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QUEER AND FLOURISHING: UNDERSTANDING THE PSYCHOSOCIAL WELL-BEING OF NON-HETEROSEXUAL MEN

by

Philip Cooke, M.A.

A Dissertation submitted to the Faculty of the Graduate School,
Marquette University,
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy

Milwaukee, Wisconsin

August 2018

ABSTRACT
QUEER AND FLOURISHING: UNDERSTANDING THE PSYCHOSOCIAL WELL-BEING OF NON-HETEROSEXUAL MEN

Philip Cooke, M.A.

Marquette University, 2018

Non-heterosexual populations often face the additional stress of discrimination, harassment, and social rejection due to their sexual identity. These prejudicial experiences, along with other factors such as internalized homonegativity, negative appraisal of one's sexual identity, and poor social support, contribute to an increased risk for negative mental health outcomes for sexual minority individuals (King et al., 2008; Meyer, 2003). While much is known about factors predicting psychosocial distress in LGB populations, less is known about the factors that predict psychosocial well-being in this group. The present study investigated the minority stress framework's (Meyer, 1995; 2003) theory that minority stress processes (e.g., discrimination, internalized homonegativity) negatively affect positive psychosocial health outcomes (e.g., positive affect, meaning in life) in non-heterosexual men. Additionally, the study examined how positive sexual identity factors and universal protective factors (e.g., social support and resilience) affect the psychosocial well-being of non-heterosexual men. Results of the study showed that social support and resilience had the largest effect on psychosocial well-being, while holding positive views on various aspects of one's non-heterosexual identity were not significant predictors of well-being. Implications of these findings, limitations to the study, and future research directions are discussed.

ACKNOWLEDGEMENTS

Philip Cooke, M.A.

This dissertation would not be possible without the support of my family, mentors, colleagues, and friends. I would like to thank my mother and father whose unending encouragement, support, and belief in me have afforded me the confidence to pursue the opportunities that led me to this dissertation. I have the utmost appreciation for the many mentors and colleagues I have had to guide and encourage me throughout the course of my graduate studies, especially my dissertation chair, Tim Melchert. Lastly, I am incredibly grateful for my partner and husband, JC Clementz, who has shown me what it means to live a queer and flourishing life.

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Queer and Flourishing: Understanding the Psychosocial Well-Being of Non-Heterosexual Men

Chapter One
INTRODUCTION

Obergefell v. Hodges (2015), the recent United States Supreme Court decision that ruled marriage is a civil right for all same-sex couples in the country, was a landmark moment for the LGB community. The decision by the court was one of many recent examples of the exponential growth in public acceptance of civil rights for individuals with minority sexual identities over the past several decades. This massive sociocultural shift is all the more breathtaking when considering that only 50 years ago, homosexuality was still considered a psychiatric disorder and the Stonewall Riots of 1969, often considered the start of the modern gay rights movement, had yet to take place. The majority of the past 50 years for LGB individuals has been characterized by stress and social stigma, widespread private and public discrimination, persistent activism by the LGB community to secure civil rights, and the devastation caused by the HIV/AIDS epidemic to the community. Because of this, psychologists and social scientists who were interested in the health and well-being of LGB individuals naturally focused on understanding the impacts of stress, stigma, and discrimination on sexual minority individuals. Their work yielded important findings such as theories of minority sexual identity development (e.g., Cass, 1984), greater understanding of the impact of minority stress on LGB individuals (e.g., Meyer, 1995; Herek & Garnets, 2007), and the stigmatizing impact of the HIV/AIDS epidemic (e.g., Herek & Capitanio, 1993). This research helped to establish the deleterious effects of discrimination toward LGB

individuals and provided direction for psychosocial interventions and public policy advocacy.

The primary focus of social science research on the effects of sexual minority stress and discrimination on mental health was undoubtedly important and necessary work in the movement toward greater acceptance of non-dominant sexual identities. One downside of this, however, was it tended to focus on the negative aspects associated with having a non-heterosexual identity (Horne, Puckett, Apter, & Levitt, 2014). As has been the case with research concerning many non-dominant cultures, identifying and promoting the strengths and well-being of LGB-identified individuals was often overlooked in an attempt to understand and help minimize psychological distress. It wasn't until the past 10-15 years and the concurrent development of positive psychology that the strengths and positive health dimensions of LGB individuals began to be studied in earnest (Riggle & Rostosky, 2012; Horne et al., 2014). Now, with the increasing acceptance of LGB individuals in mainstream society, there is more need than ever to shift from a pathology-focus in LGB research toward a more holistic understanding of LGB health and well-being.

The present study empirically tested a theory of psychosocial well-being for LGB individuals through the use of structural equation modeling. The study tested Meyer's (2003) minority stress theory that minority stress processes have a negative effect on well-being. It also investigated the effect of protective factors such as social support and resilience on well-being as well as the effect of various aspects of positive LGB identity on psychosocial well-being. This study builds upon Ilan Meyer's (1995; 2003) minority stress framework, the psychological and social well-being theories of Carol Ryff (1989)

and Corey Keyes (1998; 2002), and the LGBT well-being research of Sharon Rostosky and Ellen Riggle (Riggle, Rostosky, & Danner, 2009; Riggle & Rostosky, 2012; Riggle, Whitman, Olson, Rostosky, & Strong, 2008).

LGB Health Disparities and the Minority Stress Framework

A substantial body of empirical research has been developed over the past half century documenting health disparities between sexual minority populations and heterosexuals (Centers for Disease Control and Prevention, 2014; Conron, Mimiaga, & Landers, 2010; Fredriksen-Goldsen et al., 2014; Matthews & Lee, 2014; Meyer & Northridge, 2007). In 2010, the United States Department of Health and Human Services (2016) identified LGBT individuals as a population with disparate health outcomes as compared to heterosexuals. These findings have been supported by several studies using large, representative samples. Overall, LGB individuals have higher rates of disability (Fredriksen-Goldsen, Kim, & Barkan, 2012), higher lifetime prevalence of asthma (Conron et al., 2010), higher rates of current smoking (Conron et al., 2010; Dilley, Simmons, Boysun, Pizacani, & Stark, 2010), elevated risk of being a victim of sexual assault at some point in the lifespan (Conron et al., 2010), possible elevated risk of developing certain types of cancers and cardiovascular disease (Fredriksen-Goldsen et al., 2014), less access to health care and health insurance (Ponce, Cochran, Pizer, & Mays, 2010), and poorer health in general (Cochran & Mays, 2007; Conron et al., 2010). Gay and bisexual men are at higher risks of contracting HIV or other sexually transmitted infections (STIs) than heterosexual men (Centers for Disease Control and Prevention, 2014; Cochran & Mays, 2007), while lesbians and bisexual women have higher rates of obesity than heterosexual women (Dilley et al., 2010; Fredriksen-Goldsen et al., 2014).

There is also evidence that bisexual men and women are at even greater risks for negative health outcomes than gay men or lesbians (Conron et al., 2010; Dilley et al., 2010). Although population-based public health studies have been somewhat limited for the LGB population (Dilley et al., 2010; U.S. Department of Health and Human Services, 2016), there is nevertheless a substantial amount of evidence to suggest that non-heterosexual individuals tend to have poorer physical health outcomes than their heterosexual counterparts.

Mental health disparities are as equally pronounced as physical health disparities. Multiple studies, including studies using population-based samples, public health data, and meta-analysis, show LGB individuals are at a higher risk for anxiety and mood disorders, suicidal ideation, suicide attempts, and alcohol and substance abuse (Cochran & Mays, 2006; Herek & Garnets, 2007; Jorm, 2002; King et al., 2008; Meyer, 2003). There are some within-group differences in these findings. For example, lesbian and bisexual women are more likely to develop substance dependence, while gay and bisexual men are at higher risk for making a suicide attempt at some point in their life (King et al., 2008). Additionally, bisexual men and women are have a somewhat greater risk of developing mental health issues than both heterosexual and homosexual men and women (Jorm, 2002).

How might these health disparities be explained? Prior to the removal of homosexuality as a mental disorder from the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) in 1973, many psychiatrists, psychologists, and social scientists erroneously attributed this disparity to homosexuality itself (Herek, 2010). This mistaken attribution was due to a number of factors, including social mores, prejudice, and poorly

designed studies that only used non-heterosexual psychiatric participants (Herek, 2010; Horne, Puckett, Apter, & Levitt, 2014). For example, when the psychologist Evelyn Hooker conducted a study published in 1957 with a non-clinical sample of homosexual men and compared them to similar heterosexual men, she found no significant difference in personality or psychosocial adjustment, helping to propel the scientific community toward a new perspective on same-sex attraction (Faderman, 2015).

One of the most significant and enduring contributions to understanding LGB health disparities was the development of the minority stress framework (Meyer, 1995). This theory offered an explanation for the health disparities found among LGB-identified individuals without resorting to the scientifically unsound approach of attributing these disparities to a non-heterosexual orientation (Herek & Garnets, 2007). The minority stress theory posits that due to the social marginalization of their sexual minority status, LGB individuals are subjected to chronic stress above and beyond normative, universally-experienced stressors. This additive stress can then result in negative health outcomes (Meyer, 1995).

The minority stress theory proposes that belonging to a minority group leads to intergroup conflict (i.e., conflict with the majority group), often leading to the experience of stressors (e.g., discrimination) as well as to strong group- and self-identity for minority individuals (Meyer, 2003). Meyer (2003) identifies four minority stress processes that fall along a continuum of distal to proximal relation to the self: (a) objective stressors that are external to the self (e.g., antigay violence; lack of legal discrimination protections); (b) anticipation and preparation for external stressful events, perhaps resulting in hypervigilance; (c) concealment of sexual identity from others; and (d) the internalization

of society's negative appraisals and attitudes towards LGB individuals (i.e., internalized homophobia or homonegativity; Meyer, 2007). According to this theory, all but the first process involve one's subjective appraisal of events and is highly influenced by the individual's level of sexual identity development and other psychological processes (e.g., other held identities, coping resources; Meyer, 2007). This theory and the empirical evidence supporting it will be presented in greater depth in Chapter 2 (see Figure 1 for a depiction of the conceptual framework).

Well-Being Research

As mentioned above, LGB psychological research has largely focused on negative health outcomes, often ignoring the potential differences in positive psychosocial health by sexual orientation. Fortunately, research on the positive dimensions of psychosocial health for the general population has grown substantially in recent years (Busseri & Sadava, 2011; Deiner, Suh, Lucas, & Smith, 1999; Lent, 2004). Several theories have been developed to conceptualize psychological and social well-being, most of which can be categorized into two major categories rooted in the philosophy of Aristotle: hedonia and eudaimonia (Lent, 2004). Hedonic conceptualizations of well-being are primarily concerned with happiness and pleasure; in other words, hedonia generally views well-being as the presence of happiness or life satisfaction (Lent, 2004; Ryan & Deci, 2001). Ed Diener's (1984) subjective well-being (SWB) theory proposes a tripartite conceptual model of well-being operationalized as high levels of life satisfaction and positive affect and low levels of negative affect. Although not without its critics (Busseri & Sadava, 2011; Christopher, 1999; Ryan & Deci, 2001; Ryff, 1989), the SWB theory is relatively

easy to operationalize, has strong empirical support, and has moderate cross-cultural validation, making it the most broadly used conceptualization of psychosocial well-being.

Eudaimonic theories, on the other hand, conceptualize well-being in terms of optimal functioning or potential, and therefore rely on very different constructs to conceptualize and measure wellness (Ryan & Deci, 2001). The most prominent eudaimonic theory is Carol Ryff's (1989) Psychological Well-Being theory. This theory suggests well-being is best understood as a multidimensional construct, with six primary domains of optimal functioning (e.g., self-acceptance, autonomy). Ryff's theory, and the instrument used to measure it (Ryff, 1989), has also been widely used in psychological research, including in a number of population-based studies (Ryff & Singer, 2006). In addition to Ryff's theory, Corey Keyes (1998) developed a theory and corresponding measurement tool for social well-being, arguing that the social dimensions of well-being had not been adequately studied in previous measures. This theory proposes five dimensions of social well-being (e.g., social integration, social contribution), and like Ryff's theory, it has been validated in a number of population-based studies (Keyes, 2002).

In an attempt to integrate these two distinct conceptualizations of well-being and provide a more comprehensive and meaningful measure of psychosocial well-being, Keyes (2002) developed a concept called the mental health continuum. Through analysis of a random-digit-dialing sample of Americans in midlife, Keyes provided evidence that mental illness and mental health are two distinct constructs and suggested a DSM-style schema for diagnosing mental health (Keyes, 2002). According to Keyes (2002), the "diagnostic criteria" for measuring well-being is a combination of elements from SWB

(i.e., positive affect and life satisfaction), Ryff's psychological well-being theory, and Keyes' social well-being theory. Keyes has also developed a brief instrument to measure mental health in this way (the Mental Health Continuum-Short Form; Keyes et al., 2008).

LGB Well-Being Research

In the past 10-15 years, psychological well-being research and LGBT research have begun to overlap (Horne et al., 2014). While this rise in scholarship can be attributed to a number of factors, including the burgeoning development of the field of positive psychology and greater interest in LGBTQ research from counseling psychologists (Horne et al., 2014), it is also no surprise that this increase in interest coincides with a general societal shift toward acceptance and affirmation of LGB individuals. Since the turn of the 21st century, public opinion regarding the acceptability of a "homosexual lifestyle" has readily increased and remained over 50% (Herek, Chopp, & Strohl, 2007). Similarly dramatic changes can also be seen regarding public opinion toward whether LGB individuals deserve equal employment opportunity, as seen in a rise from 56% of Americans in 1977 to 87% in 2005 (Herek et al., 2007). Changes in public opinion have also been accompanied by major policy changes, including the enactment of a federal LGBT hate crimes bill in 2009, the repeal of "Don't Ask, Don't Tell," a policy banning LGB individuals from serving openly in the military, and perhaps most dramatically, the institution of marriage equality for same-sex couples throughout the United States by the Supreme Court (Faderman, 2015; 2015).

With the move toward societal affirmation of diverse sexual orientations, psychologists have begun to take a closer look at the strengths associated with minority sexual identities and the psychosocial well-being of LGB individuals and communities.

Sharon Rostosky and Ellen Riggle have done substantial work in this area through qualitative (Riggle & Rostosky, 2012; Riggle et al., 2008; Rostosky, Riggle, Pascale-Hague, & McCants, 2010) and quantitative research (Riggle, Mohr, Rostosky, Fingerhut, & Balsam, 2014) asking the following question: what are the positive aspects of having an LGB identity? Their research has identified a number of common themes across sexual orientations and led to the development of an instrument to quantitatively measure these themes (Riggle et al., 2014). Additionally, this team of researchers analyzed data on the well-being of LGB individuals, showing that non-heterosexual adults had significantly lower levels of eudaimonic well-being than their heterosexual counterparts (Riggle et al., 2009). This research, along with emerging LGBT positive psychology research (Dickinson & Adams, 2014; Domínguez, Bobele, Coppock, & Peña, 2015; Meyer, 2014; Powdthavee & Wooden, 2015; Vaughan & Rodriguez, 2014; Vaughan et al., 2014), has found a number of strengths associated with LGB identity (e.g., heightened self-awareness, perceived community connectedness) and potential factors that may protect against the negative impacts of stress on health and/or promote well-being (e.g., resilience, positive identity valence).

Despite the recent growth of research in this area, there remain a number of unanswered questions. For example, while the minority stress framework (Meyer, 2003) has provided a solid theoretical and empirical basis for understanding negative mental health outcomes among non-heterosexuals, there is much less evidence supporting pathways leading to positive mental health outcomes (i.e., psychosocial well-being). The minority stress theory includes positive mental health outcomes within the broader category of mental health outcomes, but empirical evidence is mixed with regard to

whether prejudicial events negatively affects psychological well-being (Selvidge, Matthews, & Bridges, 2008). The present study attempts to address this gap in the literature.

Research Questions

The present study seeks to address the following research questions with a sample of non-heterosexual men:

1. Do sexual minority stress processes (i.e., experienced prejudice, internalized homophobia, and sexual identity concealment) negatively affect psychosocial well-being?
2. Do sexual minority stress processes negatively affect social support?
3. Do sexual minority stress processes negatively affect resilience?
4. Do sexual minority stress processes negatively affect one's positive non-heterosexual identity valence (i.e., identity affirmation, belonging, and achievement)?
5. Does positive non-heterosexual identity valence positive affect psychosocial well-being?
6. Does positive non-heterosexual identity valence positive positively affect strengths associated with being non-heterosexual (i.e., self-awareness, authenticity, community, intimacy, and social justice)?
7. Do strengths associated with being non-heterosexual positively affect psychosocial well-being?
8. Does social support positively affect psychosocial well-being?
9. Does resilience positively affect psychosocial well-being?

A statistical model used to test these research questions is presented in Figure 2. Regarding the first research question, it is hypothesized that minority stress processes will have a nonsignificant effect on well-being. However, with regard to research questions two through four, it is predicted that minority stress processes will have a significant negative effect on social support, resilience, and positive non-heterosexual identity valence. For research questions five, seven, eight, and nine, it is hypothesized that positive non-heterosexual identity valence, strengths associated with being non-heterosexual, social support, and resilience will all have a significant positive effect on psychosocial well-being. Lastly, with regard to research question six, it is hypothesized that positive non-heterosexual identity valence will have a positive effect on strengths associated with being non-heterosexual.

Methodology and Limitations

The research questions were studied through quantitative analysis of survey data collected from a convenience sample of non-heterosexual men. Data was collected through a mixture of targeted recruitment at LGBT-specific venues, online recruitment through LGBT-specific listservs and social media websites, and snowball sampling. The data was analyzed using structural equation modeling (SEM), a quantitative procedure ideal for assessing the relationships between multiple observed and unobserved variables (Martens, 2005). Multiple a priori models were tested and compared to identify a structural model that best fit the data.

Although SEM may be the strongest quantitative method for answering these questions, there are a number of limitations to this study. First, using a convenience sample recruited largely through the internet and snowball sampling techniques likely

resulted in a biased sample and thereby limited the generalizability of the results. Use of a random sample would have undoubtedly produced stronger results, but obtaining a randomized sample of non-heterosexual men is very challenging even in well-funded studies (Binson, Blair, Huebner, & Woods, 2007; Meyer & Wilson, 2009; Sell, 2007). Second, limiting the study participants to non-heterosexual men did not allow for generalizing conclusions to all sexual minority populations (e.g., queer women, gender nonconforming individuals who are not heterosexual). Third, by including both gay and bisexual/queer men in one sample, it was not possible to identify important differences between these two groups.

Chapter Two
LITERATURE REVIEW

This chapter will review three major areas of research relevant to the current study: (1) psychological and social well-being research in general; (2) LGB psychological well-being research; and (3) LGB social well-being research. Given the extensive literature found in some of these areas, particularly in the general area of psychological well-being, this chapter will not be an exhaustive review; rather, the chapter is intended to provide a comprehensive summary necessary for providing the theoretical and empirical foundations for the present study.

Well-Being Research

Research on well-being within psychology has grown substantially in recent years (Busseri & Sadava, 2011; Deiner et al., 1999; Lent, 2004). Prior to reviewing the important findings in this area, it is important to first define terms: exactly what *is* well-being? Ryan and Deci (2001, p. 142) define well-being as being concerned with "optimal psychological functioning and experience." More simply put, well-being is concerned with the "good life" (Ryan & Deci, 2001). Scientific research in this area attempts to explain what constitutes the good life, how to measure it, how to predict who will have it, and how to increase it, among other concerns. Another way of conceptualizing well-being is the positive dimensions of health, with health understood from the perspective of the World Health Organization: "a state of complete physical, mental, and social well-being" (World Health Organization, 1948). Corey Keyes (2002) uses the term "flourishing" to describe an individual who is characterized by the presence of mental health, or well-being, whereas an individual without well-being is described as "languishing". These

definitions become even more nuanced and differentiated when well-being is defined by proponents of the more specific schools of thought, such as hedonic or eudaimonic well-being. This sample of definitions serves as an introduction to the complexity and nuance found in the literature regarding a definition of well-being. For this dissertation, well-being will be understood broadly from a psychosocial perspective as optimal experience and functioning, and therefore will be broadly inclusive of both hedonic and eudaimonic approaches to well-being.

This section begins with a conceptual summary of the two major schools of thought regarding well-being: hedonia and eudaimonia. These two distinct schools of thoughts find their origin in Aristotle's philosophy and present two different ways of understanding "the good life": the hedonic perspective is concerned with the attainment of happiness or pleasure, while eudaimonia is associated with the attainment of one's true potential or meaning in life (Gallagher, Lopez, & Preacher, 2009; Ryff, 1989). As a result, these two approaches to understanding well-being ask very different questions that stem from distinctly different worldviews and approaches to life (Ryan & Deci, 2001). Those associated with the hedonic school of thought tend to be interested in an individual's level of overall happiness or pleasure in their life, while researchers within the eudaimonic school of thought tend to be interested in specific areas of life deemed important for one to achieve their true potential (e.g., presence of meaning in life, a sense of autonomy, positive interpersonal relationships; Ryff, 1989). To better understand these differences, the following sections will briefly summarize the major theoretical perspectives and empirical findings.

Hedonic Well-Being

As noted above, hedonic well-being is conceptualized as an individual's level of happiness, and therefore, seeks to understand and measure one's experience of pleasure and the degree to which positive affect predominates over negative affect (Lent, 2004). The most common conceptualization to arise out of the hedonic well-being research is that of subjective well-being (SWB; Diener, 1984). SWB views well-being as consisting of life satisfaction, the presence of positive affect, and the relative absence of negative affect (Deiner et al., 1999; Ryan & Deci, 2001). Significant scholarly debates remain regarding the distinction between the cognitive and affective dimensions of SWB (Lent, 2004), the most accurate relationships between components within the SWB framework (Busseri & Sadava, 2011), and the appropriateness of SWB as the primary indicator of well-being (Ryan & Deci, 2001; Ryff, 1989). Nevertheless, SWB continues to be the primary theoretical model used for understanding and evaluating well-being (Cooke, Melchert, & Connor, 2016).

Subjective Well-Being theory. According to Diener (1984), SWB measures a cognitive and affective dimension of well-being: life satisfaction measures, such as Diener's Satisifaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), assesses one's cognitive appraisal of his or her global life satisfaction while affective measures, such as the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), measure the degree to which an individual experiences positive or negative emotions (Diener, 1984; Lent, 2004). Despite some debate in the literature as to whether assessments of life satisfaction and positive/negative affect can truly be separated into distinct cognitive and affective dimensions, there is substantial empirical

evidence that supports the notion that life satisfaction and positive/negative affect are two distinct constructs (Lent, 2004).

Thirty years of SWB research has yielded an impressive body of evidence regarding the correlates of SWB and the underlying processes central to producing high SWB (Deiner et al., 1999). While a comprehensive review of these findings is beyond the scope of this review (Deiner et al., 1999; for more thorough reviews of some of these findings, see Diener, 1984, 2012; Ryan & Deci, 2001), it is important to note some of the major research findings that may be relevant to the SWB of LGB individuals. It has been consistently shown that personality factors, particularly extraversion and neuroticism, are strong predictors of SWB (Deiner et al., 1999). The empirical evidence tends to support the notion that individuals with more optimism and less negativity (i.e., high extraversion and low neuroticism) tend to evaluate their lives in a more positive manner (Deiner et al., 1999); however, it is likely that this relationship may be moderated by one's environment and culture (Diener, 2012). Therefore, when considering the subjective well-being of LGB individuals, it may be worthwhile to consider the potential moderating effect that these traits may have between the experience of LGB-related stress and SWB.

Ample evidence has also suggested that the standards used by individuals to evaluate their life circumstances impact their SWB (Deiner et al., 1999) and that, particularly in the case of income, these comparisons are both local (i.e., comparison of one's wealth to one's neighbors) and more distal (i.e., comparison of one's wealth to a world standard set by wealthy nations; Diener, 2012). With regard to LGB subjective well-being, it might be worthwhile to see how comparisons of life circumstances are made, and whether comparisons with heterosexuals, such as perceived income inequality,

lowers SWB. Additionally, there is some empirical support to the theoretical notion that individuals tend to adapt to adverse circumstances and return to their previous SWB baseline; however, it is unclear as to how this occurs and whether individuals adaptations reliably return them to their baseline (Deiner et al., 1999; Diener, 2012). For LGB individuals, it would be important to know whether they return to their SWB baseline following a prejudicial event (e.g., being assaulted due to one's non-heterosexual orientation), and if so, how long this process takes. Finally, SWB has been found to be a strong and reliable predictor of a number of outcomes, including future physical and social health, and occupational success, all of which are important outcomes regardless of sexual orientation (Diener, 2012).

Eudaimonic Well-Being

In contrast with hedonia's emphasis on pleasure and life satisfaction, the eudaimonic perspective does not equate happiness with well-being. Because happiness or pleasure can be derived from events or behaviors that are not actually good for individuals or society, eudaimonic theorists do not believe happiness alone fully captures wellness (Ryan & Deci, 2001). Therefore, eudaimonic theories view well-being as the achievement of optimal functioning or potential, and thereby living in congruence with one's "daimon," or true nature (Lent, 2004; Ryan & Deci, 2001). Instead of focusing on measuring happiness or life satisfaction, eudaimonic theories are typically concerned with the degree to which an individual lives their life in accord with their values, derives meanings from their activities, and strives for personal fulfillment (Lent, 2004; Ryan & Deci, 2001). Unlike hedonic well-being, which is centered around the tripartite conceptual model of subjective well-being, there are a number of eudaimonic theories of

well-being. The most prominent theories include Ryff's Psychological Well-Being (PWB) model (Ryff, 1989) and Ryan and Deci's Self-Determination theory (Ryan & Deci, 2001). Although not typically discussed as a major theory of eudaimonic well-being, Keyes' Social Well-Being model (Keyes, 1998) will also be briefly discussed in this section given its congruence with eudaimonia's emphasis on optimal functioning.

Psychological Well-Being theory. Whereas the theory of subjective well-being was generally derived empirically and not based on any a priori theory (Lent, 2004), Ryff's theory of Psychological Well-Being is strongly grounded in a number of psychological and lifespan theories (Ryff, 1989). Based on her review of prominent theories of psychological functioning, ranging from Maslow's self-actualization to Jung's concept of individuation, Ryff derived six primary dimensions of optimal functioning: (1) self-acceptance; (2) positive relations with others; (3) autonomy; (4) environmental mastery; (5) purpose in life; and (6) personal growth (Ryff, 1989). In contrast to SWB, where happiness is at the core of well-being, PWB views happiness as a byproduct of a life where these six dimensions are strongly present (Lent, 2004).

To measure these dimensions, Ryff created a 120-item instrument with the items evenly divided amongst six scales that measure the theory's six dimensions (Ryff, 1989). This measure has also been used in shorter forms with 18 items total, although this shorter form has shown some issues with internal consistency (Gallagher et al., 2009). Through studies using confirmatory factor analysis, the six dimensions, as measured by the Ryff's PWB instrument, have been well supported (Lent, 2004). Additionally, numerous studies have shown substantial positive associations between PWB and

positive physical health, aging, and emotional wellness (Lent, 2004; Ryff & Singer, 2006).

Social Well-Being theory. Beyond including one interpersonally-oriented factor in their respective theories (i.e., positive relations with others and relatedness), Ryff's PWB theory and SDT are largely intrapersonally oriented, and thereby tend to minimize the social elements that contribute to an individual's well-being (Gallagher et al., 2009; Keyes, 1998). In an effort to correct this imbalance, Keyes (1998) developed a theory of social well-being with five components: social integration, social contribution, social coherence, social actualization, and social acceptance. In this conceptualization, social well-being is defined as "the appraisal of one's circumstance and functioning in society" (Keyes, 1998, p. 122). This definition's emphasis on functioning shows how it can be viewed as a natural extension of eudaimonic well-being into the social realm (Gallagher et al., 2009).

Critiques of Well-Being Research within Psychology

The proliferation of well-being research within psychology has been accompanied by widespread critiques about the exact nature of the construct, the appropriate means of measurement, and the degree to which hedonia, eudaimonia, or a combination of the two truly captures the complexity of the construct. Since these critiques are important to understanding the well-being of LGB individuals, select critiques will be reviewed briefly, beginning with critiques of hedonia and eudaimonia and then briefly addressing integrative and alternative perspectives on well-being.

Critiques of hedonic well-being. It is no surprise that hedonic conceptualizations of well-being have many strengths, especially given the widespread use and extensive

research on Diener's subjective well-being theory. Perhaps the most obvious strength of SWB is the extensive research findings that have demonstrated the psychometric strength of key measures (e.g., SWLS and PANAS; Diener et al., 1985; Watson et al., 1988), established key associations with other constructs, and shown how SWB discriminates well between individuals, groups, and nations (Busseri & Sadava, 2011).

Despite the large body of research on SWB that generally supports the theory and shows its relevance in various domains of life, many criticisms remain unresolved. One of the critiques receiving substantial attention in the literature comes from advocates for eudaimonic approaches who question whether SWB adequately measures psychological well-being in the first place (Ryan & Deci, 2001). Critics question whether SWB measures of affect and life satisfaction capture positive functioning at all (Ryff, 1989) and whether self-reports of these constructs can be considered valid indicators alone, particularly in cross-sectional correlation studies (Diener, 2012). Critics also question whether SWB truly captures well-being when an individual with serious mental illness or sociopathic qualities, for example, may score high in SWB but be viewed as lacking well-being by more objective criteria (Lent, 2004). Additionally, while SWB may at first appear to be culturally neutral in its measurement (i.e., allowing an individual to determine what is in life that is satisfying for them), there is substantial criticism that SWB is rooted in western values and perspectives (Christopher, 1999). Since SWB generally equates well-being with high life satisfaction, low negative affect, and high positive affect, it assumes that psychological well-being is attained by an individual's experience of pleasure, whereas many non-Western cultures may minimize the importance of individualized experiences of pleasure and view individuals' well-being as

rooted in the positive functioning of the collective (Christopher, 1999). While Diener and colleagues have collected robust data demonstrating the cross-cultural generalizations of predictors of SWB (Diener, 2012), this foundational critique remains largely unresolved.

Critiques of eudaimonic well-being. In many ways, the strengths of eudaimonic theories are answers to prominent critiques of hedonia. Eudaimonic theories have strong theoretical foundations as their basis for claiming to measure well-being (Lent, 2004; Ryff, 1989) and do not rely upon the respondents personal interpretation of global life satisfaction. As a result, the constructs being measured are conceptually clearer in measures such as Ryff's Scales of Psychological Well-Being (Ryff, 1989) and Keyes' Social Well-Being scales (Keyes, 1998). Additionally, the demonstrated psychometric strength of the aforementioned measures in many studies, including studies using representative samples, adds to the appeal of these theories (Lent, 2004).

These strengths may also be seen as potential weaknesses for eudaimonic conceptualizations of well-being. One such critique is that eudaimonic well-being theories rely on expert opinions as to what constitutes the "good life," and these beliefs about well-being may vary substantially based on cultural or individual differences (Ryan & Deci, 2001). As a result, measures of eudaimonic well-being may be measuring the presence of specific psychological processes, traits, or states without measuring the larger construct of well-being.

There are significant criticisms regarding the potential cultural biases of eudaimonic well-being theories. Christopher (1999) provides compelling arguments for how each of Ryff's six dimensions of PWB are rooted in western values and conceptualizations of the self, and therefore, may not be relevant to the well-being of

non-western individuals. Additionally, research in this area typically relies on the use of scales such as those developed by Ryff (1989) and Keyes (1998), thereby not allowing for comments from participants (Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011). This may further limit the conclusions found from these studies, as participants are not able to provide feedback regarding their perception of their well-being beyond their responses to the specific items.

Integrative and alternative perspectives. There is some empirical evidence that two latent factors roughly corresponding with hedonia (i.e., subjective well-being) and eudaimonia (i.e., personal growth or meaning in life) undergird the broader construct of well-being and are correlated with one another (Lent, 2004; Ryan & Deci, 2001). This may be explained by the inherent tension between the pursuits of happiness and personal growth or meaning. For example, it may be that the pursuit of meaningful work could result in lower levels of positive affect and higher negative affect due to fatigue and/or stress. Therefore, while it may be possible to obtain high levels of both factors, they are nevertheless two related but distinct constructs. The logic of these findings suggest that well-being is likely multifaceted and best explained by an integration of theories.

Keyes has proposed one such integrative framework: the mental health continuum (Keyes, 2002). This continuum, from languishing to flourishing (i.e., from low to high levels of well-being), is conceived as an integration of: (a) emotional well-being, or two of the three dimensions of subjective well-being (positive affect and life satisfaction); (b) psychological well-being, or the six dimensions of Ryff's PWB theory; and (c) social well-being, or the five dimensions' of Keyes' social well-being theory. This more holistic

conceptualization of well-being has the benefit of integrating the experiences of pleasure and optimal functioning, but still may be culturally-specific.

One multi-national mixed methods study sought to compare the salient hedonic and eudaimonic elements relevant to the well-being of participants from five European countries and two non-European countries (South Africa and Australia; Delle Fave et al., 2011). The study asked participants to name the life domains that they viewed as influential to their well-being through both open ended questions and rating scales for the level of happiness and meaningfulness they associated with 11 life domains identified by the authors (e.g., work, family). Regression analyses were then used to determine the amount of variance in global satisfaction in life that was accounted for by the levels of happiness and meaningfulness in the 11 life domains. The authors found that, across the seven countries, important interpersonal relationships were crucial for participants' well-being, suggesting that social connectedness may be an important cross-cultural contributor to well-being. Additionally, participants' definitions of happiness included eudaimonic aspects approximately 40% of the time and hedonic aspects approximately 25% of the time, further supporting the notion that well-being is likely some combination of hedonic and eudaimonic theories. Finally, the level of happiness and meaningfulness of the 11 life domains only accounted for 38% of the total variance in global life satisfaction. This indicates that 62% of the variance in global life satisfaction is accounted for by factors other than happiness and meaningfulness in particular areas of life. This finding that may be explained as global life satisfaction not being equal to the sum total of domain-specific satisfaction or it may be due to the limited number of life

domains that were assessed. Either way, this study provides solid support for a more integrative, multidimensional approach to understanding well-being.

Psychological Well-Being of LGB Individuals

What does the research literature say about the psychological well-being of LGB individuals? As noted in the introduction, much of the literature on the psychological or mental health of LGB individuals has focused on deficits and negative outcomes far more than on strengths or positive outcomes (Vaughan et al., 2014). In response to the critique that this approach has pathologized the LGB community, Meyer (2014) argues that such an approach has actually helped to counter pathologizing arguments by establishing the relationship between LGB mental health disparities and "pathogenic social structures and social stressors" (Meyer, 2014, p. 349). Indeed, the strong empirical evidence on LGB mental health deficits has not only substantiated the need for more research and clinical interventions for the LGB community, it has also provided compelling evidence to support Meyer's minority stress theory (Meyer, 2003). Because heterosexist social structures continue to negatively impact the lives of non-heterosexual individuals, providing a summary review of mental health disparities based on sexual orientation is an important starting place for understanding the full spectrum of the negative and positive well-being of LGB individuals.

After reviewing mental health disparities within the context of the minority stress framework, the focus will shift to the role of LGB identity development in the evolution and maintenance of well-being. A sizable portion of this section will then focus on a comprehensive review of research on the positive dimensions of LGB health and well-being. This will be followed by a review of research on the psychological well-being of

older LGB adults. This section on LGB psychological well-being will then conclude with a summary critique of the literature.

The Minority Stress Framework

Like physical health disparities, mental health disparities between non-heterosexual and heterosexual individuals are staggering. LGB individuals are two times as likely to make a suicide attempt, with non-heterosexual men having a particularly elevated lifetime suicide attempt risk and non-heterosexual women having an elevated suicidal ideation risk (King et al., 2008). Sexual minority individuals are 1.5 times as likely to have a depression and/or anxiety disorder than their heterosexual counterparts (King et al., 2008). In addition to substance dependence being 1.5 times in higher in all non-heterosexual individual, non-heterosexual women specifically seem to consume more alcohol than their heterosexual counterparts (Herek & Garnets, 2007; King et al., 2008).

What might be the cause of these disparities? The most extensively researched explanation is the minority stress theory. This theory attempts to explain these discrepancies as the result of the experience of prejudice and heterosexist discrimination (Meyer, 1995). According to Meyer (1995), the conflict that arises between the dominant values of a discriminatory society (i.e., valuing a heterosexual identity above others) and one's minority identity can lead to both physical and psychological manifestations of stress. The following briefly reviews each of the theory's assumptions along with prominent critiques.

Distal stress processes. Integral to this theory are several assumptions. First, the theory assumes that stressors more distal to the self, such as objective experiences of

prejudice (i.e., discrimination, violence), directly effect mental health outcomes. This view is supported by evidence showing that LGB individuals, particularly LGB youth, report higher exposure to discriminatory events and experience greater damage to their mental health as a result of anti-gay crimes relative to crimes unrelated to LGB bias (Meyer, 2003). A study by Mays and Cochran (2001) looked at a population-based sample of adults in the United States and found, when controlling for experiences of discrimination, the heightened prevalence of poor mental health among non-heterosexuals relative to heterosexuals was greatly diminished. These studies provide support for the notion that greater experiences of discrimination by LGB individuals is related to negative mental health outcomes.

Proximal stress processes. Secondly, stressors more proximal to the self, such as anticipating rejection by others, concealing one's sexual orientation from others, or internalizing society's homonegative beliefs, also directly effect mental health outcomes (Meyer, 1995). Social psychology research has shown that vigilance, or being constantly on guard to protect the self from a potential threat, can be heightened in individuals who are stigmatized, and thereby take a toll on the individual's energy level, cognitive functioning, and overall mental health (Meyer, 2003).

Concealment of one's sexual identity, or not "coming out," can be a necessary coping mechanism for some LGB individuals to protect themselves from real external threats in a heterosexist society. It is also possible, however, that identity concealment is a function of shame. When this is the case, LGB individuals not only suffer the psychological distress associated with harboring shame, but also prevent themselves from

receiving the documented benefits of sharing oneself with others and connecting with other LGB individuals (Meyer, 2003, 2007).

Finally, internalized homophobia, or internalized homonegativity as it is sometimes called in the literature, refers to internalizing society's negative messages about homosexuality. This internalization of stigma leads to individuals to holding negative views about themselves, which has an obvious detrimental impact on mental health (Herek & Garnets, 2007). This construct has received extensive examination in the literature, despite the difficulties of objectively measuring a construct that may operate on a subconscious level (Meyer, 2007). Research has shown that internalized homophobia is significantly correlated with anxiety, depression, and substance use, and may be related to self-harm behaviors such as eating disorders (Meyer, 2003).

This conceptual model, while developed specifically with regard to LGB individuals, can also be applied to understanding stress experienced by racial, ethnic, or gender minorities. Additionally, the theory assumes individuals with multiple minority identities (e.g., African American lesbians) may experience worse mental health outcomes, or be at a higher risk for negative outcomes, than those with only one minority identity because of the potential for greater discrimination in both the dominant culture and within minority communities (e.g., the African American community; Herek & Garnets, 2007).

Alternative explanations and critiques. The growing empirical support for the minority stress theory within the literature has resulted in the theory becoming the dominant conceptual framework for understanding mental health disparities among LGB individuals (Herek & Garnets, 2007). Another theory, the psychological mediation

framework, has attempted to understand LGB mental health disparities through studying increased vulnerabilities among non-heterosexuals in psychological processes that are common to all humans (Hatzenbuehler, 2009). For example, there is some evidence that LGB individuals experience more hopelessness than heterosexual individuals. Since hopelessness is a known psychological risk factor for LGB and heterosexual individuals alike, it may be that this general psychological process also uniquely contributes to LGB mental health disparities. Hatzenbuehler (2009) has developed an integrative framework that incorporates the group-specific elements of the minority stress theory (i.e., distal and proximal stressors) and some general psychological processes such as coping. Unlike Meyer's (2003) minority stress theory, this integrative psychological mediation framework is primarily interested in predicting the pathways for negative health outcomes and therefore won't be given an in-depth review here.

Although Meyer's (2003) theory explicitly identifies both negative *and* positive mental health outcomes resulting from experiences of minority stress (see box i in Figure 1) there has been some criticism that his theory, and LGB research in general, has unintentionally neglected the positive dimensions of LGB psychology (Vaughan & Rodriguez, 2014; Vaughan et al., 2014). Meyer (2014), in response to these criticisms, agrees that positive outcomes resulting from the experience of stress are important and understudied. He disagrees, however, with the implication that a focus on negative outcomes is somehow more pessimistic or less hopeful than studying negative outcomes and argues that too much of a focus on individualistic strengths or "virtues" may obscure the structural discrimination that can have a strong negative effect on health outcomes. It seems that an integrative approach that incorporates the processes and factors associated

with both negative and positive health outcomes at all levels (i.e., individual, communal, systemic) is necessary to develop a comprehensive understanding of LGB health and well-being.

Empirical support for the theory's view that increased minority stress will be associated with diminished psychological well-being is currently limited. Although there are studies examining the differential effects of minority stress on LGB subgroups (e.g., bisexuals, African Americans, etc.; see Kertzner, Meyer, Frost, & Stirratt, 2009), there is limited evidence that exposure to heterosexist stress is directly linked to lower levels of well-being (Morrison, 2012; Selvidge et al., 2008). Morrison (2012) looked at the impacts of discrimination on psychological health as operationalized by measures of self-esteem and life optimism. Results showed very limited associations between some aspects of discrimination, such as lifetime experience of verbal threat, and only on some subsets of the study's sample, such as gay men. This indicates that minority stress may not be as consequential to the positive dimensions of psychological health as is assumed in Meyer's framework. Selvidge, Matthews, and Bridges (2008) found that with a sample of 373 non-heterosexual women, there was no direct relationship between the frequency of heterosexist events and psychological well-being as measured by Ryff's PWB instrument (Ryff, 1989). Although this is in contrast to previous studies that have suggested such a link, the authors note that these previous studies operationalized well-being either as the absence of negative symptoms or through some other construct such as self-esteem. This underscores the importance of how psychological well-being is operationalized and measured in studies of the impact of minority stress on psychological well-being (Selvidge et al., 2008). Additional research is necessary to see whether the

minority stress framework applies to hedonic and/or eudaimonic conceptualizations of well-being.

LGB Identity and Well-Being

One aspect of the minority stress theory that has yet to be addressed in this chapter is the interactive effect of minority identity development on mental health. The theory considers three primary aspects of minority identity: (a) prominence, or degree of importance of the identity to the individual; (b) valence, or assessment of the identity in positive or negative terms; and (c) integration, or the synthesis of multiple identities into a cohesive whole (Meyer, 2003). A high level of identity prominence may increase stress related to one's minority identity due to the high level of commitment and identification the individual has with his/her non-heterosexual identity. Ideally, identity development will progress toward a positive self-appraisal of one's sexuality, and thereby reduce the strength of minority-specific psychological processes such as internalized homophobia. Finally, high levels of identity integration are desirable and may be associated with greater psychological well-being, as identity integration allows for the complex relationships between multiple self-concepts within varied contexts (Meyer, 2003). Strong identity integration, therefore, may attenuate negative mental health outcomes that could result from additive stress experienced by individuals with multiple minority identities.

The three features of minority identity included in the minority stress framework have been important features of positive sexual identity development theories. The successful navigation of minority sexual identity development may be associated with a number of positive outcomes, including increased psychological well-being (Frable,

Wortman, & Joseph, 1997). For example, one study using a convenience sample of gay men and women in 1994 found that the strongest single predictor of psychological well-being (as operationalized by self esteem, life satisfaction, and depression) was positive identity (Luhtanen, 2002). In an effort to understand the process of forming a positive minority sexual identity, a substantial body of theoretical and empirical research on sexual identity development has evolved over the past 40 years (Diamond, 2006; Eliason & Schope, 2007).

This area of research has shown how the development of a positive sexual identity might be related to psychological well-being. Frable, Wortman, and Joseph (1997) studied the relationship between positive LGB identity and positive self-perceptions (a combination of an index of well-being, self-esteem, and psychological symptoms) in a sample of gay men and found that positive identity was a moderate predictor of positive self-perceptions. Luhtanen (2002) found support for these findings in a similar study that assessed the relationship between positivity of LGB identity and psychological well-being, as measured by instruments assessing life satisfaction, self-esteem, and depression. In her study, for both non-heterosexual men and women, positive identity was the strongest predictor of psychological well-being when controlling for salient demographic variables (e.g., income, education). In a study of Chinese lesbians, women who identified with later stages of identity development, as measured by participants self-selecting their stage based on descriptions of six stages, reported higher levels of life satisfaction than those at earlier levels (Li, Johnson, & Jenkins-Guarnieri, 2013). Taken together, the research supports the notion that positive identity appraisal is associated with greater psychological well-being.

Research has also investigated some of the contentious assumptions of sexual identity development models, such as the belief that identity achievement or integration is necessary for positive health outcomes and that coming out as a sexual minority is also important for positive health outcomes. The first assumption regarding the importance of identity achievement and integration was tested using measures that assessed the degree to which individuals have explored their identity and the history and culture of the LGB community (Ghavami, Fingerhut, Peplau, Grant, & Wittig, 2011). In this study, identity achievement/integration was found to be predictive of psychological well-being (as operationalized by a measure of life satisfaction) only insofar as it led to identity affirmation, or a positive view of one's non-heterosexual identity. This suggests that while viewing one's sexual identity positively may be important for psychological well-being, fostering a particular sexual identity label and strongly identifying with the LGB community may not be as critical.

The impact of identity disclosure, or coming out, on LGB psychological health is likely related to reasons for non-disclosure (e.g., fear, shame) and environmental context (Meyer, 2003). While there is evidence linking non-disclosure of LGB identity due to fear of discrimination with negative mental health outcomes, the relationship of coming out with positive mental health outcomes is less clear. There is some initial evidence that negative reactions of others to an LGB individual coming out may be associated with decreased well-being for that person, while positive reactions may have no impact on well-being at all (Ryan, Legate, & Weinstein, 2015). Another study found that individuals' psychological well-being increased when they disclosed to individuals who were highly supportive of their autonomy, but that these increases were not found in

more controlling relational contexts (Legate, Ryan, & Weinstein, 2011). Both of these studies support Deci and Ryan's (2000) self-determination theory that suggests autonomy, or the perception of one's ability to freely express his/her self, mediates the relationship between events (in this case, coming out) and well-being. There is also some evidence that while coming out may be a stressful process for LGB individuals, they may benefit from stress-related growth following disclosure (Vaughan & Rodriguez, 2014; Vaughan & Waehler, 2009). This research suggests that the impact of coming out on one's psychological well-being is highly context dependent and not as straightforward as the association of negative mental health outcomes with identity concealment due to fear of discrimination.

Positive Dimensions of LGB Well-Being

As LGBT research and positive psychology have continued to develop over the past two decades, more focus has been given to the positive dimensions of holding a non-heterosexual identity. Researchers have expanded their focus beyond positive psychological outcomes and have begun to investigate the factors that determine positive LGB identity (Riggle & Rostosky, 2012) and the intersection of positive psychology concepts and LGB identity (Vaughan et al., 2014). The following section reviews this research in depth, looking specifically at research exploring predictors of psychological well-being for LGB individuals, the unique positive aspects of LGB identity, and LGB positive psychology research.

Measuring psychological well-being as an outcome. Before reviewing the literature regarding the correlates of positive psychological health for LGB individuals, it is important to emphasize the diverse ways in which psychological well-being is

measured as an outcome. For some studies, the term "psychological well-being" may refer to a hedonic conceptualization of well-being through a measure of life satisfaction and/or positive and negative affect; for many other studies, the term may be used interchangeably with diverse constructs such as self-esteem, autonomy, relatedness, connectedness, or some combination thereof; and still others may integrate measures of mental illness (e.g., depression or anxiety inventories) with more positive indicators such as life satisfaction, self-esteem, or positive affect. Therefore, when reviewing specific studies, the operationalization of well-being will be identified, and this limitation in the literature will be discussed in greater detail in the discussion and conclusions section below.

Psychological predictors of LGB well-being. Numerous studies have provided support for protective psychological factors that moderate the negative effects of minority stress, some of which are positive collective identity, self-acceptance, identity integration, coping and resilience (Herek & Garnets, 2007; Meyer, 2003). Research has begun to provide evidence that some of these factors may also serve to increase psychological well-being for non-heterosexual individuals. Collective self-esteem, or the positive or negative appraisal of the group to which an individual belongs, has been observed to predict personal self-esteem in gay Latinos (Zea, Reisen, & Poppen, 1999), as has the related variable of perceived social support (e.g., Wayment & Peplau, 1995; see social well-being section below for more detailed description of the impact of social support on well-being).

As illustrated in the previous section, self-acceptance, or having a positive view of one's sexual identity, has generally been found to be associated with psychological well-

being (Frable et al., 1997; Ghavami et al., 2011; Li et al., 2013; Luhtanen, 2002). Other studies have provided evidence as to how important developmental constructs, such as attachment and individuation from parents, are also related to psychological well-being for LGB individuals. One study found that positive feelings towards one's sexual identity attenuated the negative relationship between attachment anxiety and life satisfaction in a sample of lesbians (Keleher, Wei, & Liao, 2010). Another study showed that separation/individuation from parents, as operationalized by a measure of conflictual independence from one's parents, was positively related to psychological well-being in a sample of LGB youth (Floyd, Stein, Harter, Allison, & Nye, 1999). Greene and Britton (Greene & Britton, 2015) assessed the predictive ability of LGBTQ adults retrospective reports of childhood experiences of emotional warmth, safety, and caring on happiness in adulthood. The results indicated that these childhood experiences significantly predict adult happiness. While this final study is undoubtedly weakened by its retrospective nature, these developmentally-oriented studies as a whole highlight the importance of healthy development in fostering psychological well-being.

Spirituality and religiosity can play a very positive role in people's lives, and has been found to have a positive relationship with psychological health for a number of populations (Lease, Horne, & Noffsinger-Frazier, 2005). Due to the prevalence of heterosexism in many prominent religions, including Christianity, the dominant religion in the United States, the relationship between religiosity and well-being has been less clear for non-heterosexual individuals, with some evidence suggesting a more negative relationship (Herek et al., 2007; Lease et al., 2005; Walker & Longmire-Avital, 2013). One study looked at the impact of affirming religious experiences on the psychological

well-being of white LGB individuals through structural equation modeling (Lease et al., 2005). This study found that belonging to an affirming faith group was indirectly related to psychological well-being as operationalized by measures of life satisfaction, Psychological Well-Being (Ryff, 1989), and depression. The indirect relationship from affirming faith experiences to psychological well-being was found through lower levels of internalized homophobia and higher levels of spirituality (as operationalized through three measures of religious/spiritual practice and beliefs; Lease et al., 2005). This relationship may be more complex for non-white and non-Christian LGB individuals (Walker & Longmire-Avital, 2013), but more research is needed to determine the pathways through which religion/spirituality can predict positive psychological health.

Positive Aspects of LGB Identity. One of the critiques of LGB research in psychology has been its primary focus on negative health outcomes (Riggle et al., 2008; Vaughan & Rodriguez, 2014). In response to this, qualitative and quantitative inquiries into the positive aspects of LGB identity have identified a number of positive dimensions to having a non-heterosexual identity. Perhaps the largest amount of research on this topic has come from Ellen Riggle, Sharon Rostosky, and their colleagues (Almario, Riggle, Rostosky, & Alcalde, 2013; Riggle & Rostosky, 2012; Riggle et al., 2014; Riggle et al., 2008; Rostosky et al., 2010). Their research began using grounded theory methodology to qualitatively analyze responses from 203 gay men and 350 lesbians from across the United States to a question regarding their perspectives on the positive aspects of being gay or lesbian (Riggle et al., 2008). An additional study using the consensual qualitative research method was conducted with an international sample of 157 bisexuals asking the same question specific to bisexual identity (Rostosky et al., 2010). The themes

from these studies, as well an additional study of the positive aspects of transgender identity (Riggle, Rostosky, McCants, & Pascale-Hague, 2011), were integrated into eight themes of positive LGBTQ identity: (1) authenticity; (2); self-awareness, personal insight, and growth; (3) freedom to create new rules; (4) stronger emotional connections with others; (5) freedom to explore relationships and sexuality; (6) compassion and empathy; (7) mentor, role models, and activists; and (8) belonging to an LGBTQ community (Riggle & Rostosky, 2012).

The authors provide illustrative examples from study participants as to how these qualities are specifically related to their non-heterosexual identity. For example, as an example of the value of "freedom to create new rules," one study participant wrote, "I believe that I have a more flexible view of what it means to be a man and to be a man in a relationship. This openness to less rigid views of masculinity (and, by extension, feminity) allows me to help others see opportunities for growth and new solutions that they may not have been able to see" (Riggle & Rostosky, 2012, p. 51). Examples such as these show that widely held values within western culture become more pronounced and/or particularly colored by the experience of being a sexual minority. Many of these themes are also easily connected with dimensions of eudaimonic well-being as identified by both Ryff (1989) and Ryan and Deci (2001), such as personal growth, autonomy, positive relations with others, and relatedness. Given the potential for these values to be common among all western individuals regardless of sexual identity, more research is needed to see if these values differ by sexual orientation, if so, in what ways.

An additional quantitative study was conducted based on these findings in an effort to empirically validate a measure of the positive aspects of LGB identity (the

Lesbian, Gay, and Bisexual Positive Identity Measure, or LGB-PIM; Riggle et al., 2014). This psychometrically rigorous study included an exploratory factor analysis on a large pool of items followed by a confirmatory factor analysis (CFA) on the finalized 25-item measure and tests for convergent validity, discriminant validity, and predictive validity relative to psychological well-being (as measured by life satisfaction and depressive symptoms). The results of the CFA indicated a reasonably good fit for a five factor model consisting of self-awareness, authenticity, community, intimacy, and social justice. Results of validity testing showed that the five subscales were positively associated with measures of similar constructs as hypothesized (e.g., the authenticity subscale was positively correlated to with the Authenticity Scale). Discriminant validity tests showed all scales had at least moderate negative correlations with internalized homo- or bi-negativity. Finally, with regard to the LGB-PIM's ability to predict depression and life satisfaction, the LGB-PIM was found to add no predictive ability to depressive symptoms beyond the variance predicted by a measure of negative symptoms related to minority sexual identity (i.e., the Lesbian and Gay Identity Scale, or LGIS). However, the reverse was true with regard to life satisfaction: negative aspects of LGB identity did not account for any additional unique variance when positive identity was put in as the first step the regression model. Therefore, there appears to be evidence that the LGB-PIM may be useful in predicting the positive dimension of psychological well-being (Riggle et al., 2014).

Taken as a whole, these studies on the positive aspects of LGB identity help to clarify the positive factors associated with non-heterosexual identities and provide initial evidence that these aspects may be useful in predicting the positive health and

functioning of LGB individuals. These strengths notwithstanding, there remain some limitations with this research. The samples in all studies largely identified as Caucasian and a substantial majority of all participants had a bachelors degree or higher; therefore, the results may not be generalizable to racial/ethnic minorities or individuals with less educational attainment. Additionally, all studies used convenience samples, with surveys completed over the internet, creating the potential for selection biases. Finally, without a longitudinal study or a study using more advanced methodology (e.g., structural equation modeling), the nature of the relationship between these positive aspects and well-being remains unclear. For example, it is uncertain whether attainment of these positive aspects of LGB identity helps lead to psychological well-being, or whether individuals already high in well-being or other personality factors (e.g., extraversion, openness) tend to endorse these positive dimensions of LGB identity.

A qualitative study unrelated to Riggle and Rostosky's work used consensual qualitative methods to investigate the negative and positive factors associated with the well-being of LGBTQ youth ages 14-24 years old (Higa et al., 2014). This research identified numerous positive and negative factors associated with a wide range of life domains (e.g., sexual identity, family, peers, neighborhood, LGBT community). The positive findings were generally consistent with Riggle and Rostosky's (2012) findings, but due to the somewhat different intention of the study, provided some unique insights. First, for every life domain, LGBTQ youth were able to identify both negative and positive factors, underscoring the complex relationship LGBTQ individuals have with many aspects of their life. Second, LGB youth tended to view their sexual identity as more of a positive factor for their well-being than a negative one, a finding that may be

reflective of their generational cohort. Regardless of this generational component, it suggests more research attention on how LGB identity may be positively related to well-being. Thirdly, the authors report the unsurprising finding that youth tended to report more negative factors associated with well-being in spaces that were viewed as less LGBTQ-friendly (e.g., school, family), while the opposite was true for more LGBTQ-friend settings such as peers and LGBT-specific settings (Higa et al., 2014). This intuitive finding helps to highlight the relationship between positive social spaces/institutions and the development of well-being for LGB individuals.

LGB positive psychology research. Two recent reviews on the intersection of positive psychology and LGBT research (Vaughan & Rodriguez, 2014; Vaughan et al., 2014) have discussed particular content areas within positive psychology research and the degree to which these areas have been studied with LGBT populations. These papers framed their literature reviews around Seligman and Csikszentmihalyi (2000)'s three pillars of positive psychology: (1) positive subjective experiences; (2) virtues and character strengths; and (3) positive systems and institutions that promote the development of the two other pillars in individuals (Vaughan & Rodriguez, 2014). These two articles show that empirical research on these themes with the LGB population is somewhat rare; nevertheless, the following reviews the limited research that connects these themes with LGB psychological well-being.

Positive subjective experiences. Two of the positive subjective experiences that have received the most attention with regard to the well-being of LGB populations are the interrelated constructs of coping and resilience (Vaughan & Rodriguez, 2014). Coping, or the ability to effectively adjust to adverse circumstances, has been extensively researched

as a potentially adaptive response to stressful circumstances (Selvidge et al., 2008). It is also included within Meyer's (2003) minority stress theory as a moderating factor for the relationship between the experience of minority stress and negative and positive mental health outcomes. Selvedge, Matthews, and Bridges (2008) found that self-monitoring skills, or one part of flexible coping defined as "the ability of an individual to accurately assess and adjust to her situation", was positively associated with psychological well-being in non-heterosexual women. In a different study of bisexual individuals, a negative correlation was observed between psychological well-being, as operationalized by a composite measure of life satisfaction and self-esteem, and cognitive flexibility, a construct related to coping defined as the awareness, willingness, and ability to flexibly adapt to circumstances (Brewster, Moradi, Deblaere, & Velez, 2013). In a study of gay men, Jennings and Tan (2014) investigated whether self-compassion, a practice they suggested might be a positive coping strategy, was related to life satisfaction, and found that when controlling for age, income, and openness, self-compassion was a significant predictor of life satisfaction. These studies show the potential importance of coping in attenuating the deleterious effects of minority stress. Despite these findings, the relationship between coping and psychological well-being for LGB individuals appears to be a relatively understudied topic.

Related to coping is the concept of resilience, a construct that has received substantial study within positive psychology and is defined as the "dynamic process encompassing positive adaptation within the context of significant adversity" (Walker & Longmire-Avital, 2013, p. 1723). Meyer observes that resilience is an important component of his minority stress theory and defines it as, "the quality of being able to

survive and thrive in the face of adversity" (Meyer, 2015, p. 210). Beyond Russell and Richards (2003) study of resilience factors of LGB individuals following the striking down of a discriminatory law in Colorado (see social well-being section on public policy for more details on this study), there is relatively little empirical research on resilience within the LGB population, and virtually none regarding the construct's potential relationship with psychological well-being (Hill & Gunderson, 2015).

Two empirical studies were found addressing resilience with LGB populations. The first study investigated the effects of religiosity and internalized homonegativity on the resilience of Black LGB emerging adults. Analysis showed respondents with high scores on both religious faith and internalized homonegativity had the highest levels of resilience (Walker & Longmire-Avital, 2013). These seemingly contradictory findings may be indicative of the complex interaction of multiple marginalized identities (i.e., identifying as both Black and LGB) on resilience. The second study asked LGB individuals about activities they engaged in to support their mental, emotional, and social well-being (Dickinson & Adams, 2014). Participants in the qualitative study identified 4 main themes: (1) maintaining social connections; (2) engaging in self-care activities such as exercise, yoga, meditation, etc.; (3) participating in interests and hobbies; and (4) seeking professional help in the form of psychotherapy. The authors suggest that the participants' resiliency strategies were individually constructed, and therefore, it is questionable how much these themes generalize to LGB individuals more broadly (Dickinson & Adams, 2014). It is also unclear whether these strategies are unique to non-heterosexuals as they may be common forms of resilience among individuals in western cultures.

Character strengths and virtues. Positive psychologists have identified a number of empirically researched character strengths and virtues (e.g., creativity, courage, love, justice; Vaughan & Rodriguez, 2014). A number of these themes are found within research on LGB populations, even if the terms are not explicitly used or positive psychology is not the focus. For example, creativity is seen in a number of the positive aspects of LGB identity as reported by Riggle and Rostosky (2012), including the freedom to create new rules and the freedom to explore relationships and sexuality (Vaughan & Rodriguez, 2014). Courage is an implicit component of identity disclosure in a heterosexist culture, and theory suggests that higher levels of well-being and psychological health come as a result of the courage to disclose one's identity (Cass, 1979; Vaughan & Rodriguez, 2014). Despite the implicit or indirect connections between these virtues and LGB well-being that can be derived from the literature, a recent review of the literature by Vaughan and Rodriguez (2014) there is very little empirical research documenting the link between these character virtues and well-being in LGB populations. More research on these character strengths and virtues may increase understanding of the processes involved in developing and maintaining psychological well-being for LGB individuals.

Positive institutions. Research on the impact of positive institutions is underdeveloped within positive psychology in general, and therefore, it comes as no surprise that no empirical research on the influence of positive institutions on the well-being of LGB populations was found in a literature search (Meyer, 2014; Vaughan & Rodriguez, 2014). Meyer (2015), in an article on resilience in LGBT research, highlights the lack of research focus on the communal/institutional level, noting that

disproportionate attention on the individual diminishes the potential impact that communities and institutions can have in fostering positive psychological processes such as resilience. Additional empirical research is needed to assess the degree to which participation in LGB-positive social institutions (e.g., affirming religious congregations, affirming work environments, gay/straight student alliances) fosters positive psychological constructs (e.g., resilience, character strengths) and higher well-being within LGB individuals.

Positive psychology as a discipline has helped to promote empirical research on positive psychological functioning. The discipline as a whole, however, has been slow to incorporate cultural diversity into its overall research agenda (Vaughan & Rodriguez, 2014). As sexual minorities continue to work toward equal rights in society, it will become increasingly important to understand the positive dimensions of LGB psychology so that public institutions and helping professionals can adequately support non-heterosexuals' efforts to thrive throughout the lifespan.

Conclusion

Over the past 30 years, research on many aspects of the psychological well-being of LGB people has steadily increased (Fredriksen-Goldsen, Kim, Shiu, Goldsen, & Emlet, 2015; Herek & Garnets, 2007; Meyer, 2003). As a result, a number of conclusions can be drawn from the literature. First, there is clear and strong evidence regarding mental health disparities for sexual minority individuals as well as strong evidence supporting the relationship between minority stress and these negative mental health outcomes. In general, the various elements of the minority stress framework, including distal and proximal stressors and the impact of minority identity valence and integration,

are well supported as domains influencing negative mental health outcomes for non-heterosexual individuals. Secondly, developing a positive sense of one's sexual identity seems to be an important developmental process related to the psychological well-being of LGB individuals, even if developmental stage models have limited empirical support. Third, a number of psychological processes, including positive identification with a collective minority identity, coping, resilience, and coming out in affirmative settings, at least protect against the deleterious effects of stress on health, if not generally support the development of well-being. Fourth, a number of positive psychological factors, including authenticity, a sense of belonging to a community, and heightened self-awareness, are consistently found to come from possessing a minority sexual identity and may help predict LGB psychological well-being.

In addition to these affirmative conclusions, many questions remain unresolved. First, with regard to minority stress, it is currently unclear whether minority stress experiences are predictive of lower psychological well-being as Meyer (2003) theorizes (Selvidge et al., 2008). It is possible that other processes independent of stress experiences are at play regarding one's level of psychological well-being such as the presence of positive psychological traits or states. Secondly, the scientific and cultural understanding of sexual identity labels is rapidly shifting, including the degree to which holding a label is even relevant for the well-being of LGB individuals (Eliason & Schope, 2007). It may be that positive regard for one's sexuality is the key for the psychological health of LGB individuals rather than a solidified cognitive identification with a particular label (Ghavami et al., 2011).

Third, it remains unclear as to what positive psychological processes or constructs are particularly critical for the psychological well-being of LGB individuals. Although Riggle et al. (2014) have provided preliminary evidence suggesting the importance of certain positive aspects of identity for psychological well-being, the empirical research has remain limited by cross-sectional correlational analysis. Therefore, it will be important for researchers to investigate the potentially causal relationship between the positive aspects of LGB identity and psychological well-being. Furthermore, additional research is necessary to determine whether these factors are truly unique to LGB individuals and whether they are relevant for non-white and less educated LGB adults. On a related and broader note, researchers interested in understanding the mechanisms underlying the promotion of positive psychological health should work to determine whether minority sexual identity or orientation plays an important role in promoting psychological health at all, and if it does, how important of a role does it play. Finally, given the relative dearth of empirical research on positive psychological variables within LGB populations, the role that character strengths and positive institutions play in promoting LGB well-being is also unclear at this time and deserves additional attention (Vaughan & Rodriguez, 2014).

Social Well-Being of LGB Individuals

What does the research literature say about the social well-being of LGB individuals? From the perspective of the minority stress theory (Meyer, 2003), general environmental circumstances and stressors as well as LGB-specific social stressors such as discrimination and victimization directly impact the mental health of non-heterosexual individuals. The model also specifies that social support from both individuals and

communities can have a moderating effect on the impacts of minority stress. Research indicates that family support and community connectedness can serve as a buffer from stressful conditions, thereby lessening the effects of stress on the individual's psychological well-being (Meyer, 2003). This section will review how families of origin, same-sex intimate relationships, community, and public policy impact the well-being of LGB individuals.

Family of Origin

For all individuals, family of origin plays a strong role in one's development, especially during youth and adolescence. Parents in particular are critical for understanding the well-being of young people, yet there is a relative gap in the research regarding the influence of parents on LGB youth's well-being (Bouris et al., 2010). For the most part, research on parental relationships with LGB children and the impact of this relationship on LGB children's wellbeing has focused on parents' responses to sexual orientation disclosure (Bouris et al., 2010; Patterson, 2000). Heatherington and Lavner's (2008) review of this literature found a number of variables associated with negative and positive outcomes for LGB individuals and their families. On an individual level, there are inconsistent and sparse research findings regarding how race/ethnicity impacts the well-being of LGB individuals post-disclosure; virtually all of the research focuses on the frequency of disclosure of sexual orientation to parents by race/ethnicity and the individuals' gender, with little to no attention given to post-disclosure effects on well-being. The effects of familial religious views on parental reactions to an LGB child coming out has been studied more extensively. This research indicates that high levels of religiosity within a family are correlated with more negative parental reactions to sexual

orientation disclosure by non-heterosexual children. Furthermore, religiosity may be associated with preexisting attitudes toward homosexuality, a variable that has been shown to predict parental response to a child's disclosure. For parents with positive preexisting attitudes, positive reactions are more likely. In general, parents with more positive preexisting attitudes toward homosexuality and greater exposure to LGB individuals or the possibility of their child being non-heterosexual increase the chances for positive outcomes following the child's disclosure of sexual orientation (Heatherington & Lavner, 2008).

One of the most studied and substantiated predictors of well-being outcomes is the quality of the parental relationship prior to the disclosure (Heatherington & Lavner, 2008; Patterson, 2000). In general, more supportive and caring parent-child relationships tend to result in greater well-being for the child (Bouris et al., 2010). Family support and acceptance has been shown to have a strong and positive association with LGB youths' acceptance of their sexual orientation and well-being (Shilo & Savaya, 2011). Having two accepting parents, as opposed to one accepting and one rejecting parent, also showed better mental health outcomes for the child (Bouris et al., 2010). Stronger parental attachments are associated with fewer maladaptive cognitions and stronger attachment in relationships in adulthood (Heatherington & Lavner, 2008). In some studies, family support and cohesion has been found to predict positive outcomes in LGB individuals, but other studies have shown that while social support is an important predictor of LGB well-being, family support in particular is not (Heatherington & Lavner, 2008). It is possible that these discrepant findings are related to other factors, such as cultural values regarding the importance of family. Nevertheless, in general, positive reactions from

parents regarding their LGB child's sexual identity is associated with positive mental health outcomes for the child (Mezey, 2015).

Research has provided substantial information regarding demographic differences in disclosure to family (e.g., non-white individuals disclose less frequently than white individuals, children are more likely to come out to mothers before fathers; Heatherington & Lavner, 2008; Patterson, 2000). However, like most LGB research, there are some significant conceptual and methodological concerns. First, despite a tendency in the research to focus upon strained parental relationships following a LGB child's disclosure of sexual orientation, more recent research has shown that many parents of LGB children are engaged in supporting their child's well-being and are open to assistance in this regard (Bouris et al., 2010). More research is necessary to understand how parents can positively impact an LGB child's well-being without assuming that most parent-child relationships are strained by the child's disclosure of having a non-heterosexual orientation. Additionally, as with most LGB research, most of these studies employ a cross-sectional design and use relatively small convenience samples, making it difficult for causality or broader generalizations to be established.

Same-Sex Intimate Relationships

Although it is difficult to obtain an accurate estimate of the number of same-sex couples, there were approximately 646,464 same-sex partner households in the United States according to the 2010 U.S. Census, an 80% increase from estimates in 2000 (U.S. Census Bureau, 2012). As same-sex couples have become increasingly prominent and gained legal recognition over the past two decades, research on these relationships has increased steadily as well (Peplau & Fingerhut, 2007). Empirical evidence has shown a

number of similarities between opposite-sex and same-sex couples with regard to well-being: (a) both groups hold similar relationship values, such as valuing affection and shared interests; (b) both groups report similar levels of relationship satisfaction, quality, and love; (c) relationship satisfaction in both groups tends to be higher when partners come from similar backgrounds and share similar values; (d) both groups have similar frequency and types of arguments and are equally skilled at resolving these conflicts; and (e) individuals in both groups have similar levels of self-perceived health (Denney, Gorman, & Barrera, 2013; Patterson, 2000; Peplau & Fingerhut, 2007).

There are also a number of important distinctions between the well-being of same-sex couples and opposite-sex couples. Power within the relationships of same-sex couples is distributed more equitably than in opposite-sex couples, due at least in part to same-sex couples not being bound by traditional opposite-sex gender roles (Patterson, 2000). Same-sex partners are more likely to equitably distribute household tasks and report equal power within the relationship, even if power still tends to be unequally distributed to the partner with greater personal resources (e.g., income, education; Patterson, 2000; Peplau & Fingerhut, 2007). This perception of equality or power in relationships may be associated with greater relationship well-being, and perhaps individual well-being as well (Peplau & Fingerhut, 2007).

Relationship satisfaction. Sexual satisfaction and relationship satisfaction are positively correlated for all couples, as is sexual satisfaction with frequency of sexual activity (Holmberg, Blair, & Phillips, 2010; Peplau & Fingerhut, 2007). There are some differences in sexual frequency between opposite-sex couples, male couples, and female couples (Peplau & Fingerhut, 2007). For all couples, sexual satisfaction and sexual

frequency are related; however, female couples report lower frequency of sex than their male or opposite-sex counterparts, and early on in relationships, male couples tend to report having sex more frequently than either opposite sex or female couples (Peplau, Fingerhut, & Beals, 2004). Some research also indicates that sexual satisfaction for gay men is predicted by life satisfaction, living with a partner, and positive relations with others (one of Ryff's six dimensions of psychological well-being; Ryff, 1989) whereas sexual satisfaction for lesbians is predicted by environmental mastery (another one of Ryff's six dimensions), living with a partner, and age (Biss & Horne, 2005). This research shows the interrelationship between sexual satisfaction, gender, and well-being is likely complex and context specific.

It is also well documented that non-heterosexual men tend to be more open to non-monogamous relationships, and that the longer a male couple remains in a relationship, the more likely it is for there to be extra-dyadic sexual contact (Patterson, 2000; Peplau et al., 2004). Research indicates that sexual exclusivity is only positively associated with relationship satisfaction for female couples and opposite-sex couples, but not for male couples (Peplau & Fingerhut, 2007). For male couples, it appears that agreement regarding sexual activity is more important for relationship satisfaction than exclusivity (Peplau et al., 2004). More recent research has affirmed this perspective, but also showed that gay men in non-monogamous relationships have higher perceived quality of alternatives and lower dedication commitment, both of which put them at potential risk for relationship instability (Peplau & Fingerhut, 2007; Whitton, Weitbrecht, & Kuryluk, 2015).

Relationship quality. As already indicated, research on the relationship quality of same-sex couples has shown that these couples are generally indistinguishable from their heterosexual counterparts (Peplau & Fingerhut, 2007; Roisman, Clausell, Holland, Fortuna, & Elieff, 2008). One study collected self-reports and partner reports of relationship quality as well as observational and physiological data (i.e., electrodermal response and heart rate) of same- and opposite-sex couples engaging in dialogue about an unresolved conflict in a laboratory setting (Roisman et al., 2008). This study showed no significant differences on any of the questionnaires, observations, or physiological data, with the exception that female couples were observed to be particularly skilled in working together to resolve conflict (Roisman et al., 2008). Other studies have shown that some of the more proximal variables within the minority stress framework, such as internalized homophobia, have a negative correlation with relationship quality, and that this may be mediated by the depression that accompanies internalized homophobia (Frost & Meyer, 2009; Mohr & Fassinger, 2006). Additionally, greater sexual identity confusion has been shown to have a negative association with relationship quality in same-sex couples (Frost & Meyer, 2009; Tornello, Johnson, & O'connor, 2013).

Same-sex couples, like opposite-sex couples, often have aspirations to become parents. The path to parenthood is often relatively straightforward for opposite-sex couples, while same-sex couples face not only biological barriers (i.e., requiring either a sperm donor and/or a surrogate), but systemic barriers as well (Farr & Patterson, 2013; i.e., discrimination from adoption agencies; Peplau & Fingerhut, 2007). Among the many questions researchers have begun to address related to same-sex parenting is the degree to which becoming a parent impacts the well-being of LGB parents and the quality of their

relationship. The limited number of studies in this area have shown no differences between same-sex and opposite-sex adoptive couples on relationship satisfaction, with all parents tending to show high levels of overall relationship satisfaction and general satisfaction with being parents (Farr & Patterson, 2013).

Social Support and Community Connectedness

As stated above, social support is seen as a potential moderating variable in Meyer's (2003) minority stress conceptual model. Whereas personal supports (e.g., coping, personality traits) vary substantially from individual to individual, belonging to a larger social group, such as the LGBT community, allows LGB individuals to use collective resources (Herek & Garnets, 2007). By taking on what Herek and Garnets (2007) call a collective identity, LGB individuals view their sexual identity in broader terms, understanding themselves as one of many people with a non-heterosexual orientation. Through collective identification with LGB individuals, the experience of not being heterosexual is normalized and LGB individuals are provided the opportunity to be in a non-stigmatizing environment (Meyer, 2003). This, in turn, may make it easier for LGB individuals to interpret social discrimination as a form of social injustice rather than a personalized injustice, and thereby lessen the psychic distress that could result from this discrimination. This theory is substantiated through empirical evidence showing that LGB individuals who are actively engaged in an LGB community report less psychic distress than those who do not (Herek & Garnets, 2007).

The value of social support for LGB individuals is not limited to protecting against psychic distress; it is also important for psychological well-being. Several qualitative studies have shown that both LGB youth and adults identify connectedness to

the LGB community as an important positive factor associated with their well-being (Higa et al., 2014; Riggle & Rostosky, 2012). One early quantitative study of lesbians and heterosexual women showed that perceived social support was highly predictive of well-being, as measured by the Index of General Affect, an instrument measuring cognitive and affective appraisals of life satisfaction (Wayment & Peplau, 1995). A study of gay men in Spain looked at the effect of social support on life satisfaction and found that social support accounted for 14.5% of the variance in life satisfaction, with friendships being a stronger source of support than family (Domínguez-Fuentes, Hombrados-Mendieta, & García-Leiva, 2012). This finding also holds true for older LGB adults (ages 50 years or older), as evidenced by Masini and Barrett's (2008) finding that social support from friends was predictive of psychological well-being (as measured by the SF-12 Health Survey). Connectedness to the LGB community has also been shown to be a good predictor of social well-being, as operationalized by Keyes (1998), as well as Ryff's (1989) operationalization of psychological well-being (Kertzner et al., 2009).

Social support and LGB community connectedness can also help to attenuate the negative effects of stigma on well-being. Bachmann and Simon (2014) looked at the role that involvement in the LGB community plays in moderating the effects of victimization (i.e., discrimination of varying degrees and forms) on life satisfaction. The study showed that LGB community involvement lessened the impact of victimization on life satisfaction, as did the individual's perspective that s/he is recognized and value within the broader society. A similar study showed that community involvement moderated the effects of stigma on psychological well-being (as measured by self-esteem, depression, and loneliness; Ramirez-Valles, Fergus, Reisen, Poppen, & Zea, 2005). In a study of

Israeli youth and young adults, the association between lower psychological well-being and being bisexual was partially mediated by less contact with the LGB community (Shilo & Savaya, 2012). These studies, along with other studies that associate active membership in the LGB community with higher self-esteem and more positive group identity (Domínguez-Fuentes et al., 2012), help to substantiate the notion that social support strengthens LGB individuals' well-being and helps foster resiliency in the face of discrimination.

Public Policy

Connectedness to the LGB community seems to provide some buffer to the effects of stigma in a heteronormative society. However, this buffer does not entirely shield LGB individuals from the impact of discriminatory public policy within a heterosexist society. Up until June of 2015, the right to marry was denied to same-sex couples in the United States (Obergefell v. Hodges, 2015), causing real financial, psychological, and social stressors on LGB individuals and their families. Fortunately, the stress of being denied marriage rights is no longer a burden for LGB families in the United States. Nevertheless, other discriminatory public policies, such as the absence of anti-LGBT discrimination laws, are still prevalent in the U.S. and around the world. The psychosocial impact of discriminatory public policies and the political campaigns in support of them has received significant attention in the literature. In general, this research has provided additional reasons to support nondiscriminatory policies from the perspective of increasing the psychosocial health of LGB individuals.

Anti-discrimination policies. One of the earliest studies of the psychological impacts of anti-LGB policies is documented in Glenda M. Russell's *Voted Out: The*

Psychological Consequence of Anti-Gay Politics (2000). Russell describes the results of a mixed methods study investigating the psychological toll of Colorado's Amendment 2 ballot measure, a measure that removed discrimination protection of LGB individuals from the state's constitution, on over 600 LGB individuals in Colorado. In addition to the unsurprising negative consequences of increased anxiety, depression, and PTSD symptoms, the study also points to some of the unintended, and perhaps less expected, positive effects of the amendment's passing, including greater empowerment, stronger sense of community with other LGB individuals, and "more [confidence] that at least some heterosexuals in their lives appreciated the burden of the homophobia they confronted" (Russell, 2000, p. 12). A follow-up study factor analyzed responses to survey data in 1996 following the U.S. Supreme Court's declaration of amendment 2 unconstitutional (Russell & Richards, 2003). Factor analysis revealed what the authors describe as three resilience factors of LGB individuals in the face of anti-gay discrimination: (1) movement perspective, or the ability to cognitively reframe a particular anti-gay event within a larger political context; (2) confronting internalized homophobia, or taking the opportunity to notice and dismantle their own internalized homonegativity; and (3) expression of affect, or the ability for the expression of negative affect to mobilize LGB individuals to work for social justice (Russell & Richards, 2003). These studies help to highlight that the anti-LGB public debates and policies have the capability of spurring both psychological distress and resilience.

More recently, efforts have been made on the federal level to pass the Employment Nondiscrimination Act (ENDA) which would prohibit employment discrimination based on sexual or gender identity (Hatzenbuehler, 2010). Although

opponents to the bill argue that protections are already in place, research using population-based data has shown that gay men earn up to 32% less relative to comparable heterosexual men in the same positions (Hatzenbuehler, 2010). Other studies using population-based data have linked higher prevalence of mental health issues with lack of legal protections against hate crimes and employment discrimination on the state level (Hatzenbuehler, 2010). Although these studies have primarily focused on the presence of psychological illness and not health, similar studies regarding same-sex marriage discrimination suggest that well-being may also be hindered by the lack of legal protections against LGB discrimination.

Same-sex marriage discrimination and equality. As the debate over marriage equality for same-sex couples became increasingly fraught over the past 15 years, researchers documented the correlation between LGB health and legal same-sex marriage rights (Hatzenbuehler, 2010). Two studies using internet convenience samples observed higher rates of depressive symptoms among LGB respondents living in seven states that had recently passed constitutional amendments banning same-sex marriage relative to states that had not recently voted on such an amendment. Additional analysis was done with a smaller sample 6-months prior to the election in these states showing a significantly lower baseline of depressive symptoms, indicating the election results may have truly been connected to the ballot measures (Hatzenbuehler, 2010). Longitudinal research has also examined the rates of psychiatric diagnoses among LGB individuals between 2001-2002 and 2004-2005 in states with and without constitutional amendments barring same-sex marriage as well as the differences between heterosexuals and LGB individuals in the states with discriminatory marriage amendments during these time

periods. The study found that there was a statistically significantly higher rate of psychiatric diagnoses among LGB individuals in states with discriminatory constitutional amendments relative to states without marriage amendments and that these increases were nonexistent for heterosexuals within these states (Hatzenbuehler, 2010). This provides some compelling evidence that discriminatory ballot measures have a causal effect on the health of LGB individuals.

Similar research found that these deleterious effects extended beyond increasing psychological distress to include decreased psychological well-being for same-sex couples (Riggle, Rostosky, & Horne, 2010). Riggle, Rostosky, and Horne (2010) found that same-sex couples in legally recognized marriages reported lower levels of psychological distress and higher levels of well-being (as operationalized by a meaning in life measure) even when controlling for other variables such as gender, relationship length, and the presence of children. Another study looked at married lesbians in Massachusetts and found a positive correlation between same-sex marriage and well-being (Ducharme & Kollar, 2012). In another study, Fingerhut and Maisel (2010) examined differences between legal recognition and social recognition (i.e., a marriage ceremony without legal benefits) of same-sex marriage. In this study, the authors found that while social recognition was related to life and relationship satisfaction, only legal recognition was associated with relationship investment, a variable that has been shown to promote relational stability and longevity (Fingerhut & Maisel, 2010; Peplau & Fingerhut, 2007). These studies provide support for the notion that marriage benefits serve as a buffer against psychological illness and as a means to promote individual and relational well-being.

Given that much of this research is focused on state ballot measures that often include significant public campaigning, researchers have also investigated the general effect of anti-LGB publicity on LGB individuals and their families. One study looked at a sample LGB individuals in California five days prior to the vote on Proposition 8, a ballot measure to ban same-sex marriages in the state (Maisel & Fingerhut, 2011). This mixed method study found that LGB individuals reported higher levels of negative emotions than positive emotions in relation to the ballot measure, but also observed increases in the commitment to partners (Maisel & Fingerhut, 2011). The study also looked at positive outcomes related to the Proposition 8 campaign through qualitative methods, observing that the strongest positive effects were related to greater community involvement, increase pride, and generally feeling supported by society. Another study looked at the effects of exposure to macro-level aggressions (e.g., hearing politicians promote anti-LGB messages or seeing protestors holding signs anti-LGB religious messages) on the well-being of LGB young adults (as operationalized by self-esteem, anxiety, and perceived stress; Woodford, Paceley, Kulick, & Hong, 2015). This study found that anxiety and perceived stress, but not self-esteem, were related to experiences of macro-aggressions, while self-esteem, but not anxiety or perceived stress, were positively related to living in a state that prohibits same-sex marriage. The authors suggest these counterintuitive finding regarding the positive association between self-esteem and same-sex marriage prohibition may be an artifact of the multivariable linear regression, as there was no significant bivariate correlation between self-esteem and marriage prohibition laws (Woodford et al., 2015). Regardless of the explanation for this finding, more

research is necessary to determine what aspects of well-being are impacted by discriminatory public policy.

Conclusion

As with the psychological well-being of LGB individuals, the vast majority of research on this population focuses on psychopathology, stressors, and deficits, providing minimal attention to the positive dimensions of social health. This focus, however, has provided a number of important conclusions. First, important components of the social lives of all humans - family, intimate relationships, and community - have similar effects for LGB individuals as they do for heterosexual individuals. This is seen in better outcomes for LGB youth who have caring and supportive parents (Bouris et al., 2010), relatively equivalent levels of relationship satisfaction and overall functioning among same-sex couples (Peplau & Fingerhut, 2007), and the importance of social support from both peers and family (Herek & Garnets, 2007), among many other examples. Second, it has illustrated how the additive stress of holding a minority sexual orientation can create unique social burdens, such as possible rejection from family or the withholding of legal rights and protections, that can increase the risk for pathology. Finally, by focusing on the negative health outcomes associated with anti-LGB public policies, research has added a substantive public health argument for developing social policy geared toward recognizing and protecting the rights of LGB individuals.

Findings regarding the social well-being of LGB individuals, while more limited, also highlight some important issues. Unsurprisingly, family support and acceptance seems to increase well-being of LGB individuals (Mezey, 2015), as does social support from peers and the LGB community (Herek & Garnets, 2007). Legal recognition of

marriage also seems to promote well-being (Ducharme & Kollar, 2012; Riggle et al., 2010) and LGB couples may thrive within relationships where power is perceived to be shared equally (Peplau & Fingerhut, 2007).

Despite these findings on the social well-being of LGB individuals, there are a number of substantial unresolved issues within the literature. First, there appears to be only one study (Kertzner et al., 2009) that specifically looks at Keyes' theory of social well-being (Keyes, 1998) in relation to LGB individuals. Given the clear importance of positive social support to the lives of LGB individuals, it seems that a more thorough investigation into the predictors of social well-being and the process for developing and increasing it within LGB individuals is an important area needing further investigation. In relation to this first consideration, the literature generally does not measure the social well-being of individuals as an outcome measure at all; rather, studies tends to focus on social variables (e.g., family support, community connectedness) that are associated with psychological well-being. The one exception to this are studies of relationship satisfaction and quality, which may be seen as a specific type of social well-being. Third, as is the case with studies of the physical and psychological well-being of LGB individuals, the term "well-being" is used inconsistently throughout the literature, at times relying upon one measure that may only be tangentially related to psychological well-being (e.g., meaning in life; Riggle et al., 2010). This inconsistency obscures the findings regarding the social aspects of the well-being of LGB individuals.

In addition to more research measuring the positive social health outcomes of LGB individuals, more attention is needed on the process by which these outcomes are derived. In a recent critique of the positive psychology literature on the LGBTQ

population, Domínguez, Bobele, Coppock, and Peña (2015) call for a more strengths-based, systems-focused, and resiliency-oriented approach to understanding non-heterosexual families. Their framework incorporates a number of constructs that have been well studied within the positive psychology literature but not yet applied specifically to LGB individuals, including learned optimism, resiliency, and strengths-based intervention approaches. Although this framework is specifically intended for the study of non-heterosexual families, it nevertheless is an example of a process framework that might illuminate how LGB individuals thrive within both LGBT-friendly social settings and the larger heterosexist society.

General Critiques and Conclusions

A number of conclusions can be drawn from this review of the literature. To conclude this chapter, the findings presented in the previous sections will be summarily critiqued and future directions for research will be identified.

Conceptual Critiques of LGB Well-Being Research

Based on the review of the literature, it is clear that the minority stress theory is the predominant conceptual framework for understanding LGB health. Although this theory seems to adequately explain and predict negative health outcomes for sexual minority individuals, there is less evidence that it adequately captures the full range of positive health and well-being. One study (Kertzner et al., 2009) has shown that some factors included the theory, such as social support and positive minority identity, are predictive of both psychological well-being (as measured by Ryff's Scales of PWB; Ryff, 1989) and social well-being (as measured by Keyes' social well-being measure; Keyes,

1998). This study, however, does not test the theory's prediction that the impacts of minority stressors on well-being would be attenuated by these variables; instead, it merely shows that the social support and positive sexual identity variables have a direct relationship to the well-being variables, a finding that is not particularly surprising. Another study (Selvidge et al., 2008) used multiple regression to test the combined effect of sexist and heterosexist events (i.e., experiences of discrimination), self-concealment (i.e., a measure of one's tendency to not disclose information to others), and self-monitoring (i.e., awareness of others' behavior and the ability to adapt to circumstances) on psychological well-being. The authors found that sexist and heterosexist events were not significant predictors of psychological well-being when combined with the other two variables (Selvidge et al., 2008). Although this study, like the study by Kertzner et al. (2009), did not directly test the minority stress theory's hypothesized pathways to positive health outcomes, it does suggest that minority stress experiences may not be as important to the psychological well-being of LGB individuals as other factors such as positive identity, social support, and coping abilities. Therefore, more clarification is needed to determine whether the theory adequately explains positive health outcomes or whether modifications are needed to better explain the pathways through which LGB individuals are most likely to experience well-being.

Another field that could contribute to a deeper understanding of the positive health outcomes of LGB individuals is positive psychology. The three pillars of positive psychology as outlined by Seligman and Csikszentmihalyi (2000) could provide evidence regarding potentially unique relationships between positive psychological constructs and LGB health. Vaughan et al. (2014) recommend that LGBT researchers utilize the three

pillars framework to conduct research on the positive dimensions of LGBT experience. In addition to LGBT researchers exploring positive psychological constructs, it would also be helpful for the field of positive psychology to be more intentionally inclusive of sexual minorities (and other minorities) within their research (Meyer, 2014). Without such research, it will be difficult to determine whether, and if so, to what degree, positive psychological processes (e.g., curiosity, forgiveness, courage, etc.) differentially effect the health and well-being of LGB individuals.

Research Methodology Critique of LGB Well-Being Research

In order to fully address the aforementioned conceptual critiques, several important methodological limitations in the literature need to be adequately addressed. These limitations fall into two broad categories: sampling and design issues.

Sampling. Much has been written about the sampling difficulties inherent in LGBT research (Binson et al., 2007; Herek & Garnets, 2007; Meyer & Wilson, 2009; Parks, Hughes, & Werkmeister-Rozas, 2009; Sell, 2007). One of the most salient and problematic of these issues is the difficulty of defining the population. As mentioned in the introduction, there are three primary ways through which researchers attempt to define this population: (1) sexual orientation identity (i.e., a self-identified label of gay, lesbian, bisexual, or other non-heterosexual term); (2) sexual behavior (i.e., self-report of the gender of previous sexual partners); or (3) sexual attraction (i.e., self-report of attraction to various genders; Sell, 2007). Each method has advantages and disadvantages. By relying upon self-report of sexual orientation identity, researchers can be more certain that those who identify as lesbian, gay, bisexual, or other non-heterosexual label are accurately classified. It does not ensure, however, that all non-

heterosexual individuals are identified, as many individuals may choose not to disclose their non-heterosexual orientation due to stigma or lack of self-awareness (Meyer & Wilson, 2009). Using reports of sexual behavior has the benefit of including individuals who identify as heterosexual but have a non-heterosexual orientation, but may exclude LGB individuals who are not sexually active or uncomfortable with honestly disclosing their sexual behavior. Using reports of sexual attraction, usually assessed on an ordinal scale from exclusively attracted to the same-sex to exclusively attracted to the opposite sex, have the benefit of accounting for non-heterosexual individuals lacking sexual experience or who do not self-identify as LGB. Assessing sexual attraction, like assessing sexual behavior, has the disadvantage of not capturing a person's self-identified orientation and may create an added difficulty of accurately assigning respondents who do not identify on the polar ends of the spectrum to a group (i.e., gay, bisexual, heterosexual).

Most studies in this review have relied upon participants' self-identification as LGB, with some using behavioral or attraction measures. Because of individual differences among LGB individuals with regard to identity, behavior, and attraction, using only one measure to classify the sexuality of individuals may lead to misclassifications or oversimplification (Herek & Garnets, 2007). Some studies have utilized other classification methods, such as using multiple variables in tandem to classify sexual identity. One such study (Feinstein, Meuwly, Davila, Eaton, & Yoneda, 2015) assessed the level of participants' same-sex and opposite-sex emotional, romantic, and sexual attraction and sexual behavior and then grouped the participants into sexual orientation groups based on these variables using cluster analysis. Even when studies

incorporate multiple measures of sexual orientation, the data are sometimes reduced during data analysis, leading to overly simplistic binary categorizations (i.e., gay/lesbian and heterosexual). This simplification of sexual orientation has a number of unfortunate consequences, including reinforcing the misleading notion of the sexual binary and underrepresentation of bisexuals in LGB studies (Diamond, 2006). More research is needed on a satisfactory solution to this methodological issue, as no single approach to defining or measuring non-heterosexual orientations has arisen in the literature (Sell, 2007).

Beyond the definitional difficulties of LGB research, various other sampling issues were found within the reviewed literature. First, most of the studies used non-probability samples (i.e., non-random, convenience samples), with the exception of several probability studies establishing descriptive statistics of LGB health and well-being (e.g., Cochran & Mays, 2007; Riggle et al., 2009). Non-probability samples introduce additional bias into studies and limit the generalizability of the study's findings (Meyer & Wilson, 2009). Secondly, LGB researchers have long struggled to develop means of finding LGB participants. Two popular study recruitment methods - recruiting at LGB venues and web-based sampling - have helped address this issue and are used in many of the studies. These methods, however, introduce unintended bias, as there are likely characteristics specific to individuals who attend certain LGB venues (e.g., gay bars) and who use the internet to access gay-friendly websites that are not generalizable to the larger LGB population. Although some methods have been developed to help control this issue such as time-space sampling or respondent driven sampling, they may

be underused due to limited resources (e.g., money, time; Binson et al., 2007; Meyer & Wilson, 2009).

Third, these non-probability samples tend to lack racial/ethnic, educational, gender, and socioeconomic diversity. Historically, LGB research has been heavily focused on white, gay men, and as a result, the empirical research reviewed above may not adequately capture the well-being of all sexual minorities (Diamond, 2006). Lastly, there are numerous studies that address the unique factors associated with particularly periods in the lifespan or particular generational cohorts (Fredriksen-Goldsen et al., 2015; e.g., Higa et al., 2014). The literature as a whole, however, too often fails to fully consider the impacts of age and generational cohort on LGB well-being, and at best, only controls for age. Given the rapidly changing sociocultural perspectives on sexuality, cohort effects should be given more careful consideration in the literature (Martin & DAugelli, 2009).

Research design. Perhaps due to the very costly and time consuming nature of longitudinal studies, the vast majority of quantitative LGB well-being studies use cross-sectional designs. While these designs are helpful for establishing relationships between possible predictors of well-being and well-being variables, they are ineffective at establishing causality. In addition to more longitudinal studies, more research is needed using more complex statistical modeling (e.g., structural equation modeling, or SEM) to capture the inherent complexity involved in LGB research. Some studies reviewed above (e.g., Frost & Meyer, 2009) have used statistical modeling such as SEM, and as a result, have tentatively identified some of the unique pathways between minority stress and aspects of well-being. It is increasingly important to move beyond identifying predictor

variables of well-being and move toward more complex statistical models that validate how sociodemographic variables (e.g., race, generational cohort, socioeconomic status), minority stress processes, and positive psychological processes and traits impact LGB well-being (Meezan & Martin, 2009).

The way in which well-being outcome variables were analyzed in studies varied significantly and may have impacted the conclusions drawn from the analyses. Many studies used multiple instruments to comprehensively measure well-being. For example, Floyd et al. (1999) operationalized well-being through two measures: the Rosenberg Self-Esteem scale and the Brief Symptom Inventory. In this example, several step-wise regression analyses were conducted, each with either the self-esteem scale or the symptom inventory as the dependent variable. Other studies that used multiple dependent variables employed multivariate methods such as multivariate analysis of variance (MANOVA; e.g., Li et al., 2013). The former approach offers stronger conclusions regarding the specific constructs studied (e.g., self-esteem or psychological distress), but provides weaker conclusions regarding well-being as a whole. The latter approach of using a multivariate analysis procedure may allow for more substantive conclusions, especially when the measures are correlated and when the multiple measures are conceptualized as measuring several aspects of one construct (i.e., well-being; Tabachnick & Fidell, 2013).

With regard to qualitative designs, Riggle and Rostosky (Riggle & Rostosky, 2012) have provided compelling examples of how qualitative research can be used to advance research on the positive dimensions of LGB identity. Their studies have incorporated grounded theory methodology and consensual qualitative research

methodology on sizable samples, and as a result, provided an empirical foundation for the development of a quantitative measure of the positive aspects of LGB identity (Riggle et al., 2014). Although their research is limited by many of the methodological constraints listed above (particularly with regard to the sociocultural diversity of the sample), this research nevertheless points to the ways in which qualitative research can help promote LGB voices in the service of social justice. Other qualitative studies reviewed above (Higa et al., 2014; e.g., Van Wagenen, Driskell, & Bradford, 2013) have similar strengths, all the while supporting an alternative narrative to the predominantly deficit-focused LGB research literature (Vaughan et al., 2014). Future qualitative studies that use large, diverse samples and rigorous methods aimed at limiting potential researcher bias (e.g., consensual qualitative research) could be helpful to answer some conceptual questions, such as whether heterosexual and non-heterosexual individuals tend to identify different biopsychosocial factors as important to their overall well-being.

Gaps in the literature. Many important findings have been found in the empirical literature on LGB well-being, including the association between minority stress processes and health disparities, the role of coping and social support as protective factors against the negative effects of minority stress, the relative equality in relationship satisfaction between same-sex and opposite-sex couples, and some of the key positive outcomes associated with LGB identity, to name just a few. Despite these substantial findings, there remain a number of gaps in the LGB well-being literature that will be attended to in this study.

What is the relationship between minority stress and psychosocial well-being? While it is known that there is a heightened risk for LGB individuals to develop negative

physical and mental health symptoms because of the experience of minority stress, it is less clear whether LGB individuals are at a risk for having fewer positive physical, mental, and social health "symptoms" (e.g., physical vitality, meaning in life, positive interpersonal relationships). If the relationship between minority stress processes and positive health outcomes is as predicted by Meyer (2003), then interventions aimed at promoting positive health should be focused on reducing experiences of distal stressors (e.g., prejudice) and proximal stressors (e.g., internalized homophobia) and enhancing coping strategies and social support. If the relationship between minority stress processes and positive health outcomes does not exist as theorized, then it may mean that reducing minority stress alone will not lead to an increase in positive functioning and subjective experience. If this is the case, then it is important to investigate the biopsychosocial mechanisms associated with positive health in LGB individuals so that helping professionals can seek to promote those mechanisms alongside interventions aimed at reducing negative health outcomes.

What is the nature of the relationship between strengths associated with non-heterosexual identity and psychosocial well-being? The literature has identified positive factors of LGB identity and provided some preliminary evidence for their association with psychological well-being (Higa et al., 2014; Riggle & Rostosky, 2012; Riggle et al., 2014). However, more research is necessary to see whether these factors function as a cause or effect of well-being or whether they are simple correlatives, with no direct relationship to well-being at all. Additionally, more research is necessary to see if positive psychological processes contribute to LGB well-being and if so, the amount of variance they contribute.

The present study seeks to address many of these gaps in the literature. Specifically, this study is intended to address the role minority stress processes, positive non-heterosexual identity valence (i.e., holding a positive view of one's minority sexual identity), strengths associated with being non-heterosexual, social support, and resilience play in the psychosocial well-being of LGB individuals. In the following chapter, the methodology used to answer the research questions identified in the introduction will be described in detail.

Chapter 3
METHODS

The present study investigated direct effects of several psychological factors on psychosocial well-being in a sample of non-heterosexual men. Specifically, the study investigated whether minority stress processes predicted lower positive mental health outcomes (i.e., psychosocial well-being) as theorized by Meyer's (2003) minority stress conceptual model, as well as whether positive psychosocial factors predicted well-being. Using structural equation modeling, two models were analyzed to test the effect of minority stress processes, positive non-heterosexual identity valence, strengths associated with being non-heterosexual, social support, and resilience on psychosocial well-being.

Given the study's theoretical foundations in Meyer's (1995) minority stress framework, a sample of non-heterosexual men was chosen to align the present study's sample with the sample of the original study by Meyer. Given the substantial amount of research done on the larger LGB population and the significant gender differences that have been found between non-heterosexual men and women, focusing on a specific gender-based subset of the population was viewed as more appropriate than using a mixed-gender sample. Although including a sample of non-heterosexual women would have enriched the study's findings, the large sample size needed for SEM made analysis of separate samples of men and women beyond the scope of the present study. Bisexual, queer, or other non-heterosexual men who do not identify as gay were included in the study sample.

Participants

Study participants were primarily recruited through the internet and by use of snowball sampling techniques. Additionally, non-heterosexual men were recruited at the Milwaukee Pride Fest where they provided consent to be contacted in the future with a link to the email survey. The majority of participants were recruited online through email invitations and postings to social media platforms (e.g., LGBT-specific Facebook groups, LGBT Reddit pages). Snowball sampling techniques were used during online recruiting by encouraging individuals to share information regarding study participation on social media and forward to others who would qualify for the study.

There were 465 individuals who began the study survey and 317 of those completed the entire survey. One participant was removed who identified as female and one participant who was under the age of 18 years was removed. One additional participant was removed who identified as straight *and* identified their past sexual behavior as "exclusively heterosexual." Therefore, the final sample included 314 participants.

Full demographic information for the sample is provided in Table 3.1. The age of participants ranged from 18 to 74 years with a median age of 25. The large majority of participants identified as white (87.26%). Roughly half of the participants had completed some college or less, while the rest had earned at least an associate's degree. Slightly over half (N = 163) of the participants reported an annual household income of $30,000-39,999 or less. The vast majority of participants (N = 255) lived in either a suburban or urban area. Most participants (N = 209) identified their religious affiliation as atheist, agnostic, or none. The vast majority of participants (N = 297; 94.59%) listed their gender identity as male with no indication as to whether this identity matched their assigned

gender at birth, while only 3.84% of participants (N =12) identified explicitly as transgender, queer, or gender non-conforming men.

Approximately three-quarters of participants identified as bisexual or pansexual (N = 242; 77.11%). When asked to describe the sexual behavior in their lifetime, approximately 37% of participants (N = 117) described their sexual behavior as somewhere between exclusively heterosexual and bisexual, while 38% (N = 120) described their sexual behavior as somewhere between exclusively homosexual and bisexual, with the rest describing their behavior as equally heterosexual and homosexual (N = 76; 24.2%). Five individuals identified their lifetime sexual behavior as "exclusively heterosexual," but listed their sexual identity as bisexual, while two participants identified as straight, but indicated their sexual behavior had not been exclusively heterosexual. The average age in which participants became aware of their sexual orientation was 16 years old. 85% of participants (N = 268) reported being "out," and among those who were out, the mean age in which they came out was 20 years old. Slightly under half of participants (N=141; 45%) indicated they were currently in a romantic relationship, and of those who were currently in a relationship, 56 indicated they were in a relationship with a male-identified partner and 83 indicated they were in a relationship with a female-identified partner.

Procedures

Questionnaire data were collected through Qualtrics, an online survey platform. Informed consent was obtained on the first page of the survey. Relevant demographic information was collected (see Appendix A for list of items) and followed by the measures described above. At the end of the survey, participants were given the option to

enter a drawing for one of four $25 Amazon gift cards. If interested, participants were invited to click on a link to complete a separate form asking for their name and e-mail address. This information was not connected to the survey data in any way to ensure participant anonymity.

Measures

The following measures were used for this study. See Table 3.2 for descriptive statistics for each of the study measures with this study's sample.

Psychosocial Well-Being

For this study, psychosocial well-being was defined as the positive dimensions of psychosocial health and was measured by the Mental Health Continuum-Short Form (Joshanloo, Wissing, Khumalo, & Lamers, 2013; MHC-SF; Keyes et al., 2008; Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011; Lamers, Glas, Westerhof, & Bohlmeijer, 2012). The Mental Health Continuum was originally developed as a method to measure the positive dimensions of mental health used in the original Survey on Midlife Development in the United States Survey (MIDUS; Keyes, 2002). The MIDUS survey included measures of emotional well-being, Ryff's Psychological Well-Being Scales (Ryff, 1989), and Keyes' Social Well-Being Scale (Keyes, 1998). The MHC-SF was later developed as a shorter method for measuring these three dimensions of positive mental health. The 14-item measure includes three items measuring emotional well-being, six items measuring psychological well-being (one item from each of Ryff's six scales), and five items measuring social well-being (one item from each of Keyes' five scales). The instrument asks participants to indicate how often they experienced a given

feeling or attitude in the past month. The items use a six-point scale, with responses including never, once or twice a month, about once a week, two or three times a week, almost everyday, and everyday. For example, one item asks "How often in the past month have you felt happy?" and another asks, "How often in the past month have you felt that you had warm and trusting relationships with others?" (see Appendix A for a complete list of items). The measure produces three subscales, one for each of the three dimensions of well-being, as well as a total score.

There have been several published studies indicating the MHC-SF's strong psychometric properties. The MHC-SF was originally tested with a random sample of individuals from four Setswana-speaking communities in South Africa (Keyes et al., 2008). Confirmatory factor analysis (CFA) supported the three factor structure of the measure and showed it to be superior to a one or two factor solution. Internal consistency coefficients (i.e., Chronbach's alpha) for the total score and the emotional well-being subscale were adequate (α = .74 and .73 respectively), though internal consistency for the psychological well-being fell below the generally recommended level of .70 (Nunnally & Bernstein, 1994). This study also showed that the total score for the MHC-SF had good criterion validity as indicated by statistically significant correlations with all other criterion validity measures used in the study.

Another study examining the MHC-SF with a representative Dutch sample corroborated the findings in the South African sample (Lamers et al., 2011). The three-factor structure of the MHC-SF was substantiated through exploratory and confirmatory factor analyses, with the CFA indicating that the three factor solution fit the data substantially better than a one or two factor solution. Internal reliability for the total score

was also very strong (α = .89), while correlation coefficients with convergent validity measures were low to moderate and statistically significant, generally aligning with the authors' hypotheses. This study also tested discriminant validity through factor analysis, where the MHC-SF subscales were entered along with measures of mental illness (e.g., depression, anxiety). Exploratory and confirmatory factor analyses yielded a two factor solution, with the MHC-SF subscale loading on one factor and the psychopathology measures loading on a second factor, indicating that the MHC-SF is assessing a latent factor distinct from mental illness. Lastly, this study also looked at the measurement invariance of the MHC-SF by analyzing scores taken at four times over the course of a year. The authors found that the three subscales were generally stable over time while remaining sensitive to changes, suggesting the test-retest reliability of the measure is moderate. This finding has been replicated and further supported by a cross-cultural study using Dutch, South African, and Iranian participants (Joshanloo et al., 2013).

For the present sample, the three subscales demonstrated strong to adequate internal reliability (emotional well-being subscale, α = .90; social well-being subscale, α = .79; and psychological well-being subscale, α = .83). The Cronbach alpha for the total scale scores was .91.

Minority Stress Processes

Three instruments were used to measure minority stress processes outlined by Meyer (2003).

Distal minority stress processes. The gay/bisexual male version of the Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS) was used to measure the distal minority stress processes of experienced prejudicial events due to

minority sexual identity. The HHRDS is an instrument designed to assess the frequency with which individuals have experienced heterosexist acts of harassment, rejection, and discrimination within the past year (Szymanski, 2006, 2009). The scale was originally developed for use with a sample of lesbians, but has subsequently been used with a sample of gay and bisexual men. The measure consists of 14 items assessing three factors identified by the authors as: (1) harassment and rejection; (2) workplace and school discrimination; and (3) other discrimination. The items in the gay/bisexual male version ask participants to indicate the frequency with which they have experienced a prejudicial event in the past year because they are gay/bisexual on a six point scale, with responses being never, once in a while, sometimes, a lot, most of the time, and almost all of the time. As an example, one item asks, "How many times have you been rejected by friends because you are a lesbian?" and another asks, "How many times have you heard anti-gay remarks from family members?" For this study, language for items were modified slightly when necessary to be inclusive to non-heterosexual men who do not identify as either gay or bisexual. For example, instead of saying, "because you are gay/bisexual," the item will read, "because you identify as non-heterosexual" (see Appendix A for a complete list of items).

The first study using the HHRDS conducted an exploratory factor analysis (EFA) to determine the best factor structure for the items with a sample of lesbians (Szymanski, 2006). The EFA showed that a three factor solution was most interpretable, resulting in the three factors identified above. Internal consistency for the total score was strong (α = .90) and convergent validity evidence was shown through moderate correlations with measures of psychological distress. In another study using the HHRDS with a sample of

gay/bisexual men, internal consistency was high (α = .91) and a statistically significant low correlation was found with a measure of psychological distress and a negative correlation was found with self-esteem (Szymanski, 2009). Internal consistency was strong (α = 0.92) in the present study's sample.

Proximal minority stress processes. To measure the proximal minority stress processes defined by Meyer's (2003) theory, two subscales from the Lesbian, Gay, and Bisexual Identity Scale (LGBIS) were used (Mohr & Kendra, 2011). The LGBIS is a refinement of an earlier measure, the Lesbian and Gay Identity Scale (Mohr & Fassinger, 2000), which was originally developed to measure several constructs relevant to lesbian and gay identity, including internalized homonegativity, identity confusion, and need for acceptance. This original instrument included six scales and was specific to lesbian women and gay men. A refinement of the instrument made the measure more inclusive of bisexual individuals, modified potentially stigmatizing language, and included two additional scales: identity affirmation and identity centrality (Mohr & Kendra, 2011). All items ask participants to respond based on their experience as an LGB person using a Likert scale, with responses being disagree strongly, disagree, disagree somewhat, agree somewhat, agree, agree strongly. When necessary, item wording was modified to accommodate this study's sample (e.g., instead of "LGB," items stated, "non-heterosexual"; see Appendix A for a complete list of items included in this study). The authors of the measure conducted an EFA to determine the ideal factor structure and identify any items that should not be retained for the final measure. The EFA produced an eight factor solution and this structure was supported via a CFA with another sample that

showed the data fit the model well. The two subscales for the LGBIS used in the present study were Concealment Motivation and Internalized Homonegativity.

Concealment motivation. The Concealment Motivation scale includes three items measuring one's "concern with and motivation to protect one's privacy as an LGB person" (Mohr & Kendra, 2011, p. 239). For example, one item is worded, "I keep careful control over who knows about my same-sex romantic relationships." Mohr and Kenda's (2011) study found adequate internal consistency coefficients across samples (α = .72-.79) as well as adequate test-rest reliability (r = .70). A moderately positive correlation with a measure of self-concealment helped to establish convergent validity, while discriminant validity was established through a moderately negative correlation with a measure of outness. In the present study, internal consistency was moderately strong (α = .87).

Internalized homonegativity. The Internalized Homonegativity scale includes three items measuring the degree to which one rejects his non-heterosexual identity. For example, one states, "I wish I were heterosexual." In the original study of the LGBIS (Mohr & Kendra, 2011), internal consistency for this scale was strong (α = .86-.93) as was test-retest reliability (r = .92). There was a strong positive correlation with a measure of ego dystonic homosexuality, indicating strong convergent validity. Internalized homonegativity was also shown to have low correlations with measures of psychosocial distress (e.g., depression, guilt). In the present study, internal consistency on this scale was strong (α = .92).

Positive Non-Heterosexual Identity Valence

A single psychometrically sound measure to assess the degree to which one feels positively toward his minority sexual orientation was sought for use in this study. This construct is defined by self-validating views of minority sexual identity outlined by identity development theorists (Eliason & Schope, 2007) and Meyer (Meyer, 2003). Specifically, these theorists understand positive minority sexual identity valence as characterized by positive evaluation of sexual orientation, substantial exploration of one's sexual orientation and its meaning in one's life (i.e., identity achievement), and feeling positively connected to the LGBT community (i.e., positive belonging). Unfortunately, there does not appear to be a comprehensive instrument or set of scales developed specifically to measure this construct with sexual minorities. Therefore, an adaptation of the Multigroup Ethnic Identity Measure (or MEIM; Phinney, 1992) was used to measure this construct.

The MEIM was developed for studying ethnic identity and has been previously adapted by researchers to assess sexual identity affirmation, belonging, and achievement (Fingerhut, Peplau, & Ghavami, 2005; Ghavami et al., 2011). This study will follow the approach of these two previous studies and adapt the MEIM to assess sexual identity. The instrument consists of 20 items, with 14 assessing one's attitudes towards one's ethnic identity and six assessing one's attitudes toward people belonging to other ethnic groups. The items regarding attitudes towards ethnic identity were divided into three subscales: (1) identity affirmation and belonging; (2) identity achievement; and (3) ethnic behaviors.

In previous studies that adapted this instrument for use with sexual minorities, one used all items from the Identity Affirmation and Belonging and Identity Achievement scales with a sample of lesbians to create a total score with good reliability ($\alpha = .82$;

Fingerhut et al., 2005), while another used these two subscales separately with a sample of lesbians and gay men and found acceptable reliability (α = .71 and .89 respectively; Ghavami et al., 2011). For the purposes of this study, the 12 items from the first two subscales were combined to create a total score, resulting in strong reliability (α = .89). Since the construct of positive sexual identity is conceptually focused on one's *attitudes* toward sexual identity rather than one's manifest *behaviors*, the ethnic behaviors subscale was not included due to its behavioral focus. For all items, respondents are asked to state their level of agreement on a scale of 1-6, with options of strongly disagree, disagree, disagree somewhat, agree somewhat, agree, and strongly agree (see Appendix A for complete list of items).

Strengths Associated with Being Non-Heterosexual

The Lesbian, Gay, and Bisexual Positive Identity Measure (LGB-PIM) was used to measure the degree to which individuals believe their minority sexual orientation has helped them to develop specific positive characteristics in their lives (Riggle et al., 2014). The LGB-PIM was developed from several qualitative research studies investigating the positive aspects associated with LGB individuals' non-heterosexual identities. Riggle et al. (2014) used the results of these studies to develop 106 items that were later refined to 25 items through exploratory and confirmatory factor analyses. This process resulted in the identification of five factors with five items each: (1) self-awareness; (2) authenticity; (3) community; (4) intimacy; and (5) social justice. Respondents are asked to indicate their level of agreement with each statement on a seven-point scale, with responses being strongly disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree, and strongly agree (see Appendix A for a complete list of items).

Self-awareness. The Self-Awareness subscale of the LGB-PIM assesses whether an individual perceives his LGB identity as having positively influenced his insight into himself. For example, one item reads, "My LGBT identity leads to me to important insights about myself," and another states, "Because of my LGBT identity, I am more in tune with what is happening around me." Across two samples in the original study (Riggle et al., 2014), internal consistency was strong (α = .89). Evidence of construct validity was demonstrated with a statistically significant low correlation with a measure of emotional self-awareness (*r* = .17). In the present study, internal consistency was strong (α = .94).

Authenticity. The Authenticity subscale is defined as "a comfort with one's LGB identity and with expressing one's identity in interaction with others" (Riggle et al., 2014, p.403). This is measured through items such as "I am honest with myself about my LGBT identity," and "I feel I can be honest and share my LGBT identity with others." Internal consistency in Riggle et al.'s (2014) study for this scale was good across the two samples (α = .82, .88). As hypothesized by the authors, the scale had a low positive correlation with a measure of authentic living (*r* = .46), thereby supporting the scale's construct validity. This scale was also negatively associated with a measure of self-alienation (*r* = -.38) and a scale measuring the degree to which one influenced by other's views (*r* = -.18), further providing evidence of construct validity. In the present sample, internal consistency was good (α = .89).

Community. The Community subscale measures an individuals perception of "involvement with and support from LGBT communities" (Riggle et al., 2014, pp. 403-404). For example, one item states, "I feel supported by the LGBT community," and

another reads, “I feel a connection to the LGBT community.” Internal consistency for this scale was excellent across the two samples (α = .89, .91), and construct validity was supported by a moderate positive correlation with a measure of group identity (r = .56; Riggle et al., 2014). For the present study’s sample, internal consistency was also excellent (α = .92).

Intimacy. The Intimacy subscale assesses the degree to which one believes his LGBT identity increases his ability to be intimate and sexually free. This variable is measured through items such as, “My LGBT identity allows me to be closer to my intimate partner,” and “I have a sense of sexual freedom because of my LGBT identity.” Internal consistency for this scale ranged from good to excellent (α = .82, .90) and construct validity was supported through a low positive correlation with a measure of emotional intimacy (r = .19; Riggle et al., 2014). In the present study, internal consistency was good (α = .88).

Social justice. The Social Justice subscale measures the degree to which one’s LGBT identity is perceived to have positively influenced one’s awareness and concern with various types of social injustice and efforts to bring about positive social change. For example, one item is, “As an LGBT person, it is important to act as an advocate for LGBT rights,” and another states, “I am more sensitive to prejudice and discrimination against others because of my LGBT identity.” Internal consistency was good and consistent across the two samples (α = .87) and construct validity evidence was provided through a moderate positive correlation with a measure of attitudes regarding social justice (r = .62; Riggle et al., 2014). In the present study, internal consistency was excellent (α = .94).

Social Support

In order to measure individuals' perception of social support and connectedness, the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) and Connectedness to the LGBT Community Scale (Frost & Meyer, 2012) was used. Both of these measures were chosen because of their relative brevity and focus on individuals' perceptions of social support and community connectedness rather than a quantitative report of social support networks (e.g., number of social supports and frequency of engagement with supports and community). A subjective evaluation of social support is preferable due to its focus on the perceived quality of social support rather than the quantity of support.

Significant other, family, and friend support. The MSPSS is a 12-item measure that assesses the perceived social support received from family, friends, and significant others. The measure produces three subscales – one subscale each for significant other, family, and friends – as well as a total score, the score that was used in the present study. For each item, respondents are asked to indicate their level of agreement on a seven-point scale, with responses including very strongly disagree, strongly disagree, disagree, neutral, agree, strongly agree, and very strongly disagree (see Appendix A for a complete list of items). In the original validation study using a sample of undergraduate students, factor analysis supported the three subscales (Zimet et al., 1988). Internal consistency values for the significant other, family, and friends subscales ranged from good to excellent (α = .91, .87, and .85 respectively) and Cronbach's alpha for the total score was good (α = .88). The test-retest reliability value for the significant other, family, and friends subscales were .72, .85, and .75 respectively, indicating good stability over two

to three months. Construct validity for the subscales was supported through low to moderate correlations between the subscales and measures of depression and anxiety. In a second study of the measures psychometric properties, three samples – pregnant women, European high school students, and pediatric residents – were investigated to assess reliability and validity (Zimet, Powell, Farley, Werkman, & Berkoff, 1990). Principal components analysis supported the three factor structure of the instrument. Cronbach's coefficient alpha for the samples range from good to excellent in the significant other subscale (α = .83-.98) and family (α = .81-.90), and excellent for the friends subscale (α = .90-.94). This study also tested subscale validity by testing whether married residents would have a significantly higher level of perceived support from a significant other compared to single residents, with the other scales showing no significant difference based on marital status. Through the use of multivariate analysis of variance (MANOVA), the authors found support for this hypothesis ($F_{(3, 44)} = 5.32$, $p < .005$). In the present study, internal consistency was very strong for all three subscales (α = .90, .93, and .97 for the family, friends, and significant others subscales respectively) and for the total score (α = .92).

LGBT community connectedness. The Connectedness to the LGBT Community Scale was developed by Frost and Meyer (2012) in response to a perceived lack of short measures focusing specifically on perceived connectedness to the LGBT community as opposed to participation in the community. The scale includes eight items and asks participants to indicate their level of agreement with each item on a scale of 1 to 4, with responses being agree strongly, agree, disagree, and disagree strongly (see Appendix A for a complete list of items). The items were originally crafted for a study of LGB

individuals in New York City, and therefore, the items specifically identified "NYC's LGBT community." Given the lack of geographical focus for this study, items were adapted to refer to the more global LGBT community. For data analysis, scores will be reverse coded so that higher scores indicate higher levels of connectedness.

In an this initial study providing psychometric data, the authors conducted a confirmatory factor analysis and found adequate support in the data for a single overarching construct and three first-order latent factors identified as closeness, positivity, and problem-focused aspects of community connectedness. Internal consistency for the total score was good for both the total sample ($\alpha = .81$) and for six subgroups by gender and race (White, Black, and Latino; $\alpha = .75$-$.88$). For the total sample, the measure had a significant but low positive correlation with psychological well-being (as measured by Ryff's PWB scales; Ryff, 1989; $r = .17$) and social well-being (as measured by Keyes' social well-being scales; Keyes, 1998; $r = .31$), supporting the measure's predictive validity. Convergent validity data was also obtained, showing the measure was negatively related to internalized homophobia ($r = -.37$) and positively correlated with collective self-esteem ($r = .43$) and LGB group identity ($r = .62$). In the present study, internal consistency was good ($\alpha = .88$).

Resilience

Although Meyer (2003) identifies coping as one of the two ameliorating factors in his theory of LGB mental health, he has more recently clarified the distinction of resilience from coping and its potential role in the minority stress framework (Meyer, 2015). Whereas coping is understood as any effort made by an individual to manage stress, regardless of its inherent adaptiveness or success, resilience is understood as one's

ability to *successfully* manage adverse circumstances and recover from stress following these events (Meyer, 2015). Because coping may not be successful or healthy (e.g., suppression of affect can be seen as a coping mechanism even if it is relatively ineffective), resilience appears to be a better conceptualization of a positive ability to deal with stress and is therefore operationalized in this study.

The Brief Resilience Scale (BRS; Smith et al., 2008) was chosen for its brevity and its psychometric strength relative to other measures of resilience (Windle, Bennett, & Noyes, 2011). The BRS conceptualizes resilience as "bouncing back from stress," (Smith et al., 2008, p. 195) and includes six items. Respondents are asked to indicate their level of agreement with each item on a scale of 1-5, with responses being strongly disagree, disagree, neutral, agree, and strongly agree (see Appendix A for a complete list of items). Example of items include, "I tend to bounce back quickly after hard times," and "I usually come through difficult times with little trouble."

In the original study conducted to assess the psychometric properties of the instrument, internal reliability coefficients were good across four samples (α = .80-.91; Smith et al., 2008). Principal components analysis conducted on four different samples all indicated an optimal solution was found with just one principal component accounting for 55-65% of the variance in the data. Convergent validity evidence showed low to moderate positive correlations with other measures of resilience as well as measures of optimism, purpose in life, and social support. As expected, the measure negatively correlated with measures of pessimism, negative social interactions, and various health outcomes, including psychological symptoms of depression and anxiety as well as with

symptoms of physical illness (e.g., pain). In the present study, internal consistency was excellent ($\alpha = .90$).

Open-ended Qualitative Items

Two qualitative items were included in the survey, but were not be formally analyzed in this study. Since the instruments in this survey do not include all possible predictive factors of psychosocial well-being, these questions allowed participants to share their perspective on the factors that are most important to facilitating their psychosocial well-being. Participants were instructed to briefly respond to each prompt and "flourishing" was defined by Keyes' (2002, p. 210) definition: "to be filled with positive emotions and functioning well psychologically and socially." The following two questions will be presented, with separate text boxes for each:

1. What are some of the most important factors in your life that help you to flourish?
2. What are some of the most important factors in your life that are barriers to you flourishing?

The questions were worded in such a way as to make them as broad as possible. Additionally, the term "flourishing" was used because it seems to more readily imply living "the good life" than well-being, as individuals may interpret well-being as simply the lack of disease or dysfunction.

Negative Mental Health

To measure symptoms of mental illness, the Depression Anxiety Stress Scales-21 (DASS-21) was used (Lovibond & Lovibond, 1995). The DASS-21 is a shorter, 21-item version version of the 42-item DASS. The instrument provides three subscales measuring

anxiety, depression, and stress, and allows for a total score. Respondents are asked to identify how often they have experienced each statement over the past week, with responses on a 0-3 scale including never, sometimes, often, and almost always. For example, one item measuring depression reads "I found it difficult to work up the initiative to do things," and one for anxiety reads, "I experienced trembling (e.g., in the hands)" (see Appendix A for a complete list of items).

Multiple studies using both non-clinical and psychiatric samples have shown good reliability for all scales, with internal consistency coefficients ranging from .85 to .94 for depression, .81 to .87 for anxiety, and .88 to .91 for stress (Antony, Bieling, Cox, Enns, & Swinson, 1998; Henry & Crawford, 2005; Lovibond & Lovibond, 1995; Osman et al., 2012). Confirmatory factor analyses have supported a four-factor model consisting of one general factor of psychic distress and three factors for depression, anxiety, and depression (Henry & Crawford, 2005; Osman et al., 2012). Construct validity has been established in multiple studies comparing the DASS-21 subscales with measures of depression (i.e., the Beck Depression Inventory and the Mood and Anxiety Symptom-Questionnaire-90 anhedonic depression scale; Lovibond & Lovibond, 1995; Osman et al., 2012), anxiety (Antony et al., 1998; i.e., the Beck Anxiety Inventory, the State-Trait Anxiety Inventory, and the Mood and Anxiety Symptom Questionnaire-90 anxious arousal scale; Lovibond & Lovibond, 1995; Osman et al., 2012), and stress (i.e., the State-Trait Anxiety Inventory and the perceived stress scale; Antony et al., 1998; Osman et al., 2012). In the present study, internal consistency was strong ($\alpha = .93$). While this data were collected for use in future research, the data were not used in the present study in order to focus this study on

psychosocial well-being. Given the exclusion of this data from the present study, further descriptive statistics regarding the scale are not included.

Proposed Models

Structural equation modeling experts suggest researchers identify multiple structural models prior to the onset of data analysis and then analyze all models to determine which model fits the data best (Martens, 2005). In compliance with this best practice, multiple measurement and structural models were proposed prior to data collection. This section will first discuss the measurement aspect of the models and then provide a detailed description of the proposed structural models.

Measurement Model

The measurement component of SEM involves the identification of latent variables, the observed variables that serve as indicators of the latent variables, and observed variables that do not act as indicators for a latent variable (Kline, 2015). For measurement model 1 (see Figure 3), four latent variables were identified as well as two observed variables that do not serve as indicators of a latent variable. The four latent variables are (1) psychosocial well-being, (2) minority stress processes, (3) strengths associated with being non-heterosexual, and (4) social support (see Figure 3). The well-being latent variable was designed to be consistent with Keyes' (2008) conceptualization of well-being and was therefore comprised of the three subscales of the MHC-SF: emotional well-being, social well-being, and psychological well-being. The minority stress processes latent variable was defined by Meyer's (2003) distal and proximal minority stress processes, namely experienced prejudicial events, internalized

homonegativity, and identity concealment. This construct was measured by three observed variables: the HHRDS and two subscales of the LGBIS, namely Internalized Homonegativity and Concealment Motivation (Mohr & Kendra, 2011; Szymanski, 2006).

The third latent variable, strengths associated with being non-heterosexual, was defined as a multidimensional construct of positive characteristics stemming from one's sexual minority identity. While the latent variable of non-heterosexual positive identity valance looked directly at whether one holds an affirmative view of his sexual identity, this latent variable looked at whether an individual has positive characteristics and strengths that directly result from holding a minority sexual identity. The latent variable was indicated by the five subscales of the LGB-PIM: Self-Awareness, Authenticity, Community, Intimacy, and Social Justice. The fourth latent variable, social support, was defined as one's perception of support received from a significant other, family, friends, and perceived connectedness to the LGBT community. This latent variable was indicated by two observed variables: the MSPSS and the Connectedness to the LGBT Community scale (Frost & Meyer, 2012; Zimet et al., 1988).

A second measurement model was also proposed (see Figure 4), with two changes from the first measurement model. First, the experienced prejudicial events variable was removed as an indicator of minority stress processes. In this model, therefore, the minority stress processes latent variable is more accurately understood as Meyer's (2003) proximal minority stress processes. This change was included to test the possibility that distal and proximal minority stress processes, while related, are not well defined as one latent construct. It may be that proximal minority stress processes occur relatively independently of the distal experiences of stress. For example, sociocultural biases

against sexual minority identities may lead to the development of proximal stress processes without one having to directly experience discrimination based on their sexual identity. Furthermore, this alteration in the measurement model allowed for testing the hypothesis that experiences of prejudicial events affect psychosocial well-being indirectly through the heightened presence of proximal minority stress processes. Second, the observed variable of positive non-heterosexual identity valence (as measured by the adapted Multiethnic Identity Measure) and strengths associated with being non-heterosexual were combined into one latent variable called *positive non-heterosexual identity*. Given the substantial conceptual overlap between the strengths latent variable and the MEIM observed variable, grouping the LGB-PIM subscales and the MEIM within one latent variable may be more theoretically and statistically appropriate.

Structural Model

Although the following models were modified based on the analysis of the aforementioned measurement models, two structural models were identified prior to data analysis using the first measurement model identified above. The first structural model tested the following hypothesized relationships among four latent variables: (a) minority stress processes will have a nonsignificant effect on well-being; (b) minority stress processes will negatively affect social support; (c) minority stress processes will negatively affect resilience; (d) minority stress processes will negatively affect positive non-heterosexual identity valence; (e) positive non-heterosexual identity valence will positively affect well-being; (f) positive non-heterosexual identity valence will positively affect strengths associated with being non-heterosexual; (g) strengths associated with being non-heterosexual will directly and positively affect well-being; (h) social support

will positively affect well-being; and (i) resilience will positively affect well-being (see Figure 2).

Hypothesized structural model 2 (see Figure 5) is identical to the first model except the composition of the latent variables was done according to the second measurement model. Therefore, the observed variable of experiences of prejudicial events was not included as an indicator of the minority stress processes latent variable and MEIM and the five subscales of the LGB-PIM were included as indicators of the *positive non-heterosexual identity* latent variable. With this modification in the measurement aspect of the model came an additional pathway from experiences of prejudice and discrimination to the proximal minority stress processes latent variable. It also removed a direct path from the MEIM observed variable to the well-being latent variable.

Chapter 4
RESULTS

Power Analysis

Determining an appropriate sample size for structural equation modeling is a complicated issue with no definitive rules. Some experts suggest the guideline of including 10-20 participants for each parameter that is to be estimated in the model (Kline, 2015; Weston & Gore, 2006). Under these guidelines, given the minimum of 50 parameters that need to be estimated in the study's primary structural model, the minimum sample size acceptable would be 500 participants, with an ideal sample size of 1000 participants. However, scholars also indicate that the minimum sample size can be smaller if the researcher is not looking for an exact model-data fit and is comfortable with less statistical power (Weston & Gore, 2006). Ultimately, Weston and Gore (2006) recommend having a minimum sample of at least 200 participants for any study using SEM. With these guidelines in mind, it may be possible for this study to have a smaller sample size than 500 given an exact fit between the model and data is not necessary and lower statistical power (~.85) is acceptable.

In addition to these guidelines, a statistical calculator was used to compute minimum sample size necessary for conducting the Root Mean Square Error of Approximation (RMSEA) test for measure of model fit (Preacher & Coffman, 2006). RMSEA is a statistically strong method for computing model fit and one of the preferred model fit indices within counseling psychology research (Martens, 2005). Therefore, this calculator was consulted as an additional indicator for determining minimum sample size. In order to calculate the minimum sample size for RMSEA, the degrees of freedom for

the model needed to be computed. This was done by using the following formula (Kline, 2015):

df = number of observations - number of estimated parameters

Number of observations refers to the number of unique entries in the sample covariance matrix, which in this study is 120. The number of estimated parameters is 50; therefore, the degrees of freedom for the models are 70. In addition to entering the degrees of freedom, alpha was set at .05, desired power at .80, the RMSEA null hypothesis value at .05, and the RMSEA alternative hypothesis at .08. Based on this information, the recommended minimum sample size is 187.5 participants.

Preliminary Analyses

Data were analyzed using R statistical software and RStudio software (R Core Team, 2017; RStudio Team, 2016). Scale scores were calculated using means, rather than sums, in order to minimize differences in range of variances across scales. Scale scores were not calculated for any participants missing greater than 10% of items in the scales; as a result, the sample size for each scale varied from 306-314. Following the calculation of scale scores, descriptive statistics were compiled (see Table 3.2 for complete descriptive statistics of measures).

In order to assure that the statistical assumptions of structural equation modeling were met, analyses were run to assess for univariate and multivariate normality and multicollinearity. To assess whether the distributions of the observed variables were univariate normal, a histogram, Q-Q plot, skewness and kurtosis statistics, and a Shapiro-Wilk normality test were analyzed for each scale. Only three scales appeared to be normally distributed: the MHC-SF social well-being scale, the MEIM, and the LGBT

Community Connectedness scale. The rest appeared to significantly deviate from normality based on an assessment of the aforementioned graphs and statistics.

Although the lack of univariate normality virtually guaranteed that the latent variables would not be multivariate normal, multivariate normality analyses were still conducted by assessing chi-square Q-Q plots and Mardia's multivariate normality test for each of the latent variables included in the measurement models. Given the general lack of univariate normality, it is no surprise that none of the latent variables included in the proposed models were observed to be multivariate normal. As a result, several options were considered to manage the lack of normality in the data. One option to correct non-normal data is to apply transformations to the scaled scores. This option was attempted with the non-normal scales. Although the transformations slightly improved the distributions of some scales, it generally failed to substantially improve the normality of the scales' distributions. Therefore, transformations of scale scores were not used, and instead, an estimator that is robust to violations of normality was used.

There are several robust maximum likelihood estimators that can be used to help minimize the bias introduced by violations of normality (Lei & Wu, 2012). The Yuan-Bentler residual-based χ^2 is recommended for use in estimating model parameters and fit with non-normal data when the sample size is medium to large. A sample size is considered medium to large when $N > p(p + 1)/2$, where N is the sample size (314 for the current sample) and p is the number of observed variables (15 for structural model 1). Using this equation, this study's N of 314 was greater than 120, indicating that the Yuan-Bentler residual-based χ^2 was an appropriate method for maximum likelihood estimation with these data.

Bivariate correlations were analyzed to assess for multicollinearity among the predictor variables (see Table 3.2 for complete list of bivariate correlations). In general, bivariate correlations did not appear to be high enough to suggest multicollinearity with a few possible exceptions. The correlations between the MEIM and both the LGB-PIM authenticity scale and the Connectedness to the LGBT Community scale were above .75, indicating they were highly related. Similarly, the Connectedness to the LGBT Community scale was also highly correlated with the LGB-PIM scales measuring community (r = .74) and social justice (r = .74). Although these correlations were high, there were a number of reasons as to why they were deemed acceptable. First, none of the correlations exceeded .81, and therefore, they may not have been close enough to a perfect correlation to cause concern. Second, the detrimental impact of multicollinearity, particularly with regards to causing a Type II error, is reduced the higher the reliability of the observed variables (Grewal, Cote, & Baumgartner, 2004). The impacted variables had strong internal consistency coefficients (range = .88-.92), and therefore, their high correlation may have had less of an impact on type II error. Third, the effects of multicollinearity can also be reduced by having these observed variables covary in the models. Finally, if any extreme collinearity is present in the observed variables, the covariance matrix for the latent variables in the model will not be positive definite, indicating a misspecification in the model. If this is the case, the latent variable covariance matrix can be inspected to help address the problem by making theoretically-sound modifications to the measurement model (Kline, 2015).

Latent Variable Modeling Analysis Procedure

Data were analyzed using the two-step procedure recommended by Kline (2015). In the first step, the measurement models were analyzed and appropriate modifications were made to the measurement models. In the second step, the full structural models were analyzed.

All of the following latent variable models were analyzed using the lavaan package for R, version 0.5-23.1097 (Yves, 2012). All latent factors were standardized so as to have a mean of 0 and a variance of 1. The latent variable models were all analyzed using the "MLR" estimator - a maximum likelihood estimator that uses the Yuan-Bentler residual-based χ^2 correction for non-normal data (Lei & Wu, 2012). Full information maximum likelihood (FIML) was used to address missing data. FIML uses a statistical method that does not require listwise deletion or imputation of missing values, and therefore allows for the inclusion of all cases (Kline, 2015).

Following the recommendations of Kline (2015), the Yuan-Bentler residual-based χ^2 (i.e., chi-square goodness of fit test), the RMSEA, the Comparative Fit Index (CFI), and the Standardized Root Mean Square Residual (SRMR) were reported to evaluate the global fit of the models. The χ^2 statistic is an exact-fit test that evaluates the degree to which the observed and predicted covariance matrices differ, with lower values indicating better model fit. Significance testing is conducted for the χ^2 statistic, with p-values greater than .05 indicating exact model fit and values less than .05 indicating a significant difference between the model and data, thereby suggesting poor model-data fit (Martens, 2005). Because the χ^2 test is the most stringent global model fit test and is sensitive to differences in larger sample sizes, three other statistics were also used to assess global model fit. The latter three tests - RMSEA, CFI, and SRMR - do not include a test of

statistical significance, and therefore, cutoff values are used to evaluate the model fit. It is important to note that these cutoff values are somewhat arbitrary, and therefore, these measures should be interpreted in tandem with one another and in context of other data (e.g., regression effect sizes, residual correlations; Kline, 2015; West, Taylor, & Wu, 2012). For RMSEA, values lower than .06 generally indicate good fit, with values between .06-.08 indicating acceptable fit, and values above .10 indicating potentially unacceptable fit (West et al., 2012). For CFI, values greater than .95 indicate good model fit, while for SRMR, values less than .08 indicate good model fit.

Measurement Models - Confirmatory Factor Analysis (CFA)

Measurement model 1

Confirmatory factor analysis was used to analyze the two measurement models. Measurement model 1 was analyzed as proposed with two slight modifications based on analysis of bivariate correlations. The Connectedness to the LGBT Community scale was set to covary with both the community and social justice scales of the LGB-PIM since their respective bivariate correlations showed they were strongly related to one another.

Although the model converged normally after 141 iterations, the results of the CFA for measurement model 1 produced a nonpositive definite latent variable covariance matrix, violating the statistical assumption of positive definite covariance matrices for maximum likelihood estimation (Kline, 2015). Upon inspecting the latent variable covariance matrix, the minority stress latent variable and the strengths associated with being LGBT latent variable were too highly correlated. This suggested that extreme collinearity between some of the indicators of the two latent variables was causing the

problem in the covariance matrix. To address this issue, the Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS) was removed from the minority stress latent variable. Since measurement model 2 already included the removal of HHRDS from the minority stress latent variable for theoretical reasons, it seemed justifiable to remove it from this measurement model as well. HHRDS also appeared to deviate the most from normality (skew = 1.56, kurtosis = 3.12), with most respondents reporting very few experiences of discrimination or prejudice. This may have indicated that the scale's scores did not fit well with the statistical assumptions of robust maximum likelihood estimation.

While removing HHRDS slightly improved the model fit, it did not solve the problem of the nonpositive latent variable covariance matrix. Because of this, the LGB-PIM authenticity scale was also removed following a closer look at the scale's items. The items of this scale focus on the degree to which one feels comfortable identifying openly as LGBT, which may be seen as the inverse of the minority stress process of identity concealment (i.e., *not* being comfortable openly identifying as LGBT to others). Therefore, it seemed highly plausible that these scales were assessing the same construct, and therefore, the LGB-PIM authenticity scale was removed.

After removing *both* HHRDS and the LGB-PIM authenticity scale, the resulting latent variable covariance matrix was still not positive definite; however, upon inspecting the latent variable covariance matrix, the problem had shifted to being between the social support and strengths associated with being non-heterosexual latent variables. After examining the items involved in the various indicators of these latent variables, it became clear that the Connectedness to the LGBT Community scale shared substantial theoretical

overlap with the LGB-PIM scales, particularly with the community and social justice scales. The Connectedness to the LGBT Community scale measures: (a) the degree to which one feels a part of the LGBT community, as does the LGB-PIM community scale; (b) positive bonds with other non-heterosexual men, as does the LGB-PIM intimacy scales; and (b) the degree to which one is socially and politically engaged with LGBT issues, as does the LGB-PIM social justice scale. Therefore, to remedy this problem, the Connectedness to the LGBT Community scale was removed from the model. With the removal of this scale, the social support latent variable only had one indicator and was changed from a latent variable to an observed variable, and therefore no longer included in the measurement model.

With these modifications, the model converged normally after 85 iterations and the latent variable covariance matrix was positive definite. All observed variables had highly significant factor loadings; however, the model fit was poor (Yuan-Bentler residual-based $\chi^2 = 99.83$, $p < .000$; robust RMSEA = .104, 90% CI = .084-.126; CFI = .828; SRMR =.112; see Table 4.1 for factor loadings). To identify ways to improve the model fit, modification indices were consulted. Following best practices in SEM, modifications were only made if they were theoretically justifiable (Kline, 2015). After consulting modification indices, the following error terms for the observed indicators of the strengths associated with being non-heterosexual latent variable were set to covary: LGB-PIM self-awareness scale with LGB-PIM social justice scale; LGB-PIM self-awareness scale with LGB-PIM community scale; and LGB-PIM intimacy scale with LGB-PIM social justice scale. Allowing the error terms of these LGB-PIM scales to covary was deemed theoretically acceptable given the strong possibility that they share

common sources of error, such as one's introspective abilities or level of extraversion. The modification indices also suggested that setting the error terms of the LGBIS concealment motivation scale and the LGB-PIM community scale to covary would greatly improve the model fit. Upon looking at the items measuring these two variables, it made sense as to why they might share common sources in their measurement error. It could be that non-LGBT specific social isolation and/or a fear of social rejection is a common source of error in both of these measures: those who conceal their sexual identity may do so out of a general fear of social rejection or as a result of social isolation, and those who do not feel comfortable, connected, visible, or included within the LGBT community may feel this way due to a general feeling of social isolation and/or rejection. Based on this theoretical justification, the error terms of these two scales were also set to covary.

These modifications resulted in a significantly improved model (Yuan-Bentler residual-based $\chi^2 = 49.74$, $p < .000$; robust RMSEA = .071, 90% CI = .047-0.96; CFI = .966; SRMR = .05). Factor loadings ranged from .391 (the loading of the internalized homonegativity scale on minority stress processes) to .893 (the loading of the psychological well-being subscale of the MHC-SF on well-being). The covarying error term between the LGB-PIM self-awareness scale and the LGB-PIM social justice scale ($\beta = .45$, *SE* = 4.23, $z = 2.946$, $p = .003$) was statistically significant, while the three other covarying error terms were not statistically significant (see Table 4.2 for complete list of factor loadings and error covariance estimates).

Residual correlations were also computed to assess model fit (see Table 4.3). As a general rule, residual correlations greater than .1 suggest that the relationship between the

two variables is not well accounted for in the model, and therefore, there may be substantial differences between the data and the model (Kline, 2015). The residuals were generally below .1 for most variables with the exception of the correlations between the LGB-PIM social justice scale and the three MHC-SF scales, all of which were above .1. Since the residual correlations for these variables was not much higher than .1 (the greatest correlation was -.18) and the model fit was adequate, this did not appear to be a major concern. See Figure 6 for the final version of measurement model 1 with factor loadings.

Measurement model 2

The hypothesized second measurement model was adjusted to reflect the changes in measurement model 1. Given that the two measurement models were mostly the same, the LGB-PIM authenticity scale and the Connectedness to the LGBT Community scale were removed from measurement model 2 to prevent a nonpositive definite covariance matrix from reoccurring. MSPSS (the sole indicator of social support) was also removed from the measurement model as it would no longer be considered a latent variable. Additionally, the error terms that were set to covary in the first measurement model were also set to covary in the second measurement model. Therefore, the only difference between the two measurement models was the inclusion of the MEIM scale with the four LGB-PIM scales to create a latent variable referred to as positive non-heterosexual identity.

The modified measurement model 2 converged normally after 141 iterations and the global fit statistics were somewhat better than the primary model (Yuan-Bentler residual-based $\chi^2 = 64.79$, $p < .000$; robust RMSEA = .069, 90% CI = .048-.091; CFI =

.97; SRMR = .05). When the model was run, an error warning indicated that the MEIM observed variable had a negative variance. This suggested the model might have been misspecified. Modification indices were consulted to determine if MEIM's error term should be set to covary with the error terms of other observed variables. Modification indices suggested that MEIM and the LGB-PIM social justice scale should covary. This seemed theoretically sensible, as both scales assess the degree to which one is invested in learning about and taking part in the LGBT community and its history. Therefore, MEIM was set to covary with LGB-PIM's social justice scale.

With this additional modification, the model converged normally after 153 iterations and the variance for MIEM was no longer negative. Model fit also improved (Yuan-Bentler residual-based χ^2 = 55.48, p = .001; robust RMSEA = .062, 90% CI = .039-.085; CFI = .978; SRMR = .044). All factor loadings were highly significant and five of the six error covariances were statistically significant (see Table 4.4 for factor loadings and error covariance estimates and Figure 7 for the final version of the second measurement model with factor loadings).

Structural Models

Structural Model 1

The hypothesized structural model 1 (see Figure 2) was used with the modifications made to measurement model 1 outlined above (see Figure 6). The model converged normally after 199 iterations and model fit was poor (Yuan-Bentler residual-based χ^2 = 136.36, p < .000; robust RMSEA = .086, 90% CI = .07-.102; CFI = .939; SRMR = .065). All factor loadings were highly significant.

Residual correlations were assessed to evaluate model fit and to identify possible ways to improve model fit (Kline, 2015; see Table 4.5 for residual correlations for this model). The most problematic residual correlation was between the observed indicators of social support (MSPSS) and resilience (BRS; residual correlation = .221). Modification indices were then consulted to see if any modifications involving these variables might be done to improve model fit. Modification indices suggested that the model fit would significantly improve if the MSPSS and BRS scales were set to covary (MI = 27.54). It seemed theoretically plausible that perceived social support and resilience might have correlated error terms, as both variables may be influenced by other factors such as childhood upbringing and personality traits (e.g., extroversion, conscientiousness). This modification was made since it seemed theoretically sound and did not alter the measurement model.

This minor modification both improved global model fit (Yuan-Bentler residual-based $\chi^2 = 118.58$, $p < .000$; robust RMSEA = .078, 90% CI = .062-.095; CFI = .95; SRMR = .055) and lowered residual correlations to levels that were more similar to measurement model 1 (see Table 4.6 for residual correlations). While χ^2 and RMSEA did not indicate good fit, no further modifications were made to avoid over-fitting the model to this particular sample. All factor loadings were highly significant (i.e., $p < .000$; see Figure 8 and Table 4.7 for all parameter estimates). The model accounted for 58% of the variance in well-being, 74% of the variance in positive non-heterosexual identity valence, and 87% of the variance in strengths associated with being non-heterosexual. The hypotheses for the proposed primary model are assessed below.

Minority stress effects. As hypothesized, minority stress had a statistically insignificant direct effect on well-being (β = -.233, *SE* = .485, z = -.742, p = .458). Minority stress had a statistically significant and negative direct effect on social support (β = -.308, *SE* = .92, z = -4.68, p < .000) and on positive non-heterosexual identity valence (β = -.861, *SE* = 1.17, z = -8.5, p < .000). The effect of minority stress on resilience was not significant (β = -.131, *SE* = .385, z = -1.83, p = .067).

Positive non-heterosexual identity valence effects. The MEIM observed variable did not have a statistically significant direct effect on well-being (β = -.347, *SE* = .051, z = -.91, p = .363). Positive non-heterosexual identity valence did have a statistically significant direct effect on strengths associated with being non-heterosexual (β = .934, *SE* = .05, z = -4.29, p < .000).

Strengths associated with being non-heterosexual. The latent variable of strengths associated with being non-heterosexual did not have a statistically significant direct effect on well-being (β = .274, *SE* = .0137, z = 1.11, p = .269).

Social support. Social support did have a statistically significant and positive direct effect on well-being (β = .452, *SE* = .01, z = 7.83, p < .000).

Resilience. Resilience also had a statistically significant and positive direct effect on well-being (β = .421, *SE* = .02, z = 7.96, p < .000).

Structural Model 2

The hypothesized structural model 2 (see Figure 5) was used with the modifications made to measurement model 2 outlined above (see Figure 7). Given the modifications made to structural model 1, the error terms for social support and resilience were set to covary before structural model 2 was run. The model converged normally

after 203 iterations and the model fit was good (Yuan-Bentler residual-based χ^2 = 82.34, p = .001; robust RMSEA = .058, 90% CI = .039-.076; CFI = .974; SRMR = .047). Residual correlations also appeared to be adequate, with no significant changes from the measurement model (see Table 4.8 for residual correlations). All factor loadings were statistically significant (see Table 4.9 for all parameter estimates). The model accounted for 57% of the variance in well-being and 83% of the variance in positive non-heterosexual identity. The hypotheses for the proposed alternative structural model will now be assessed (see Figure 9 for all parameter estimates).

Minority stress effects. As hypothesized, minority stress had a statistically insignificant direct effect on well-being (β = -.179, *SE* = .69, z = -.4, p = .689). Minority stress had a statistically significant and negative direct effect on social support (β = -.346, *SE* = .96, z = -4.68, p < .000) and on resilience (β = -.158, *SE* = .384, z = -2.22, p = .026). The effect of minority stress on positive non-heterosexual identity was not significant (β = -.911, *SE* = 1.26, z = -1.75, p = .081).

Positive non-heterosexual identity. The positive non-heterosexual identity latent variable did not have a statistically significant direct effect on well-being (β = -.034, *SE* = .259, z = -.083, p = .934).

Social support. Social support did have a statistically significant and positive direct effect on well-being (β = .455, *SE* = .01, z = 7.65, p < .000).

Resilience. Resilience also had a statistically significant and positive direct effect on well-being (β = .417, *SE* = .01, z = 8.26, p < .000).

Conclusion

Overall, the second structural model appeared to fit the data better in two important ways. First, on all measures of global model fit, structural model 2 was superior. Not only did the fit indices improve with the second structural model, the statistics for the second model met the proposed cutoff criteria for RMSEA, CFI, and SRMR. This was in contrast to the first structural model where the global fit indices only met the "good model fit" cutoff criteria for CFI and SRMR. Secondly, the second structural model's residual correlations were lower, indicating that the local model fit was slightly improved with the second model (Kline, 2015).

The only way in which the first structural model might be viewed as superior to the second structural model was by looking at the factor loadings for the latent variables. In structural model 1, all factor loadings were highly significant, whereas in structural model 2, all were highly significant except for the observed variables of the positive non-heterosexual identity variable. This may have indicated a weakness in this latent variable. However, these factor loadings were still below the .05 p-value threshold for significance, and therefore, this weakness in structural model 2 did not outweigh its other substantial strengths over structural model 1.

Chapter 5
DISCUSSION

This study analyzed two slightly different structural models that provided largely similar findings regarding the relationship of several constructs to psychosocial well-being. The following section reviews the overall findings of the structural models and then discusses the model's regression hypotheses more specifically. Given that structural model 2 had substantially better global and local model fit than the primary structural model, the analysis of the second structural model will be discussed throughout unless explicitly stated otherwise. This chapter will then conclude with a discussion of the study's limitations, implications for future research, and overall conclusions.

Structural Model

This study analyzed two structural models that largely differed with regard to how the positive aspects of non-heterosexual identity were conceptualized. In structural model 1 (see Figure 8), two variables were included to measure positive aspects of LGB identity: (1) the MEIM measuring the construct of positive non-heterosexual identity valence and (2) the latent variable named strengths associated with being non-heterosexual, indicated by four scales from the LGB-PIM. In structural model 2, MEIM was combined with the four LGB-PIM variables to form one latent variable named positive non-heterosexual identity. Analysis of these two models indicated that the second structural model fit the data better than the first structural model with regard to global model fit and local model fit (as indicated by analysis of residual correlations).

Two differences between the structural models should be highlighted in light of the superior fit of structural model 2. First, the fact that structural model 2 fit the data

better may indicate that positive beliefs about being non-heterosexual and the strengths that derive from one's minority sexual identity are better conceptualized as indicators of one underlying construct rather than two separate constructs. However, this conclusion should be considered within the context of decreased latent variable factor loadings when both the MEIM and LGB-PIM scales are included in a singular latent variable. While lower factor loadings might be expected with the addition of one scale constructed with a different number of items and response range than the other four scales, it is nevertheless noteworthy that the factor loadings for this latent variable are significantly weaker than factor loadings for any of the other latent variables.

The second difference to highlight is disparities in regression coefficients between the two structural models. While the conclusions drawn from the regressions in both models were largely similar, there was one important difference: the positive non-heterosexual identity latent variable was not significantly affected by minority stress processes, while in structural model 1, the positive non-heterosexual identity valence was significantly affected by minority stress processes. This difference is somewhat harder to explain theoretically. Given that the p-value for the estimate of minority stress's effect on positive non-heterosexual identity is only slightly above the .05 cutoff ($p = .081$), this finding may be an artifact of the data and model specification.

The amount of variance accounted for in key variables by structural model 2 is also noteworthy. The model accounted for 57.4% of the variance in well-being. This indicates that a substantial proportion (over 50%) of the differences in well-being scores was predicted by the model. The model accounted for even more variance (83%) in the positive non-heterosexual identity latent variable. Unsurprisingly, relatively little of the

variance in social support (11.9%) and resilience (2.5%) was accounted for by the model, as many other factors that were not included in the model likely influenced these variables.

Regression Hypotheses

Several hypotheses were made regarding the structural model. The hypothesis for each research question is reviewed, starting with the hypotheses related to the minority stress processes latent variable.

Research questions 1-4: Minority stress processes

The first four research questions that this study sought to answer involved the impact of minority stress processes on a number of variables in the model. Unfortunately, as discussed in the previous chapter, the HHRDS measure, which assessed one's experiences of discrimination, was not included in the minority stress processes variable in the final model. Therefore, it is more appropriate to conceptualize this latent variable as measuring some of the *proximal minority stress processes* indicated in Meyer's (2003) minority stress theory. With this caveat in mind, each research question involving the minority stress processes latent variable is reviewed below.

Research question 1 - minority stress and well-being. The first research question asked: *Do sexual minority stress processes (i.e., experienced prejudice, internalized homophobia, and sexual identity concealment) negatively affect psychosocial well-being?* To address this question, it was hypothesized that minority stress processes would have a nonsignificant effect on well-being. This hypothesis was entirely supported. This finding builds on previous research that found minority stress processes, such as

experiencing prejudicial events and concealing one's identity, were not significant predictors of psychological well-being (Selvidge et al., 2008). While previous research had shown that internalized homonegativity and identity concealment were significant predictors of psychological distress (e.g., Meyer, 2003), this finding in the present study provides further evidence that these proximal minority stress processes may be less influential to one's psychosocial well-being than they are to one's psychosocial distress. Although this study did not directly compare the effects of these proximal minority stress processes on both psychosocial well-being *and* distress, it nevertheless provides additional support for the notion that psychological distress and psychological well-being should be understood as related but distinct constructs with different predictors for LGB individuals.

Prior empirical research has shown a strong pathway from holding a stigmatized identity to increased prevalence of psychological distress (Meyer, 2003). This line of research supported the theory that experiencing stigma related to one's identity can lead to internalized negative beliefs about oneself and the world, which in turn can lead to a heightened vulnerability to developing depressive and anxious symptoms (Meyer, 2003). Therefore, it makes both theoretical and empirical sense that a reduction in minority stress would also reduce one's vulnerability to developing symptoms of psychological ill-being. However, it makes far less theoretical sense for this same relationship to exist between minority stress and symptoms of psychological health or well-being. The mere absence of internalized homonegativity and identity concealment is not likely to increase the chance that non-heterosexual will experience the added presence of positive affect, meaning in life, or social connection. Put another way, the absence of additive minority

stress does not automatically increase the likelihood that one will lead a happy or fulfilling life. For an increased likelihood of elevated well-being in non-heterosexual men, the presence of other positive factors, such as social support or resilience, are likely needed.

Research question 2 - minority stress and social support. The second research question asked: *Do sexual minority stress processes negatively affect social support?* As hypothesized, minority stress did have a statistically significant and moderately negative impact on social support. This indicates that holding negative feelings towards one's minority sexual identity and taking efforts to conceal it from others has a detrimental impact on one's perception of their social support from family, friends, and significant others. This aligns well with prior research linking both internalized homonegativity and identity concealment with relational difficulties in the personal and professional lives of LGB individuals (Meyer, 2003). Unfortunately, due to statistical limitations, the model was unable to assess whether the impact of minority stress processes on social support indirectly affected social support's effect on well-being (see the study limitations section below). As a result of this, it is not possible to assess whether experiencing internalized homonegativity and identity concealment ultimately impacts one's psychosocial well-being by reducing one's perceived social support.

Research question 3 - minority stress and resilience. The third research question stated: *Do sexual minority stress processes negatively affect resilience?* Minority stress also had a modest but statistically significant negative effect on resilience, thereby supporting the study's hypothesis. In this sample, experiencing internalized homonegativity and feeling motivated to conceal your sexual identity from others was

predictive of lower levels of resilience, or one's ability to bounce back from stressful events. Given that harboring negative views about oneself and concealing one's sexual identity takes substantial internal resources, there are likely less mental/emotional resources available to effectively overcome some additional stressors.

Similarly to the impact of minority stress on social support, the study's model did not assess whether resilience buffered the impacts of minority stress on psychosocial well-being, which is the predicted role of resilience in the minority stress framework (Meyer, 2015). Future research should seek to clarify the protective nature of resilience to LGB individuals' well-being.

Research question 4 - minority stress and positive LGB identity. The final research question involving minority stress processes asked: *Do sexual minority stress processes negatively affect one's positive non-heterosexual identity valence (i.e., identity affirmation, belonging, and achievement)?* This research question was based on the original measurement model that had two separate variables measuring positive non-heterosexual identity valence and strengths associated with being non-heterosexual, while the final model combined these two variables into one latent variable. Therefore, the study's final structural model addressed a modified version of this question: *Do sexual minority stress processes negatively affect one's positive non-heterosexual identity (i.e., strengths associated with being non-heterosexual and identity affirmation, belonging, and achievement)?*

It was hypothesized that minority stress processes would negatively affect positive non-heterosexual identity. This hypothesis was unsupported, although the regression estimate was only slightly above the threshold for statistical significance (p =

.081). Therefore, while the finding was statistically nonsignificant, the relationship between the latent variables was in the expected negative direction. This suggests that the presence of proximal minority stress processes tends to decrease minority identity affirmation and strengths associated with minority sexual identity. While the direction of this tendency is as was expected, the nonsignificance of this finding is noteworthy as it contradicts theoretical and empirical literature that suggests holding negative views about one's sexual identity would significantly decrease positive views of that same identity. This finding, interestingly, differed in the first structural model, where positive non-heterosexual identity valence and the strengths associated with non-heterosexual identity were measured as two separate variables. In the case of that model, there *was* a statistically significant negative relationship between minority stress processes and positive non-heterosexual identity valence. Therefore, the significant finding in the first structural model and the slightly non-significant p-value found in the second structural model suggests that this finding may be a statistical artifact of the indicators used to measure the positive non-heterosexual identity latent variable. Additional research is necessary to clarify this finding.

As with social support and resilience, holding a positive view of one's sexual identity and the strengths derived from it is seen as a moderator of the effect of minority stress on mental health within Meyer's (2003) framework. Due to statistical limitations, it was not possible to assess this moderation effect within this model (see limitations section below).

In general, the model supported the hypothesized effects of minority stress on several variables. The evidence clearly shows that minority stress has a negative impact

on most of the positive psychosocial factors measured within the model. This aligns well with the empirical evidence supporting the minority stress framework (Herek & Garnets, 2007; Meyer, 2003, 2007). The most notable divergence from the minority stress theory is the nonsignificant effect of minority stress on psychosocial well-being. This finding supports prior research suggesting that proximal minority stress processes may not impact well-being in the significantly negative way that these processes impact psychosocial distress (Morrison, 2012; Selvidge et al., 2008).

Research questions 5-7: Positive LGB identity

Research questions five through seven related to positive aspects of non-heterosexual identity and are discussed below.

Research question 5 - positive LGB identity and well-being. The fifth research question stated: *Does positive non-heterosexual identity valence positively affect psychosocial well-being?* Due to the combination of the positive non-heterosexual identity valence observed variable and the strengths associated with being non-heterosexual latent variable, this study's model ultimately answers the following slightly modified question: *Does positive non-heterosexual identity positively affect psychosocial well-being?* It was hypothesized that positive non-heterosexual identity would have a statistically significant and positive effect on well-being. This hypothesis was entirely unsupported: the effect of positive non-heterosexual identity was nonsignificant. This finding contradicts previous empirical research that suggested a positive relationship between positive views of one's sexual identity and well-being (e.g., Higa et al., 2014; Keleher et al., 2010; Riggle et al., 2014; Zea et al., 1999). There are a few possible explanations for this finding. First, it could be that universal protective factors such as

social support and resilience have far more predictive value for the well-being of non-heterosexual men; therefore, these variables better captured the variance in well-being than the positive non-heterosexual identity latent variable. This is the most straightforward explanation that is both theoretically and empirically sound. A second possible explanation for this nonsignificant finding is that holding a positive view of one's sexual identity might be conceptualized better as a moderator variable than a factor that directly impacts well-being. In other words, holding positive beliefs about one's identity might dampen the negative effect of minority stress on well-being, but it won't directly increase (or decrease) the well-being of non-heterosexual men. This would fit with Meyer's (2003) theory of minority stress that views factors such as positive identity valence as having an indirect, rather than direct, effect on mental health outcomes. Unfortunately, this study was unable to analyze the potential moderation effects of this variable, and therefore, this explanation remains untested. Lastly, it is important to note that this finding is likely not an artifact of the combination of the positive non-heterosexual identity valence variable and the strengths associated with being non-heterosexual latent variable, as the first structural model showed that both these variables had a non-significant direct effect on well-being.

Research question 6 - positive non-heterosexual identity valence and strengths associated with being non-heterosexual. As noted above, the structural model that best fit the data in this study combined all positive aspects of non-heterosexual identity into one latent variable. Therefore, the sixth research question - *Does positive non-heterosexual identity valence positively affect strengths associated with being non-heterosexual (i.e., self-awareness, authenticity, community, intimacy, and social justice)?*

- was not truly answered in the final structural model. However, it is noteworthy that combining the indicators of these two constructs into one latent variable produced a measurement model with better model-data fit. This suggests that sexual minority identity valence and strengths associated with one's sexual minority identity may be better conceptualized as one construct rather than two separate but related constructs. It could be that the strengths of community, self-awareness, intimacy, and social justice are additional indicators of having a positive minority identity and *not* the natural sequelae of positive sexual identity valence. Future research should seek to clarify this relationship.

Research question 7 - strengths associated with being non-heterosexual and well-being. The seventh research question - *Do strengths associated with being non-heterosexual positively affect psychosocial well-being?* - was not addressed in the final model due to the indicators for the strength associated with non-heterosexual identity variable being combined with the MEIM to form one latent variable assessing positive non-heterosexual identity.

Research question 8: Social support and well-being

The eighth research question asked: *Does social support positively affect psychosocial well-being?* It was hypothesized that social support would have a statistically significant and positive effect on well-being. This hypothesis was fully supported by the model. The medium effect size (r = .455) indicates that the perception of having strong support from family, friends, and significant others had a moderate to strong effect on participants' psychosocial well-being. This finding aligns well with substantial empirical evidence showing social support as a predictor of well-being for

LGBT individuals (Domínguez-Fuentes et al., 2012; Herek & Garnets, 2007; Masini & Barrett, 2008; Meyer, 2003; Wayment & Peplau, 1995).

This finding is remarkable within the context of the other effects found within the model. First, the effect of social support on well-being was the strongest effect found between any two variables in the model. It is noteworthy that the universal factor of social support was the strongest predictor of psychosocial well-being, greater than both resilience and positive LGB identity. This suggests that feeling supported by others in your life has a more profound impact on the positive dimensions of psychosocial health for LGB individuals than LGB-specific factors such as positive sexual identity, a variable which had no statistically significant effect on well-being at all. Additionally, the moderate effect size of social support on well-being makes further sense when considering that six of the 14 items in the MHC-SF (the scale measuring psychosocial well-being) assess social connection, perceptions of society, and interpersonal relationships. Given the clear theoretical connections between these constructs, it makes good sense that well-being would be substantially influenced by one's perceived social support.

Research question 9: Resilience and well-being

The final research question stated: *Does resilience positively affect psychosocial well-being?* It was hypothesized that resilience would have a significant positive effect on well-being. This hypothesis was entirely supported by the model. In fact, the moderate effect of resilience on well-being (r = .417) was only slightly lower than the effect of social support on well-being. This indicates that being able to bounce back from stressful events had a moderate effect on psychosocial well-being in the LGB individuals within

this. This finding supports Meyer's (2015) view that resilience is a critical component of the minority stress framework and aligns well with empirical research showing the positive effects of resilience within the LGB population (Dickinson & Adams, 2014; Walker & Longmire-Avital, 2013). While the model is unable to account for Meyer's (2003) theoretical prediction that resilience would buffer the negative effects of minority stress processes, it nevertheless provides additional evidence of the importance of the construct to well-being of non-heterosexual men.

Unsurprisingly, the correlation between resilience and social support in the model was highly significant and the relationship was moderate (r = .239). It seems plausible that experiencing social support might provide an individual with additional resources to effectively cope with stressful events. Conversely, lack of such social supports might impede one's ability to cope effectively. It is also noteworthy that these two factors are theorized as important universal protective factors in both the minority stress theory (Meyer, 2003) and the psychological mediation framework (Hatzenbuehler, 2009), providing additional conceptual credence to their positive correlation.

Conclusion

Overall, five of the seven regression hypotheses that were able to be addressed in the study's final structural model were supported. Somewhat surprisingly, the two unsupported hypotheses both had to do with positive non-heterosexual identity, namely the effect of minority stress processes on it and its effect on well-being. These conclusions may be at least partially explained by the factors making up the latent variable. As noted above, while all the factors on the positive non-heterosexual identity latent variable were statistically significant at the .05 level, the p-values were all above

.03, leaving one to wonder whether the observed variables are adequate indicators of an underlying latent variable. It may be that a statistically significant relationship between the positive LGB identity latent variable and minority stress/well-being would have been found had more suitable scales been used as indicators of the latent variable. Another potential explanation for these unsupported hypotheses may be more straightforward: it could be that positive universal factors such as social support and resilience are simply more determinative of one's psychosocial well-being than factors specific to one's sexual identity, regardless of the measures used. Additional research is necessary to clarify whether this is the case.

Beyond the analysis of the path coefficients, the study's final model showed adequate to good global fit and explained substantial amounts of variance in key factors, particularly well-being. While the theory tested in this study's structural model is certainly amendable to conceptual adjustments in the future (see future directions section below), these findings nevertheless suggest that the present theoretical model provides a solid foundation for future research on psychosocial well-being of non-heterosexual individuals.

Limitations

The findings of this study should be understood within the context of the study's limitations. The following will discuss several limitations to this study's findings, focusing on limitations related to the sample, measurement, and methodology.

Sample

Although the study's sample was adequate for the statistical analysis, there are several issues that limit the generalizability of the study's findings to non-heterosexual men. First, a convenience sample of volunteers was used, limiting the degree to which the study's findings can be generalized to the population of non-heterosexual men as a whole. Second, the sample skewed toward bisexual and queer-identified individuals, with 77% of participants identifying this way. Therefore, the study's findings may have been substantially different for a sample that was more representative of gay men. Third, the study's sample was largely recruited through social media, particularly websites and forums specifically geared toward non-heterosexual men. This may have impacted the study's findings as these individuals may have shared certain characteristics that were unique to the non-heterosexual men engaging in these forms of social media and not representative of non-heterosexual men as a whole. Lastly, the sample was overwhelmingly white (87%), and therefore, was far from representative of the racial diversity of non-heterosexual men.

Measurement

The study's findings were also limited by issues related to the measurement of constructs. As noted above, virtually all of the scores from the scales used in the final model had non-normal distributions. While statistical procedures were used to minimize the impact of the non-normal data on the structural equation modeling analyses, it is possible that the lack of normality may have still introduced unique error into the model.

Several scales, including the Connectedness to the LGBT Community scale and the authenticity subscale of the LGB-PIM, that were originally intended to be included in the model, had to be removed for statistical reasons. Excluding these scales and the

constructs they measure may have impacted the findings of the model in general, and therefore, their exclusion limits the validity of the final model's conclusions.

Methodology

This study attempted to answer questions regarding key predictors of psychosocial well-being in non-heterosexual men using structural equation modeling. This statistical procedure was used so that the factors in the model could be considered holistically. This approach had the advantage of allowing for the analysis of latent variables with multiple observed indicators and assessing global model fit. It did not, however, come without some limitations. First, the minority stress framework includes several factors, such as social support, resilience, and sexual identity valence, that are seen as moderators of the effect of minority stress on mental health outcomes (Meyer, 2003). The conceptual model developed for this study also included several moderating relationships. Unfortunately, analyzing these moderator effects in the statistical model would have required the creation of several product terms which would have significantly increased the number of parameters that needed to be estimated by the model. When this was attempted, the model was underidentified, and therefore, unable to be analyzed. While it was statistically feasible to include a moderator effect for one moderator variable in the model, the decision was made not to test any of these effects rather than arbitrarily choose to test one moderator and exclude the others. Without being able to test all of the moderator effects in one statistical model, it would be difficult to make conclusions regarding the goodness of fit of the conceptual model as a whole. This is because the inclusion of additional product terms might result in substantial changes in the global model fit and in specific path coefficients. As a result of this decision, this study was

unable to indicate whether variables such as perceived social support, resilience, and positive non-heterosexual identity moderated the effects of minority stress on psychosocial well-being. Not being able to identify whether these variables had significant moderation effects substantially limited the study's findings.

The study's findings were also limited by the several modifications to the model made during data analysis. While these modifications were all theoretically justified and were intentionally constrained to a minimum, it could be argued that these modifications resulted in a model that was overfit to this particular dataset. If this were the case, the study's findings would not be generalizable beyond the present sample.

Future Directions

There are several important ways in which future research can continue to improve understanding of the well-being of sexual minority individuals. One critical methodological issue concerning all empirical research of non-heterosexual individuals is sampling. Researchers should continue to seek means to find a more representative sample of sexual minorities, particularly those who might not be out and those who do not strictly identify as lesbian, gay, or bisexual. The present study was skewed toward men who do not identify their sexual orientation as exclusively heterosexual or homosexual, and in this regard, provided a unique sample that was not heavily focused on gay-identified men. While this may be a unique asset of this study, future research should endeavor to use samples that are more representative of the non-heterosexual population as a whole, without oversampling any particular sexual identity. Similarly, this study was also skewed toward younger cisgender men who identify as white and who earn $30,000 or less per year. Future research should seek more representative samples with regard to

age, gender identity, race, and socioeconomic status. The findings of the present study would be significantly strengthened if validated by a sample that was more representative of the broader population of non-heterosexual men.

Future research should also seek to extend these findings on the psychosocial well-being of non-heterosexual men to non-heterosexual women and gender nonconforming individuals. As previous research has found some differences in well-being by gender (e.g., Biss & Horne, 2005), it will be important for researchers to determine how these differences play out in this model of LGB well-being. Similarly, future research should consider whether the well-being of gender non-conforming individuals, regardless of their sexual identity, also follows the model analyzed in the present study. Given the tendency for researchers to apply similar theoretical models of psychosocial health to both sexual and gender minority individuals (e.g., Riggle & Rostosky, 2012), it would be useful to see whether this conceptual model has similar explanatory power for gender nonconforming individuals as it does for sexual minorities.

Beyond extending this research to other populations, future research should seek to improve the conceptual model in this study. First, as noted in the limitations section, this study was unable to assess whether perceived social support, resilience, and positive LGB identity acted as moderators on the effect of minority stress processes on well-being. Future research should seek larger samples that allow for testing all of these moderator effects within one structural model. A second prominent limitation of this study was the necessary exclusion of certain variables for statistical reasons, particularly measures of prejudicial events and connectedness to the LGBT community. Future

studies should work to ensure these constructs can be appropriately measured and included in the statistical model.

It would be worthwhile to determine whether the factors included in this conceptual model of LGB well-being function differently for specific subsets of the LGB population. For example, do social support and resilience have the same positive impact on well-being for individuals with substantial prejudicial experiences (e.g., those scoring in the upper quartile on the HHRDS) versus those with relatively few experiences of discrimination (e.g., those scoring in the lower quartile of the HHRDS)? Are there cohort specific differences in the model (e.g., are there significant differences in the model's effects for LGB individuals 55 years or older versus those who are under 30 years old)? These two examples might uncover important differences for promoting psychosocial well-being in particularly vulnerable LGB individuals (i.e., individuals who have experienced high levels of prejudice and older adults).

Lastly, future studies should seek to include negative mental health variables (e.g., measures of depression, anxiety, stress) in the statistical model in order to see how the predictor variables impact psychosocial distress versus well-being. By including measures that address the full spectrum of mental health, researchers might come closer to a single conceptual framework of psychological health in non-heterosexual individuals. Such a theory might be particularly useful for clinicians interested in simultaneously decreasing psychosocial distress and promoting psychosocial well-being in LGB clients.

Conclusion

Despite having some significant limitations, this study is not without several important strengths. First, a literature search did not find any prior study that used structural equation modeling to test a theoretical model of psychosocial well-being for non-heterosexual men. Previous studies on LGBT mental health have often used regression analysis or other forms of statistical analysis that do not allow for the inclusion of specified relationships between multiple variables. This study sought to study the relationship of multiple variables at once to provide a more holistic understanding of the predictors of well-being. Although structural equation modeling is not truly able to make cause and effect claims in the way that a true experiment can (Kline, 2015), it nevertheless provides the most rigorous tool for testing multiple relationships between constructs with cross-sectional data. Additionally, the use of SEM potentially allowed for the finding of important non-significant relationships that may have been significant had they been tested outside of the context of a structural model. For example, previous studies that found a significant relationship between minority stress processes and well-being (e.g., Morrison, 2012) used regression analyses that did not take into consideration the impact of other variables such as social support and resilience. By using SEM, this study was able to show that social support and resilience have a much stronger impact on well-being than minority stress processes do when all of these variables are tested together in a comprehensive manner.

Another strength of this study is its conceptualization and measurement of psychological well-being. For many previous studies of LGBT well-being (e.g., Keleher, Wei, & Liao, 2010; Zea, Reisen, & Poppen, 1999), psychological well-being was operationalized as the absence of mental illness and/or with more narrow definitions of

psychological well-being (e.g., life satisfaction, self-esteem). The present study, however, took a more comprehensive approach in conceptualizing well-being. This study viewed psychosocial well-being as comprised of elements from three of the major psychological well-being theories, namely subjective well-being (Diener, 1984), psychological well-being (Ryff & Keyes, 1995), and social well-being (Keyes, 1998). This conceptualization was operationalized through a measure – the Mental Health Continuum-Short Form (Keyes et al., 2008) – that incorporates items from well-established instruments used to measure each one of these conceptualizations of well-being. Such an approach adds credence to this study's claim to be measuring *psychosocial well-being* rather than a particular positive psychology construct (e.g., life satisfaction, happiness, purpose in life) or merely the absence of depression or distress. Furthermore, based on the literature reviewed, this study appears to be the first study of LGBT mental health to use this instrument or this specific conceptualization of well-being.

In summary, the present study makes several significant contributions to the literature regarding the psychosocial health of sexual minority men. First, the most significant predictors of well-being within this sample of non-heterosexual men were perceived social support and resilience. This finding is congruent with previous empirical findings showing how social support and resilience are important protective factors against the negative impacts of discrimination on mental health (Herek & Garnets, 2007; e.g., Meyer, 2003, 2015) and goes beyond these findings by showing a significant *direct* effect on mental health. It is also congruent with the LGB positive psychology research literature, including studies showing that non-heterosexual men value support from LGB peers (Dickinson & Adams, 2014; Riggle et al., 2008) and that there is an association

between coping and psychological well-being (Selvidge et al., 2008). These findings suggest that clinicians working to improve the psychosocial health of non-heterosexual men would do well to attend to their clients' perceptions of the social support in their lives and their ability to bounce back from stress. By addressing social support and resilience directly, clinicians can not only help mitigate the effects of minority stress on mental illness in their patients, but also work to improve global functioning and satisfaction in the lives of sexual minority men.

Another significant finding of this study is that minority stress may not have the same negative effects on psychological well-being as it does on psychological distress. In the present study, the proximal minority stress processes of internalized homonegativity and identity concealment did not have a statistically significant impact on psychosocial well-being, while in many previous studies (Herek & Garnets, 2007; e.g., see Meyer, 2003, 2007), minority stress was found to predict psychosocial distress. This suggests that addressing proximal forms of minority stress may not be as relevant to the promotion of flourishing as other factors such as social support and resilience. Of course, it remains prudent for clinicians and LGB individuals to work to decrease the prevalence of proximal forms of minority stress and promote more effective means of coping with these minority stressors even when the focus is on the promotion of flourishing rather than the diminishment of psychological distress. A continued focus on reducing the presence of proximal minority stressors is particularly relevant given this study's finding that minority stress *does* have a statistically significant negative impact on social support and resilience. In other words, the increased presence of internalized homonegativity and identity concealment leads to decreased perceptions of social support and resilience,

which may lead to a negative, albeit indirect, impact on an individual's well-being. It is also important to note that the present study's statistical model accounted for a relatively small amount of the variance in both social support and resilience; as a result, it is unclear how much a decrease in minority stress would positively impact these two protective factors. Therefore, while decreasing the presence of proximal minority stressors may indirectly promote well-being by decreasing its negative impact on the important protective factors of social support and resilience, directly focusing on proximal minority stressors alone may be insufficient to increase well-being in non-heterosexual men.

More broadly, the present study adds to the empirical evidence suggesting that psychological distress and well-being are two distinct but related constructs (Keyes, 2002) that are impacted differently by the same stressors. This study provides preliminary support for developing a more comprehensive theory of the predictors of psychosocial well-being that builds upon and appropriately modifies the minority stress theoretical model (Meyer, 2003). Given the present study's findings, it may no longer be sufficient to conceptualize predictors of LGB mental health solely based on factors shown to impact indicators of psychological distress. Future research should work to build upon the minority stress framework and make appropriate modifications to include relevant predictors of well-being alongside predictors of distress. By doing so, clinicians, public health officials, and LGB individuals themselves will be better informed as to how to promote the full spectrum of mental health.

Now is the time to strive toward an LGB healthcare ethos that seeks to promote psychological flourishing *in addition* to preventing and diminishing psychological languishing. The LGB community has undoubtedly made incredible strides toward

greater visibility, recognition, and acceptance within society as a whole over the past half century. As efforts continue to be made to decrease stigma, promote acceptance, and strengthen LGB civil rights, work must also be done to ensure that the pathways to the fullness of mental health for LGB individuals are well known and accurately defined. This study takes a step in this direction by showing how elements of the minority stress framework impact well-being differently than they impacted psychological distress in prior research. It is the hope of this author that efforts to decrease the psychological suffering of sexual minority individuals will continue unabated *and simultaneously broadened* to include the goal of promoting the psychosocial flourishing of all those in the LGBT community.

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Appendix A – Survey Items

Demographic Questionnaire

1. What is your current age? ___ year old.
2. Which best matches your racial/ethnic background?
    a. White/European American
    b. Black/African American
    c. Asian/Pacific Islander
    d. Latino/Hispanic
    e. Native American
    f. Other: _____
3. What is your highest level of formal education?
    a. Did not graduate high school
    b. High school or equivalent (e.g., GED)
    c. Some college (no degree)
    d. Associate's Degree (2-year degree)
    e. Bachelor's Degree (4 year-degree)
    f. Master's Degree
    g. Doctoral Degree
4. What is an estimate of your annual household income?
    a. Less than $10,000
    b. $10,000-19,999
    c. $20,000-29,999
    d. $30,000-39,999
    e. $40,000-49,999
    f. $50,000-59,999
    g. $60,000-69,999
    h. $70,000-79,999
    i. $80,000-89,999
    j. $90,000-99,999
    k. $100,000-149,999
    l. $150,000 or more
5. Which of the following best describes where you live?
    a. Rural
    b. Small Town
    c. Suburban Town/City
    d. Urban City
6. What is your religious affiliation? _____
7. What is your occupation? _____
8. What is your gender? _____
9. What is your sexual orientation? _____
10. At approximately what age did you realize your sexual orientation? ____ years old.
11. At approximately what age did you "come out" or told others about your sexual orientation? (If you are not "out," please enter 0) ____ years old.

12. Are you currently in a romantic relationship? Yes or No
13. If you are currently in a romantic relationship, what is the gender identity of your partner? _____

Psychosocial Well-Being

Mental Health Continuum-Short Form:

1 = Never
2 = Once or twice a month
3 = About once a week
4 = Two or three times a week
5 = Almost every day
6 = Everyday

In the past month, how often did you feel…

1. Happy
2. Interested in life
3. Satisfied
4. That you had something important to contribute to society
5. That you belonged to a community (like a social group, your neighborhood, your city).
6. That our society is becoming a better place for people.
7. That people are basically good.
8. That the way our society works makes sense to you.
9. That you liked most parts of your personality.
10. Good at managing the responsibilities of your daily life
11. That you had warm and trusting relationships
12. That you have experiences that challenge you to grow and become a better person.
13. Confident to think or express your own ideas and opinions
14. That your life has a sense of direction or meaning to it.

Minority Stress Processes (Distal)

Heterosexist Harassment, Rejection, and Discrimination Scale:

1 = Never happened to you
2 = Happened once in a while (less than 10% of the time)
3 = Sometimes (10-25%)
4 = A lot (26-49%)
5 = Most of the time (50-70%)
6 = Almost all the time (more than 70% of the time)

1. How many times have you been treated unfairly by teachers or professors because you are not heterosexual?
2. How many times have you been treated unfairly by your employer, boss, or supervisors because you are not heterosexual?

3. How many times have you been treated unfairly by your coworkers, fellow students, or colleagues because you are not heterosexual?
4. How many times have you been treated unfairly by people in service jobs (by store clerks, waiters, bartenders, waitresses, bank tellers, mechanics, and others) because you are not heterosexual?
5. How many times have you been treated unfairly by strangers because you are not heterosexual?
6. How many times have you been rejected by friends because you are not heterosexual?
7. How many times have you been verbally insulted because you are not heterosexual?
8. How many times have you been treated unfairly by your family because you are not heterosexual?
9. How many times have you been called a heterosexist name like fag or other names?
10. How many times have you been made fun of, picked on, pushed, shoved, hit, or threatened with harm because you are not heterosexual?
11. How many times have you been rejected by family members because you are not heterosexual?
12. How many times have you been rejected by friends because you are not heterosexual?
13. How many times have you heard anti-gay remarks from family members?
14. How many times have you been verbally insulted because you are not heterosexual.

Minority Stress Processes (Proximal)

Lesbian, Gay, Bisexual Identity Scale (LGBIS):
1 = Strongly disagree
2 = Disagree
3 = Disagree somewhat
4 = Agree somewhat
5 = Agree
6 = Strongly agree

LGBIS Concealment Motivation:

1. I keep careful control over who knows about my same-sex romantic relationships.
2. I prefer to keep my same-sex romantic relationships rather private.
3. My sexual orientation is a very personal and private matter.

LGBIS Internalized Homonegativity:

1. d
2. I wish I were heterosexual.
3. I believe it is unfair that I am attracted to people of the same sex.

Positive Non-Heterosexual Identity Valence

Multigroup Ethnic Identity Measure (MEIM):
1 = Strongly disagree
2 = Disagree
3 = Disagree somewhat
4 = Agree somewhat
5 = Agree
6 = Strongly agree

MEIM Identity Affirmation and Belonging Subscale Adapted for Non-Heterosexual Men:

1. I am happy that I am a member of the LGBT community.
2. I have a strong sense of belonging to the LGBT community.
3. I have a lot of pride in the LGBT community and its accomplishments.
4. I feel a strong attachment toward the LGBT community.
5. I feel good about being LGBT.

MEIM Identity Achievement Subscale Adapted for Non-Heterosexual Men:

1. I have spent time trying to find out more about the LGBT community, such as its history, traditions, and customs.
2. I have a clear sense of my LGBT identity and what it means for me.
3. I think a lot about how my life with be affected by my sexual orientation.
4. I am not very clear about the role of my sexual orientation in my life. (reverse coded)
5. I really have not spent much time trying to learn more about the culture and history of the LGBT community. (reverse coded)
6. I understand pretty well what my membership in the LGBT community means to me.
7. In order to learn more about my sexual orientation, I have often talked to other people about the LGBT community.

Strengths Associated with Being Non-Heterosexual

Lesbian, Gay, Bisexual Positive Identity Measure (LGB-PIM):
1 = Strongly disagree
2 = Disagree
3 = Disagree somewhat
4 = Neither agree nor disagree
5 = Agree somewhat
6 = Agree
7 = Strongly agree

1. My LGBT identity leads me to important insights about myself.
2. I am more aware of how I feel about things because of my LGBT identity.

3. My LGBT identity motivates me to be more self-aware.
4. Because of my LGBT identity, I am more in tune with what is happening around me.
5. My LGBT identity has led me to develop new insights into my strengths.
6. I feel I can be honest and share my LGBT identity with others.
7. I am honest with myself about my LGBT identity.
8. I have a sense of inner peace about my LGBT identity.
9. I embrace my LGBT identity.
10. I am comfortable with my LGBT identity.
11. I feel supported by the LGBT community.
12. I feel visible in the LGBT community.
13. I feel included in the LGBT community.
14. I feel a connection to the LGBT community.
15. I find positive networking opportunities in the LGBT community.
16. My LGBT identity allows me to understand my sexual partner better.
17. My LGBT identity allows me to be closer to my intimate partner.
18. My LGBT identity frees me to choose who I want as my sexual/intimate partner.
19. I have a sense of sexual freedom because of my LGBT identity.
20. My LGBT identity helps me to communicate better with my intimate partner.
21. As an LGBT person, it is important to act as an advocate for LGBT rights.
22. My LGBT identity makes it important to me to actively educate others about LGBT issues.
23. My experience with my LGBT identity leads me to fight for the rights of others.
24. I am more sensitive to prejudice and discrimination against others because of my LGBT identity.
25. I have a greater respect for people who are different from society's expectations because of my LGBT identity.

Social Support

Multidimensional Scale of Perceived Social Support (MSPSS):
(Subscale for each item indicated in parentheses)
1 = Very strongly disagree
2 = Strongly disagree
3 = Disagree
4 = Neutral
5 = Agree
6 = Strongly Agree
7 = Very strongly agree

1. There is a special person who is around when I am in need. (Significant Other)
2. There is a special person with whom I can share my joys and sorrows. (Significant Other)
3. My family really tries to help me. (Family)
4. I get the emotional help and support I need from my family. (Family)
5. I have a special person who is a real source of comfort to me. (Significant Other)

6. My friends really try to help me. (Friends)
7. I can count on my friends when things go wrong. (Friends)
8. I can talk about my problems with my family. (Family)
9. I have friends with whom I can share my joys and sorrows. (Friends)
10. There is a special person in my life who cares about my feelings. (Significant Other)
11. My family is willing to help me make decisions. (Family)
12. I can talk about my problems with my friends. (Friends)

Connectedness to the LGBT Community Scale:
1 = agree strongly
2 = agree
3 = disagree
4 = disagree strongly

1. You feel you're a part of the LGBT community.
2. Participating in the LGBT community is a positive thing for you.
3. You feel a bond with the LGBT community.
4. You are proud of the LGBT community
5. It is important for you to be politically active the LGBT community.
6. If we work together, gay, bisexual, and lesbian people can solve problems in the LGBT community.
7. You really feel that any problems faced by the LGBT community are also your own problems.
8. You feel a bond with other non-heterosexual men.

Resilience

Brief Resilience Scale:
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree

1. I tend to bounce back quickly after hard times.
2. I have a hard time making it through stressful events.
3. It does not take me long to recover from a stressful event.
4. It is hard for me to snap back when something bad happens.
5. I usually come through difficult times with little trouble.
6. I tend to take a long time to get over set-backs in my life.

Negative Mental Health

The Depression, Anxiety, and Stress Scale-21 (DASS-21)
How much the statement applied to you in the last week:

0 = Never (Did not apply to me at all)
1 = Sometimes (Applied to me to some degree, or some of the time)
2 = Often (Applied to me to a considerable degree, or a good part of time)
3 = Almost Always (Applied to me very much, or most of the time)

1. I found it hard to wind down.
2. I was aware of dryness of my mouth.
3. I couldn't seem to experience any positive feeling at all.
4. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion).
5. I found it difficult to work up the initiative to do things.
6. I tended to over-react to situations.
7. I experienced trembling (eg, in the hands).
8. I felt that I was using a lot of nervous energy.
9. I was worried about situations in which I might panic and make a fool of myself.
10. I felt that I had nothing to look forward to.
11. I found myself getting agitated.
12. I found it difficult to relax.
13. I felt down-hearted and blue.
14. I was intolerant of anything that kept me from getting on with what I was doing.
15. I felt I was close to panic.
16. I was unable to become enthusiastic about anything.
17. I felt I wasn't worth much as a person.
18. I felt that I was rather touchy.
19. I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat).
20. I felt scared without any good reason.
21. I felt that life was meaningless.

Qualitative Items

When answering the following questions, "flourish" or "flourishing" is defined as being filled with positive emotions and functioning well psychologically and socially.

1. What are some of the most important factors in your life that help you to flourish?
2. What are some of the most important factors in your life that are barriers to you flourishing?

Table 3.1. Sample Description

Demographic	
Age	M = 27.49 (SD = 8.86)
Gender Identity	
Male	297 (94.59%)
Transgender, Gender Nonconforming, or Queer Identified	12 (3.84%)
Cis-Gender Male (explicitly identified)	5 (1.58%)
Race	
White	274 (87.26%)
Black/African American	9 (2.87%)
American Indian/Alaska Native	2 (.64%)
Latino/Hispanic	24 (7.64%)
Asian	12 (3.82%)
Native Hawaiian or Pacific Islander	2 (.64%)
Other	4 (1.27%)
Education	
Did not graduate high school	9 (2.87%)
High school or equivalent (e.g., GED)	49 (15.61%)
Some college (no degree)	98 (31.31%)
Associate's Degree (2-year degree)	17 (5.41%)
Bachelor's Degree (4 year-degree)	90 (28.66)
Master's Degree	34 (10.83%)
Doctoral Degree	8 (2.55%)
Professional Degree (JD, MD)	9 (2.87%)
Income	
Less than $10,000	54 (17.2%)
$10,000-19,999	36 (11.4%)
$20,000-29,999	30 (9.55%)
$30,000-39,999	43 (13.69%)
$40,000-49,999	28 (8.92%)
$50,000-59,999	26 (8.28%)
$60,000-69,999	18 (5.73%)
$70,000-79,999	9 (2.87%)
$80,000-89,999	11 (3.50%)
$90,000-99,999	11 (3.50%)
$100,000-149,999	29 (9.24%)
$150,000 or more	19 (6.05%)
Geographic Location	
Rural	18 (5.73%)
Small Town	41 (13.06%)
Suburban Town/City	142 (45.22%)
Urban City	113 (35.99%)
Kinsey Scale*	M = 4.26 (SD = 1.58)
Currently in romantic relationship	141 (44.8%)

Note. *Kinsey Scale measures sexual behavior, with 1 indicating exclusively heterosexual sexual behavior and 7 indicating exclusively homosexual behavior.

Table 3.2. Descriptive Statistics

	N	Mean	Standard Deviation	Skew	Kurtosis
MHC-SF - Emotional Well-Being	314	4.21	1.11	-.56	-.32
MHC-SF- Psychological Well-Being	313	4.05	1.11	-.22	-.79
MHC-SF - Social Well-Being	311	3.35	1.11	.13	-.58
HHRDS	313	1.72	.71	1.56	3.12
LGBIS - Concealment Motivations	310	3.97	1.45	-.37	-.86
LGBIS - Internalized Homonegativity	314	1.83	1.13	1.54	1.93
MEIM	314	3.83	.96	.01	-.38
LGB-PIM Self-Awareness	314	4.52	1.56	-.56	-.31
LGB-PIM Authenticity	314	5.39	1.28	-.87	.32
LGB-PIM Community	314	3.51	1.54	.21	-.69
LGB-PIM Intimacy	310	4.85	1.36	-.61	.45
LGB-PIM Social Justice	314	5.10	1.49	-.97	.41
MSPSS	313	4.9	1.17	-.68	.62
Connectedness to the LGBT Community	309	2.71	.61	-0.32	0.14
BRS	313	3.17	.9	-.12	-.56

Note. MHC-SF = Mental Health Continuum – Short Form. HHRDS = Heterosexist Harassment, Rejection, and Discrimination Scale. LGBIS = Lesbian, Gay, Bisexual Identity Scales. MEIM = Multigroup Ethnic Identity Measure. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. MSPSS = Multidimensional Scale of Perceived Social Support. BRS = Brief Resilience Scale.

Table 3.3. Bivariate Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13
MHC-SF - Emotional Well-Being													
MHC-SF- Psychological Well-Being	0.75***												
MHC-SF - Social Well-Being	0.66***	0.67***											
HHRDS	-0.12*	0.00	-0.18**										
LGBIS - Concealment Motivations	-0.18**	-0.17**	-0.22***	-0.07									
LGBIS - Internalized Homonegativity	-0.04	-0.07	-0.08	0.11*	0.22***								
MEIM	0.22***	0.25***	0.23***	0.31***	-0.45***	-0.31***							
LGB-PIM Self-Awareness	0.17**	0.20***	0.11	0.37***	-0.22***	-0.14*	0.65***						
LGB-PIM Authenticity	0.30***	0.30***	0.28***	0.03	-0.51***	-0.50***	0.56***	0.35***					
LGB-PIM Community	0.28***	0.28***	0.28***	0.15**	-0.44***	-0.25***	0.75***	0.47***	0.50***				
LGB-PIM Intimacy	0.21***	0.24***	0.09	0.23***	-0.22***	-0.21***	0.53***	0.57***	0.46***	0.44***			
LGB-PIM Social Justice	0.05	0.06	-0.04	0.32***	-0.17**	-0.09	0.63***	0.67***	0.24***	0.44***	0.44***		
BRS	0.49***	0.52***	0.37***	-0.11	-0.11	-0.02	0.11	0.05	0.24***	0.14*	0.11	-0.05	
MSPSS	0.51***	0.55***	0.48***	-0.13*	-0.19***	-0.05	0.27***	0.14*	0.29***	0.34***	0.29***	0.06	0.28***

Note. MHC-SF = Mental Health Continuum – Short Form. HHRDS = Heterosexist Harassment, Rejection, and Discrimination Scale. LGBIS = Lesbian, Gay, Bisexual Identity Scales. MEIM = Multigroup Ethnic Identity Measure. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. MSPSS = Multidimensional Scale of Perceived Social Support. BRS = Brief Resilience Scale. *** $p < .001$, ** $p < .01$, * $p < .05$

Table 4.1. Initial Measurement Model 1 Factor Loadings

Latent Variable	Indicator	B	SE	Z	p-value	β
Well-Being	MHC-SF - Emotional Well-Being	2.84	0.15	19.38	0.00	0.85
	MHC-SF - Social Well-Being	4.23	0.27	15.37	0.00	0.76
	MHC-SF- Psychological Well-Being	5.78	0.27	21.73	0.00	0.87
Minority Stress	LGBIS - Concealment Motivations	2.67	0.50	5.32	0.00	0.62
	LGBIS - Internalized Homonegativity	1.20	0.27	4.42	0.00	0.35
Strengths	LGB-PIM Self-Awareness	6.62	0.43	15.54	0.00	0.85
Associated with	LGB-PIM Community	4.69	0.45	10.35	0.00	0.61
Being Non-	LGB-PIM Intimacy	4.48	0.42	10.65	0.00	0.66
Heterosexual	LGB-PIM Social Justice	5.51	0.49	11.32	0.00	0.74

Note. B = unstandardized parameter estimate. SE = standard error. Z = z-score. β = standardized parameter estimate. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure.

Table 4.2. Final Measurement Model 1 Factor Loadings and Covariance Estimates

Parameter Estimates		B	SE	Z	p-value	β
Latent Variable	**Indicator**					
Well-Being	MHC-SF - Emotional Well-Being	2.84	.15	19.33	.00	.85
	MHC-SF - Social Well-Being	4.22	.27	15.45	.00	.76
	MHC-SF- Psychological Well-Being	5.79	.27	21.80	.00	.87
Minority Stress	LGBIS - Concealment Motivations	2.18	.40	5.38	.00	.50
	LGBIS - Internalized Homonegativity	1.32	.30	4.39	.00	.39
Strengths Associated with Being Non-Heterosexual	LGB-PIM Self-Awareness	6.38	.69	9.25	.00	.82
	LGB-PIM Intimacy	4.39	.52	8.42	.00	.65
	LGB-PIM Social Justice	4.16	.54	7.72	.00	.56
	LGB-PIM Community	5.79	.62	9.31	.00	.75
Error Covariance Estimates						
LGB-PIM Self-Awareness	LGB-PIM Social Justice	12.45	4.23	2.95	.00	.45
LGB-PIM Self-Awareness	LGB-PIM Community	-8.94	5.13	-1.74	.08	-.39
LGB-PIM Intimacy	LGB-PIM Social Justice	3.29	2.93	1.12	.26	.10
LGBIS - Concealment Motivations	LGB-PIM Community	-6.04	1.87	-3.22	.00	-.32
Latent Variable Covariance Estimates						
Well-Being	Minority Stress	-.32	.12	-2.56	.01	-.32
Well-Being	Strengths Associated with Being Non-Heterosexual	.34	.07	4.59	.00	.34
Minority Stress	Strengths Associated with Being Non-Heterosexual	-.62	.14	-4.56	.00	-.62
Error Estimates						
MHC-SF - Emotional Well-Being		.33	.05	7.08	.00	.27
MHC-SF - Social Well-Being		.51	.05	9.45	.00	.42
MHC-SF- Psychological Well-Being		.29	.05	5.61	.00	.24
LGBIS - Concealment Motivations		1.55	.2	7.76	.00	.75
LGBIS - Internalized Homonegativity		1.1	.13	8.31	.00	.85
LGB-PIM Self-Awareness		.82	.29	2.81	.00	.34
LGB-PIM Intimacy		1.1	.16	6.82	.00	.58
LGB-PIM Social Justice		1.52	.17	8.87	.00	.69
LGB-PIM Community		1.02	.26	3.89	.00	.43

Note. B = unstandardized parameter estimate. SE = standard error. Z = z-score. β = standardized parameter estimate. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay,

Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. Strengths = Strengths Associated with Being Non-Heterosexual latent variable.

Table 4.3. Final Measurement Model 1 Residual Correlations

Variables	1	2	3	4	5	6	7	8	9
MHC-SF - Emotional Well-Being									
MHC-SF - Social Well-Being	.00								
MHC-SF- Psychological Well-Being	.00	.00							
LGBIS - Concealment Motivations	-.05	-.10	-.03						
LGBIS - Internalized Homonegativity	.07	.02	.04	.02					
LGB-PIM Self-Awareness	-.07	-.10	-.04	.04	.05				
LGB-PIM Intimacy	.02	-.07	.05	-.02	-.05	.04			
LGB-PIM Social Justice	-.11	-.18	-.10	.00	.04	.00	.01		
LGB-PIM Community	.06	.09	.05	-.02	-.07	.00	-.05	.02	.00

Note. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure.

Table 4.4. Final Measurement Model 2 Parameter Estimates

Parameter Estimates		B	SE	Z	p-value	β
Latent Variable	**Indicator**					
Well-Being	MHC-SF - Emotional Well-Being	2.83	.15	19.35	.00	.85
	MHC-SF - Social Well-Being	4.24	.27	15.62	.00	.77
	MHC-SF- Psychological Well-Being	5.78	.26	21.85	.00	.87
Minority Stress	LGBIS - Concealment Motivations	2.46	.35	7.08	.00	.57
	LGBIS - Internalized Homonegativity	1.29	.25	5.19	.00	.38
Positive Non-Heterosexual Identity	LGB-PIM Self-Awareness	5.25	.40	13.01	.00	.67
	LGB-PIM Intimacy	3.82	.40	9.46	.00	.56
	LGB-PIM Social Justice	3.92	.48	8.20	.00	.53
	LGB-PIM Community	5.99	.38	15.93	.00	.78
	MEIM	11.00	.58	19.11	.00	.96
Error Covariance Estimates						
LGB-PIM Self-Awareness	LGB-PIM Social Justice	18.19	2.88	6.32	.00	.50
LGB-PIM Self-Awareness	LGB-PIM Community	-3.99	2.03	-1.96	.05	-.14
LGB-PIM Self-Awareness	LGB-PIM Intimacy	9.99	2.70	3.70	.00	.31
LGB-PIM Intimacy	LGB-PIM Social Justice	7.35	2.38	3.09	.00	.21
LGB-PIM Social Justice	MEIM	1.86	3.55	3.06	.00	.51
LGBIS - Concealment Motivations	LGB-PIM Community	-1.94	1.23	-1.58	.11	-.11
Latent Variable Covariance Estimates						
Well-Being	Minority Stress	-.32	.11	-2.92	.00	-.32
Well-Being	Positive Non-Heterosexual Identity Valence	.33	.07	4.58	.00	.33
Minority Stress	Positive Non-Heterosexual Identity Valence	-.83	.10	-8.41	.00	-.83
Error Estimates						
MHC-SF - Emotional Well-Being		.33	.05	7.22	.00	.27
MHC-SF - Social Well-Being		.51	.05	9.43	.00	.41
MHC-SF- Psychological Well-Being		.29	.05	5.72	.00	.24
LGBIS - Concealment Motivations		1.42	.18	7.95	.00	.68
LGBIS - Internalized Homonegativity		1.08	.12	9.1	.00	.85
LGB-PIM Self-Awareness		1.35	.13	10.81	.00	.55
LGB-PIM Intimacy		1.27	.11	11.11	.00	.69
LGB-PIM Social Justice		1.6	.15	10.72	.00	.72
LGB-PIM Community		.93	.12	7.91	.00	.39
MEIM		.08	.05	1.51	0.13	.09

Note. B = unstandardized parameter estimate. SE = standard error. Z = z-score. β = standardized parameter estimate. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay,

Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. MEIM = Multigroup Ethnic Identity Measure.

Table 4.5. Initial Structural Model 1 Residual Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11
MHC-SF - Emotional Well-Being											
MHC-SF - Social Well-Being	.04										
MHC-SF- Psychological Well-Being	.01	.02									
LGBIS - Concealment Motivations	-.01	-.07	.01								
LGBIS - Internalized Homonegativity	.08	.03	.05	.02							
LGB-PIM Self-Awareness	-.02	-.06	.00	.09	.05						
LGB-PIM Intimacy	.05	-.04	.08	.03	-.05	.14					
LGB-PIM Community	.08	.10	.06	-.01	-.04	-.03	-.03				
LGB-PIM Social Justice	-.13	-.19	-.12	.11	.09	.01	.05	-.08			
MSPSS	.05	.08	.07	-.01	.06	-.03	.14	.15	-.11		
BRS	.08	.01	.09	-.02	.04	-.04	.04	.04	-.13	.22	
MEIM	-.03	.01	-.02	.00	-.01	-.02	-.02	.01	.02	.00	-.03

Note. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. MSPSS = Multidimensional Scale of Perceived Social Support. BRS = Brief Resilience Scale. MEIM = Multigroup Ethnic Identity Measure.

Table 4.6. Final Structural Model 1 Residual Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
MHC-SF - Emotional Well-Being											
MHC-SF - Social Well-Being	.02										
MHC-SF- Psychological Well-Being	.00	.00									
LGBIS - Concealment Motivations	-.03	-.09	-.01								
LGBIS - Internalized Homonegativity	.07	.02	.04	.03							
LGB-PIM Self-Awareness	-.01	-.05	.02	.09	.06						
LGB-PIM Intimacy	.06	-.03	.09	.04	-.04	.14					
LGB-PIM Community	.09	.11	.07	.00	-.03	-.03	-.03				
LGB-PIM Social Justice	-.11	-.18	-.11	.11	.09	.01	.05	-.08			
MSPSS	-.01	.02	.01	-.03	.05	-.03	.14	.15	-.11		
BRS	.01	-.06	.02	-.04	.02	-.03	.05	.06	-.12	.00	
MEIM	-.02	.02	.00	.00	.00	-.02	-.02	.01	.02	.01	.00

Note. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. MSPSS = Multidimensional Scale of Perceived Social Support. BRS = Brief Resilience Scale. MEIM = Multigroup Ethnic Identity Measure.

Table 4.7. Structural Model 1 Parameter Estimates

Parameter Estimates		B	SE	Z	p-value	β
Latent Variable	**Indicator**					
Well-Being	MHC-SF - Emotional Well-Being	1.81	.14	13.07	.00	.84
	MHC-SF - Social Well-Being	2.69	.25	1.93	.00	.75
	MHC-SF- Psychological Well-Being	3.78	.26	14.66	.00	.89
Minority Stress	LGBIS - Concealment Motivations	2.29	.33	7.04	.00	.53
	LGBIS - Internalized Homonegativity	1.19	.24	5.04	.00	.35
Strengths Associated with Being Non-Heterosexual	LGB-PIM Self-Awareness	1.97	.51	3.89	.00	.71
	LGB-PIM Intimacy	1.45	.39	3.69	.00	.60
	LGB-PIM Community	2.15	.46	4.69	.00	.78
	LGB-PIM Social Justice	1.75	.39	4.46	.00	.66
Regression Estimates						
Well-Being	MSPSS	.05	.01	7.83	.00	.45
Well-Being	BRS	.12	.02	7.96	.00	.42
Well-Being	MEIM	-.05	.05	-.91	.36	-.35
Well-Being	Minority Stress	-.36	.49	-.74	.46	-.23
Well-Being	Strengths Associated with Being Non-Heterosexual	.15	.14	1.11	.27	.27
MSPSS	Minority Stress	-4.31	.92	-4.67	.00	-.31
BRS	Minority Stress	-.71	.38	-1.83	.07	-.13
MEIM	Minority Stress	-9.9	1.17	-8.49	.00	-.86
Strengths Associated with Being Non-Heterosexual	MEIM	.23	.05	4.28	.00	.93
Error Covariance Estimates						
LGB-PIM Self-Awareness	LGB-PIM Social Justice	11.1	3.02	3.67	.00	.36
LGB-PIM Self-Awareness	LGB-PIM Community	-3.40	2.39	-1.42	.16	-.13
LGB-PIM Intimacy	LGB-PIM Social Justice	-.5	1.74	-.29	.77	-.02
LGBIS - Concealment Motivations	LGB-PIM Community	-3.34	1.15	-2.9	.00	-.19
MSPSS	BRS	17.8	4.35	4.09	.00	.25
Error Estimates						
MHC-SF - Emotional Well-Being		.35	.05	7.78	.00	.29
MHC-SF - Social Well-Being		.53	.05	10.5	.00	.43
MHC-SF- Psychological Well-Being		.26	.04	6.7	.00	.21
LGBIS - Concealment Motivations		1.5	.16	9.44	.00	.72
LGBIS - Internalized Homonegativity		1.11	.12	9.06	.00	.88
LGB-PIM Self-Awareness		1.2	.15	7.93	.00	.5
LGB-PIM Intimacy		1.19	.12	10.13	.00	.64
LGB-PIM Social Justice		.92	.08	10.94	.00	.39
LGB-PIM Community		1.26	.12	10.43	.00	.57
MSPSS		1.23	.13	9.5	.00	.91
BRS		.8	.06	14.34	.00	.98
MEIM		.24	.15	1.64	.24	.26

Note. B = unstandardized parameter estimate. SE = standard error. Z = z-score. β = standardized parameter estimate. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. MSPSS = Multidimensional Scale of Perceived Social Support. BRS = Brief Resilience Scale. MEIM = Multigroup Ethnic Identity Measure.

Table 4.8. Structural Model 2 Residual Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11
MHC-SF - Emotional Well-Being											
MHC-SF - Social Well-Being	.02										
MHC-SF- Psychological Well-Being	.00	.00									
LGBIS - Concealment	-	-	.00								
Motivations	.02	.08									
LGBIS - Internalized Homonegativity	.07	.03	.04	.03							
LGB-PIM Self-Awareness	-	-	.01	.11	.07						
	.02	.06									
LGB-PIM Intimacy	.05	-	.08	.05	-	.00					
		.04			.03						
LGB-PIM Community	.06	.09	.04	-	.00	.01	-				
				.01			.01				
LGB-PIM Social Justice	-	-	-	.08	.08	.00	.00	.03			
	.10	.17	.09								
MEIM	-	-	-	.00	.00	.01	.00	.00	.00		
	.05	.01	.03								
MSPSS	-	.02	.00	-	.07	-	.11	.10	-	-	
	.01			.02		.06			.11	.03	
BRS	.01	-	.02	-	.03	-	.03	.03	-	-	0
		.06		.02		.05			.13	.03	

Note. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. MEIM = Multigroup Ethnic Identity Measure. MSPSS = Multidimensional Scale of Perceived Social Support. BRS = Brief Resilience Scale.

Table 4.9. Structural Model 2 Parameter Estimates

Parameter Estimates		B	SE	Z	p-value	β
Latent Variable	**Indicator**					
Well-Being	MHC-SF - Emotional Well-Being	1.83	.12	14.76	.00	.85
	MHC-SF - Social Well-Being	2.73	.22	12.60	.00	.76
	MHC-SF - Psychological Well-Being	3.84	.23	16.90	.00	.89
Minority Stress Processes	LGBIS - Concealment Motivations	2.27	.33	6.99	.00	.52
	LGBIS - Internalized Homonegativity	1.19	.23	5.23	.00	.35
Positive Non-Heterosexual Identity	LGB-PIM Self-Awareness	2.17	1.06	2.06	.04	.67
	LGB-PIM Intimacy	1.59	.76	2.08	.04	.57
	LGB-PIM Community	2.49	1.18	2.11	.03	.79
	LGB-PIM Social Justice	1.61	.81	1.98	.05	.53
	MEIM	4.51	2.16	2.09	.04	.95
Regression Estimates						
Well-Being	MSPSS	.05	.01	7.65	.00	.45
Well-Being	BRS	.12	.01	8.25	.00	.42
Well-Being	Minority Stress	-.27	.69	-.40	.69	-.18
Well-Being	Positive Non-Heterosexual Identity	-.02	.26	-.08	.93	-.03
Social Support	Minority Stress Processes	-4.83	.96	-5.02	.00	-.35
BRS	Minority Stress Processes	-.85	.38	-2.22	.03	-.16
Positive Non-Heterosexual Identity	Minority Stress Processes	-2.21	1.26	-1.75	.08	-.91
Error Covariance Estimates						
LGB-PIM Self-Awareness	LGB-PIM Social Justice	18.05	2.83	6.38	.00	.49
LGB-PIM Self-Awareness	LGB-PIM Community	-4.27	1.96	-2.18	.03	-.15
LGB-PIM Self-Awareness	LGB-PIM Intimacy	9.71	2.68	3.63	.00	.30
LGB-PIM Intimacy	LGB-PIM Social Justice	7.30	2.36	3.09	.00	.21
LGB-PIM Social Justice	MEIM	11.19	3.32	3.37	.00	.49
LGBIS - Concealment Motivations	LGB-PIM Community	-1.69	1.23	-1.38	.17	-.10
MSPSS	BRS	16.74	4.45	3.76	.00	.24
Error Estimates						
MHC-SF - Emotional Well-Being		.35	.05	7.82	.00	.29
MHC-SF - Social Well-Being		.52	.05	10.53	.00	.43
MHC-SF- Psychological Well-Being		.26	.04	6.73	.00	.21
LGBIS - Concealment Motivations		1.52	.15	10.02	.00	.73
LGBIS - Internalized Homonegativity		1.11	.12	9.12	.00	.88
LGB-PIM Self-Awareness		1.34	.12	10.9	.00	.55
LGB-PIM Intimacy		1.26	.11	11.1	.00	.68
LGB-PIM Community		.91	.12	7.84	.00	.38
LGB-PIM Social Justice		1.59	.15	10.88	.00	.72
MEIM		0.09	.05	1.9	.06	.1
MSPSS		1.195	.13	9.32	.00	.88
BRS		.8	.06	14.26	.00	.98

Note. B = unstandardized parameter estimate. SE = standard error. Z = z-score. β = standardized parameter estimate. MHC-SF = Mental Health Continuum – Short Form. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure. MEIM = Multigroup Ethnic Identity Measure. MSPSS = Multidimensional Scale of Perceived Social Support. BRS = Brief Resilience Scale.

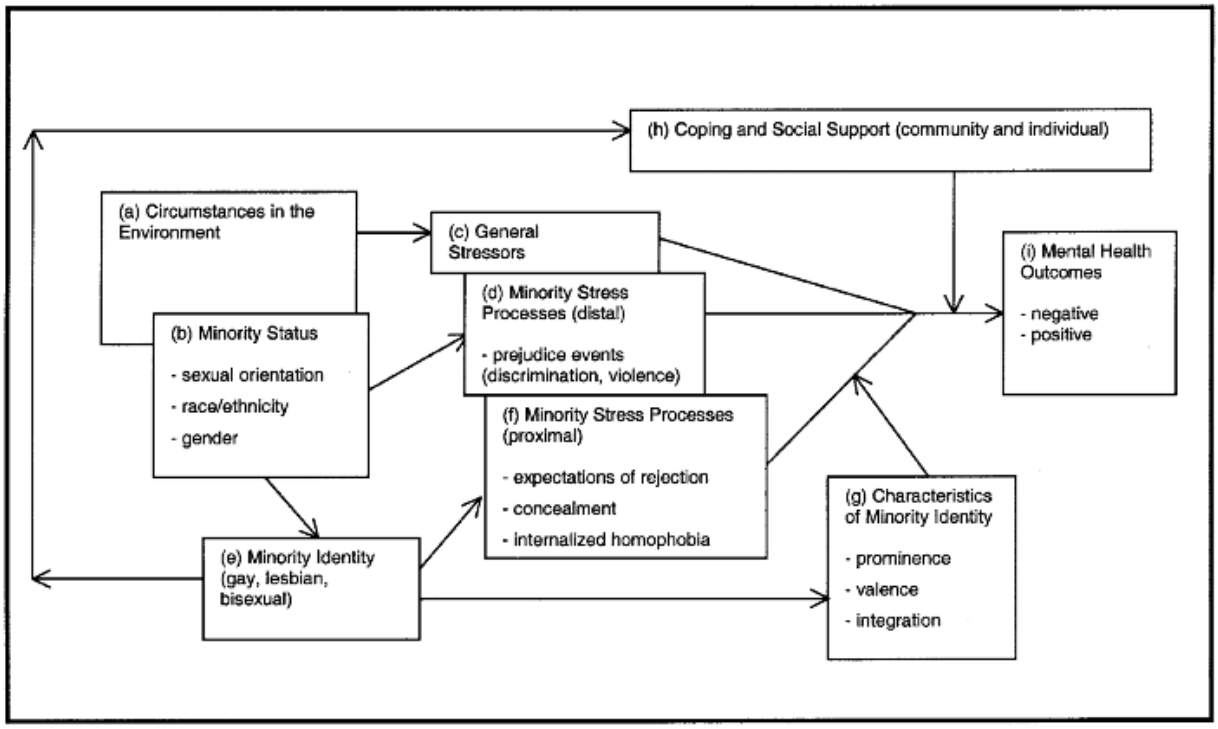


Figure 1. Minority Stress Framework (Meyer, 2003).

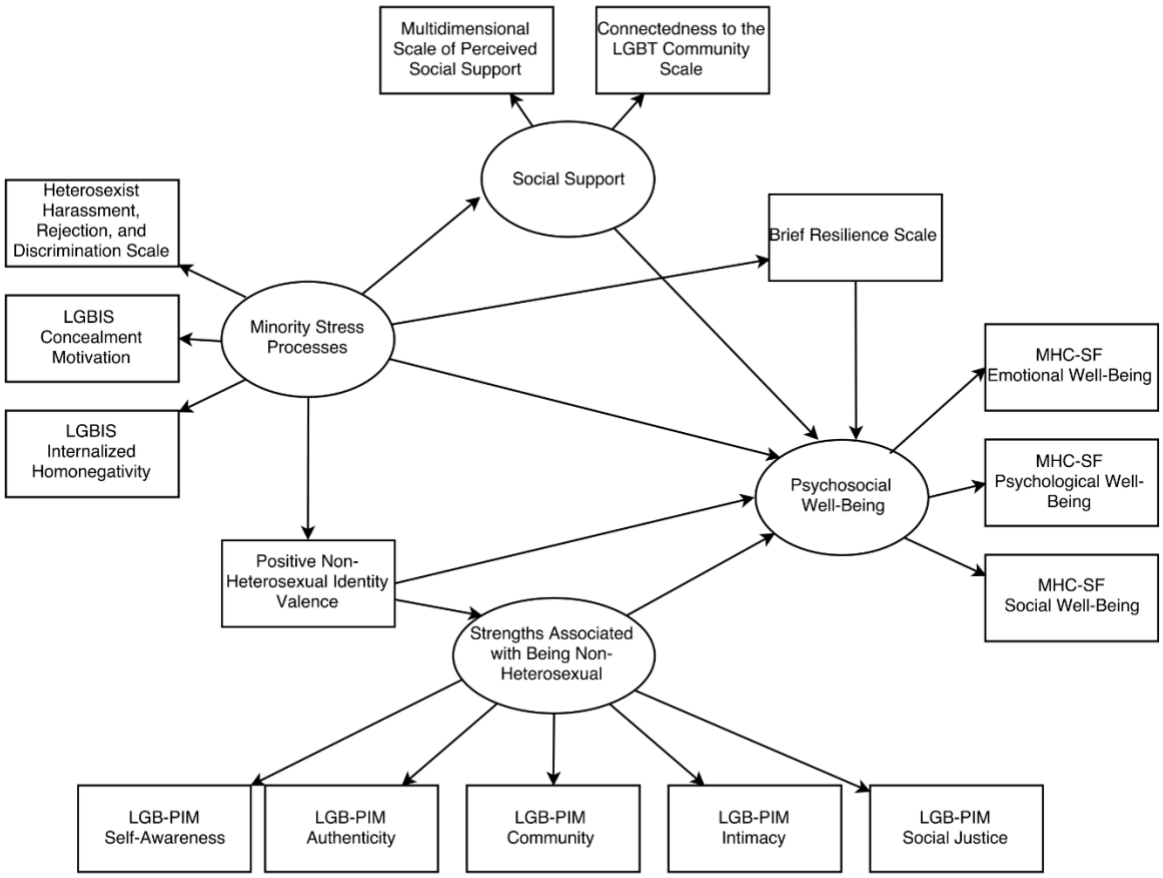


Figure 2. Hypothesized Structural Model 1. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure; MHC-SF = Mental Health Continuum – Short Form.

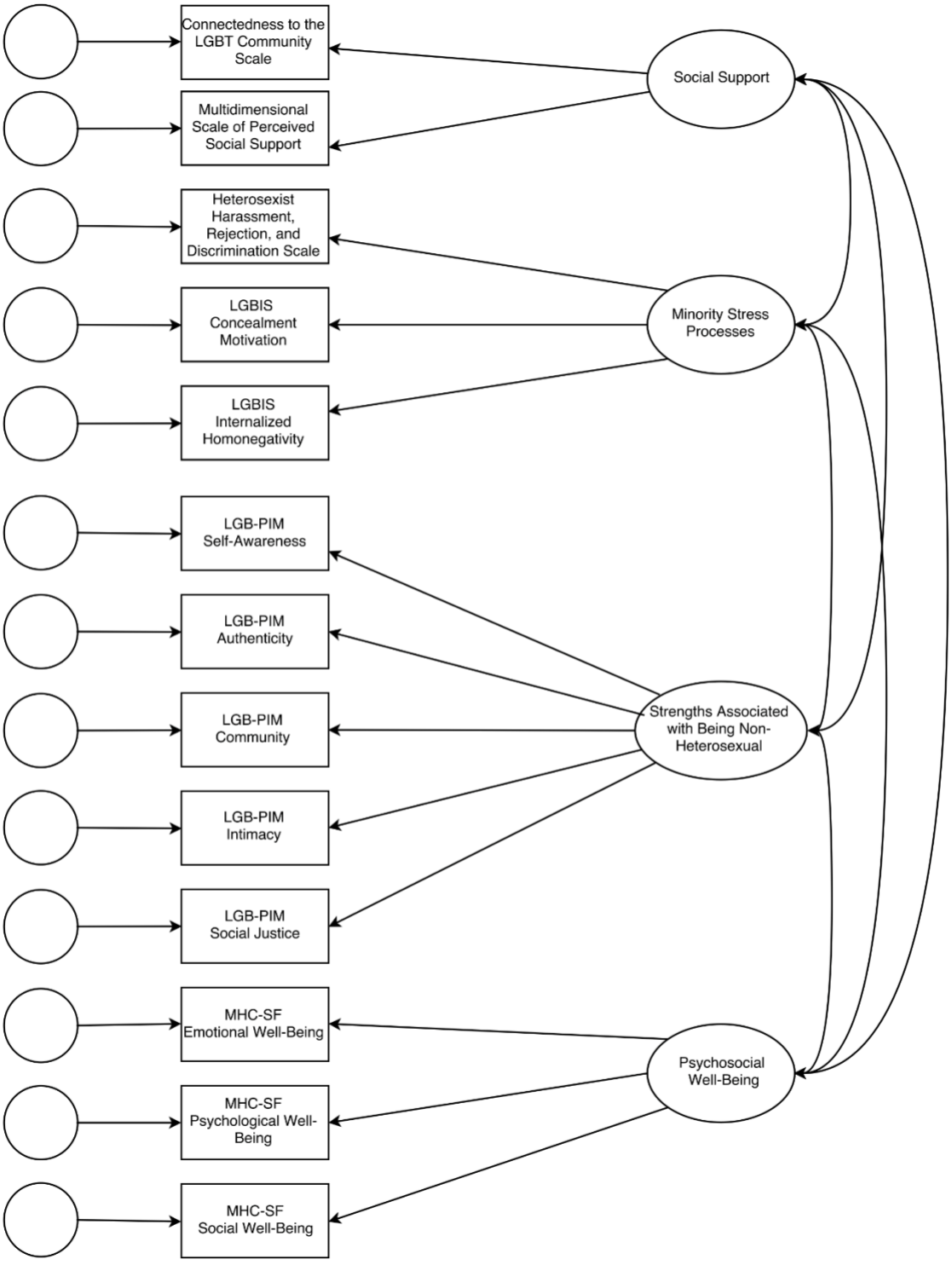


Figure 3. Hypothesized Measurement Model 1. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure; MHC-SF = Mental Health Continuum – Short Form.

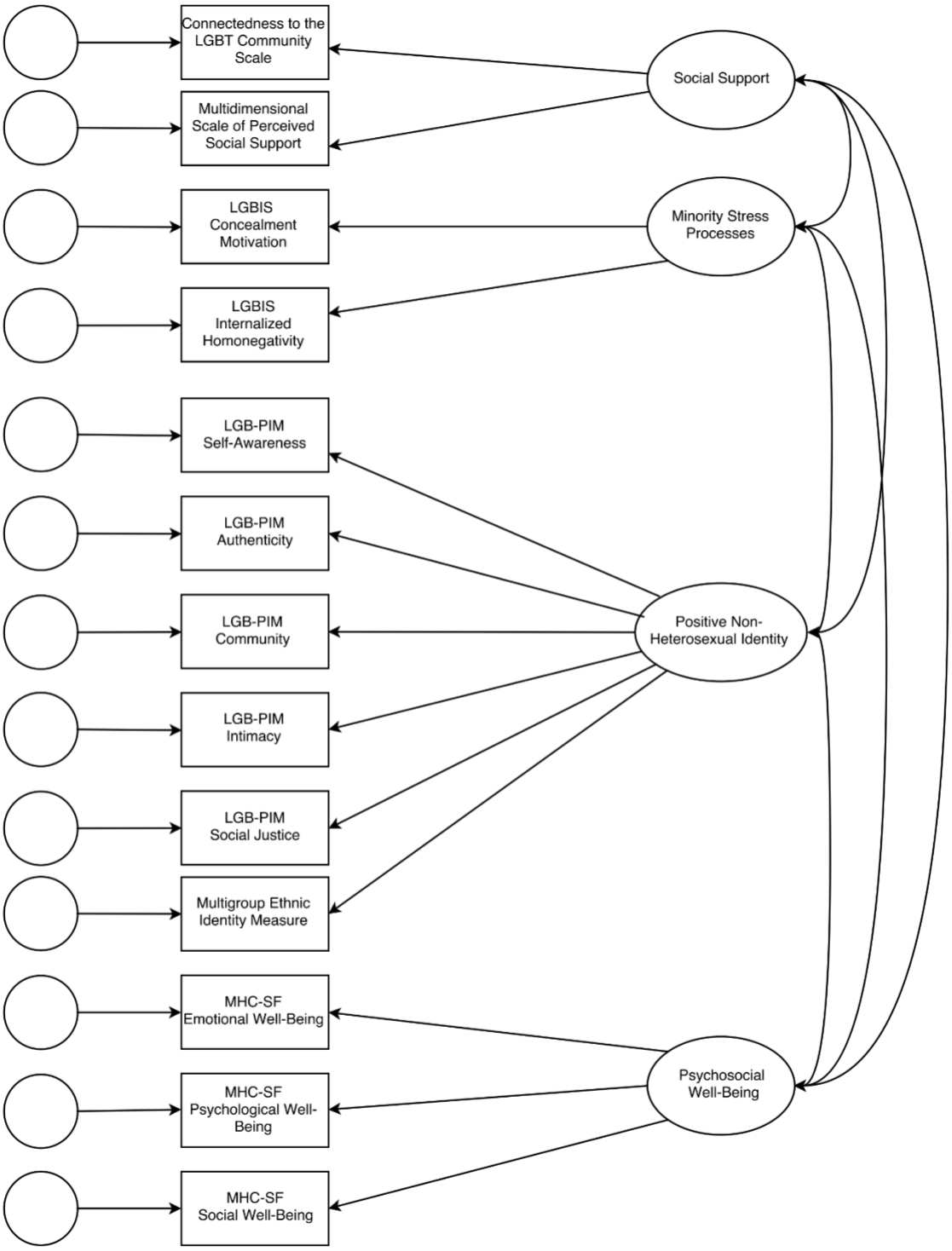


Figure 4. Hypothesized Measurement Model 2. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure; MHC-SF = Mental Health Continuum – Short Form.

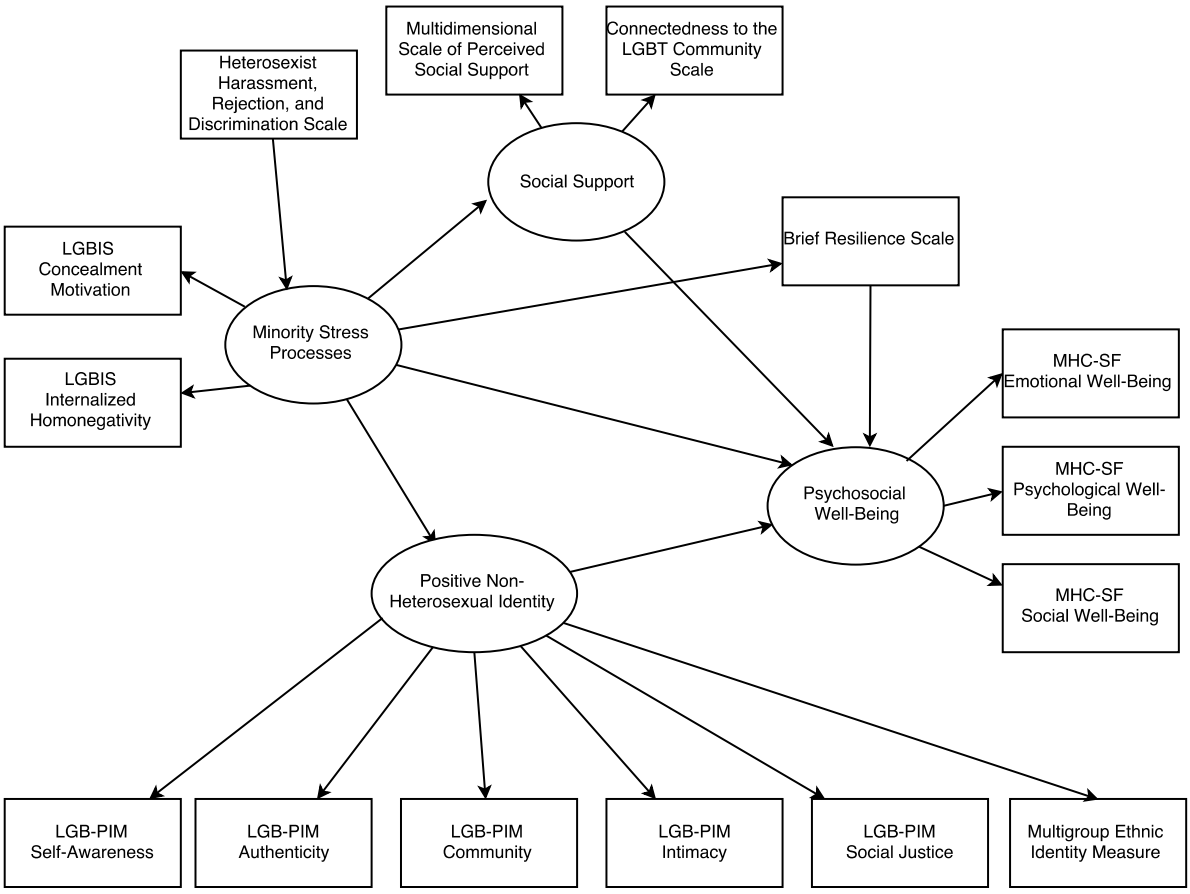


Figure 5. Hypothesized Structural Model 2. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure; MHC-SF = Mental Health Continuum – Short Form.

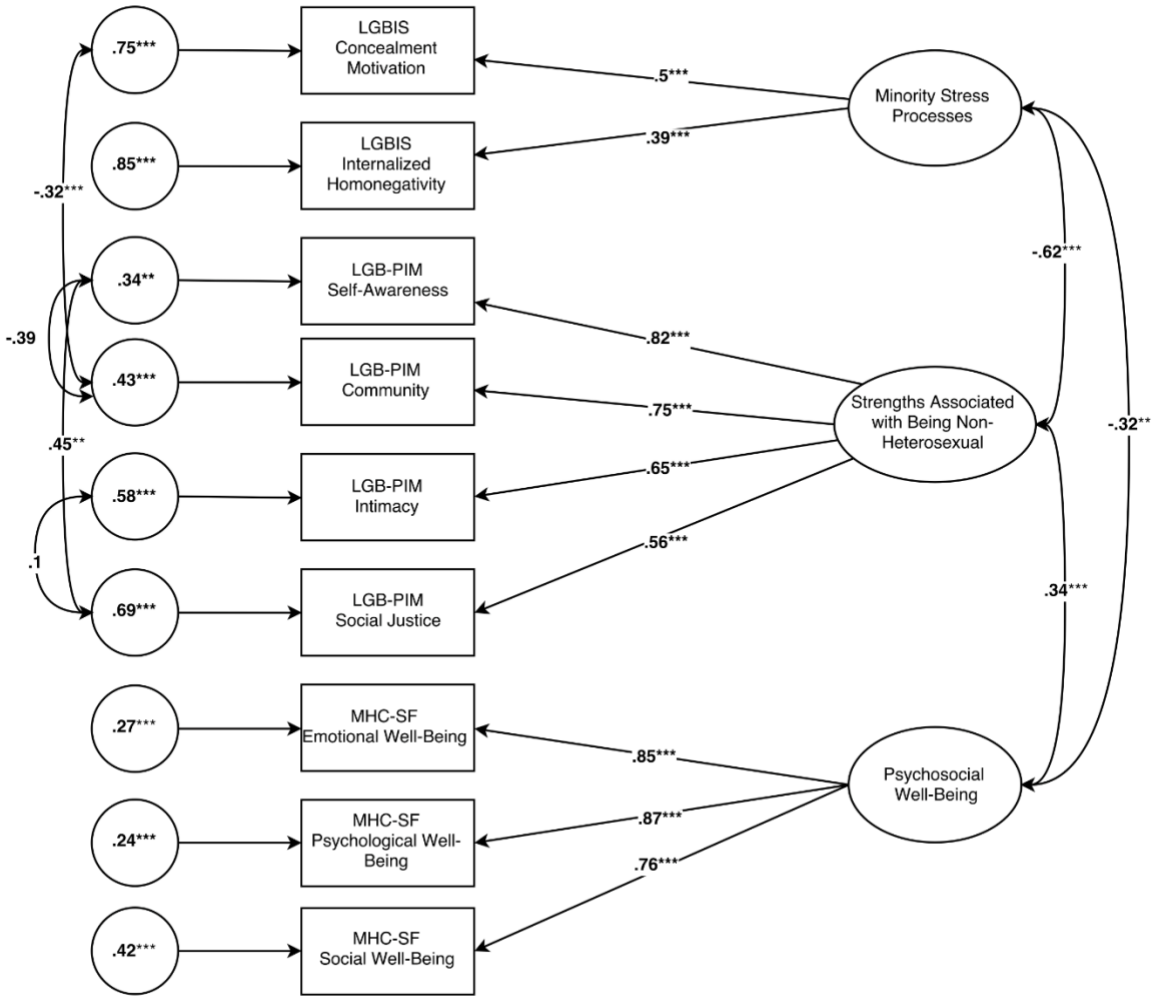


Figure 6. Measurement Model 1 with Parameter Estimates. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure; MHC-SF = Mental Health Continuum – Short Form. Bolded numbers indicate statistical significance. * $p < .05$. ** $p < .01$. *** $p < .001$.

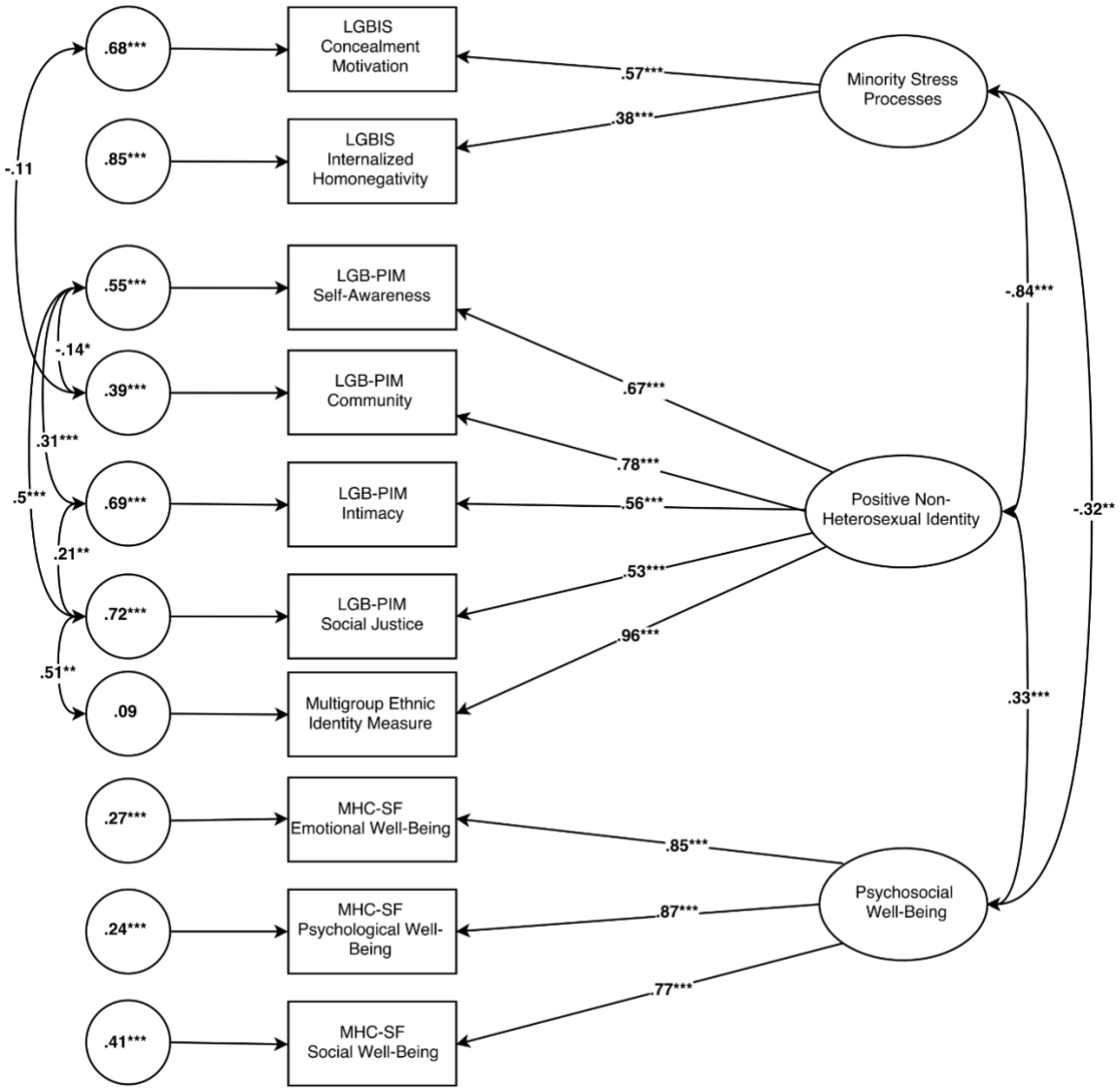


Figure 7. Measurement Model 2 with Parameter Estimates. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure; MHC-SF = Mental Health Continuum – Short Form. Bolded numbers indicate statistical significance. * $p < .05$. ** $p < .01$. *** $p < .001$.

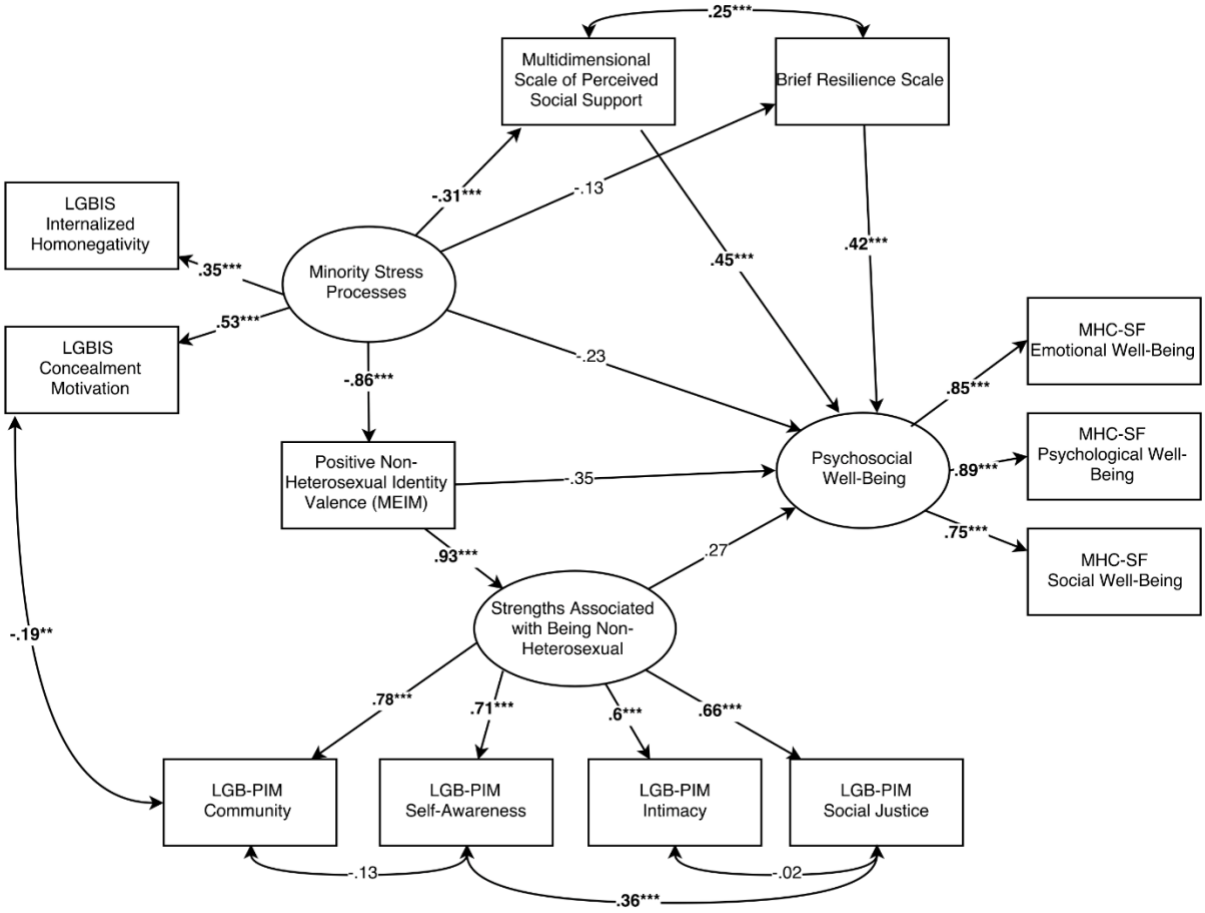


Figure 8. Structural Model 1 with Parameter Estimates. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure; MHC-SF = Mental Health Continuum – Short Form. Error estimates are not included. Bolded numbers indicate statistical significance. * $p < .05$. ** $p < .01$. *** $p < .001$.

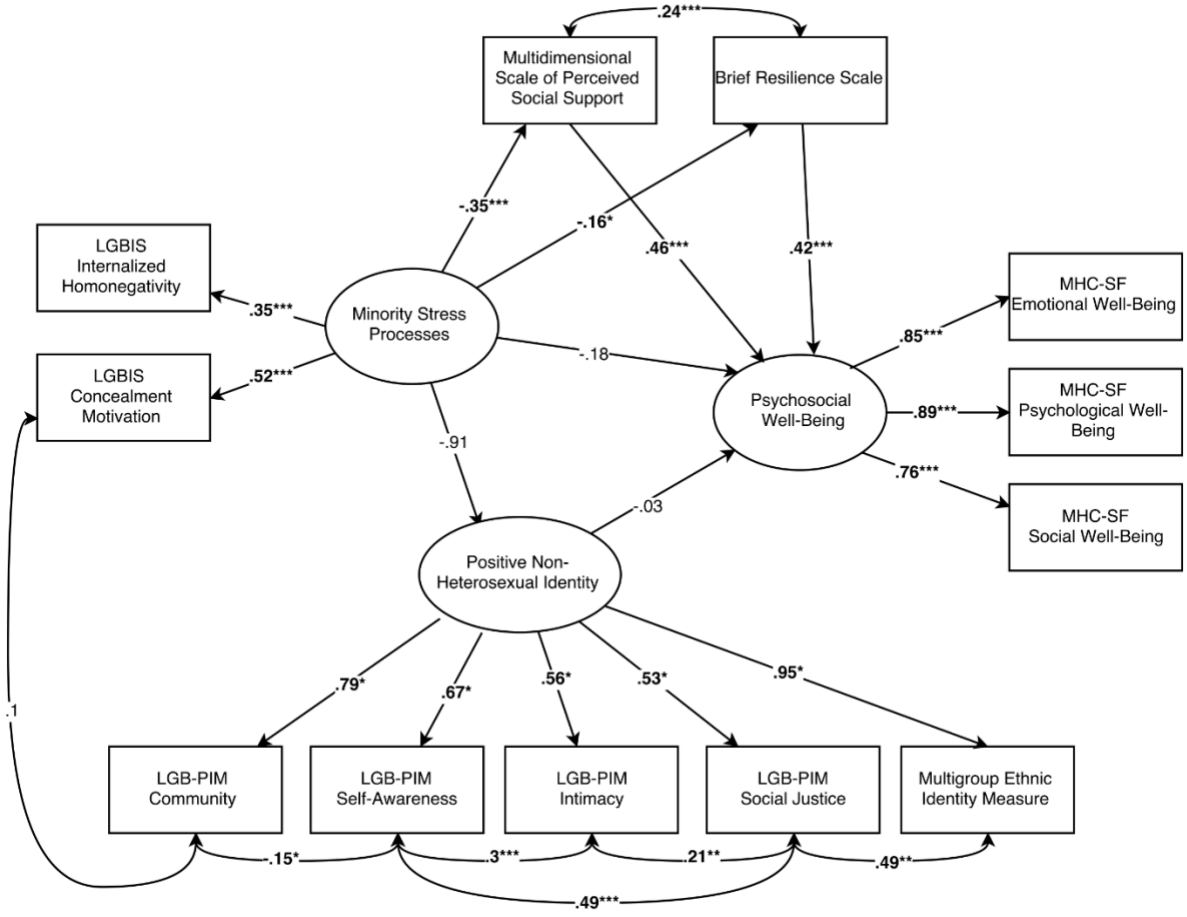


Figure 9. Structural Model 2 with Parameter Estimates. LGBIS = Lesbian, Gay, Bisexual Identity Scales. LGB-PIM = Lesbian, Gay, and Bisexual Positive Identity Measure; MHC-SF = Mental Health Continuum – Short Form. Error estimates are not included. Bolded numbers indicate statistical significance. * $p < .05$. ** $p < .01$. *** $p < .001$.