) people (Charlesworth & Banaji, 2019).

Contributions to the Literature

Taken together, these findings provide a more detailed explication of how openness about one's sexual minority status can shape mental health. In so doing, we shed light on seemingly discrepant findings in the sexual minority health literature, as to whether openness has benefits or costs for mental health (Pachankis et. al., 2020). Our findings explain how openness can in fact have *both* benefits and costs for sexual minorities' mental health, explained through distinct identity-based pathways. In so doing, our work makes meaningful and complementary connections to both system justification theory and social identity theory.

System justification theory.

This work joins a growing body of research suggesting that for lower-status group members – including ethnic and sexual minorities as well as and women – there can be some benefits from overlooking discrimination towards their group (Bahamondes et al., 2019; 2020;

Napier et al., 2020a; Suppes et al., 2019). We suggest that overlooking discrimination may be an individual-level coping mechanism available to sexual minorities. Unfortunately, this comes at a cost to sexual minorities as a group and may perpetuate a cycle wherein sexual minorities are motivated not to be open about their status. It is hard enough to acknowledge and speak up against discrimination – but for sexual minorities, it appears that to do so, there may be a direct cost to their subjective well-being and mental health. If silence is motivated by individual needs for psychological well-being, the system becomes exonerated from facing its inequities, making it harder for other sexual minorities to speak up when there is injustice.

Social identity theory. The current studies also contribute to our understanding of key social identity-based processes for sexual minority group members. For instance, in line with theory on social identity and health (on the 'social cure;' e.g., Jetten et al., 2017), our findings show that while identifying with one's sexual minority group has clear mental health benefits – in part by fostering a sense of group support and belonging (Greenaway et al., 2016; Haslam et al., 2012) – it can also yield certain costs, in part by heightening one's awareness of group-based discrimination (a generally distressing experience; e.g., Begeny & Huo, 2017). Additionally, in line with theory on social identity and intragroup relations (Tyler et al., 1996), our findings indicate that being open about one's sexual minority status can foster growth in sexual minority identification (e.g., by creating opportunities to engage with and feel valued by fellow minority group members; experiences that promote internalization of that group membership as an important piece of who they are; Tyler & Blader, 2002).

Parallel and Conflicting Findings

While our findings are largely parallel across two, independently-collected datasets, there was a noteworthy discrepancy. We found inconsistencies in the direct relationship between

openness and perception of group-based discrimination. In Study 1, this relationship was negative - those who were more (vs. less) open were *less* likely to perceive discrimination. In Study 2, those who were more (vs. less) open were *more* likely to perceive discrimination. Despite this inconsistency in the *direct* relationship, however, the costly *indirect* relationship between openness and mental health via minimization of group-based discrimination was present in both studies. Those who are more (vs. less) open considered their LGBTQ+ identity to be more important, and subsequently perceived more discrimination. Therefore, for both Studies 1 and 2, we observed an indirect cost of openness on mental health through increased LGBTQ+ identity importance, and increased perception of discrimination.

Limitations

As with all survey research, these data are correlational. We don't know how the cycle of costs and benefits of openness unfolds over time or across the life course. Some processes may work in the other direction or cyclically, which is best addressed with experimental and longitudinal research. It could be, for instance, that as a sexual minority individual starts to perceive more discrimination, they begin to be more open; this openness may, in turn, facilitate identification with the group (as our findings indicate), through which vigilance to discrimination is further reinforced (consistent with our findings), thereby creating a cycle of greater openness, identification, and awareness of discrimination. Another possibility is that happier individuals (those with better mental health) may have a positivity bias that leads them to perceive less discrimination, suggesting that those with worse mental health experience a type of "depressive realism"- a situation where people with higher (vs. lower) rates of depression read negative situations (including instances of discrimination) more accurately (see Moore & Fresco, 2012).

There are also contextual differences that may dictate when the benefits of openness outweigh the costs, or vice versa. For instance, the magnitude of these benefits and costs may differ depending on an individual's local level of structural stigma, well known to impact health and wellbeing (for reviews, Hatzenbuehler, 2016, Camacho et al., 2020). Specifically, openness may have greater costs for those living in more hostile environments (vs. more accepting ones). Local attitudes towards sexual minorities is another critical facet of context, and levels of hostility (or acceptance) among local community members may also affect who sexual minorities are comfortable being open with (e.g., other LGBTQ+ people vs. coworkers), and ultimately the benefits and costs that come with this. Sexual minorities who are only open to supportive family and friends may benefit from community integration, while eschewing the increased perception of discrimination that comes with more general openness in hostile environments. Finally, as social attitudes towards sexual minorities continue to improve, at least in certain countries overall (e.g., the U.S.A.; Flores, 2019), an examination of newer data will be warranted.

There are important alternative explanations of our findings that were not tested in the current research (e.g., the Rejection Identification Model). For example, among other stigmatized groups (e.g., African Americans), researchers have found that the experience of discrimination increases identity importance, which in turn supports subjective wellbeing (Postmes & Branscombe, 2002). While it will be important for future research on sexual minorities to explore the possibility that discrimination experiences increase identification, it is worth noting that in our data identity importance did not predict subjective wellbeing or mental health, counter to what the rejection-identification model would suggest. This indicates that for sexual minorities these processes may work differently (for additional tests and discussion of the rejection-identification and alternative models, see Begeny & Huo, 2017).

In Conclusion

Our work highlights clear benefits that come from stepping out of 'unhealthy closets.' In part, it enables one to grow in their sense of connection and integration with the sexual minority community (enabling access to forms of support and belonging). At the same time, our work reveals that outside unhealthy closets are discriminatory dwellings – environments that are ripe with stigma and discrimination toward sexual minorities, which only becomes increasingly clear to one as their openness and identification grows. The deleterious effects of this group-based discrimination ultimately render a rather sobering picture of what is involved in 'coming out.' Yet while sobering, these processes are also critically important to understand, especially if we aim to effectively address the long-standing disparities that sexual minorities endure (e.g., in health, rates of victimization). A harrowing recent example to add to the litany of evidence of injustice: one third of youths in New York City's foster care system are sexual or gender minorities, many of whom have been kicked out of homes because of their identities (Sandfort, 2020). Collectively, we must strive to create a society that allows sexual minorities access to their communities without the ensuing discrimination.

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Table 1. Bivariate correlations among variables (Study 1).

	1	2	3	4	5
Focal Variables					
1. Openness					
2. LGBTQ+ Identity Importance	**.28**				
3. LGBTQ+ Community Integration	**.24**	**.30**			
4. Perception of Group-Based Discrimination	.03	**.16**	**.24**		
5. Subjective Well-Being	**.13**	**.05**	**.16**	-.01	
Demographic Variables					
6. Time Since Coming Out	**.13**	**.03**	**.07**	**.04**	**.10**
7. Age	**.06**	.00	**.06**	.03	**.13**
8.Education Level	.03	**.07**	**.05**	**.09**	**.12**
9. Income	**.08**	.02	**.04**	.01	**.19**
10. Religiosity	**-.06**	-.02	**.05**	.01	**.14**
11. Political Orientation	**-.16**	**-.13**	**-.17**	**-.13**	**-.03**

Note. $p < .05$ for bolded coefficients.

Table 2. Direct effects between key variables (Studies 1-2).

	Study 1			Study 2		
	B(SE)	*p*<	95% CI	*B(SE)*	*p*<	95% CI
Identity Importance						
Openness	.311(.025)	<.001	.263,.359	.260(.090)	.004	.083,.436
Community Integration						
Openness	.153(.021)	<.001	.111,.194	.175(.035)	<.001	1.07,.243
ID Importance	.194(.016)	<.001	.163,.225	.073(.020)	<.001	.033,.112
Perception of Group-Based Discrimination						
Openness	-.061(.022)	.006	-.101,-.017	.105(.052)	.043	.004,.206
ID Importance	.129(.016)	<.001	.097,.162	.028(.030)	.346	-.031,.087
Perception of Personal Discrimination						
Openness	-	-	-	.756(.142)	<.001	.477,1.04
ID Importance	-	-	-	.289(.082)	<.001	.128,.451

Note. Models control for all demographics listed in Methods.

Table 3. Indirect effects (95% confidence intervals) of openness on subjective well-being and mental health through predictors (Study 1-2).

	Openness→	Study 1	Study 2
Hypo:		95% CI	95% CI
H1	Total Effect	**.007,.023**	-.082,.031
H2	Community Integration→	**.008,.018**	**.025,.095**
H3	Perception of Group DISC→	**.001,.006**	-.056,.001
H3	Perception of Personal DISC→		**-.093,-.025**
H4	ID→	-.009,.001	-.017,.018
H2/H4	ID→ Community Integration →	**.003,.006**	**.001,.014**
H3/H4	ID→ Perception of Group DISC →	**-.003,-.001**	-.006,.002
H3/H4	ID→ Perception of Personal DISC →	-	**-.012,-.001**

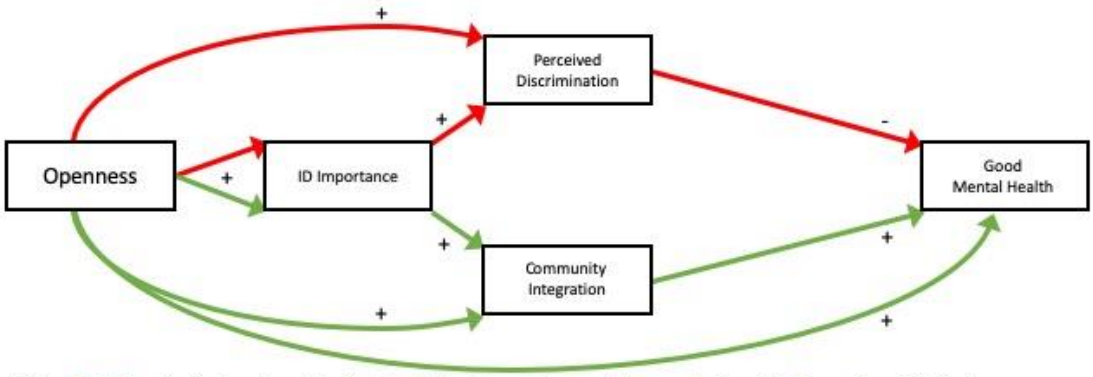
Note. Each row reflects the indirect effect of openness on a subjective wellbeing (Study 1) or mental health (Study 2). Bold values indicate CI does not include zero. [1]Higher scores indicate better subjective wellbeing or mental health. H(1-4) = Hypothesis; DISC = Discrimination; ID = LGBTQ+ identity (importance).

Table 4. Bivariate correlation among variables (Study 2).

		M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	Focal Variables													
1.	Openness	3.29	.73											
2.	Identity Importance	2.30	1.27	**.15**										
3.	Community Integration	3.30	.52	**.27**	**.21**									
4.	Perception of Group-Based DISC	2.07	.77	.01	.03	.06								
5.	Perception of Personal DISC	2.37	2.05	**.29**	**.23**	**.27**	**.25**							
6.	CES-Depression[1]	2.29	.56	.07	.01	.06	**-.24**	**-.20**						
7.	Mastery	2.63	.32	**.18**	.02	.10	**-.23**	**-.11**	**.51**					
8.	Self Esteem	3.31	.56	.06	.01	**.15**	**-.20**	**-.13**	**.55**	**.51**				
9.	Social Well-Being	4.78	.87	**.13**	.06	**.32**	**-.19**	-.03	**.41**	**.46**	**.49**			
10.	Psychological Well-Being	5.34	.78	**.12**	.03	**.18**	**-.27**	**-.11**	**.56**	**.59**	**.73**	**.53**		
11.	Guilt[1]	3.72	.72	.08	.02	**.10**	**-.23**	**-.16**	**.43**	**.29**	**.53**	**.28**	**.41**	
	Demographic Variables													
12.	Age Category	3.84	1.85	.04	-.10	**.11**	-.08	-.07	-.02	-.03	.03	**.16**	.02	**.13**
13.	Income	21.51	7.39	.14	.08	.01	**-.18**	-.03	**.17**	**.24**	**.11**	**.17**	**.22**	**.05**

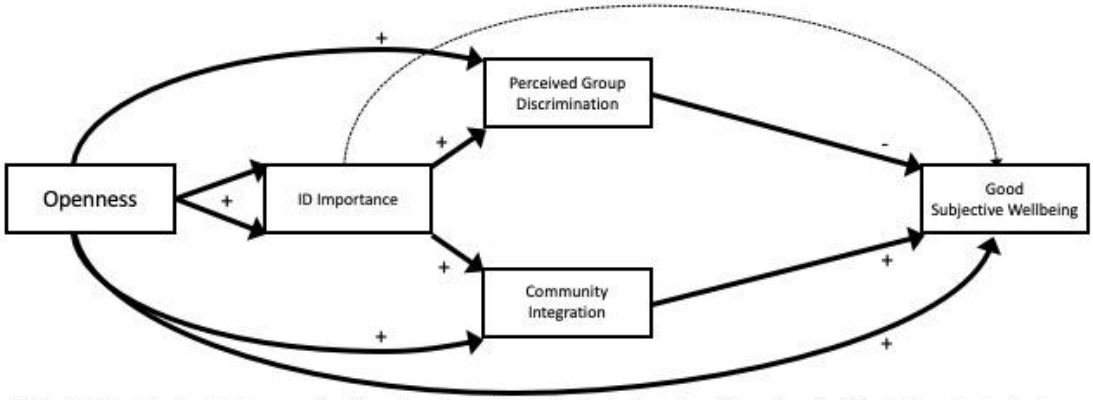
Note. [1] higher value represent better mental health. Bold values indicate $p<.05$.

Figure 1. Proposed serial mediation model predicting costs and benefits to mental health of being more (vs. less) open about sexual minority status.



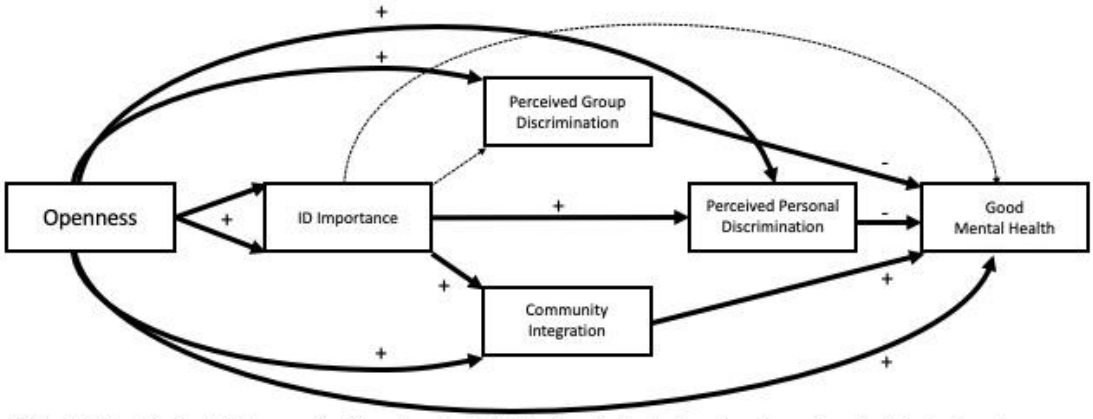
Note. Red lines indicate a hypothesized path that leads to a cost to mental health. Green lines indicate a hypothesized path that leads to a benefit to mental health. Perceived *group* or perceived *personal* discrimination.

Figure 2. Serial mediation model predicting subjective well-being (Study 1).



Note. Dotted line indicates nonsignificant paths. +/- sign indicate the direction of a significant direct effect at the $p<.05$ level. Model controls for demographic covariates listed in Methods section.

Figure 3. Serial mediation model predicting mental health (Study 2).



Note. Dotted line indicates nonsignificant paths."+"/"-" signs indicate the direction of a significant direct effect at the $p<.05$ level. Model controls for demographic covariates listed in Methods section.