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A Model of Individual, Relationship, and Societal Factors and Mental Health and Well-Being in Partnered Sexual Minority Women: The Central Role of Relationship Satisfaction

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A MODEL OF INDIVIDUAL, RELATIONSHIP, AND SOCIETAL FACTORS AND MENTAL HEALTH AND WELL-BEING IN PARTNERED SEXUAL MINORITY WOMEN: THE CENTRAL ROLE OF RELATIONSHIP SATISFACTION

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ABSTRACT

A MODEL OF INDIVIDUAL, RELATIONSHIP, AND SOCIETAL FACTORS AND MENTAL HEALTH AND WELL-BEING IN PARTNERED SEXUAL MINORITY WOMEN: THE CENTRAL ROLE OF RELATIONSHIP SATISFACTION

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Sexual minority women (SMW) are at increased risk for mental health disorders, substance abuse, and physical health problems compared to heterosexual women. For heterosexual individuals, romantic relationships have been found to be protective against a variety of health issues. Less research, however, has focused on the association between romantic relationships and health in same-sex couples. The purpose of this study was to examine the potential protective nature of being in a relationship for SMW and to test a model investigating the central role of relationship satisfaction in the association between individual, relationship, and societal factors and mental health and well-being among young women in same-sex relationships.

Women attracted to women were recruited from Facebook's advertising platform based on their interests (e.g., Gay pride). In total, 665 SMW were in the final sample, including 432 partnered women and 233 single women. Participants completed an online survey consisting of measures of negative and positive sexual minority identity, social support, mental health, and well-being. Those in relationships also completed a subset of relationship-related measures. Partnered women reported better mental health (i.e., less anxiety and depression) and well-being (i.e., higher levels of self-acceptance, personal growth, environmental mastery, and purpose in life) than single women. The SEM model suggests that the Societal factor is important for the

mental health and well-being of partnered SMW, with significant associations to mental health and well-being. Future research is needed to better understand the role of relationship satisfaction in the mental health and well-being of partnered SMW.

This thesis is dedicated to my mother, Laurie, and my fiancé, Chris, for their unconditional love and support.

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TABLE OF CONTENTS

LIST OF TABLES

Table

LIST OF FIGURES

Figure

CHAPTER I

INTRODUCTION

The Institute of Medicine (IOM, 2011) and Healthy People 2020 (Healthypeople.gov, 2017) both emphasized the importance of continued research on health disparities among lesbian, gay, bisexual, and transgender (LGBT) individuals. Sexual minority individuals, or people who do not identify as heterosexual, are at greater risk for mood, anxiety, and substance abuse disorders (Bostwick et al., 2010; Fergusson et al., 1999; Gilman et al., 2001; Jorm et al., 2002; King et al., 2008). Among lesbian and bisexual women specifically, disparities have been reported in terms of anxiety, comorbidity of mental health disorders, hazardous drinking, and drug use (Cochran et al., 2003; Drabble et al., 2018).

One prominent explanation for these health disparities focuses on the unique challenges faced by sexual minority individuals, such as discrimination, stigma, and prejudice. Meyer's minority stress model (2003) suggests that these challenges create heightened stress for sexual minority individuals, potentially increasing psychological distress. Hatzenbuehler (2009) built upon Meyer's theory with the psychological mediation framework, which suggests that the association between sexual minority stress and psychopathology is mediated by disruptions in psychological processes. These psychological processes include coping and emotion regulation, cognitive processes, and social and interpersonal problems, which may increase the risk for psychopathology (Hatzenbuehler, 2009).

Sexual minority stress has historically been considered at this individual level. That is, sexual minority stress has been associated with greater psychological distress (Lea et al., 2014; Lehavot & Simoni, 2011; Lewis et al., 2003; Szymanski et al., 2014) and physical health problems (Flenar et al., 2017; Frost et al., 2015). Importantly, sexual minority stress may also be

associated with relationship conflicts and problems. Overall, there is a negative association between sexual minority stress and same-sex relationship well-being. Specifically, a meta-analysis conducted before the legalization of same-sex marriage in the United States found that, in general, sexual minority stress and same-sex relationship well-being are negatively associated (Cao et al., 2017). Although a large body of research has investigated how heterosexual relationships are associated with mental and physical well-being (Braithwaite & Holt-Lunstad, 2017), female same-sex couples have been systematically excluded from health research (Andersen & Zou, 2015). As a result, there is a gap in the literature regarding the potential protective role of relationships for female same-sex partners. Therefore, the proposed study aims to examine the potential protective nature of female same-sex relationships and seeks to test a model of individual, relationship specific, and societal factors and mental health and well-being through relationship satisfaction. The proposed model extends Huston's (2000) social ecological model, used to study close relationships, to include mental health and well-being outcomes.

Protective Nature of Romantic Relationships

Heterosexual Relationships

Among heterosexuals, the association between romantic relationships and mental health and well-being is well established. Generally, heterosexual adults in close, committed relationships have reported experiencing fewer mental health problems (Braithwaite & Holt-Lunstad, 2017; Gove et al., 1983). Married individuals also reported more satisfaction with life and greater well-being than those who are single (Gove et al., 1990; Holt-Lunstad et al., 2008). Extending these findings to non-marital relationships, young adults in romantic relationships reported fewer depressive symptoms than single young adults (Simon & Barrett, 2010). Similarly, college students in committed relationships experienced fewer mental health problems

compared to single college students (Braithwaite et al., 2010). Taken together, this research suggests that being in a committed relationship may serve as a protective factor against mental health problems.

Previous research has also focused on the association between relationship quality and mental health among heterosexual individuals. In a meta-analytic review of 26 cross-sectional studies, marital quality was negatively associated with depressive symptoms in women and men (Whisman, 2001). Proulx and colleagues (2007) expanded upon Whisman's work by including longitudinal studies and investigated multiple elements of well-being, such as depression, self-esteem, life satisfaction, global happiness, and physical health. In both cross-sectional and longitudinal studies, there was a positive association between marital quality and personal well-being (Proulx et al., 2007). However, these types of thorough investigations have not examined whether aspects of same-sex relationships protect against mental health problems for sexual minority individuals.

Selection vs. Experience

When investigating the association between romantic relationships and mental health, it is important to consider the potential direction of causality. The directionality of the association can have implication for interventions and treatment plans. In their review article, Braithwaite and Holt-Lunstad (2017) defined and reviewed the arguments for both the selection hypothesis and the experience hypothesis. They defined the *selection hypothesis* as suggesting "it is mental health that increases the likelihood of individuals to select into romantic relationships," and that the *experience hypothesis* suggests "the experience of marriage is associated with mental health" (p. 120). Braithwaite and Holt-Lunstad (2017) concluded that both selection and experience play a role in explaining the association between mental health and romantic relationships, but that

experience explains more of the variance in the association. Additionally, in a meta-analysis of longitudinal studies, the association between marital quality and well-being was stronger when marital quality was the predictor and well-being was the outcome (Proulx et al., 2007). Consistent with these findings, the proposed study will focus on relationship status and relationship quality as predictors and well-being as the outcome.

Same-Sex Relationships

Although there is little research examining the association between romantic relationships and mental health or well-being in sexual minorities, some studies have suggested that the protective nature of heterosexual relationships might apply to same-sex relationships. Some of this research has been conducted in connection with recent legislation allowing marriage recognition for same-sex couples. For instance, in a population-based sample in California, same-sex married men and women were significantly less psychologically distressed than sexual minority individuals who were not in a legally recognized same-sex union (Wight et al., 2013). Similarly, LGB men and women in legally recognized relationships and committed relationships reported less internalized homophobia (i.e., internalization of negative societal attitudes), depression, and stress as well as more meaning in life compared to single LGB individuals (Riggle et al., 2010). In a study using dyadic analyses, same-sex male and female couple members in civil marriages (i.e., marriages recognized by states prior to the legal recognition of same-sex marriage) reported greater partner support and LGB identity centrality, an aspect of positive sexual minority identity, compared to same-sex couple members who were not in civil marriages (Riggle et al., 2017). In addition, same-sex male and female cohabitors reported better overall health than single individuals (Liu et al., 2013). However, Liu and colleagues (2013) found that this difference was fully explained by socioeconomic status, such that same-sex

cohabitors in their study reported more socioeconomic resources than both single individuals and mixed-sex cohabitors. In summary, being in a same-sex relationship appears to influence the mental health and well-being of sexual minority individuals.

Relationship Status

In addition to the protective nature of romantic relationships in general, differences in health outcomes among types of romantic relationships were identified in previous research for both mixed and same-sex relationships. In a review of research on romantic relationships and mental health, Braithwaite and Holt-Lunstad (2017) emphasized that more established, committed heterosexual relationships have been associated with greater mental health benefits than less committed heterosexual relationships. Several other studies have concluded that well-being increases among heterosexual individuals as one moves from dating, to cohabiting, to marital relationships (Dush & Amato, 2005; Soons & Liefbroer, 2008). Additionally, in California one study including both lesbian and heterosexual women concluded that married women reported lower levels of depression than unmarried women regardless of sexual identity (Kornblith et al., 2016). This type of research has not been conducted to the same extent among same-sex couples, in part, due to the only recent legalization of same-sex marriage and the exclusion of same-sex couples from couple research (Andersen & Zou, 2015). However, some research has compared health outcomes for different relationship statuses among same-sex couples. Among LGB men and women in relationships, those who were in legally recognized relationships experienced less psychological distress and more life meaning than LGB individuals in relationships that were not legally recognized (Riggle et al., 2010). In a sample of lesbian women, married and partnered women reported ever having a depressive disorder at a significantly lower rate than single women; married women reported significantly less days when

mental health was not good compared to partnered and single women (DuBois et al., 2019). For alcohol use, SMW in committed noncohabiting relationships were more likely to report alcohol-related problems and symptoms of potential alcohol dependence when compared to SMW in committed cohabiting relationships (Veldhuis et al., 2017). Therefore, more committed relationships (i.e., marriage) and cohabiting relationships seem to be linked to better mental health.

Individual, Relationship, and Societal Factors

To address the gap in the literature regarding how female same-sex relationships may be associated with health outcomes, Huston's (2000) model of close relationships served as a guide.

Huston's Model for Studying Close Relationships

Huston (2000) developed a framework for studying marital and other intimate relationships that could apply to romantic relationships of any gender composition or living situation. Huston's social ecological model includes three levels of analysis: the individual, the relationship itself, and societal forces. The social ecological model was used to outline the factors that may contribute to the relationship satisfaction of women who are in female same-sex relationships. Extending Huston's model, the proposed model also tested these factors and their importance to mental health and well-being, both through relationship satisfaction and directly. At the individual level, both negative and positive sexual minority identity was examined. The focus of the specific relationship factors was on sexual satisfaction, intimacy, commitment, and equality. The societal forces included general social support, sexual minority specific social support, and belonging to the LGBT community. Connections between individual, relationship, and societal factors and relationship, satisfaction, mental health, and well-being have been identified in sexual minority individuals in past research.

Individual Factors

Negative Sexual Minority Identity. The majority of research on negative LGB identity concerns internalized homonegativity. Internalized homophobia has been linked to psychological distress in a number of studies focusing on LGB adults (Kaysen et al., 2014; Newcomb & Mustanski, 2010). Connecting internalized homophobia, relationships, and mental health, Frost and Meyer (2009) suggested that depressive symptoms mediated the association between internalized homophobia and relationship problems in a diverse sample of LGB adults. However, it is important to note that Frost and Meyer (2009) suggest that alternative models may be a better fit. Internalized homophobia has also been negatively associated with intimacy in female same-sex relationships (Otis et al., 2006) and overall relationship well-being in male and female same-sex relationships (Cao et al., 2017). However, some studies have focused on overall negative identity and different aspects of negative identity in relation to relationship quality and mental health. Among female and male same-sex couples, stigma sensitivity, identity confusion, superiority, and homonegativity were negatively associated with relationship quality (Mohr & Fassinger, 2006). Negative identity (i.e., acceptance concerns, concealment motivation, difficult process, and internalized homonegativity) has been positively associated with depression, anxiety, and negative affect and inversely associated with satisfaction with life (Cramer et al., 2017). Overall, negative sexual minority identity has been associated with both mental health and relationship issues.

Positive Sexual Minority Identity. Research tends to focus on the negative aspects of being a sexual minority individual. Consequently, little research has examined how a positive LGB identity may be associated with health and well-being. Identity affirmation, or affirmation of one's LGB identity, has been positively associated with general satisfaction with life, self-

esteem, and self-assurance in a sample of LGB university students (Mohr & Kendra, 2011). Additionally, positive sexual minority identity has been inversely associated with depressive symptoms and positively associated with satisfaction with life (Riggle et al., 2014). A more specific aspect of positive sexual minority identity, authenticity, was also positively associated with psychological well-being and negatively associated with depressive symptoms and stress (Riggle et al., 2017). Although some research has connected positive sexual minority identity and mental health and well-being, less is known about the association between positive sexual minority identity and relationship quality. One notable exception is that authenticity, one aspect of positive sexual minority identity, has been identified as a contributor to healthy relational functioning according to Relational-Cultural Theory and Silencing the Self Theory (Szymanski et al., 2016).

Relationship Factors

Sexual Satisfaction. Sexual satisfaction is an important aspect of relationship functioning. Among women in same-sex and mixed-sex relationships, sexual satisfaction was a strong predictor of relationship well-being and mental health for women in both types of relationships (Holmberg et al., 2010). Sexual intimacy in female same-sex relationships has also been associated with greater relationship satisfaction (Eldridge & Gilbert, 1990). Henderson and colleagues (2009) found that sexual satisfaction was positively associated with relationship satisfaction and negatively associated with depressive symptomology.

Intimacy. Another important relationship factor linked to mental health and sexual minority identity is relationship intimacy. Poorer mental health and internalized homophobia have been associated with lower levels of intimacy for female same-sex couples (Otis et al., 2006). In addition, Eldridge and Gilbert (1990) found that five types of intimacy (emotional,

intellectual, recreational, sexual, and social) were all associated with greater relationship satisfaction in female same-sex relationships, with emotional intimacy the most closely related to relationship satisfaction.

Commitment. Another important factor in romantic relationships is commitment to the relationship. The results from a qualitative study of perceptions of success in long-term male and female same-sex relationships suggested that commitment to the relationship is a source of strength in long-term relationships (Riggle et al., 2016). Also, in a study investigating the impact of mental health on relationship quality in female same-sex couples specifically, poor psychological health was significantly associated with lower levels of commitment to the relationship (Otis et al. 2006). Equal involvement or commitment from both female partners in a same-sex relationship has also been associated with more relationship satisfaction (Peplau et al., 1982).

Equality. A unique characteristic of same-sex relationships, compared to mixed-sex relationships, is the similarity in gender. Similar gender may impact relationship dynamics and functioning. For example, lesbian women reported more shared decision making than gay men and married or cohabitating heterosexual individuals (Kurdek & Schmitt, 1986). Also, partnered lesbian women tend to perceive higher levels of personal autonomy and equality when compared to partnered heterosexuals (Kurdek, 2004). In a review of empirical studies, Peplau and Fingerhut (2007) noted that female same-sex couples were more likely to divide housework equally when compared to mixed-sex and gay couples, with lesbian partners tending to share tasks as opposed to completing tasks individually.

Among female same-sex couples, 97% of lesbian women reported that both partners should have exactly equal say in a relationship, while 64% of lesbian women reported that this

ideal was achieved in their relationship (Peplau et al., 1978). Riggle and colleagues (2008) found that many lesbian women noted that positive aspects of their lives included freedom to have egalitarian relationships and freedom from gender-specific roles and stereotypes. In a study of balance of power in lesbian relationships, Caldwell and Peplau (1984) found that women in unequal power relationships reported less satisfaction and more relationship problems than women in equal power relationships. Also, in a study examining correlates of relationship satisfaction in female same-sex couples, higher power, defined as partner's sense of influence in the relationship, was associated with greater relationship satisfaction (Eldridge & Gilbert, 1990). In female same-sex relationships, equality tends to be more important to the partners and more achievable when compared to mixed-sex couples and same-sex male couples. Therefore, a sense of equality in female same-sex relationships may be a contributing factor to the mental health and well-being of the partners.

Societal Factors

General and Sexual Minority Specific Social Support. Social support is another important aspect to consider in understanding the experiences of female same-sex couples. Lesbian and gay individuals were less likely to report social support from family members and more likely to identify friends as supporters of their relationship compared to heterosexual individuals (Kurdek, 2004). Although women and men in same-sex relationships perceived less social support than mixed-sex couples overall, social support was an important predictor of relationship well-being and personal well-being in both same-sex and mixed-sex relationships (Blair & Holmberg, 2008). In a sample of LGB individuals, sexual minority specific social support was inversely associated with symptoms of psychological distress (Belous & Wampler, 2016). Additionally, in a sample of women who were currently or recently in a relationship with

another woman, social support was positively associated with relationship satisfaction (Terrell & Dugger, 2018). These findings highlight the importance of social support when considering the relationship satisfaction and mental health and well-being of women in same-sex relationships.

Belonging to the LGBT Community. Connection, belonging, and involvement in the LGBT community can be beneficial to sexual minority individuals. Belonging to a community was the most common theme that emerged when lesbian women were asked to describe positive aspects of their lives (Riggle et al., 2008). More LGBT community connectedness has also been linked to greater psychological well-being in a diverse sample of LGB individuals living in New York City (Kertzner et al., 2009). Social involvement in lesbian and gay related activities has also been connected to relationship quality in female same-sex couples. Couples who reported moderate involvement in lesbian or gay related activities were most satisfied with their romantic relationships (Beals & Peplau, 2001).

Relationship Satisfaction and Mental Health and Well-Being

Several studies have focused on the association between relationship satisfaction and mental health or psychological distress in same-sex couples. For instance, poorer mental health was significantly associated with lower levels of relationship satisfaction and higher levels of conflict in female same-sex couples (Otis et al., 2006). In a sample of women who were currently or recently in a relationship with a woman, psychological distress was negatively associated with relationship satisfaction (Terrell & Dugger, 2018). Also, relationship well-being, defined as satisfaction, love, and trust, was positively associated with mental health in sample of same-sex couples (Blair & Holmberg, 2008; Holmberg et al., 2010). In addition, in a sample of gay and lesbian individuals, greater sexual-minority-specific relationship satisfaction was associated with less psychological distress (Belous & Wampler, 2016).

Relationship satisfaction has also been linked to well-being among female same-sex couples. In a sample of married female same-sex couples from Massachusetts, greater relationship quality was associated with greater overall well-being, as well as physical, psychological, social, and environmental well-being (Ducharme & Kollar, 2012). Additionally, Shenkman (2018) found that among lesbian mothers there was a positive correlation between basic need satisfaction in their relationship and personal growth, a factor of well-being.

Previous research has shown that marital quality plays a central role in the mental health and well-being of heterosexual individuals (Beach et al., 1993). Less is known about the role of relationship satisfaction in the mental health and well-being of women in same-sex relationships. However, in a study of heterosexual women and SMW, relationship satisfaction mediated the association between sexual satisfaction and depression, as well as the association between social support and sexual satisfaction (Henderson et al., 2009). Among sexual minority women specifically, Henderson and colleagues (2009) found that relationship satisfaction also mediated the association between social support and internalized homophobia. This suggests that relationship satisfaction may play a central role in the mental health and well-being for SMW in relationships.

Current Study

Despite findings that romantic relationships have been protective against mental health issues for heterosexual women (Braithwaite & Holt-Lunstad, 2017; Gove et al., 1990; Simon & Barrett, 2010), the protective role of being in a stable same-sex female relationship has not been well established. Perhaps due to experiencing minority stress, SMW are at a greater risk from mental health problems than heterosexual women (Gilman et al., 2001; Bostwick et al., 2010; Jorm et al., 2002). Consequently, it is critical to examine potential protective factors that may be

associated with better mental well-being among SMW. Additionally, when considering romantic relationships as protective, it is also important to consider the role of relationship satisfaction. Lower levels of relationship quality have been linked to more depressive symptoms among same-sex couples (Whitton & Kuryluk, 2014). Therefore, the current study examined relationship status as a protective factor for SMW and tests a model of individual, relationship, and societal factors and mental health and well-being through relationship satisfaction.

The current study focused on women who are attracted to women due to evolving sexual identity labels. Young sexual minority individuals may refuse labels altogether or prefer labeling themselves with an umbrella term such as queer instead of bisexual or lesbian (Savin-Williams, 2008). In their study on sexual minority self-identification, Galupo and colleagues (2015) found that sexual identity is much more complex than identifying individuals as sexual minority, lesbian/gay, or bisexual. In addition to using a variety of primary sexual identity labels (e.g., lesbian, bisexual, queer, pansexual, fluid), many individuals also endorsed a secondary sexual identity label (i.e., identifying as queer and pansexual). Therefore, concentrating on women who are attracted to women does not force these individuals into a "box" or a single label but still allows the focus to remain on SMW.

In addition to an increased risk of mental health issues due to their sexual minority status, young women (18-30) may be particularly vulnerable to mental health issues when compared to other age groups. The age of onset of mental health disorders, using the range between the 25th and 75th percentiles, has been reported as 18-43 years for mood disorders and 6-21 for anxiety disorders and 75% of people with a mental disorder report an age of onset younger than 24 years. (Kessler et al., 2005). Additionally, young adulthood is a period of transition when many are working to establish careers and relationships (Patel et al., 2007).

Study Aims

First, the current study aimed to extend the knowledge regarding the potential protective nature of being in a relationship for SMW by examining differences in mental health and well-being among different types of partnered SMW and single SMW. Typically, higher levels of commitment have been associated with better mental health and well-being (Braithwaite & Holt-Lunstad, 2017; Proulx et al., 2007). Also, while romantic relationships have been found to be protective for a variety of health issues, the current study focuses on both mental health problems and well-being.

Second, this study sought to provide a better understanding of which aspects of female same-sex relationships are associated with better mental health and well-being through the central role of relationship satisfaction. The following aspects of relationships were considered: sexual satisfaction, intimacy, involvement, and equality. In addition, guided by Huston's social ecological model (2000), the current study considered relationship factors alongside individual and societal factors and their connections to relationship satisfaction. Specifically, individual level factors included negative and positive sexual minority identity, and the society level factors included global social support, sexual minority specific social support, and belonging to the LGBT community. The proposed model extends Huston's model to include mental health and well-being outcomes.

Specific aims of the current study are:

Aim 1: To examine the protective effects of same-sex relationships for female partners with regard to mental health and well-being

Aim 1a: To examine whether mental health and well-being differ based on being in a relationship (partnered vs. single).

Hypothesis 1a: Past research on heterosexual individuals has shown that generally people in relationships have better mental health and well-being. Therefore, it was predicted that women in same-sex relationships would report better mental health and well-being than single SMW.

Aim 1b: To examine whether mental health and well-being differ across all groups (married vs. cohabiting vs. non-cohabiting vs. single).

Hypothesis 1b: It was predicted that married women would have better mental health and well-being than cohabiting women, following by women in noncohabiting relationships and then single women.

Aim 2: To test a model of individual, relationship specific, and societal factors and mental health and well-being through relationship satisfaction for women in same-sex couples (see Figure 1).

Aim 2a: To test the direct effects of individual, relationship specific, and societal factors to relationship satisfaction, mental health, and well-being, as well as the direct effects from relationship satisfaction to mental health and well-being.

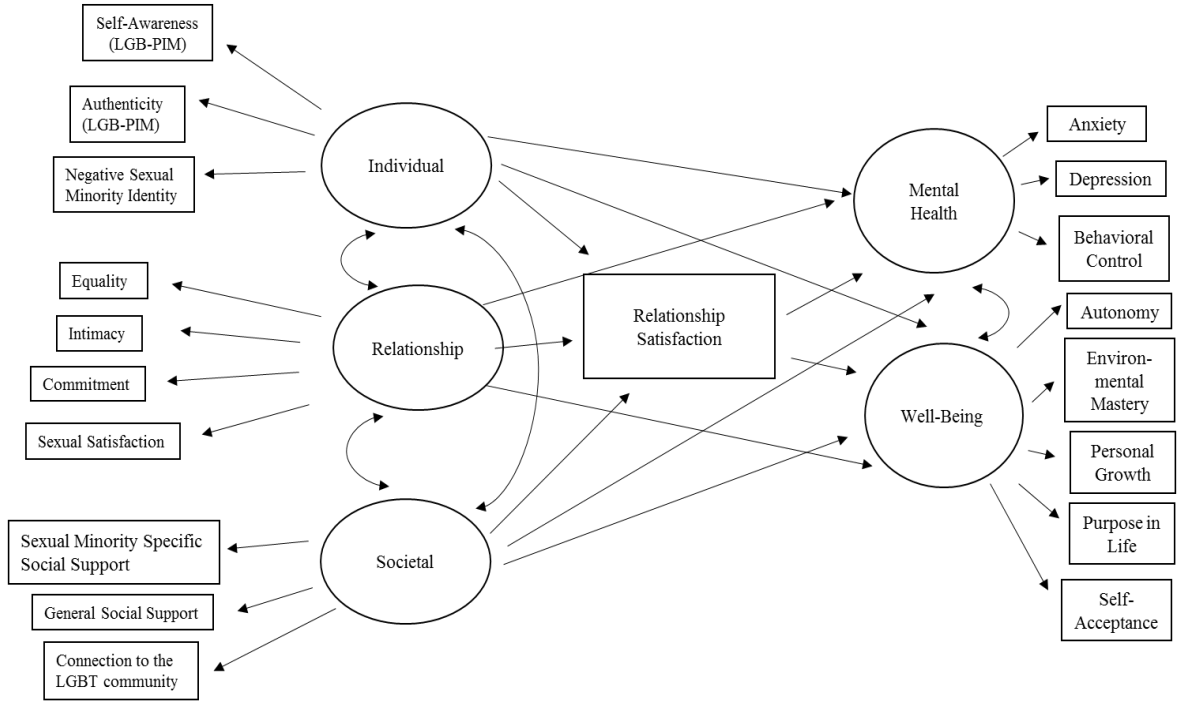
Hypothesis 2a: It was predicted that individual identity, relationship specific factors, and societal factors would be positively associated with relationship satisfaction, mental health, and well-being. It was also predicted that relationship satisfaction would be positively associated with mental health and well-being.

Aim 2b: To test the indirect effects of individual, relationship specific, and societal factors on mental health and well-being through relationship satisfaction.

Hypothesis 2b: It was predicted that relationship satisfaction would partially mediate the association between the individual, relationship specific, and societal factors and mental health and well-being.

Figure 1

Proposed Model



CHAPTER II

METHOD

Measures

Demographics (Appendix A)

Participants reported their general background information including age, ethnicity, education, and income. Participants also reported additional information regarding their gender identity, sexual identity, sexual attraction, sexual behaviors, coming out, and romantic relationships. Participants indicated the sex which they were assigned at birth and how they currently describe their gender identity (e.g., female, male, female-to-male transgender, male-to-female transgender, or gender-nonconforming). Participants reported their sexual identity (e.g., lesbian, queer), their sexual attraction (range from only attracted to men to only attracted to women), and their sexual behaviors during the past year and throughout their lifetime. Information was collected about coming out, such as age of disclosure to parents. Participants answered questions about their romantic relationships, including questions about cohabitation and how often they see their partner.

Negative Sexual Minority Identity (Appendix B)

The Lesbian, Gay, and Bisexual Identity Scale (LGBIS; Mohr & Kendra, 2011) is a 27-item measure of sexual minority identity. The measure was revised from the Lesbian and Gay Identity Scale to include bisexual individuals and to use less stigmatizing language. The LGBIS contains eight subscales: acceptance concerns, concealment motivation, identity uncertainty, internalized homophobia, difficult process, identity superiority, identity affirmation, and identity centrality. In the present study, four of the subscales were used to measure negative identity. The negative identity higher order subscale includes acceptance concerns (“I often wonder whether

others judge me for my sexual orientation."), concealment motivation ("I prefer to keep my same-sex relationships rather private."), difficult process ("Admitting to myself that I'm an LGB person has been a very slow process."), and internalized homonegativity ("If it were possible, I would choose to be straight."; Cramer et al., 2017). Originally, identity affirmation ("I am glad to be an LGB person") and identity centrality ("My sexual orientation is a central part of my identity") were not proposed to be used in the analyses of the present study. However, these variables were included in the SEM model so that the individual factor was able to fit adequately in the model. Participants responded to the measure using a scale ranging from 1 (*Disagree Strongly*) to 6 (*Agree Strongly*). Items 11 and 23 were reverse scored. Acceptance concerns (5, 9, 16), concealment motivation (1, 4, 9), difficult process (12, 17, 23), internalized homonegativity (2, 20, 27), identity affirmation (6, 13, 26), and identity centrality (11, 15, 21, 24, 25) were averaged into their respective subscale score. The average of each subscale was taken. The negative identity subscales were then reverse scored to be in the same direction as the positive identity subscales.

Mohr and Kendra (2011) found that the test-retest correlations for these subscales ranged from .70 to .92, and that Cronbach's alpha ranged from .72 to .94. Convergent validity was demonstrated by correlations with established measures in a sample of university students: acceptance concerns and concealment motivation were negatively associated (r = -.58; r = -.58, respectively) with Out to World subscale of the Outness Inventory (Mohr & Fassinger, 2000), and Difficult Process and Internalized Homonegativity were positively associated (r = .51; r = .85, respectively) with the Ego-Dystonic Homosexuality scale (Martin & Dean, 1987; Mohr & Kendra, 2011). Validity and reliability for the negative identity subscale were also demonstrated by significant associations with negative affect (r = .32) and stress symptoms (r = .25) and a

Cronbach's alpha of .81 (Cramer et al., 2017). In the present study, concealment motivation (α = .75), internalized homonegativity (α = .85), identity Affirmation (α = .88), and identity centrality (α = .87) had adequate internal consistency.

Positive Sexual Minority Identity (Appendix C)

The Lesbian, Gay, and Bisexual Positive Identity Measure (LGB-PIM; Riggle et al., 2014) is a 25-item measure of positive lesbian, gay, or bisexual identity. The LGB-PIM has five subscales: self-awareness, authenticity, intimate relationships, belonging to the LGBT community, and commitment to social justice. In the present study, self-awareness ("My LGBT identity leads me to important insights about myself") and authenticity ("I have a sense of inner peace about my LGBT identity") were used to assess positive sexual minority identity. Belonging to the LGBT community ("I feel supported by the LGBT community") assessed the societal factor of connectedness to the community. Participants respond to the items using a scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Self-awareness (1, 2, 3, 4, 5), authenticity (6, 7, 8, 9, 10), and community (11, 12, 13, 14, 15) were averaged into their respective subscale score. Higher scores indicate a more positive sexual minority identity.

The LGB-PIM had high internal consistency (α = .90) and high test-retest reliability (*r* = .91), and all subscales were significantly and negatively associated with the Internalized Negativity subscale of the Lesbian Gay Identity Scale (LGIS; Balsam & Mohr, 2007; Riggle et al., 2014). In addition, incremental validity was demonstrated such that the LGB-PIM and the LGIS explained satisfaction with life better than the LGIS alone (Riggle et al., 2014). The self-awareness (α = .85), authenticity (α = .86), and belonging to the LGBT community (α = .86) subscales had strong internal consistency in the present sample.

Relationship Satisfaction (Appendix D)

The Gay and Lesbian Relationship Satisfaction Scale (GLRSS; Belous & Wampler, 2016) is a 24-item measure of same-sex relationship satisfaction and social support. In the present study, the relationship satisfaction and social support subscales were used separately. Sample items include: "If there is one thing that my partner and I are good at, it's talking about our feelings with each other," and "My partner and I share the same values and goals in life." Participants respond to the items with options ranging from 0 (*Strongly Disagree*) to 6 (*Strongly Agree*). Items 1, 2, 9, 14, 16, and 17 are reverse scored. The means of the relationship satisfaction subscale (1-16) and the social support subscale (17-24) were taken. Scores above the mean for relationship satisfaction (M = 68, SD = 13) and social support (M = 38, SD = 7) indicate higher rates of relationship satisfaction and support, and scores below the mean may indicate possible deficits in those areas.

The GLRSS total has adequate internal consistency (α = .82); the GLRSS Relationship Satisfaction subscale had convergent validity demonstrated by a positive correlation (r = .68) with the Revised Dyadic Adjustment Scale (RDAS; Busby et al., 1995). In addition, the relationship satisfaction subscale and social support subscale were negative correlated (r = -.47; r = -.31, respectively) with the Outcome Questionnaire 45.2 which measure mental health-related functioning (OQ; Lambert et al., 1996; Belous & Wampler, 2016). In the present study, the relationship satisfaction subscale (α = .70) and the social support subscale (α = .71) had adequate internal consistency.

Sexual Satisfaction (Appendix E)

The Global Measure of Sexual Satisfaction (GMSEX; Lawrance & Byers, 1995) is a 5-item measure used to assess sexual satisfaction. Participants rate the sexual relationship on a 7-

point scale with the following items: good-bad, pleasant-unpleasant, positive-negative, satisfying-unsatisfying, and valuable-worthless. A total sum score was created for the GMSEX. Higher scores indicate higher sexual satisfaction. The GMSEX was internally consistent (α = .94) in a sample of lesbian, bisexual, and heterosexual women (Henderson et al., 2009). The GMSEX has adequate test-retest reliability (*r* = .72) and convergent validity in a sample of majority heterosexual-identified women with the New Scale of Sexual Satisfaction-Short (*r* = .72; NSSS; Štulhofer et al., 2010) and a single item measure of sexual satisfaction (*r* = .50; Mark et al., 2014). Strong internal consistency (α = .92) was found in the current sample.

Intimacy (Appendix F)

The Personal Assessment of Intimacy in Relationships (PAIR; Schaefer & Olson, 1981) assesses perceptions of romantic intimacy in relationships. Schaefer and Olson (1981) found five dimensions of intimacy: emotional, intellectual, recreational, sexual, and social. However, Moore and colleagues (1998) identified a three-factor model that includes engagement, communication, and shared friendships. LaFontaine and colleagues (2017) tested these two models in same-sex couples, finding evidence to support a revised three-factor model. The present study uses the Communication-R subscale, which include 8 items. Sample items include: “My partner can really understand my hurts and joys,” and “My partner helps me clarify my thoughts and feelings.” Participants respond to the items with options ranging from 0 (*Strongly Disagree*) to 4 (*Strongly Agree*). A total sum score was calculated for the Communication-R subscale, such that higher scores indicated a greater sense of intimacy. Communication-R (α = .88) was internally consistent in a sample of same-sex couples (LaFontaine et al., 2017). Concurrent validity was established for Communication-R through a significant association (*r* = .63) with the Dyadic

Attachment Scale (DAS-4, Sabourin et al., 2005; LaFontaine et al., 2017). In the present sample, there was good internal consistency with the Communication-R subscale (α = .84).

Commitment (Appendix G)

The Investment Model Scale (IMS; Rusbult et al., 1998) is a self-report measure of commitment, satisfaction, quality of alternatives, and investment size for close relationships. The present study only uses the 7-item commitment level subscale, which measures the degree to which one intends to persist in the relationship. Sample items include "I want our relationship to last for a very long time," and "I am committed to maintaining my relationship with my partner." The response options range from 0 (*Do Not Agree At All*) to 8 (*Agree Completely*). Items 3 and 4 were reverse scored. The mean of the items was calculated, with higher scores indicating stronger commitment. Alphas for commitment level ranged from .91 to .95, indicating high internal consistency. The IMS had adequate convergent validity with Dyadic Adjustment (r = .56; Spanier, 1976) and Liking and Loving (r = .51; r = .75; Rubin, 1970) in a sample of undergraduate students (Rusbult et al., 1998). In a sample of lesbian couples, the commitment subscale was positively associated with relationship persistence (B= .31), whether an individual and her partner stay together (Barrantes et al., 2017). In the current sample, the IMS had good internal consistency (α = .79).

Equality (Appendix H)

Kurdek's (1995) 8-item measure of equality was used to assess perceptions of power and equality in the relationship. Sample items include: "My partner and I have equal power in the relationship," and "My partner and I invest equal amounts of time and energy in the relationship." The response options range from 1 (*Not at All True*) to 9 (*Very True*). The items were summed to make a total score, with higher scores indicating high equality. The equality

scale was internally consistent (α = .91) in a sample of gay, lesbian, and heterosexual partners (Kurdek, 1998). In a sample of female same-sex couples only, the equality scale was also internally consistent (α = .91; Horne & Biss, 2009). In a sample of heterosexual and gay and lesbian couples, the scale was positively associate with Stemberg's (1988) commitment scale (*r* = .65; Kurdek, 2004). Internal consistency in the present sample was strong (α = .92).

Social Support (Appendix I)

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) is self-report measure of social support. Whereas the scale includes three subscales, family, friends, and significant other, only the family and friends subscales was used in the present study. Examples of these eight items include: "I have friends with whom I can share my joys and sorrows," and "I can talk about my problems with my family." A 7-point response scale is used, ranging from 1 (*Very strongly disagree)* to 7 (*Very strongly agree*). The average of items 1, 2, 5, and 7 was calculated to create the family subscale score. The average of items 3, 4, 6, and 8 were calculated to form the friends subscale scores. The average of these subscale scores was then taken to create the general social support score. In a sample of undergraduate students, the MSPSS had adequate internal consistency for the family (α = .87) and friends (α = .85) subscales, and that the MSPSS demonstrated construct validity (family: *r* = -.24; friends: *r* = -.24) with depressive symptoms (Zimet et al., 1988). The MSPSS had good internal consistency in a sample of lesbian women for the family (α = .93) and friends (α = .94) subscales (Mason et al., 2017). Construct validity was demonstrated in a sample of SMW: the MSPSS was negatively associated (*r* = -.36) with the Center for Epidemiologic Studies Depression Scale—Short Form (CES–D; Andresen et al., 1994; Lehavot & Simoni, 2011). In the present study, internal consistency of the combined friends and family subscales was good (α = .87).

Well-Being (Appendix J)

Ryff's Scales of Psychological Well-being (SPWB; Ryff & Keyes, 1995) is an 18-item self-report measure of well-being that includes six components of positive psychological functioning. These six components are autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Positive relations with others was not used in the current study. Sample items include "Some people wander aimlessly through life, but I am not one of them," and "When I look at the story of my life, I am pleased with how things have turned out so far." Participants respond using a 6-point Likert scale, ranging from 1 (*Completely Disagree*) to 6 (*Completely Agree*). Items 4, 5, 6, 9, 12, and 13 were reverse scored. Each set of items for every subscale, including autonomy (13, 14, 15), environmental mastery (4, 7, 8), personal growth (10, 11, 12), purpose in life (3, 6, 9), and self-acceptance (1, 2, 5), are summed. Ryff and Keyes (1995) found that the SPWB was correlated with measures of happiness, life satisfaction, and depression. In a diverse LGB population, the Cronbach's alpha for the SWPD total score was .75, and psychological well-being was significantly associated with social well-being (r = .53) and depression (r = -.56; Kertzner et al., 2009). Ryff and Keyes (1995) found estimates of internal consistency ranging from .33. to .56. However, the authors noted that this was likely due to the small number of items per scale and that they selected certain items for conceptual reasons (Ryff & Keyes, 1995). In the present study, the internal consistency of the autonomy (α = .53), personal growth (α = .59), and purpose in life (α = .46) were fairly low. Good internal consistency was found for the self-acceptance (α = .75) and environmental mastery (α = .70) subscales.

Mental Health (Appendix K)

The Mental Health Inventory (MHI-18; adapted from Veit & Ware, 1983) is an 18-item measure of psychological distress and well-being that is comprised of four subscales: anxiety, depression, behavioral control, and positive affect. The present study used the anxiety, depression, and behavioral control subscales. Sample items include: "Has your daily life been full of things that were interesting to you?" and "Have you been in firm control of your behavior, thoughts, emotions, and feelings?" Participants respond with how often they felt a certain way in the past four weeks, ranging from 1 (*None of the time*) to 6 (*All of the time*). Items 3, 5, and 7 were reverse scored. The mean of each subscale, anxiety (2, 4, 7, 8, 13), depression (1, 6, 9, 10), behavior control (3, 5, 11, 12), was calculated. Higher scores reflect more mental health problems.

The MHI-18 had high internal consistency in a sample of adults (α = .96; McHorney et al., 1992). In a sample of lesbian and bisexual women there was adequate internal consistency with the anxiety (α = .86), depression (α = .90), and behavioral control (α = .83) subscales for the MHI, and the anxiety, depression, and behavioral control subscales were positively associated (*r* = .39; *r* = .57; *r* = .61, respectively) with social isolation (Mason & Lewis, 2015). In the current sample, the internal consistency of the anxiety (α = .88), depression (α = .92), and behavioral control (α = .84) subscales was good.

Participants and Recruitment

Participants for the present study were SMW age 18-30 years old. They were recruited through the Facebook advertisement platform, which includes Instagram and Facebook, during April 2019. Eligible participants were cisgender women and reported that they were exclusively or mostly attracted to women, or equally attracted to men and women. Additionally, to be

eligible for the relationship part of the study, they must have been in a relationship with a cisgender woman for at least three months and see their partner in person at least once a week. The study was approved by the College of Science Human Subjects Committee. Participants' responses were anonymous, that is, identifying information was never associated with their responses to survey questions.

Power analyses were conducted to determine the number of participants needed for this study. Prior to conducting power analyses, the effect sizes of similar studies were reviewed, with effect sizes ranging from small (Braithwaite et al., 2010) to medium (Proulx et al., 2007). Using G*Power, three power analyses were conducted to determine sample size for the MANCOVAs used to address Aim 1. To conduct the power analyses, sample sizes were calculated using the ANCOVA statistical test with a Bonferroni correction. All power analyses included eight response variables and used 80% power for detecting a small to medium (f = .20) sized effect at the .00625 level of statistical significance. A power analysis was conducted for Aim 1 first, indicating that 162 single participants were needed, and 162 partnered participants were needed. To address Aim 1b, 107 participants were needed in each group (married/ civil union, cohabiting, non-cohabiting, single). Taking into account all parts of Aim 1, 107 participants were needed for married/civil union, cohabiting, and non-cohabiting, and 162 single participants were needed. Therefore, based on this power analysis, the aim was to recruit 483 participants to ensure sufficient power for these analyses.

In order to evaluate the sample size needed to test the proposed model (Aim 2), the 20:1 recommended sample size to parameters ratio was used (Kline, 2016). Using this ratio, the minimum number of partnered SMW needed to test the model, 19, is 380. Therefore, the total number of participants needed is 542 (380 partnered and 162 single). A recent data collection

using similar recruitment methods and incentives successfully recruited over 1,000 young SMW who were only or mostly attracted to women or equally attracted to men and women (Lewis & Dawson, 2018). In the Lewis and Dawson (2018) study, participants reported their relationship statuses as partnered, married or in a civil union (n = 131), partnered, in an exclusive relationship (n = 435), single, exclusively dating one person (n = 79), single, dating a main partner but not in an exclusive relationship (n = 91), single, dating, but not anyone person in particular (n = 83), and single, not dating anyone (n = 266).

A total of 1,474 individuals completed the online survey. Individuals were deemed ineligible for a variety of reasons: individual demographic characteristics such as age, gender, attraction (n = 327); relationship characteristics such as not indicating whether they were in a relationship or having a partner who identifies as male (n = 477). Two individuals were excluded from the data analyses because they only answered questions that allowed them to move forward in the survey (i.e., eligibility questions that required a response through Qualtrics) but did not complete any measures. Therefore, the final N was 668 single and partnered sexual minority women prior to data cleaning. Of the 668 women, 439 were partnered and 229 were single. After data cleaning, 665 women were included in the final sample (see Table 1 for demographic characteristics of the final sample). The mean age of participants was 23.65 (SD = 3.70). Including those who identified as Latina, 83% of the women identified as White. In terms of attraction, 42.1% reported only women, 40.2% reported mostly women, and 17.7% reported equal to men and women. Regarding sexual identity, the most common sexual identities reported were Lesbian (63.2%), Queer (45.4%), and Bisexual (33.1%).

Table 1

Descriptive Statistics of the Final Sample

Demographic Characteristics	N = 665
Age	
18-21	225 (33.8%)
22-25	205 (30.8%)
26-30	235 (35.3%)
Latina	55 (8.3%)
Race	
White	552 (83.0%)
Black	25 (3.8%)
Asian/Hawaiian/Pacific Islander	14 (2.1%)
American Indian/Alaskan	2 (0.3%)
Multiracial	61 (9.2%)
Other	10 (3.1%)
Sexual Identity (select all that apply)	
Lesbian	420 (63.2%)
Bisexual	220 (33.1%)
Queer	302 (45.4%)
Asexual	29 (4.4%)
Pansexual	84 (12.6%)
Questioning	28 (4.2%)
Gay	17 (2.6%)
Sexual Attraction	
Only Women	280 (42.1%)
Mostly Women	267 (40.2%)
Equally Men & Women	118 (17.7%)
Relationship Status	
Single	233 (35.0%)
Noncohabiting Committed	135 (20.3%)
Cohabiting Committed	137 (20.6%)

Married/Civil Union	160 (24.1%)
City/Community/Town	
Urban	292 (43.9%)
Suburban	267 (40.2%)
Rural	106 (15.9%)
Employment (select all that apply)	
Employed Part-Time	179 (26.9%)
Employed Full-Time	298 (44.8%)
Retired	0 (0.0%)
Student	293 (44.1%)
Homemaker	13 (2.0%)
Unemployed	35 (5.3%)
Education	
Some High School	18 (2.7%)
High School Graduate	57 (8.6%)
Some College	230 (34.6%)
Associate's Degree	32 (4.8%)
Bachelor's Degree	216 (32.5%)
Master's Degree	99 (14.9%)
Doctoral/Professional Degree	13 (2.0%)
Income	
$0-$19,000	302 (45.4%)
$20,000-$39,999	167 (25.1%)
$40,000-$59,999	116 (17.5%)
$60,000-$79,999	50 (7.5%)
$80,000+	25 (3.8%)

Procedure

Potential participants viewed an advertisement through Facebook's advertising platform. The advertisements targeted women who were aged 18-30, lived in the U.S., and had a sexual minority-related interest (e.g., Gay pride, Same-sex marriage, LGBT social movements). The advertisement appeared on participants' Facebook Newsfeed and Stories, as well as their Instagram Feed and Stories. Although potential participants may have seen the advertisement multiple times, only one response was allowed per IP address. If a potential participant clicked on the advertisement, they were directed to the Qualtrics survey. The Qualtrics survey included the Informed Consent document and a brief screening survey. If participants indicated that they were younger than 18 or old than 30, male, or mostly or exclusively attracted to men, then they were told that they were not eligible to complete the rest of the survey. Eligible participants completed an online survey, consisting of self-report measures. Participants who indicated that they were in female same-sex relationships completed all measures. Single participants completed a subset of measures. Participants who completed the survey could provide an email address in a separate survey to enter into a raffle for the opportunity to one $50, four $25, and five $10 Amazon gift cards. Several items were added to the survey to ensure that participants were selecting their answers carefully. These "attention check" items were embedded into measures asking participants to select a particular answer (e.g., Please choose "Strongly Agree"). If the participant did not select the correct answer, she received feedback and responded again until the correct answer was chosen.

CHAPTER III

RESULTS

Preliminary Analyses and Data Cleaning

Prior to conducting the MANCOVA analyses (Aim 1), the data were examined for outliers and normality (skewness and kurtosis). All variables were normally distributed. Outliers were identified using boxplots. One value for the personal growth subscale was winsorized from 5 to 8; no other variables had extreme outliers. A correlation matrix of the dependent variables showed that there was a high correlation (r = .70 or higher) between behavioral control and depression (r = 0.83). Therefore, behavioral control was removed from the MANCOVA analyses. Missing value analyses confirmed that there were not any missing data for any of the seven dependent variables.

Additional data cleaning was conducted for the SEM analyses (Aim 2) in the subset of partnered SMW. The variables included in these analyses were also checked for outliers and normality (skewness and kurtosis). One value for authenticity was winsorized from 1.80 to 2.90. There were seven outliers identified for equality. The following values were winzorized: two values of 8 to 23, 12 to 24, 20 to 25, 24 to 26, and two values of 26 to 27. Commitment had six outliers that were winsorized, including 2.14 to 3.86, two values of 2.57 to 4, 3.14 to 4.14, 3.43 to 4.29, and 4.29 to 4.43. There were four outliers for sexual satisfaction, all of which were winsorized from 5 to 9. Intimacy had four outliers that were winsorized, including 9 to 17, 17 to 18, and two values of 18 to 19. identity affirmation had one outlier, which was winsorized from 1.33 to 2.33. Internalized homonegativity had ten outliers that were winsorized, including two values of 5.33 to 4.10, 5 to 4, 4.67 to 3.90, two values of 4.33 to 3.80, and four values of 4 to 3.80. Last, there were 6 outliers for relationship satisfaction. The following values were

winsorized: 46 to 52, 49 to 53, 50 to 54, two values of 51 to 55, and 52 to 56. All variables were normally distributed. Bivariate correlations among variables indicated high correlations (r = .70 or higher) among variables underlying the same factor. Intimacy was highly correlated with commitment (r = 0.77), and behavioral control was highly correlated with depression (r = 0.82). There were no high correlations between any variables belonging to different factors. Missing data ranged from 0% to 3.9% among the SEM variables. There were no missing data for any of the Individual factor indicators (concealment motivation, internalized homonegativity, identity affirmation, or identity centrality), Mental Health factor indicators (anxiety, depression, or behavioral control), or Well-Being factor indicators (environmental mastery, purpose in life, personal growth, or self-acceptance. Missing data for the Relationship factor indicators were minimal: sexual satisfaction (1.1%), equality (0.9%), commitment (0.2%), and intimacy (3.9%). Similarly, missing data was low for the Societal factor indicators: general social support (0.2%), sexual minority specific social support (2.3%), and connection to the LGBT community (0.2%). Relationship satisfaction was also missing very little data (2.3%). Maximum likelihood estimation was used in Mplus to address the missing data.

MANCOVA Assumptions Aim 1a

Assumptions for MANCOVA were addressed for Aim 1a (Laerd Statistics, 2017). The first assumption, two or more dependent variables measured at the continuous level, was confirmed. The second assumption, one independent variable that includes two categorical groups, was confirmed. The third assumption was confirmed, such that there was a covariate that was measured at the continuous level. The fourth assumption of independence of observations was confirmed. The fifth assumption is that there should be a linear relationship between each pair of dependent variables within each group of the independent variable. This assumption was

tested using scatterplots. There were linear relationships between all pairs of dependent variables for each relationship status group. The sixth assumption, linear relationship between the covariate and each dependent variable within both groups of the independent variables, was also tested using scatterplots. There were linear relationships between the covariate and each dependent variable within each relationship status group. The seventh assumption is homogeneity of regression slopes. There was homogeneity of regression slopes, as assessed by the interaction term between relationship status and level of attraction, F (8, 657) = .495, p = .860. The eighth assumption is homogeneity of variances and covariances. The assumption of homogeneity of variances and covariances was violated, as assessed by Box's M test, $p < .001$. Therefore, Pillai's Trace was used for significance testing (Tabachnick & Fidell, 2013). The ninth assumption, no significant univariate outliers in the groups of the independent variable for each dependent variable, was tested using boxplots and histograms. Significant univariate outliers were winsorized where necessary. The tenth assumption, no significant multivariate outliers in the relationship status groups for each dependent variable, was tested using Mahalanobis distance. There were three multivariate outliers in the data, as assessed by Mahalanobis distance ($p > .001$). These cases were removed from subsequent analyses, resulting in a sample size of 665. The eleventh assumption, residuals should be normally distributed for each relationship status group, was violated as evidenced by significant Shapiro-Wilk values. However, for this type of analysis, the Type I error rate is not strongly affected by non-normality (Glass, Peckham, Sanders, 1972).

MANCOVA Assumptions Aims 1b

Additional MANCOVA assumptions were tested as relevant from the change in groups from partnered and single (Aim 1a) to married/civil union, committed cohabiting, committed non-cohabiting, and single (Aim 1b). The first and third assumptions were confirmed, as the dependent variables and covariate did not change. The second assumption was confirmed, with the independent variable having four categorical groups. The fourth assumption, independence of observations, was confirmed. The fifth and sixth assumptions of linearity were tested using scatterplots and were confirmed. There was homogeneity of regression slopes, as assessed by the interaction term between attraction and relationship level, F (21, 1869.87) = .672, p = .864. Therefore, the seventh assumption was also met. The eighth assumption of homogeneity of variances and covariances was violated, as assessed by Box's M test, $p < .001$. Pillai's Trace was used for significance testing to accommodate this violation (Tabachnick & Fidell, 2013). There were no additional univariate or multivariate outliers, confirming the ninth and tenth assumptions. The eleventh assumption was also violated, as shown by significant Shapiro-Wilk values. As with Aim 1a, no action was taken due to the weak effect of non-normality for this type of analysis.

Hypothesis Testing

Aim 1: Hypothesis 1a Statistical Analysis Testing

To examine Hypothesis 1a, a one-way MANCOVA was conducted to examine differences on anxiety, depression, autonomy, environmental mastery, personal growth, purpose in life, and self-acceptance. The grouping variable was relationship status (partnered vs. single). Attraction level may vary by relationship status (i.e., a woman who is married to a woman may be more likely to report being exclusively attracted to women than a single SMW) and therefore

was included as a covariate. With the use of Pillai's Trace criterion, there was a statistically significant difference between partnered and single women on the combined dependent variables after controlling for attraction, F (7, 656) = 11.180, $p < .001$, partial $\eta^2 = .107$.

Follow up univariate one-way ANCOVAs were performed. A Bonferroni adjustment was made such that statistical significance was accepted at $p < .007143$. The p-value of .05 was divided by the number of dependent variables to get this value. With this correction, partnered participants reported significantly less anxiety, F (1, 662) = 29.39, $p < .001$, partial $\eta^2 = .043$; less depression, F (1, 662) = 56.62, $p < .001$, partial $\eta^2 = .059$; and significantly more self-acceptance, F (1, 662) = 41.46, $p < .001$, partial $\eta^2 = .059$; personal growth, F (1, 662) = 9.22, $p = .002$, partial $\eta^2 = .014$; environmental mastery, F (1, 662) = 71.83, $p < .001$, partial $\eta^2 = .098$; and purpose in life, F (1, 662) = 18.27, $p < .001$, partial $\eta^2 = .027$ compared to single women. There were no significant differences between partnered and single women for autonomy, F (1, 662) = 5.43, $p = .020$, partial $\eta^2 = .008$. See Table 2 for means and adjusted means for Aim 1a.

Aim 1: Hypothesis 1b Statistical Analysis Testing

To examine Hypothesis 1b, an additional one-way MANCOVA was conducted to determine whether anxiety, depression, autonomy, environmental mastery, personal growth, purpose in life, and self-acceptance differ based on relationship status (marriage or civil union, in committed cohabiting relationship, in a committed noncohabiting relationship, or single). Attraction level was included as a covariate. For hypothesis 1b, significant multivariate effects were followed up with post hoc analyses to determine which groups differed significantly. With the use of Pillai's Trace criterion, there was a statistically significant difference among the married, cohabiting, non-cohabiting, and single women on the combined dependent variables

Table 2

Means, Adjusted Means, Marginal Means, Standard Deviations, and Standard Errors for Mental Health and Well-Being Outcomes for Partnered and Single Women

	Group				Total
	Partnered		Single		Marginal
Mental Health and Well-Being Outcomes	*M (SD)*	M_{adj} *(SE)*	*M (SD)*	M_{adj} *(SE)*	*M (SD)*
Anxiety*	3.56 (1.12)	3.57 (0.05)	4.08 (1.07)	4.07 (0.07)	3.74 (1.13)
Depression*	2.78 (1.11)	2.78 (0.06)	3.41 (1.27)	3.41 (0.08)	2.99 (1.20)
Autonomy	16.17 (2.99)	16.15 (0.15)	15.51 (3.33)	15.55 (0.21)	15.95 (3.12)
Environmental Mastery*	13.98 (3.66)	13.93 (0.18)	11.44 (4.10)	11.23 (0.26)	13.01 (4.04)
Personal Growth*	19.13 (2.09)	19.13 (0.11)	18.52 (2.75)	18.53 (0.16)	18.92 (2.35)
Purpose in Life*	16.39 (3.33)	16.38 (0.16)	15.15 (3.53)	15.17 (0.23)	15.97 (3.45)
Self-Acceptance*	15.87 (3.76)	15.85 (0.20)	13.59 (4.66)	13.64 (0.28)	15.09 (4.23)

* p <.007143.

after controlling for attraction, F (21, 1968) = 4.06, $p < .001$, partial $\eta^2 = .042$.

One-way ANCOVAs were conducted to follow up the statistically significant one-way MANCOVA result. A Bonferroni adjustment was made such that statistical significance was accepted at $p < .007143$. This value was obtained by dividing .05 by the number of dependent variables. There were statistically significant differences in adjusted means among the four groups for anxiety, F (3, 660) = 10.14, $p < .001$, partial $\eta^2 = .044$); depression, F (3, 660) = 14.40, $p < .001$, partial $\eta^2 = .061$; self-acceptance, F (3, 660) = 13.05, $p < .001$, partial $\eta^2 = .056$; environmental mastery, F (3, 660) = 23.84, $p < .001$, partial $\eta^2 = .098$; and purpose in life, F (3, 660) = 6.88, $p < .001$, partial $\eta^2 = .030$; no differences emerged for personal growth, F(3, 660) = 3.25, $p = .021$, partial $\eta^2 = .015$ or autonomy, F (3, 660) = 5.434, $p = .045$, partial $\eta^2 = .012$).

Pairwise comparisons were conducted to see which groups differed significantly for anxiety, depression, self-acceptance, environmental mastery, and purpose in life using the Bonferroni post hoc test with statistical significance accepted at $p < .007143$. Married, cohabiting, and non-cohabiting women reported significantly less anxiety and depression than single women. Additionally, married, cohabiting, and non-cohabiting women reported significantly more self-acceptance and environmental mastery than single women. There were no significant differences among married, cohabiting, and non-cohabiting women for anxiety, depression, self-acceptance, or environmental mastery. For purpose in life, married and cohabiting women reported significantly higher levels than single women. There were no significant differences in purpose in life among any of the other groups. See Table 3 for means and adjusted means for Aim 1b and Table 4 for mean differences between groups.

Table 3

Means, Adjusted Means, Standard Deviations, and Standard Errors for Mental Health and Well-Being Outcomes for Married, Cohabiting, Non-cohabiting, and Single Women

	Group							
	Married		Cohabiting		Non-cohabiting		Single	
Mental Health and Well-Being Outcomes	*M (SD)*	M_{adj} *(SE)*	*M (SD)*	M_{adj} *(SE)*	*M (SD)*	M_{adj} *(SE)*	*M (SD)*	M_{adj} *(SE)*
Anxiety	3.47 (1.11)	3.48 (0.09)	3.58 (1.09)	3.58 (0.10)	3.66 (1.18)	3.67 (0.10)	4.07 (1.06)	4.06 (0.07)
Depression	2.69 (1.09)	2.69 (0.09)	2.73 (1.09)	2.73 (0.10)	2.93 (1.16)	2.93 (1.10)	3.39 (1.27)	3.39 (0.08)
Autonomy	16.46 (2.81)	16.45 (0.25)	16.17 (3.15)	16.15 (0.27)	15.80 (3.03)	15.78 (0.27)	15.55 (3.31)	15.58 (0.21)
Environmental Mastery	14.20 (3.99)	14.16 (0.30)	14.12 (3.53)	14.08 (0.33)	13.58 (3.37)	13.52 (0.33)	11.20 (4.10)	11.29 (0.25)
Personal Growth	19.03 (2.20)	19.03 (0.19)	19.23 (2.11)	19.22 (0.22)	19.16 (1.99)	19.16 (0.20)	18.53 (2.72)	18.54 (0.16)
Purpose in Life	16.71 (3.17)	16.70 (0.27)	16.33 (3.49)	16.32 (0.29)	16.10 (3.32)	16.09 (0.29)	15.16 (3.54)	15.18 (0.23)
Self-Acceptance	15.78 (3.82)	15.76 (0.33)	16.04 (3.67)	16.02 (0.35)	15.77 (3.85)	15.74 (0.35)	13.66 (4.63)	13.71 (0.27)

Table 4

Mean Differences between Relationship Groups for Mental Health and Well-Being Outcomes

Mental Health and Well-Being Outcomes	Difference in adjusted means (95% CI)					
	Married vs. Cohabiting	Married vs. Non-cohabiting	Married vs. Single	Cohabiting vs. Non-Cohabiting	Cohabiting vs. Single	Non-cohabiting vs. Single
Anxiety	-0.11	-0.19	-.58*	-0.08	-0.48*	-0.40*
Depression	-0.05	-0.24	-0.70*	-0.20	-0.66*	-0.46*
Environmental Mastery	0.08	0.63	2.87*	0.55	2.78*	2.23*
Purpose in Life	0.38	0.61	1.52*	0.23	1.14*	0.92
Self-Acceptance	-0.25	0.02	2.06*	0.28	2.31*	2.03*

* p <.007143.

Aim 2: Analytic Plan

To examine Aim 2, five latent variables were constructed. Latent variables in the model included the Individual factor, Relationship factor, Societal factor, Mental Health factor, and Well-Being factor. The exogeneous latent variables included the Individual factor, Relationship factor, and Societal factor. The Individual factor was comprised of three indicators: self-awareness, authenticity, and negative sexual minority identity. Indicators for the Relationship factor included equality, commitment, sexual satisfaction, and intimacy. The Societal factor consisted of general social support, sexual minority social support, and belonging to the LGBT community. Mental Health and Well-Being were the endogenous latent variables. The indicators for the Mental Health factor were anxiety, depression, and behavioral control. The Well-Being factor was comprised of autonomy, environmental mastery, personal growth, purpose in life, and self-acceptance. The mediator variable is an observed variable of relationship satisfaction. Prior to analyzing the full SEM model, confirmatory factor analysis (CFA) was conducted to assess the adequacy of the latent variables included in the model. Next, the full SEM model was tested for model fit. After determining that model fit was adequate for each latent variable and the full SEM model, SEM was used to conduct path analyses among the observed and latent variables and address Aim 2. Addressing Aim 2, the direct and indirect effects of the Individual, Relationship, and Societal factors on the Mental Health and Well-Being factors through relationship satisfaction were tested.

Aim 2: Confirmatory Factor Analyses

To test the factor structure of the latent variables, confirmatory factor analyses were conducted to evaluate whether the indicators contributed to underlying factors. Given that there were five latent variables in the model (Individual, Relationship, Societal, Mental Health, and

Well-Being), a CFA was conducted for each latent variable in Mplus (Version 8.2; Muthén & Muthén, 2015). Model fit was assessed using the chi-square test of model fit, the root-mean-square error of approximation (RMSEA), the standardized root-mean-square residual (SRMR), and the comparative fit index (CFI). A non-significant chi-square test, a .06 or .07 cut-off for the RMSEA, a SRMR value of less than .08, and a CFI value of at least .95 indicate good model fit (Hooper et al., 2008; Hu & Bentler, 1999).

First, a CFA was conducted for the Individual factor, which included negative identity, self-awareness, and authenticity. This model resulted in a negative residual variance for negative identity, indicating model misspecification (Kolenikov & Bolen, 2010). Due to this model misspecification, additional models were tested using various negative and positive identity variables that were theoretically consistent with the proposed model. The model with the best model fit included concealment motivation, internalized homonegativity, identity affirmation, and identity centrality. The CFA showed adequate model fit [$\chi^2(2) = 13.41$, $p = .001$, RMSEA= .11, CFI= .97, and SRMR= .03]. The SRMR value was less than .08, and the CFI value was greater than .95. The chi-square test was significant; however, this may be due to overpowering caused by moderate to large sample size (Bentler & Bonnet, 1980). In addition, when the chi-square test is significant, the RMSEA value is often above the cutoff (Muthén & Muthén, 2017). Standardized factor loadings ranged from .42 to .91 (see Table 5 for specific factor loadings).

A second CFA for the Relationship factor was conducted, including equality, commitment, sexual satisfaction, and intimacy. The results indicated excellent model fit [$\chi^2(2) = 2.85$, $p = 0.24$, RMSEA= 0.03, CFI= 0.99, and SRMR= 0.01]. The chi-square test was not significant, the RMSEA value was less than .06, the CFI was greater than .95, and the SRMR was less than .08. Standardized factor loadings ranged from .51 to .84.

Given that the Societal (general social support, sexual minority specific social support, and connection to the LGBT community) and Mental Health (anxiety, depression, and behavioral control) factors only had three indicators each, the factors were just identified. Therefore, model fit statistics could not be calculated for those factors. Standardized factor loadings for the Societal factor ranged from .30 to .73. The factor loading for connection to the LGBT community was .30. Due to the low factor loading, this indicator was excluded from future analyses. For the Mental Health factor, standardized factor loadings ranged from .72 to .92.

A CFA for the Well-Being factor was conducted with autonomy, environmental mastery, personal growth, purpose in life, and self-acceptance as indicators. The results of the CFA showed poor model fit [$\chi^2(5) = 34.82$, $p < .001$, RMSEA= 0.12, CFI= 0.94, and SRMR= 0.04]. The SRMR value was less than .08. However, the RMSEA was greater than .06, the CFI value was below .95, and the chi-square test was significant. Additionally, the factor loading for autonomy was low at 0.296. Therefore, autonomy was removed from the factor. A CFA was conducted with environmental mastery, personal growth, purpose in life, and self-acceptance, yielding similar poor model fit [$\chi^2(2) = 29.36$, $p < .001$, RMSEA= 0.12, CFI= 0.94, and SRMR= 0.05]. The modification indices indicated that correlating personal growth and purpose in life would improve model fit, so this correlation was added. The final Well-Being factor was just identified, so model fit statistics were not able to be calculated. Standardized factor loadings ranged from .43 to .86.

Table 5

Standardized Factor Loadings by Factor

Factor	Indicators	Standardized Factor Loadings (SE)
Individual	Concealment Motivation	.42 (.05)
	Internalized Homonegativity	.61 (.04)
	Identity Affirmation	.91 (.03)
	Identity Centrality	.60 (.04)
Relationship	Equality	.84 (.03)
	Commitment	.51 (.04)
	Sexual Satisfaction	.63 (.04)
	Intimacy	.75 (.03)
Societal	General Social Support	.73 (.06)
	Sexual Minority Specific Social Support	.61 (.06)
Mental Health	Anxiety	.72 (.03)
	Depression	.92 (.01)
	Behavioral Control	.90 (.02)
Well-Being	Environmental Mastery	.71 (.04)
	Purpose in Life	.55 (.04)
	Personal Growth	.43 (.05)
	Self-Acceptance	.86 (.04)

Note. All factor loadings significant, $p < .001$.

Aim 2: Full Model Testing

Last, the overall model fit was tested, including the Individual factor (concealment motivation, internalized homonegativity, identity affirmation, and identity centrality), the Relationship factor (equality, commitment, sexual satisfaction, and intimacy), the Societal factor (general social support and sexual minority-specific social support), the Mental Health factor (anxiety, depression, and behavioral control), and the Well-Being factor (self-acceptance, personal growth, environmental mastery, purpose in life). In addition, personal growth was correlated with purpose in life. The results of the CFA showed adequate model fit [$\chi^2(120) = 292.37$, $p < .001$, RMSEA= 0.057, CFI= 0.95, and SRMR= 0.05]. The RMSEA and SRMR values are within acceptable limits. Additionally, the CFI value is right at .95. The chi-square test of model fit was significant, which could be due to moderate to large sample size.

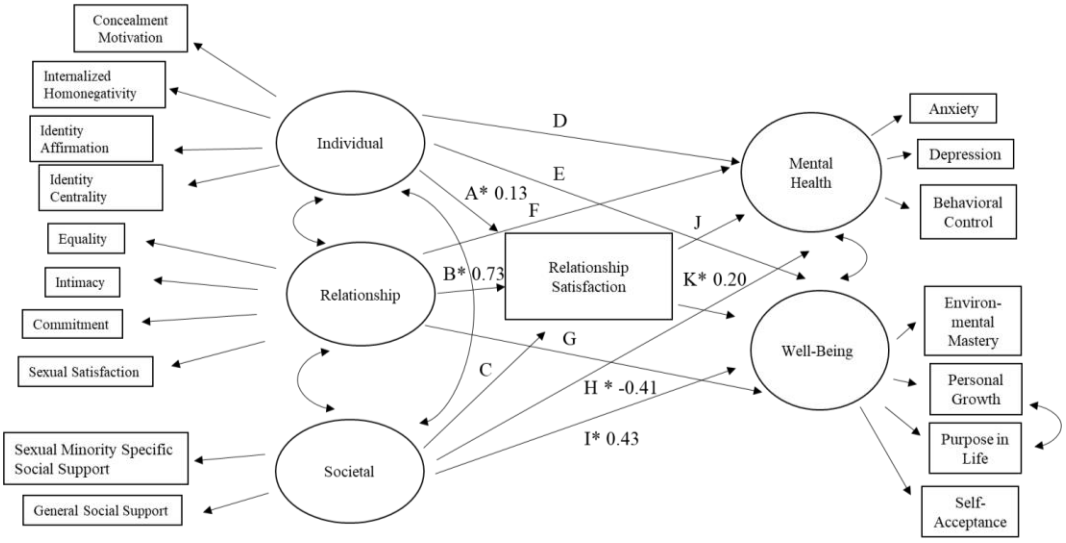
Direct and Indirect Effects Testing. To test the direct and indirect effects of the proposed model, standardized and unstandardized path coefficients were examined (see Figure 2). Based on the recommendations of Hayes and Scharkow (2013), confidence intervals were examined to identify significant paths using 95% bias-corrected bootstrapping of 5,000 samples. If the confidence interval does not include 0, then it is significant.

There was a significant direct association between the Individual factor and relationship satisfaction (Path A; $\beta = 0.13$; $B = 2.91$, unstandardized 95% CI: 1.40, 4.42), a significant direct association between the Relationship factor and relationship satisfaction (Path B; $\beta = 0.73$; $B = 0.90$, unstandardized 95% CI: 0.81, 0.99). The direct effect between the Societal factor and relationship satisfaction (Path C) was not significant. However, the Societal factor was significantly associated with the Mental Health factor (Path H; $\beta = -0.41$; $B = -0.08$, unstandardized 95% CI: -1.03, -0.06) and the Well-Being factor (Path I; $\beta = 0.43$; $B = 0.32$, unstandardized 95% CI: 0.22, 0.41). The direct paths from the Individual factor to the Mental

Health factor (Path D) and the Well-Being factor (Path E) were not significant. The Relationship factor was not directly associated with the Mental Health factor (Path F) or the Well-Being factor (Path G). The direct effect between relationship satisfaction and the Mental Health factor (Path J) was not significant. Relationship satisfaction was significantly associated with the Well-Being factor (Path K; $\beta = 0.20$; $B = 0.06$, unstandardized 95% CI: 0.01, 0.10). Additionally, none of the indirect effects through relationship satisfaction were significant.

Figure 2

Final Model with Hypothesized and Significant Paths



Note. * indicates that paths are significant. Standardized coefficients are included for significant paths.

CHAPTER IV

DISCUSSION

It is well documented that SMW are more likely to report mental health problems (e.g., depression, anxiety, substance use) when compared to their heterosexual counterparts (Bostwick et al., 2010; Cochran et al., 2003; Drabble et al. 2018; Fergusson et al., 1999; Gilman et al., 2001; Jorm et al., 2002; King et al., 2008). Meyer (2003) and Haztenbuehler (2009) have attributed this disparity to the sexual minority stress that SMW experience. Previous research has linked sexual minority stress with greater psychological distress and physical health problems (Flenar et al., 2017; Lea et al., 2014) and lower levels of relationship well-being (Cao et al., 2017). However, little research has focused the potential protective nature of romantic relationships and the central role that relationship satisfaction may play for same-sex female couples. The present study sought to expand the literature by comparing the mental health and well-being of SMW of different relationship statuses (i.e., married, committed cohabiting, committed non-cohabiting, and single). Additionally, Huston's (2000) model of individual, relationship, societal factors and relationship factors was extended to include mental health and well-being outcomes in an SEM model.

Aim 1: Relationship Status, Mental Health, and Well-Being

The purpose of Aim 1 was to examine the potential protective nature of romantic relationships for mental health and well-being among SMW. It was hypothesized that partnered women (i.e., women who indicated that they were in a relationship) would report better mental health and well-being than single women. Additionally, it was predicted that there would be differences in mental health and well-being based on relationship status. Women who were married (or in a civil union or legal domestic partnership) were predicted to have the best

outcomes, followed by cohabiting women in a relationship, then non-cohabiting women in a relationship, and last single women.

Aim 1a: Partnered vs. Single

In support of hypothesis 1a, partnered women reported better mental health than single women controlling for attraction, with partnered women reporting significantly less depression and anxiety. These results are consistent previous research indicating that partnered heterosexual individuals (Braithwaite & Holt-Lunstad, 2017; Simon & Barrett, 2010) and partnered sexual minority individuals (Riggle et al., 2010) reported better mental health than their single counterparts. In addition, these results expanded upon previous findings with the inclusion of attraction as a covariate. Similarly, when controlling for attraction, partnered women fared better in terms of their well-being, such that partnered women reported significantly higher levels of self-acceptance, personal growth, environmental mastery, and purpose in life. Again, these findings are consistent with previous research in which partnered heterosexual women reported enhanced well-being compared to single heterosexual women (Holt-Lunstad, Birmingham, & Jones, 2008). Although the study of the potential benefits of partnership has been limited among sexual minority individuals, the current results are consistent with previous research that found that partnered LGB individuals reported finding more meaning in life than single LGB individuals (Riggle et al., 2010). In particular, the differences between partnered and single SMW in terms of self-acceptance, personal growth, and environmental mastery add to the literature as these constructs are not known to have been studied in this context before. However, levels of autonomy did not significantly differ between partnered and single women. Although it was predicted that partnered women would report higher levels of autonomy than single women, there is no known previous research that would indicate that this particular aspect of well-being

might be higher among partnered SMW women compared to single SMW. Autonomy has been noted as an important aspect when comparing same-sex female relationships and mixed sex relationships (Kurdeck, 2004); however, SMW as whole seem to report similar levels of autonomy regardless of their relationship status.

Aim 1b: Comparing All Relationship Status Groups

In line with the mental health comparisons between partnered and single women, married, cohabiting, and non-cohabiting partnered women reported significantly less depression and anxiety than single women controlling for attraction. Contrary to predictions, there were no significant differences among married, cohabiting, and non-cohabiting partnered women regarding mental health outcomes. These findings contrast with previous research in which the legal status of relationships among LGB couples was associated with fewer depressive symptoms (Riggle et al., 2010). It is important to note that the mean age of 39 for Riggle et al. sample was higher than the 18-30 age range in the current study. Additionally, the current results are not in line with research suggesting that cohabitation among SMW might protect against alcohol-related problems when comparing SMW who lived with their partners and those who did not (Veldhuis et al., 2017). In contrast to the current study which included women in relationships with women and separated married and cohabiting women who were unmarried, the Veldhuis et al. sample included SMW who had both male and female partners, and women who were married were combined with the women in cohabiting relationships. The current study is the first known study to examine legal status groups and cohabitation groups together on mental health outcomes among SMW. Perhaps some of the differences between different relationship status groups are masked when considering both legal relationship status and cohabitation status. Another possible explanation is that being in any type of committed relationship is sufficient to

protect against mental health problems. It may also take time to see the effects of legal recognition in a relationship and due to the recency of legal recognition of same-sex couples, we have not yet been able to see how this plays out over time.

In terms of well-being, married, cohabiting, and non-cohabiting partnered women reported significantly more self-acceptance and environmental mastery than single women controlling for attraction. Similar to the findings for mental health outcomes and contrary to hypotheses, there were no differences among the groups of partnered women (i.e., married, cohabiting, and non-cohabiting). Previous research has shown that, among heterosexual individuals, well-being increases as level of relationship commitment increases (i.e., dating to cohabiting to married; Dush & Amato, 2005; Soons & Liefbroer, 2008). In addition, Riggle and colleagues (2010) found that meaning in life was higher among LGB individuals in legally recognized relationships when compared with other partnered LGB individuals. Again, this sample consisted individuals whose average age was higher than the current sample. Similar to the mental health outcomes, being in a committed relationship may, regardless of relationship type, may be the protective aspect for well-being among SMW. Interestingly, married and cohabiting women reported significantly higher levels of purpose in life than single women controlling for attraction, but non-cohabiting partnered women did not significantly differ from any of the other groups. These results indicate that being in a legally recognized relationship or living together may be important when considering meaning or purpose in life for SMW. Perhaps the higher level of commitment and support associated with marriage or cohabitation contributes to greater purpose in life. Additionally, there were no differences between any of the groups on the personal growth and autonomy outcomes. These autonomy results, while inconsistent with predictions, were consistent with the partnered vs. single results. However, the

lack of relationship group differences for personal growth was not in line with the partnered vs. single results. Interestingly, when the relationship groups were combined as the partnered group personal growth was significantly higher compared to single women.

Aim 2: SEM Model

The second aim of the study was to extend the Huston's (2000) model to test how individual, relationship specific, and societal factors contribute to mental health and well-being through relationship satisfaction for SMW in same-sex couples in an SEM model. In other words, the purpose of Aim 2 was to examine how the mediational role of relationship satisfaction factor for mental health and well-being. More specifically, it was hypothesized that the Individual, Relationship, and Societal factors would be positively associated with relationship satisfaction and the Mental Health and Well-Being factors. It was also hypothesized that relationship satisfaction would be positively associated with the Mental Health and Well-Being factors. In addition, it was predicted that relationship satisfaction would partially mediate the association between the Individual, Relationship, and Societal factors and Mental Health and Well-Being.

One of the benefits of SEM is that all of the direct and indirect associations can be tested simultaneously. Additionally, latent variables can be used to measure underlying constructs. While these are major benefits of SEM, it is important to keep in mind the type of analyses when comparing the SEM model to previous research. For example, much of the previous research examines dyadic relationships and does not include latent variables. In contrast, the SEM model must be interpreted within the context of the other variables in the model.

Aim 2a: Direct Effects

In line with predictions, there were direct associations between the Individual and Relationship factors and relationship satisfaction. The Individual factor, which included aspects of positive and negative sexual minority identity, was positively associated with relationship satisfaction. This finding is in line with past research which found a negative association between internalized homophobia and overall relationship well-being (Cao et al., 2017) and internalized homonegativity and relationship quality (Mohr & Fassinger, 2006). This connection between the Relationship factor (equality, commitment, sexual satisfaction, and intimacy) and relationship satisfaction is consistent with previous research that linked sexual satisfaction with relationship satisfaction and relationship well-being (Henderson et al., 2009; Holmberg et al. 2010), intimacy with relationship satisfaction (Eldridge & Gilbert, 1990), equal commitment or involvement with relationship satisfaction (Peplau et al., 1982), and power and equality with relationship satisfaction (Caldwell & Peplau, 1984; Eldridge & Gilbert, 1990) in female same-sex couples. The association between the Societal factor (sexual minority specific social support and general social support) and relationship satisfaction was not significant. This finding is not congruent with past research indicating that social support is associated with relationship well-being (Blair & Holmberg, 2008) and relationship satisfaction (Terrell & Duggar, 2018) for women in same-sex relationships. However, Blair and Holmberg's sample included individuals up to age 58, and Terrell and Duggar's sample included women up to age 76. Additionally, these direct effects are tested while controlling for many other associations between variables. Perhaps there would be a significant, direct association if the Societal factor and relationship satisfaction were tested alone.

The only variable in the model that was significantly associated with mental health and well-being was the Societal factor. Prior research has found connections between social support and personal well-being among individuals in same and mixed-sex couples (Blair & Holmberg, 2008) and an inverse association between sexual minority specific social support and psychological distress among LGB individuals (Belous & Wampler, 2016). Therefore, this link between the Societal factor and mental and well-being is supported by previous search and highlights that, even for SMW in same-sex relationships, social support is important the health and well-being of these women.

In contrast to expectations, relationship satisfaction was not significantly associated with the Mental Health factor. These results are not in line with previous research that has shown a strong connection between relationship satisfaction and mental health among female same-sex couples (Otis et al., 2006; Terrell & Duggar, 2018) and male and female same-sex couples (Belous & Wampler; Blair & Holberg, 2008; Holmberg et al., 2010). As previously mentioned, the current model controls for many other associations, therefore lessening the chance of significance for the structural paths. Whereas the link between relationship status and mental health is well established, less research has been conducted on relationship status and well-being. The current well-being results, however, are consistent with previous research demonstrating a significant association between relationship quality and overall well-being among women in same-sex marriages (Ducharme & Kollar, 2012). Given that this is one of the first studies to establish a link between relationship satisfaction and well-being among same-sex female couples, more research is needed in this area.

The Individual and Relationship factors were not significantly associated with mental health or well-being. These results were not expected given that negative sexual minority identity

has been positively associated with psychological distress and poor mental health (Cramer et al. 2017; Kaysen et al., 2014; Newcomb & Mustanski, 2010), and positive sexual minority identity has been linked to satisfaction with life, self-esteem, and psychological well-being (Mohr & Kendra, 2011; Riggle et al., 2014; Riggle et al., 2017). Similarly, the results for the Relationship factor went against predictions based on past research indicating that sexual satisfaction is a predictor of better mental health (Henderson et al., 2009; Holmberg et al., 2010) and poorer mental health has been associated with lower levels of intimacy and commitment (Otis et al., 2006). As previously mentioned, these associations are considered in the context of the larger SEM model, and there were possible ceiling effects due to a restricted range of the personal growth subscale of the Well-Being factor.

Aim 2b: Indirect Effects

In contrast with predictions, relationship satisfaction did not partially mediate the associations between Individual, Relationship, and Societal factors and mental health and well-being. It was predicted that relationship satisfaction would play a central role in the mental health and well-being of partnered SMW. This hypothesis was based on findings that marital quality has been an important factor for mental health and well-being among heterosexual individuals (Beach et al., 1993) and findings that relationship satisfaction mediated that association between sexual satisfaction and depression among SMW and heterosexual women (Henderson et al., 2009). However, previous studies included either only heterosexual individuals or a combination of SMW and heterosexual women. Although relationship satisfaction was hypothesized to mediate the association between individual, relationship, and societal factors and the health and well-being outcomes, it is possible that it acts as a moderator instead between individual, relationship, and societal factors and mental health and well-being. Rather than explaining why

there are associations between these factors between mental health and well-being, the associations may depend on the level of relationship satisfaction. Perhaps for women with higher levels of relationship satisfaction, the associations between the three levels and mental health and well-being may be stronger.

Limitations and Future Directions

Compared to the much larger literature on relationships among heterosexual individuals, there is still much to learn about relationships among sexual minority individuals. Although the current study begins to help fill these gaps in the literature, limitations of the present research must be acknowledged. In order to take part in the study, participants were required to identify as cisgender women. Transgender women or individuals who identify as non-binary, who were excluded from participating, likely face additional and unique stressors at the individual level, relationship level, and societal level. For these reasons, the current study was limited to cisgender women. However, future research should explore relationship functioning among transgender and non-binary individuals. In addition, women were included in the study based on their level of attraction, one element of sexual orientation. Women were included if they reported being exclusively or mostly attracted to women or equally attracted to men and women. However, women who reported being mostly being attracted to men were not included. Women who report being mostly attracted to men may identify (e.g., bisexual) and behave (e.g., in a relationship with a woman) in ways such that they align more so with SMW than heterosexual women. Future research should consider inclusion criteria that take into account attraction, identity, and behavior such as including women who identify as lesbian or queer, report attraction to women, and are in a relationship with a woman.

There are additional limitations related to the sample. First, 83% of the sample identified as White. This is greater than the 2019 U.S. population estimate of 76.5%, indicating that the current sample has an overrepresentation of White individuals (U.S. Census Bureau). Similarly, individuals identifying as Multiracial were also overrepresented, with 9.2% of the current sample compared to 2.7% of the population identifying as Multiracial. In contrast, Black (3.8%) and Latina (8.3%) individuals were largely underrepresented in the current sample, compared the population estimates of 13.4% and 18.3%, respectively. Asian/Hawaiian/Pacific Islander and American Indian/Alaskan were also underrepresented groups in the current sample. Obtaining a diverse sample of sexual minority women is an ongoing challenge in this line of research. Recruitment a more diverse sample will help with generalization of findings and consideration of intersectionality.

Another limitation to consider is how participants were recruited. Potential participants were targeted on the Facebook advertisement platform based on their interests (e.g., LGBT related) and relationship status indicated on their profile. Therefore, it is possible that participants in the current sample may have higher levels of outness than the general population. The majority of the sample (91.5%) indicated that they were either completely out of the closet (57.9%) or out of the closet most of the time (33.6%). Consequently, it is difficult to generalize findings to those who are less open about their sexual orientation.

There are also limitations associated with the groups of comparison. When comparing different relationship status groups, women who were married, in a civil union, or in a legal domestic partnership were combined into one group. Given that these unions offer different levels of benefits, there may be differences in mental health and well-being among this combined group. An additional limitation when thinking about the different types of relationships is that

women in relationships with women were compared to single women who may have had a history of relationships with men. While all women in the study reported being exclusively or mostly attracted to women or equally attracted to men and women currently, their history of sexual of behavior may be very different. For example, SMW who are currently in a relationship with a woman and have only been in relationships with women may have different experiences than SMW who are currently single but have a history of relationships with only men. Thus, it is important to consider all aspects of sexual orientation: identity, attraction, and behavior.

Another important limitation is the low reliability of some of the well-being scales, including autonomy, personal growth, and purpose in life. The results obtained with these measures should be interpreted with this limitation in mind. Although Ryff and Keyes (1995) emphasized that shorter scales often have lower reliability, and the items they chose were conceptually consistent with what they were aiming to measure, future researchers should aim to replicate the results of the current study with different measures of well-being.

Although the present study provides valuable information about SMW in relationships with women, future research should also focus on SMW in relationships with men. Future research should aim to compare SMW in relationships with men with both SMW in relationships with men and heterosexual women in relationships with men. In addition, previous research on sexual minority relationships has often combined men and women. Therefore, researchers should examine these groups separately and continue investigating same-sex male relationships as the experiences of SMW and sexual minority men are likely to be different.

Future researchers should also consider testing variations of the SEM model in the current study. There are bidirectional associations among many of the variables included in the model. For example, one’s mental health or well-being may impact their relationship. Therefore,

future researchers should consider how mental health and well-being may lead to changes at the individual, relationship, and societal levels. Additionally, this model considered all three levels (individual, relationship, and societal) in one model with relationship satisfaction, mental health, and well-being. Future research could examine each level separately and together. It is important to understand how these levels may function independently and how they may be interdependent. While the current study tested the mediational role of relational satisfaction, future research should investigate how relationship satisfaction may function as a moderator. In addition, social support may serve as a mediator between the individual and relationship levels and mental health and well-being or as a moderator of these associations. Finally, these constructs were examined at the cross-sectional level. Relationships both change over time and can have an impact on one's mood within a day. Therefore, future research should aim to examine these constructs at longitudinal and daily levels.

CHAPTER V

CONCLUSIONS

The significant differences in anxiety and depression symptoms between partnered and single women found in Aim 1 suggest that being in a relationship is protective against mental health problems for SMW. In addition to mental health, partnership also appears to act as a protective factor for well-being given that SMW in relationships reported significantly higher levels of self-acceptance, personal growth, environmental mastery, and purpose in life when compared to single women. Another possible explanation is that women with better mental health and well-being are more likely to be in and stay in relationships. The differences in mental health and well-being between partnered and single women are clear. However, it is unclear whether different relationship statuses (e.g., marriage and cohabitation) offer additional benefits in terms of mental health and well-being. Although previous research has found that some relationships that are legally recognized or involve couples living together provide protection for mental health, the current study did not find any differences in mental health and well-being among partnered women.

The results of the final model in Aim 2 suggest that the Societal factor (sexual minority specific social support and general social support) plays an important role in the mental health and well-being of partnered SMW. The Societal factor was the only variable that was significantly associated with mental health and well-being. These results also suggest that SMW with less mental health problems and better well-being may be better at seeking out social support and engaging with others. As expected, there were direct effects between the Individual and Relationship factors and relationship satisfaction, suggesting a strong link between individual identity and relationship-related variables and relationship satisfaction. In addition,

there was a significant direct association between relationship satisfaction and well-being. Future researchers should seek to better understand the association between relationship satisfaction and well-being among partnered SMW. Contrary to expectations, there were no direct effects between the Individual factor and mental health or well-being, between the Relationship factor and mental health or well-being, between the Societal factor and relationship satisfaction, or between relationship satisfaction and mental health. Additionally, relationship satisfaction did not play a mediational role in associations between the Individual, Relationship, and Societal factors and mental health and well-being.

The current study offers support for differences in mental health and well-being based on whether SMW are partnered or single. Future research should continue to examine differences among partnered women and consider how different relationship statuses may be protective for the health and well-being of SMW. In addition, the current study emphasized the importance of social support for partnered SMW. This information could be used when considering interventions for partnered SMW who are experiencing mental health problems. Given that relationship satisfaction did not mediate any of the associations in the model, alternative models should be considered. One possibility is that relationships satisfaction may function better as a moderator. Continued work is still needed to further understand the role of relationships for SMW's health. Although there has been increased attention to health disparities among SMW, there is still much for researchers to investigate and address.

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APPENDIX A

1. What is your age? _____ years

2. Which sex were you assigned at birth? (i.e., what appears on your birth certificate?)

- ☐ Male
- ☐ Female

3. How would you describe yourself?

- ☐ Male
- ☐ Female
- ☐ Male to female transgender
- ☐ Female to male transgender
- ☐ Gender queer/non-conforming
- ☐ Other- please specify

4. People are different in their sexual attraction to other people. Which best describes your feelings?

- ☐ I am only attracted to women.
- ☐ I am mostly attracted to women.
- ☐ I am equally attracted to men and women.
- ☐ I am mostly attracted to men.
- ☐ I am only attracted to men.

5. In what state do you currently reside? _____

6. What is your employment status? (check all that apply)

- ☐ Employed part-time
- ☐ Employed full-time (or more)
- ☐ Retired
- ☐ Student
- ☐ Homemaker
- ☐ Unemployed

7. What best describes your educational level?

- ☐ Less than high school
- ☐ Some high school
- ☐ High school graduate
- ☐ Some college

- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctoral/Professional degree

8. What is your average individual income?

- ☐ $0 - $9,999
- ☐ $10,000 - $19,999
- ☐ $20,000 - $29,999
- ☐ $30,000 - $39,999
- ☐ $40,000 - $49,999
- ☐ $50,000 - $59,999
- ☐ $60,000 - $69,999
- ☐ $70,000 - $79,999
- ☐ $80,000 - $89,999
- ☐ $90,000 - $99,999
- ☐ $100,000+

9. How much are finances an issue for you or your immediate family?

- ☐ Difficulty meeting my/my family's basic needs
- ☐ Barely able to meet my /my family's basic needs
- ☐ Once-in-a-while have difficulty covering my/my family's basic needs
- ☐ No difficulty covering basic needs
- ☐ Have extra money each month

10. The city/community/town in which I live is:

- ☐ Urban
- ☐ Suburban
- ☐ Rural

11. What is your ethnicity?

☐ Hispanic, Latina, or Spanish origin
☐ Not Hispanic, Latina, or Spanish origin

12. Which racial group BEST describes you?

☐ African American or Black alone
☐ American Indian and Alaska Native alone
☐ Asian, Asian American
☐ Native Hawaiian, or Pacific Islander alone

☐ European American, Caucasian or White alone
☐ Multiracial
☐ Other: _____

13. There are many ways that individuals think of their sexual identity. Choose all that describe you:

☐ Lesbian
☐ Bisexual
☐ Queer
☐ Asexual
☐ Pansexual
☐ Questioning
☐ Gay
☐ Other (specify): _____

14**. During the past year**, with whom have you had sex?

☐ Women only
☐ Women and men
☐ Men only
☐ No one
☐ Prefer not to answer

15. With whom have you had sex in your **lifetime**?

☐ Women only
☐ Women and men
☐ Men only
☐ No one
☐ Prefer not to answer

16. At what age did you first wonder about your sexual identity? _____years

17. At what age did you self-identify as being lesbian/gay/bisexual/other? _____years

18. At what age did you first disclose your sexual identity to someone else? _____years

19. Have you disclosed your sexual identity to a parent or guardian? Yes/No

If yes to question 19, then:
At what age did you first disclose your sexual identity to a parent or guardian?
_____years

20. Have you disclosed your sexual identity to another family member other than a parent or guardian? Yes/No

If "yes" to question 20, then:

At what age did you first disclose your sexual identity to another family member other than a parent or guardian? _____years

21. Have you "come out" to any of your friends? Yes/No

If "yes" to question 21, then:

At what age did you first "come out" to friends? _____years

22. Have you "come out" to any of your coworkers? Yes/No

If "yes" to question 22, then:

At what age did you first "come out" to coworkers? _____years

23. Relative to other lesbian/gay/bisexual individuals, I am:

- □ Definitely in the closet.
- □ In the closet most of the time.
- □ Half-in and half-out.
- □ Out of the closet most of the time.
- □ Completely out of the closet.
- □ Prefer not to answer

24. Are you in a relationship?

- □ Yes
- □ No
- □ Other____

25. How would you best describe your relationship status?

- □ not dating anyone
- □ dating, but not any one person in particular
- □ dating a main partner but not in an exclusive relationship
- □ exclusively dating one person
- □ in an exclusive relationship
- □ legally recognized civil union or domestic partnership
- □ married
- □ Other

26. What is the gender of your partner?

- □ Female
- □ Male
- □ Other, please specify

27. How long have you been in your current relationship?

_____Years _____Months

28. Do you live with your partner?

- □ Yes
- □ No

29. During an average week, on how many days do you see your partner I person?
- □ I don't see my partner in person during an average week.
- □ 1-2 days
- □ 3-5 days
- □ 6-7 days

APPENDIX B

LESBIAN, GAY, BISEXUAL IDENTITY SCALE- NEGATIVE IDENTITY SUBSCALE

For each of the following questions, please mark the response that best indicates your current experience as an LGB person. Please be as honest as possible: Indicate how you really feel now, not how you think you should feel. There is no need to think too much about any one question. Answer each question according to your initial reaction and then move on to the next.

1	2	3	4	5	6
Disagree Strongly	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Agree Strongly

1. If it were possible, I would choose to be straight.
2. I often wonder whether others judge me for my sexual orientation.
3. I am glad to be an LGB person.
4. I can't feel comfortable knowing that others judge me negatively for my sexual orientation.
5. My sexual orientation is an insignificant part of who I am.*
6. I'm proud to be part of the LGB community.
7. My sexual orientation is a central part of my identity.
8. I think a lot about how my sexual orientation affects the way people see me.
9. I wish I were heterosexual.
10. To understand who I am as a person, you have to know that I'm LGB.
11. Being an LGB person is a very important aspect of my life.
12. I believe being LGB is an important part of me.
13. I am proud to be LGB.
14. I believe it is unfair that I am attracted to people of the same sex.

APPENDIX C

LESBIAN, GAY, AND BISEXUAL POSITIVE IDENTITY MEASURE

We are going to ask you a series of questions about your identity as a Lesbian, Gay, or Bisexual identified (LGB) person. There are several questions and some of the questions may seem similar, but there are differences in the wording, so please try to answer all of the questions. Please answer the questions by thinking about which response category best represents your feelings about your experiences. Indicate how you really feel now, not how you think you should feel. There is no need to think too much about any one question. Answer each question according to your initial reaction and then move on to the next. Choose the response that best reflects your feelings about your lesbian, gay, or bisexual identity.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	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.

Subscale scores are computed by averaging subscale item ratings: Self-awareness (1, 2, 3, 4, 5), Authenticity (6, 7, 8, 9, 10), Community (11, 12, 13, 14, 15).

APPENDIX D

GAY AND LESBAIN RELATIONSHIP SATISFACTION SCALE

Couples often have good and not-so-good moments in their relationship. This measure has been developed to get an objective point of view of your relationship. Thinking about your relationship with your partner, please mark your agreement with each statement on the scale below.

0	1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree

1. There are some things about my partner that I do not like.
2. I wish my partner enjoyed more of the activities that I do.
3. My mate has the qualities I want in a partner.
4. My partner and I share the same values and goals in life.
5. My partner and I have an active social life.
6. My partner's sociability adds a positive aspect to our relationship.
7. If there is one thing that my partner and I are good at, it's talking about our feelings with each other.
8. Our differences of opinion lead to shouting matches.
9. I would lie to my partner if I thought it would "keep the peace."
10. During our arguments, I never put down my partner's point of view.
11. When there is a difference of opinion, we try to talk it out rather than fight.
12. We always do something to mark a special day in our relationship, like an anniversary.
13. I often tell my partner that I love him/her.
14. Sometimes sex with my partner seems more like work than play to me.
15. I always seem to be in the mood for sex when my partner is.
16. My partner sometimes turns away from my sexual advances.
17. My family accepts my relationships with my partner.
18. My partner's family accepts our relationship.
19. My family would support our decision to adopt or have children.
20. My partner's family would support our decision to adopt or have children.
21. I feel as though my relationship is generally accepted by my friends.
22. I have a strong support system that accepts me as I am.
23. I have told my coworkers about my sexual orientation/attraction.
24. Most of my family members know about my sexual orientation/attraction.

APPENDIX E

GLOBAL MEASURE OF SEXUAL SATISFACTION

In general, how would you describe your sexual relationship with your partner?

7-point dimension scale
ex: 7=good, 1=bad

1	2	3	4	5	6	7
Good						Bad

good–bad
pleasant–unpleasant
positive–negative
satisfying–unsatisfying
valuable–worthless

APPENDIX F

PERSONAL ASSESSMENT OF INTIMACY IN RELATIONSHIPS

Please respond to each question as your relationship is now.

0	1	2	3	4
Strongly Disagree				Strongly Agree

1. My partner listens to me when I need someone to talk to.
2. I am satisfied with the level of affection in our relationship.
3. My partner helps me clarify my thoughts and feelings.
4. I can state my feelings without him/her getting defensive.
5. I am able to tell my partner when I want sexual intimacy.
6. We like playing and having fun together.
7. My partner can really understand my hurts and joys.
8. We have an endless number of things to talk about.

APPENDIX G

THE INVESTMENTS MODEL SCALE- COMMITMENT LEVEL

0	1	2	3	4	5	6	7	8
Do Not Agree At All				Agree Somewhat				Agree Completely

1. I want our relationship to last for a very long time.
2. I am committed to maintaining my relationship with my partner.
3. I would not feel very upset if our relationship were to end in the near future.
4. It is very likely that I will date someone other than my partner within the next year.
5. I feel very attached to our relationship- very strongly linked to my partner.
6. I want our relationship to last forever.
7. I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

APPENDIX H

KURDEK'S EQUALITY MEASURE

1	2	3	4	5	6	7	8	9
Not At All True								Very True

1. My partner and I have equal power in the relationship.
2. My partner shows as much affection to me as I think I show to her.
3. My partner and I invest equal amounts of time and energy in the relationship.
4. My partner and I are equally committed to working out problems that occur in our relationship.
5. All things considered, my partner and I contribute an equal amount to the relationship.
6. My partner and I deal with each other as equals.
7. My partner treats and respects me as an equal.
8. My partner depends on me as much as I depend on her.

APPENDIX I

MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT

1	2	3	4	5	6	7
Very Strongly Disagree						Very Strongly Agree

1. My family really tries to help me.
2. I get the emotional help and support I need from my family.
3. My friends really try to help me.
4. I can count on my friends when things go wrong.
5. I can talk about my problems with my family.
6. I have friends with whom I can share my joys and sorrows.
7. My family is willing to help me make decisions.
8. I can talk about my problems with my friends.

APPENDIX J

RYFF'S SCALES OF PSYCHOLOGICAL WELL-BEING

Instructions: Circle one response below each statement to indicate how much you agree or disagree.

1	2	3	4	5	6	7
Strongly Agree	Somewhat Agree	A Little Agree	Neither Agree or Disagree	A Little Disagree	Somewhat Disagree	Strongly Disagree

1. I like most parts of my personality.
2. When I look at the story of my life, I am pleased with how things have turned out so far.
3. Some people wander aimlessly through life, but I am not one of them.
4. The demands of everyday life often get me down.
5. In many ways I feel disappointed about my achievements in life.
6. I live life one day at a time and don't really think about the future.
7. In general, I feel I am in charge of the situation in which I live.
8. I am good at managing the responsibilities of daily life.
9. I sometimes feel as if I've done all there is to do in life.
10. For me, life has been a continuous process of learning, changing, and growth.
11. I think it is important to have new experiences that challenge how I think about myself and the world.
12. I gave up trying to make big improvements or changes in my life a long time ago.
13. I tend to be influenced by people with strong opinions.
14. I have confidence in my own opinions, even if they are different from the way most other people think.
15. I judge myself by what I think is important, not by the values of what others think is important.

APPENDIX K

MENTAL HEALTH INVENTORY- DEPRESSION, ANXIETY, AND BEHAVIORAL CONTROL

The next set of questions are about how you feel, and how things have been for you during the PAST 4 WEEKS. Please answer every question. If you are not sure which answer to select, please choose the one that comes closest to describing you.

During the PAST 4 WEEKS, how much of the time...

1	2	3	4	5	6
All of the Time	Most of the Time	A Good bit of the Time	Some of the Time	A Little Bit of the Time	None of the Time

1. Did you feel depressed?
2. Have you been a very nervous person?
3. Have you been in firm control of your behavior, thoughts, emotions, feelings?
4. Have you felt tense or high-strung?
5. Have you felt emotionally stable?
6. Have you felt downhearted and blue?
7. Were you able to relax without difficulty?
8. Have you felt restless, fidgety, or impatient?
9. Have you been moody, or brooded about things?
10. Have you been in low or very low spirits?
11. Did you feel you had nothing to look forward to?
12. Have you felt so down in the dumps that nothing could cheer you up?
13. Have you been anxious or worried?

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Selected Publications

Ehlke, S. J., Braitman, A. L., **Dawson, C. A.**, Heron, K. E., & Lewis, R. J. (2020). Sexual minority stress and social support explain the association between sexual identity with physical and mental health problems among young lesbian and bisexual women. *Sex Roles*. http://dx.doi.org/10.1007/s11199-019-01117-w

Heron, K. E., Lewis, R. J., Shappie, A. T., **Dawson, C. A.,** Amerson, R., Braitman, A. L., . . . Kelley, M. L. (2019). Rationale and design of a remote web-based daily diary study examining sexual minority stress, relationship factors, and alcohol use in same-sex female couples across the United States: Study protocol of project relate. *JMIR Research Protocols, 8*(2), e11718. http://dx.doi.org/10.2196/11718

Shappie, A.T., **Dawson, C.A.**, & Debb, S.M. (2019). Personality as a predictor of cyber security behavior. *Psychology of Popular Media Culture*. http://dx.doi.org/10.1037/ppm0000247

Selected Presentations

Dawson, C.A., Shappie, A.T., & Debb, S.M. (2019, June). *Personality and Cybersecurity Behaviors: The Role of the "Big Five."* Paper presented at the 24th Annual CyberPsychology, CyberTherapy, and Social Networking Conference, Norfolk, VA.

Dawson, C., Lewis, R., Shappie, A., & Heron, K. (2019, March). *When social support isn't supportive: Examining everyday microaggressions and mental health among young sexual minority women*. Poster presented at the 40th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, Washington, D.C.

Dawson, C., Lewis, R., & Shappie, A. (2018, March). *Sexual orientation, relationship status, and negative sexual minority identity*. Poster presented at the annual meeting of the Southeastern Psychological Association, Charleston, SC.