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Applying Intergroup Relations Research to Understanding LGB Health Disparities

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This article describes how intergroup processes and stigma contribute to pervasive health disparities that exist between LGB and heterosexual individuals. In particular, we focus on how the hierarchical organization of groups and the intergroup dynamics that arise from this structure operate at structural, interpersonal, and intrapersonal levels to impact psychological and physiological processes that negatively influence health among LGB individuals. We focus on how these various manifestations of stigma act as additional stressors with which LGB individuals must contend and how this stress impacts health via stress-related physiological reactivity, coping strategies, and health care interactions. Throughout we highlight how specific aspects of LGB identities (i.e., concealability and "nontribal" nature) present concerns that diverge from those documented in research on race and gender-based stigmas. We end by discussing areas for future research and implications for social policy and interventions.

Relative to heterosexuals, LGB people rate their overall health to be poorer and report a greater number of acute and chronic health symptoms (for a review, see Lick, Durso, & Johnson, 2013). Understanding the source of these disparities and reducing their prevalence represent pressing social issues that social psychological theories of intergroup relations are well positioned to address. This article describes how intergroup processes and stigma contribute to the pervasive health disparities that exist between LGB and heterosexual individuals (see Williams & Mann, 2017). Drawing on recent models (Hatzenbuehler, 2009; Major, Mendes & Dovidio, 2013; Meyer, 2013), we outline the structural, interpersonal, and intraindividual factors associated with intergroup dynamics and membership in a

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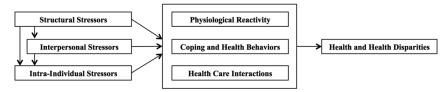


Fig. 1. Theoretical model: From intergroup structure to health disparities.

devalued social group that act as sources of increased stress in the lives of LGB individuals. These stressors negatively affect the health of LGB individuals through three primary pathways: by increasing stress-related physiological reactivity, by increasing engagement in maladaptive coping strategies that have negative implications for health, and by impairing health care interactions (Figure 1). We conclude with a brief discussion of future directions and applications.

Intergroup Structure and Stigma

Research on intergroup processes is rooted in the assumption that, as humans, we have a natural and automatic tendency to categorize ourselves and others based on shared characteristics (Brewer, 1988). Such categorization is necessary to render a complex social world navigable. Social categories activate automatic evaluations and beliefs about members of groups, allowing people to make inferences quickly and with minimal effort (Dovidio & Gaertner, 2010). Not only are social groups viewed in distinct ways, they are also differentially valued. Across all societies, groups are hierarchically organized such that some groups are afforded higher value and greater social status than others (Sidanius & Pratto, 1999). Moreover, individuals are motivated to uphold the social system to which they belong (Jost, Banaji, & Nosek, 2004), even when they themselves are members of lower status groups. One way they do so is through group stereotypes that justify the relative position of lower status groups. In most cultures, LGB individuals are marginalized, devalued, relegated to lower status compared to heterosexual individuals, and must contend with multiple forms of discrimination (Amnesty International, 2015).

Insights from research on intergroup relations are essential to our understanding of social stigma. A stigma is any characteristic that marks an individual as different, devalued, and negatively stereotyped within a particular social context (Crocker, Major, & Steele, 1998; Goffman, 1963). Link and Phelan (2001) argue that stigma begins with the aforementioned social categorization processes, whereby individuals distinguish and label differences and then link these to negative stereotypes. These stereotypes justify separating and marginalizing "them" as a distinctly different social group from "us." Categorization, negative

stereotyping, and segregation of social groups lead stigmatized individuals to experience status loss and encounter discrimination at the structural and interpersonal levels. Sometimes negative stereotypes and devaluation are internalized, leading to self-stigma.

Stigmas vary in several ways. Goffman (1963) distinguished among three types of stigmas: tribal—those based on inherited group characteristics such as race; abominations of the body—those based on physical features such as obesity; and blemishes of character—those based on a perceived moral failing such as drug addiction. Crocker et al. (1998) emphasized that stigmas also vary in the extent to which they are concealable (vs. immediately visible to social perceivers) and perceived as under individual control (vs. uncontrollable). The majority of intergroup research has focused on race and ethnicity, stigmatizing characteristics that are "tribal," typically visible to others, and seen as not under personal control. In contrast, LGB identities often are seen as a blemish of character, which can result in antipathy rooted in moral evaluations and moral emotions (i.e., disgust; Haidt & Kesebir, 2010). They are generally concealable, which can lead to unique challenges (Pachankis, 2007), and are perceived by many to be controllable, which can lead to blame attributions and justification of negative social treatment (Weiner, Perry, & Magnusson, 1988). Thus, while LGB individuals share many of the same stressors as members of other stigmatized groups, several features of LGB identities and the stigma associated with them lead to unique concerns that may ultimately impact health.

Stressors Associated with LGB Stigma

Structural sources of stress. As noted above, societies are structured hierarchically, with some groups having more power and status than others and thus greater ability to influence the resources and outcomes of other groups. Because people derive self-esteem from their group memberships, they are motivated to view their social groups positively and to enhance and justify the higher position of their group relative to other groups (Tajfel & Turner, 1986). One consequence is that members of higher status groups often exploit and discriminate against members of lower status groups. Institutional and societal practices set in place by powerful higher status groups can limit the resources and opportunities available to members of lower status groups. This in turn, can increase the latter's stress exposure (e.g., Link & Phelan, 2001).

In the case of LGB individuals, structural stigma manifests in a variety of ways, including same-sex marriage bans (historically), a lack of legal protections against discrimination in employment and housing, exclusion from military and religious institutions, and in some cases criminalization of same-sex sexual behavior. Such policies are associated with greater stress and distress among LGB individuals. Within the United States, LGB individuals living in states with more

heterosexist policies exhibit greater psychiatric distress (Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010). Policies and institutions that disadvantage lower status groups create barriers to resources and opportunities and reaffirm perceived differences between groups which, in turn, are used to justify further differential treatment. For example, marriage is an institution that confers both tangible (e.g., tax breaks, health care benefits) and symbolic (e.g., recognition, inclusion) benefits that have implications for health (Herek, 2011). A study of gay men living in Massachusetts found that they made fewer medical and mental health care visits after marriage equality was passed in that state in 2003 (Hatzenbuehler et al., 2012). This reduction in health care visits occurred independent of relationship status, suggesting it was due to the symbolic and status implications of marriage equality rather than specific, tangible benefits. Still, despite the passing of marriage equality legislation, debate leading up to and following this ultimately positive outcome may reify perceived group differences and increase stress as opponents question the normality and morality of LGB individuals (Fingerhut, Riggle, & Rotosky, 2011).

Interpersonal sources of stress. Group categorization is accompanied by group evaluation and stereotyping on the part of both in- and out-group members. For stigmatized groups, these evaluations and stereotypes are negative. LGB individuals, for example, are perceived as engaging in behaviors that violate notions of purity and sanctity (Haidt & Kesebir, 2010), which elicit feelings of disgust, a moral emotion. Prejudicial attitudes and negative emotions toward LGB individuals, in turn, can lead to interpersonal discrimination. LGB individuals experience high rates of discrimination and harassment in the workplace and in educational settings (Meyer, 2013), as well as high rates of property crimes, threats of violence, verbal harassment, and actual violence (Herek, 2009). Indeed, Herek (2009) found that approximately 25% of LGB individuals report experiencing violence, property crime, or attempted crime and 50% report experiencing verbal harassment. Although acts of harassment and violence are primarily enacted by straight-identified individuals, some research suggests that for some, anti-LGB harassment may be an attempt to prevent themselves or others from realizing their own same-sex attractions (Weinstein et al., 2012).

Unlike individuals with tribal stigmas (e.g., ethnic minorities), LGB individuals are unlikely to be born into a community of others who share this identity. LGB individuals may frequently encounter prejudice and rejection from their family members (Pachankis, Goldfried, & Ramrattan, 2008; Ryan, Legate, & Weinstein, 2015). One study found that only about half of mothers and one-third of fathers were perceived by their LGB children to be accepting of their identity (D'Augelli, 2006). Not only are such rejection experiences stressful, they also increase vulnerability to poor health by removing important sources of social support, which is

known to buffer against the negative effects of stress (e.g., Cohen, 2004). Indeed, multiple studies converge to indicate that LGB individuals lack social support and that this mediates the relation between distal stressors and psychological distress (see Hatzenbuehler, 2009, for a review).

Experiencing interpersonal discrimination is stressful not only in the moment in which it occurs, but also has a lasting influence via information it conveys about one's identity, the world, and the type of treatment one can expect (Herek, Gillis, & Cogan, 1999). Interpersonal forms of prejudice undermine the health of LGB individuals directly by increasing risks of bodily harm and stress exposure, and indirectly by reducing socioeconomic status through restricted occupational and academic opportunities and achievement (Major et al., 2013). Moreover, rejection, discrimination, and violence convey that the world is dangerous, unpredictable, unfair, and uncontrollable, cognitions known to negatively impact health (Williams & Mohammed, 2009). These instances also communicate that one's social identity is devalued and subject to social exclusion, threatening core needs for self-esteem and belongingness (Major et al., 2013).

Intraindividual factors and stress. People are generally aware of culturally held stereotypes about the groups to which they belong, and of how their groups are evaluated in the larger society. For members of stigmatized groups, this awareness is often accompanied by fear that they might be viewed through the lens of negative stereotypes about their group, and/or mistreated on the basis of their membership (Crocker et al., 1998; Meyer, 2003; Steele, Spencer, & Aronson, 2002). The psychological state of concern that one might be devalued, discriminated against, rejected, or stereotyped because of one's social identity has been termed social identity threat (Major & O'Brien, 2005; Steele et al., 2002). Notably, social identity threat is a situational threat—it is activated in situations in which one's identity is salient and there exists potential for negative stereotyping and devaluation. A wide variety of situations can trigger social identity threat, from overhearing a "gay joke" at work to seeing media coverage of anti-LGB referenda. When activated, social identity threat leads to increased stress and associated affective, cognitive, and physiological consequences (Schmader, Johns, & Forbes, 2008).

Although social identity threat is situationally activated, individuals vary in their chronic sensitivity to and concerns about identity-based devaluation (Major et al., 2013). This sensitivity is captured in measures of race or sexual orientation-based rejection sensitivity (Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002; Pachankis et al., 2008), as well as stigma consciousness (Pinel, 1999). Those who score high on these measures are more likely to report having experienced discrimination in the past and more likely to expect and perceive it in future interactions (Herek, 2009; Steele et al., 2002). For example, Pachankis and colleagues (2008) found that gay men who experienced rejection from their

parents were particularly sensitive to future rejection on the basis of their sexual orientation.

Situational factors that activate social identity threat as well as chronic sensitivity to identity-based rejection can manifest in increased *vigilance* for signs of mistreatment and greater attention to potential threats, even at a preconscious level (Kaiser, Vick, & Major, 2006). These processes may lead individuals to interpret events or interactions as discriminatory even when underlying motives are ambiguous or not specifically identity-related (Major et al., 2013). Chronic concerns and sensitivity to rejection are also associated with increased worry, uncertainty, and rumination, cognitions that are experienced as stressful (Williams & Mohammed, 2009). Chronic activation of stigma concerns thus influences how individuals appraise and respond to identity-relevant situations in ways that can exacerbate stress.

LGB individuals may attempt to minimize the potential for mistreatment by concealing their identity. However, concealing one's identity may act as a form of social identity threat as individuals monitor what they say and do, maintain vigilance for cues that they have been found out, and worry about the consequences that may follow if they are (e.g., Critcher & Ferguson, 2014). Unfortunately, "coming out" does not necessarily reduce stress. Concern over whether, when, and to whom to disclose one's sexual orientation is also a form of social identity threat that can similarly increase stress and tax cognitive resources (Madera, 2010; Pachankis, 2007). Given that most LGB individuals are not 'out' to all people or in all contexts, and that they regularly face new disclosure opportunities, sexual identity concealment and disclosure may act as a significant source of stress (e.g., Mohr & Fassinger, 2000).

Under some circumstances, members of devalued groups may internalize the negative societal attitudes towards and stereotypes associated with their group membership, applying those attitudes and stereotypes towards themselves and other members of their group. This process of directing negative social attitudes toward the self is termed self-stigma. Self-stigma is especially likely when important others evince negative attitudes (Pachankis et al., 2008). Self-stigma, also called "internalized homophobia" when applied to LGB individuals, is a source of stress shown to be associated with poorer mental and physical health (Meyer, 2003).

In summary, like other socially devalued groups, LGB individuals are exposed to structural (e.g., restrictive laws), interpersonal (e.g., prejudiced attitudes and behavior on the part of others) and intraindividual (e.g., heightened awareness of and sensitivity to stigma-related concerns) sources of stress that can negatively affect health. In the next section, we discuss three pathways by which the stress associated with LGB stigma may affect long-term health among LGB individuals: increased physiological stress reactivity, maladaptive coping and health-related behaviors, and less effective health care interactions.

From Group Devaluation to Poorer Health

Stress-Related Physiological Reactivity

Experienced or anticipated unfair treatment based on one's group membership is often appraised as stressful (Major & O'Brien, 2005). Events and interactions that are appraised as stressful activate the hypothalamic–pituitary–adrenal cortical (HPA) axis, which stimulates a cascade of biological responses including the release of the stress hormone cortisol and increases in vascular resistance (i.e., blood pressure; Blascovich & Mendes, 2010). Worry, distrust, rumination, and uncertainty about discrimination have been shown to increase blood pressure, decrease heart rate variability, and increase cortisol (Williams & Mohammed, 2009). When experienced chronically, activation and dysregulation of the HPA axis can increase the risk of cardiovascular disease and other stress-related ailments (Juster, McEwen, & Lupien, 2010).

Although much is known about physiological responses to stress in general, to date little research has examined the physiological response to stigma-related stress among LGB individuals. Of the few studies conducted thus far, most have focused on cortisol production. Findings of these studies, however, raise more questions than they answer. For example, Hatzenbuehler and McLaughlin (2014) found that LGB young adults who grew up in states with greater structural stigma evidenced blunted cortisol responses (interpreted as consistent with patterns resulting from childhood trauma) following a laboratory stress task compared to LGB participants who grew up in states with fewer restrictive policies. Examining interpersonal level influences, Burton, Bonanno, and Hatzenbuehler (2014) found that perceived parental support was associated with reduced cortisol reactivity during the same laboratory stress task, while support from peers did not show a similar buffering effect. Comparing the diurnal cortisol levels of LGB and heterosexual participants, another study found that total cortisol output did not differ by sexual orientation (Juster, Smith, Ouellet, Sindi, & Lupien, 2013). However, LGB individuals who had disclosed their sexual orientation evidenced lower levels of cortisol upon awakening than did those who had not disclosed, which the authors interpreted as indicating that disclosing to family may protect against physiological stress reactivity. Yet another study found that gay men who revealed their sexual orientation at work evidenced higher total levels of cortisol during the workday than did those who concealed their identity (Huebner & Davis, 2005).

These results appear contradictory in that both greater exposure to structural stigma (stress-inducing) and greater perceived parental support (stress-buffering) were associated with reduced cortisol reactivity. Moreover, concealment predicted both higher and lower cortisol levels depending on how and in what context cortisol was assessed. Patterns of cortisol reactivity that are adaptive or maladaptive require further investigation (Adam & Kumari, 2009). In general, however,

research suggests that *dysregulation* of the HPA axis is associated with negative health outcomes (Blascovich & Mendes, 2010). Such dysregulation can manifest in reduced or increased cortisol-reactivity and/or in the form of an excessive or flattened diurnal slope (Adam & Kumari, 2009). Thus, more research is needed to clarify associations between patterns of cortisol reactivity (in response to laboratory tasks and over the course of the day) and health as well as how the timing of stress exposure and assessment impacts this relationship. In addition, greater attention to other physiologic responses to LGB stigma is needed.

Maladaptive Coping and Health Relevant Behaviors

Discrimination may also negatively affect health in members of devalued groups through the coping strategies these individuals employ to deal with identityrelated stress (Major et al., 2013). In the context of a stressor, coping refers to conscious attempts to regulate one's emotional, cognitive, and behavioral responses in service of mitigating the experience of stress (Major & O'Brien, 2005; Lazarus & Folkman, 1984). Coping strategies include those designed to address the source of stress (problem-focused) as well as those aimed at reducing the negative emotions associated with stress (emotion-focused; Lazarus & Folkman, 1984). One means of coping with negative emotions associated with discrimination-related stress is to engage in escape or avoidance coping such as drinking, smoking, or other substance use. Consistent with the idea of substance use as strategy for escaping negative emotions, LGB individuals are more likely than heterosexuals to use and abuse a variety of substances, with greater use among those with more internalized homophobia (Pascoe & Smart Richman, 2009). Hatzenbuehler, Corbin, and Fromme (2011) tested the role of coping motives directly, finding that experiencing discrimination is associated with greater alcohol-related problems and that this effect is mediated by coping motives (see also Lewis, Winstead, Mason, & Lau-Barraco, 2017).

Engaging in unhealthy behaviors may also be due to the depletion of executive resources. Contending with discrimination and social identity threat is an inherently effortful process. Vigilance for rejection-related cues, suppression of automatically activated stereotypes, and regulation of behavior and resulting emotions all constitute demands and thus consume executive resources (Schmader et al., 2008). Decreased executive resources limit individuals' ability to avoid unhealthy but tempting behaviors, such as drinking alcohol, smoking cigarettes, eating unhealthy foods, or taking recreational drugs (e.g., Inzlicht & Kang, 2010). The reduction of executive resources also makes it more difficult to engage in health promotion behaviors such as exercising and preparing healthy food (Major et al., 2013).

Another strategy for coping with group devaluation is to conceal one's group membership, if not readily visible to others. LGB individuals often attempt to cope

with their stigmatized identity by concealing it from others, particularly in contexts where support is perceived to be unlikely (Legate, Ryan, & Weinstein, 2012). While this problem-focused coping strategy can sometimes prevent one from facing harassment or discrimination, it is associated with potentially negative health implications (Pachankis, 2007). First, concealing one's identity requires constant monitoring and depletes cognitive resources, detrimentally impacting performance on cognitive tasks (Crichter & Ferguson, 2014). The depletion of executive resources due to concealment means that these resources are not available to cope with daily stressors and other situational demands, which may exacerbate both psychological and physiological stress. Additionally and as discussed above, the vigilance and monitoring associated with concealing are themselves sources of identity-related stress.

Second, concealing identity also precludes behaving authentically in interpersonal interactions, which may make it difficult to connect with others, jeopardize existing relationships, and impede the ability to form new ones. Identity concealment makes it especially difficult to form connections with similar others (Beals, Peplau, & Gable, 2009), which are critical to combating internalized negative stereotypes. Frable, Platt, and Hoey (1998) found that, compared to those whose stigmas were visible, individuals with concealable stigmas had less contact with similar others, but that when contact did occur it had a greater positive impact on well-being. Concealment may therefore limit opportunities for social support, a factor known to influence health outcomes (Cohen, 2004). Thus, in attempting to cope with identity threat via concealment, stress and the negative health outcomes that follow may actually be compounded.

Health Care Interactions

Intergroup processes can also undermine the health of members of devalued groups by impairing the quality and quantity of their contact with medical professionals who belong to higher status groups. For example, health care providers evince bias against LGB individuals (Sabin, Riskind, & Nosek, 2015; Smith & Turrell, 2017), which may lead to poorer treatment outcomes even in the absence of overt mistreatment. Research in the race domain has shown that providers' implicit bias can undermine the clinical interaction and influence treatment recommendations (for a review, see Zestcott, Blair, & Stone, 2016). Moreover, patient worries about being negatively stereotyped or judged by health care providers may undermine doctor—patient communication by increasing anxiety, reducing cognitive resources, and promoting concealment among LGB individuals (Fingerhut & Abdou, 2017). These processes may reduce LGB individuals' ability to understand and comply with health directives, ask clarifying questions, and provide pertinent health behavior information to their provider. Such breakdowns in communication can lead to poorer quality health care decisions and outcomes

as fear of negative treatment may lead LGB individuals to delay or avoid seeking health services. In sum, bias on the part of providers as well as the identity threat-related processes that emerge from awareness of these biases may impact health by reducing the quality and quantity of health care LGB individuals receive. Examining the consequences of LGB-related stigma in health care interactions is a newly emerging area of research. As such, much more research is needed to elucidate how stigma within the health care environment impacts LGB health.

Discussion

Intergroup Relations and LGB Health Disparities as a Social Issue

Reducing the prevalence of health disparities between LGB and heterosexual individuals is a pressing social issue that social psychological theories of intergroup relations and stigma are well positioned to address. Despite recent progress, LGB individuals as a group continue to be devalued and stigmatized in society. Our review indicates that group devaluation and intergroup processes that flow from it lead to structural disadvantages, subtle and overt discrimination, social identity threat, and, sometimes, self-stigma. The stress resulting from these structural, interpersonal, and intrapersonal sources of threat contribute to poorer health among LGB individuals relative to heterosexuals (Lick et al., 2013).

As a group, LGB individuals face identity concerns, such as concealability and rejection from close others, that set them apart from most groups typically discussed in the intergroup literature (e.g., different racial groups, nationalities, religious groups), and that expose them to different and additional stressors. Greater consideration of how stigma associated with LGB identities can be integrated into the literature on intergroup processes and social identity threat is thus called for. Importantly, sexual orientation does not operate in isolation, but rather intersects with other social identities including race, gender, (dis)ability status, and social class to produce unique experiences and barriers. Yet little research has explored the intersectionality of these identities (Consolacion, Russell, & Sue, 2004). Moving forward, researchers should consider stigmatized identities in concert rather than isolation to increase understanding of how multiple stigmatized identities exert additive or interactive effects on health (for a recent example, see Grollman, 2014).

Much of the research cited throughout has been conducted within the United States. Yet, countries vary considerably in the amount of structural and interpersonal stigma directed at LGB individuals. While some countries (e.g., Canada) have moved beyond marriage equality to also extend antidiscrimination protection to LGB individuals, numerous other countries not only lack marriage equality but also criminalize homosexuality (e.g., Iran; Amnesty International, 2015). Although the intergroup processes linking LGB identity and health may generalize

across cultures and contexts, their relevance and prominence are likely to differ with the extent of devaluation. For example, concealment is likely to be a more prominent stressor in particularly hostile environments, whereas in less hostile (but still anti-LGB) contexts LGB individuals may contend more with interpersonal forms of stigma.

It is also important to consider how the intergroup approach presented here aligns with existing frameworks that focus specifically on LGB identities and stressors, particularly minority stress research (Meyer, 2003). The approach we present here parallels the minority stress framework in its attention to stigmarelated sources of stress, but adds to this framework an emphasis on the role of psychological, physiological, and social processes in mediating the relationship between minority status and health (see Hatzenbuehler, 2009 for a complimentary approach to integrating multiple literatures on LGB stress, health, and well-being).

Interventions/Applications

How can we improve the health of members of groups that must contend with pervasive social devaluation and discrimination, such as LBG individuals? At the structural level, implementing affirmative policies (e.g., 2016 marriage equality ruling) can provide material benefits as well as intangible psychological benefits, such as a sense of value (Herek, 2011), that can translate into better health outcomes. Indeed, structural changes have been shown to have salubrious effects at the individual level (e.g., Hatzenbuehler et al., 2010; Hatzenbuehler et al., 2012) and interact with individual-level phenomena to influence health (e.g., Pachankis, Hatzenbuehler, & Starks, 2014). Additional large-scale, longitudinal research examining the chain of causality and proximal processes by which structural change affects health is needed, such as the effect of policy change on experiences of and attributions to discrimination.

At the interpersonal level, intergroup research and theory suggest that one means of reducing stigma-related stress among LGB persons is to target the negative group-based stereotypes and attitudes, broadly held, that underlie behavioral expressions of prejudice. Continued visibility of positive and affirmative images of LGB individuals is critical to changing these attitudes, especially among heterosexuals. Indeed, one of the strongest predictors of LGB affirmative attitudes is contact with LGB-identified individuals (Lewis, 2011), consistent with research and theory on intergroup contact (Crocker et al., 1998). It will also be important for researchers going forward to examine the role of implicit and explicit attitudes in predicting behavior toward LGB individuals. Providing education about LGB issues may also be effective in improving social support available to LGB individuals, which is known to buffer against the negative health effects of stress (Cohen, 2004).

Interventions may also be designed to target the intrapersonal processes that contribute to social identity threat and stigma-related stress. For example, interventions that frame adversity as short-lived and shared have been shown to break the psychological link between adversity and threats to belongingness and to lead to health and well-being benefits for African American college students (Walton & Cohen, 2011). Similar interventions might be applied in LGB centers, workplaces, schools, and on college campuses to reduce LGB health disparities. Relatively small steps can also communicate support and decrease uncertainty about belongingness. For example, safe space stickers and inclusive health care forms may signal acceptance and reduce uncertainty about how one will be treated. Improving support available to LGB individuals and conveying belongingness offer productive means of intervention and may have immediate impacts on individual lives. Interventions can also target negative cognitions and maladaptive coping among LGB persons (see Chaudoir, Wang, & Pachankis, 2017, for a review). Continued research is needed to develop and test interventions specifically designed to improve LGB health outcomes.

Conclusion

The documented disparities in the health of LGB individuals represent a major social and public health issue worldwide. Though researchers have begun to explicitly examine the mechanisms that underlie these disparities, more work is needed to integrate existing theories, delineate individual, contextual, and identity-related factors that moderate experiences and psychological processes, and to develop and test the efficacy of interventions aimed at reducing stress and improving the health of LGB individuals.

References

- Adam, E. K., & Kumari, M. (2009). Assessing salivary cortisol in large-scale, epidemiological research. Psychoneuroendocrinology, 34(10), 1423–1436.
- Amnesty International. (2015). *The state of the world's human rights*. London: Amnesty International Publications.
- Beals, K. P., Peplau, L. A., & Gable, S. L. (2009). Stigma management and well-being: The role of perceived social support, emotional processing, and suppression. *Personality and Social Psychology Bulletin*, 35(7), 867–879.
- Blascovich, J., & Mendes, W. B. (2010). Social psychophysiology and embodiment. In S. Fiske, D. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (pp. 194–227). Hobeken, NJ: Wiley.
- Brewer, M. B. (1988). A dual process model of impression formation. In T. Scrull & R. Wyer (Eds.), *Advances in social cognition* (pp. 1–36). Hillsdale, NJ: Erlbaum.
- Burton, C. L., Bonanno, G. A., & Hatzenbuehler, M. L. (2014). Familial social support predicts a reduced cortisol response to stress in sexual minority young adults. *Psychoneuroendocrinology*, 47, 241–245.
- Chaudoir, S. R., Wang, K., & Pachankis, J. E. (2017). What reduces sexual minority stress? A review of the intervention "toolkit". *Journal of Social Issues*, 73(3), 586–617.

- Consolacion, T. B., Russell, S. T., & Sue, S. (2004). Sex, race/ethnicity, and romantic attractions: Multiple minority status adolescents and mental health. *Cultural Diversity and Ethnic Minority Psychology*, 10(3), 200–214.
- Critcher, C. R., & Ferguson, M. J. (2014). The cost of keeping it hidden: Decomposing concealment reveals what makes it depleting. *Journal of Experimental Psychology: General*, 143(3), 721–735.
- Crocker, J., Major, B., & Steele, C. (1998). Social stigma. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology* (pp. 504–553). New York, NY: McGraw-Hill.
- Cohen, S. (2004). Social relationships and health. *American Psychologist*, 59(8), 676–684.
- D'Augelli, A. R. (2006). Developmental and contextual factors and mental health among lesbian, gay, and bisexual youths. In A. E. Omoto & H. M. Kurtzman (Eds.), Sexual orientation and mental health: Examining identity and development in lesbian, gay, and bisexual people (pp. 37–53). Washington, DC: APA Books.
- Dovidio, J. F., & Gaertner, S. L. (2010). Intergroup bias. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (pp. 1084–1121). Hoboken, NJ: John Wiley & Sons.
- Fingerhut, A. W., & Abdou, C. M. (2017). The role of stereotype threat in LGB health disparities. Journal of Social Issues, 73(3), 493–507.
- Fingerhut, A. W., Riggle, E. D. B., & Rotosky, S. S. (2011). Same-sex marriage: The social and psychological implications of policy and debates. *Journal of Social Issues*, 67(2), 225–241.
- Frable, D. E., Platt, L., & Hoey, S. (1998). Concealable stigmas and positive self-perceptions: Feeling better around similar others. *Journal of Personality and Social Psychology*, 74(4), 909–922.
- Goffman, E. (1963). Stigma: Notes on the management of spoiled identity. Englewood Cliffs, NJ: Simon and Schuster.
- Grollman, E. A. (2014). Multiple disadvantaged statuses and health the role of multiple forms of discrimination. *Journal of Health and Social Behavior*, 55(1), 3–19.
- Haidt, J., & Kesebir, S. (2010). Morality. In S. Fiske, D. Gilbert, & G. Lindzey (Eds.), Handbook of social psychology (pp. 797–832). Hobeken, NJ: Wiley.
- Hatzenbuehler, M. L. (2009). How does sexual minority stigma "get under the skin"? A psychological mediation framework. *Psychological Bulletin*, 135(5), 707–730.
- Hatzenbuehler, M. L., Corbin, W. R., & Fromme, K. (2011). Discrimination and alcohol-related problems among college students: A prospective examination of mediating effects. *Drug and Alcohol Dependence*, 115(3), 213–220.
- Hatzenbuehler, M. L., & McLaughlin, K. A. (2014). Structural stigma and hypothalamic–pituitary–adrenocortical axis reactivity in lesbian, gay, and bisexual young adults. *Annals of Behavioral Medicine*, 47(1), 39–47.
- Hatzenbuehler, M. L., McLaughlin, K. A., Keyes, K. M., & Hasin, D. S. (2010). The impact of institutional discrimination on psychiatric disorders in lesbian, gay, and bisexual populations: A prospective study. *American Journal of Public Health*, 100(3), 452–459.
- Hatzenbuehler, M. L., O'Cleirigh, C., Grasso, C., Mayer, K., Safren, S., & Bradford, J. (2012). Effect of same-sex marriage laws on health care use and expenditures in sexual minority men: A quasi-natural experiment. American Journal of Public Health, 102(2), 285–291.
- Herek, G. M. (2009). Hate crimes and stigma-related experiences among sexual minority adults in the United States prevalence estimates from a national probability sample. *Journal of Interpersonal Violence*, 24(1), 54–74.
- Herek, G. M. (2011). Anti-equality marriage amendments and sexual stigma. *Journal of Social Issues*, 67(2), 413–426.
- Herek, G. M., Gillis, J. R., & Cogan, J. C. (1999). Psychological sequelae of hate-crime victimization among lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical Psychology*, 67(6), 945–951.
- Huebner, D. M., & Davis, M. C. (2005). Gay and bisexual men who disclose their sexual orientations in the workplace have higher workday levels of salivary cortisol and negative affect. *Annals of Behavioral Medicine*, 30(3), 260–267.
- Inzlicht, M., & Kang, S. K. (2010). Stereotype threat spillover: How coping with threats to social identity affects aggression, eating, decision making, and attention. *Journal of Personality and Social Psychology*, 99(3), 467–481.

- Jost, J. T., Banaji, M. R., & Nosek, B. A. (2004). A decade of system justification theory: Accumulated evidence of conscious and unconscious bolstering of the status quo. *Political Psychology*, 25(6), 881–919.
- Juster, R. P., McEwen, B. S., & Lupien, S. J. (2010). Allostatic load biomarkers of chronic stress and impact on health and cognition. *Neuroscience & Biobehavioral Reviews*, 35(1), 2–16.
- Juster, R. P., Smith, N. G., Ouellet, É., Sindi, S., & Lupien, S. J. (2013). Sexual orientation and disclosure in relation to psychiatric symptoms, diurnal cortisol, and allostatic load. *Psychosomatic Medicine*, 75(2), 103–116.
- Kaiser, C. B., Vick, S. B., & Major, B. (2006). Prejudice expectations moderate preconscious attention to cues that are threatening to social identity. *Psychological Science*, 17(4), 332–338.
- Lazarus, R. S., & Folkman, S. (1984). Coping and adaptation. In W. D. Gentry (Ed.), The handbook of behavioral medicine (pp. 282–325). New York, NY: Guilford.
- Legate, N., Ryan, R. M., & Weinstein, N. (2012). Is coming out always a "good thing"? Exploring the relations of autonomy support, outness, and wellness for lesbian, gay, and bisexual individuals. Social Psychological and Personality Science, 3(2), 145–152.
- Lewis, G. B. (2011). The friends and family plan: Contact with gays and support for gay rights. *Policy Studies Journal*, 39(2), 217–238.
- Lick, D. J., Durso, L. E., & Johnson, K. L. (2013). Minority stress and physical health among sexual minorities. *Perspectives on Psychological Science*, 8(5), 521–548.
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. Annual Review of Sociology, 27, 363–385.
 Madera, J. M. (2010). The cognitive effects of hiding one's homosexuality in the workplace. Industrial and Organizational Psychology, 3(1), 86–89.
- Major, B., Mendes, W. B., & Dovidio, J. F. (2013). Intergroup relations and health disparities: A social psychological perspective. *Health Psychology*, 32(5), 514–524.
- Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. Annual Review of Psychology, 56, 393–421.
- Mendoza-Denton, R., Downey, G., Purdie, V. J., Davis, A., & Pietrzak, J. (2002). Sensitivity to status-based rejection: Implications for African American students' college experience. *Journal of Personality and Social Psychology*, 83(4), 896–918.
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, 129(5), 674–697.
- Meyer, I. H. (2013). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. Psychology of Sexual Orientation and Gender Diversity, 1(S), 3–26.
- Mohr, J., & Fassinger, R. (2000). Measuring dimensions of lesbian and gay male experience. Measurement and Evaluation in Counseling and Development, 33(2), 66–90.
- Pachankis, J. E. (2007). The psychological implications of concealing a stigma: A cognitive-affective-behavioral model. *Psychological Bulletin*, 133(2), 328–345.
- Pachankis, J. E., Goldfried, M. R., & Ramrattan, M. E. (2008). Extension of the rejection sensitivity construct to the interpersonal functioning of gay men. *Journal of Consulting and Clinical Psychology*, 76(2), 306–317.
- Pachankis, J. E., Hatzenbuehler, M. L., & Starks, T. J. (2014). The influence of structural stigma and rejection sensitivity on young sexual minority men's daily tobacco and alcohol use. *Social Science & Medicine*, 103, 67–75.
- Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. Psychological Bulletin, 135(4), 531–554.
- Pinel, E. C. (1999). Stigma consciousness: The psychological legacy of social stereotypes. *Journal of Personality and Social Psychology*, 76(1), 114–128.
- Ryan, W. S., Legate, N., & Weinstein, N. (2015). Coming out as lesbian, gay, or bisexual: The lasting impact of the initial disclosure experience. *Self and Identity*, 14(5), 1–21.
- Sabin, J. A., Riskind, R. G., & Nosek, B. A. (2015). Health care providers' implicit and explicit attitudes toward lesbian women and gay men. American Journal of Public Health, 105(9), 1831–1841.
- Schmader, T., Johns, M., & Forbes, C. (2008). An integrated process model of stereotype threat effects on performance. *Psychological Review*, 115(2), 336–356.

- Sidanius, J., & Pratto, F. (1999). Social dominance: An intergroup theory of social hierarchy and oppression. New York, NY: Cambridge University Press.
- Smith, S. K., & Turrell, S. C. (2017). Perceptions of healthcare experiences: Relational and communicative competencies to improve care for LGBT people. *Journal of Social Issues*, 73(3), 637–657.
- Steele, C. M., Spencer, S. J., & Aronson, J. (2002). Contending with group image: The psychology of stereotype and social identity threat. Advances in Experimental Social Psychology, 34, 379–440.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behaviour. In S. Worchel & W. G. Austin (Eds.), Psychology of intergroup relations (pp. 7–24). Chicago, IL: Nelson-Hall.
- Walton, G. M., & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science*, 331(6023), 1447–1451.
- Weiner, B., Perry, R. P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology*, 55(5), 738–748.
- Weinstein, N., Ryan, W. S., DeHaan, C. R., Przybylski, A. K., Legate, N., & Ryan, R. M. (2012). Parental autonomy support and discrepancies between implicit and explicit sexual identities: dynamics of self-acceptance and defense. *Journal of Personality and Social Psychology*, 102(4), 815–832.
- Williams, S. L., & Mann, A. K. (2017). Sexual minority health disparities as a social issue: How stigma and intergroup relations can explain and reduce health disparities. *Journal of Social Issues*, 73(3), 450–461.
- Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine*, 32(1), 20–47.
- Zestcott, C. A., Blair, I. V., & Stone, J. (2016). Examining the presence, consequences, and reduction of implicit bias in health care: A narrative review. *Group Processes & Intergroup Relations*, 19(4), 528–542.

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