

THE RELATIONSHIP BETWEEN SEXUAL IDENTITY, BEHAVIOR, AND ATTITUDE  
CONGRUENCE AND PSYCHOLOGICAL WELL-BEING

by  
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**Abstract**

Psychological theory has long held that incongruence between behavior, identity, and attitudes results in psychological distress, while greater congruence between behavior, identity, and values leads to more positive outcomes, such as happiness and better mental health. The current study used aggregated data from the GSS to explore the relationships between sexual identity, behavior, and attitude congruence and psychological well-being. Analyses failed to find significant relationships, possibly due to participant use of dissonance reduction strategies, inadequacy of measures, and the timing of dissonant activities. Future research would benefit from qualitative designs to explore congruence and incongruence more broadly.

*Keywords:* sexual identity, same-sex sexual behavior, congruence, psychological well-being

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## Chapter 1

### **The Relationship Between Sexual Identity, Behavior, and Attitude Congruence and Psychological Well-Being**

Research offers a conflicting picture of the prevalence of same-sex sexual behavior in the general population, with estimates ranging from 4% to 16% (Herbenick et al., 2010; Laumann et al., 1994). While variation in estimates could be due to the type or types of sexual behavior measured, age group sampled, and time period (Butler, 2005), the consensus is that the prevalence of same-sex sexual behavior has increased over time (Charlton et al., 2016; Twenge et al., 2016). Yet, while the number of individuals who engage in same-sex behavior has increased, not all people who engage in same-sex behavior identify as gay, lesbian, or bisexual. According to the data from the National Health and Social Life Survey (NHSL), less than half of adults in the United States who engaged in same-sex sexual encounters self-identified as lesbian, gay, or bisexual (Laumann et al., 1994). Data from the 2014 General Social Survey (GSS) reflected that 9% of Americans reported a same-sex sexual experience as an adult, with only 4.3% of the 9% sample having identified as gay, lesbian, or bisexual, indicating that approximately half of individuals who had same-sex sexual experiences identified as heterosexual (Twenge et al., 2016), with the remaining participants identifying as gay/homosexual or bisexual.

A number of theories exist as to why people may not identify as LGB even while engaging in same-sex behavior, such as period of life and emerging adulthood (Diamond, 2005; Jackson & Gilbertson, 2009; Yost & McCarthy, 2012), the sexual objectification of women (Tolman, 2002), and college hookup culture (Ronen, 2010; Yost & McCarthy, 2012), wherein heterosexual women may kiss or dance together to gain male attention, as well as sexual fluidity

among women (Baumeister, 2000) and heterosexual identity development (Worthington et al., 2002), as Worthington and colleagues (2002) identified active exploration, whether cognitive or behavioral, as a key developmental stage of heterosexual identity development. Finally, others have argued that same-sex sexual behavior is a component of sexual orientation identity development for sexual minorities (Calzo et al., 2011), and therefore an expected part of LGB identity formation. Congruence theory has also been postulated to explain why individuals may not align identity with behavior.

Individuals who identify as heterosexual and engage in same-sex sexual behavior are considered to be identity/behavior incongruent, according to Roger's (1961) theory, and those individuals who identify as homosexual and engage in same-sex sexual behavior are considered to be identity/behavior congruent. Congruence and incongruence have been associated with positive and negative psychological outcomes, respectively. Higgins (1987) hypothesized that a discrepancy between the actual self and the ideal self (incongruence) results in depression, while Heidrich and Ryff (1993) contended that aligning various aspects of the self, or achieving congruence, results in psychological well-being. Specific to sexual congruence, studies have reflected that sexual identity/behavior incongruent individuals were at increased risk for substance use (Gattis et al., 2012; Talley et al., 2015) and depressive symptoms (Lourie & Needham, 2017) compared to their sexual identity/behavior congruent peers.

In addition to identity/behavior congruence, congruence between identity, behavior, and attitudes can also be considered. Individuals often act in ways that are discrepant with their beliefs, or attitudes, a phenomenon that social psychology has long sought to explain (Ajzen & Fishbein, 1977). In particular, sexual minority individuals may hold negative beliefs or attitudes about homosexuality, which are an internalization of society's negative and shameful beliefs, a

concept known as internalized heterosexism (Herek et al., 2015; Szymanski et al., 2008). Thus, incongruence can also exist between sexual identity and attitudes toward members of one's own identity group.

While there is explanation as to why people who engage in same-sex behavior may not identify as a sexual minority, and why individuals who engage in same-sex behavior may continue to hold non-affirming beliefs about homosexuality, understanding the impact of the congruence or incongruence between sexual behavior, identity, and attitudes is of particular interest, especially as it relates to psychological well-being. It is postulated that congruence is associated with happiness, with individuals who are congruent being happier (Mikulincer & Peer-Goldin, 1991). While researchers are beginning to draw these associations, no study prior has attempted to examine the relationship between sexual identity, behavior, and attitude congruence, and the relationship on levels of well-being. In an attempt to understand the relationship between role congruence and positive psychological outcome (i.e., happiness), the following study was proposed.

### **Congruence**

Psychological theory has long used the concept of congruence to conceptualize how aspects of an individual interact. Incongruence (Rogers, 1961) occurs when an individual's self-image and actual experience are different. Rogers argued that people want to behave in ways that are congruent with their ideal self, feelings, and values, but when they do not, distress can occur. Cognitive dissonance theory (Festinger, 1957) proposed that individuals strive to achieve congruence among affect, cognitions, and behaviors, because incongruence results in psychological impairment (Devos & Banaji, 2003; Harmon-Jones & Mills, 1999). In Cass' theory of sexual identity development, incongruence between sexual behavior, desire, identity,



and the environment can be an agent of change (Cass, 1984). Cass (1984) posited that feelings of turmoil regarding one's sexual identity can result in acceptance of the possibility of being gay or lesbian. Similarly, others have argued that incongruence between behavior and identity can explain changes in sexual orientation or identity (Higgins, 2002). As a whole, theoretical models of identity formation describe the process of individuals as seeking to achieve congruence between sexual behavior, sexual orientation, and sexual identity (Cass, 1979; Eliason, 1996; Rosario et al., 2001).

### ***Congruence in Lesbian, Gay, and Bisexual Individuals***

Although some gay, lesbian, and bisexual individuals experience little conflict in the formation of their sexual orientation, many individuals experience distress as a result of the incongruence between same-sex sexual behaviors and their attitudes regarding homosexuality (Herek et al., 2015). Often this is experienced during the formation of a homosexual identity and can be successfully resolved with the full integration of a homosexual identity (Cass, 1979; Eliason, 1996; Rosario et al., 2001).

Sexual identity integration (Rosario et al., 2006) is an individual's belief about how aspects of their sexuality, such as sexual behavior, sexual partners, and engagement in the LGB community, integrate together. High levels of integration, or congruence, would indicate that identity, behaviors, and values align, while low levels of integration might be expressed through conflicting identity and behavior. While many LGB individuals experience high sexual identity integration, for some individuals, incongruence between sexual identity and sexual behavior continues (O'Leary & Jones, 2006; Pathela et al., 2006). Researchers that examined the maintenance of a heterosexual identity among men who have sex with men found that participants did not consider their same-sex activities to be discrepant with their heterosexual

identity under certain situations—situations such as those that occurred infrequently, ones that occurred accidentally, or behaviors that were engaged in out of economic necessity (Reback & Larkins, 2010). While behavioral congruence has been examined, so too has attitude congruence.

### *Attitude Congruence*

Understanding an individual's attitudes toward homosexuality and same-sex sexual behavior provides context for understanding the consequences of sexuality-related discrimination and internalized homophobia, including psychological distress. In terms of congruence, attitudes are an important component of an individual's experience, and incongruence between sexual behavior, identity, and attitudes can result in psychological distress or impairment. Attitudes toward homosexuality generally fall into two categories, positive and negative, with a significant body of research examining negative attitudes toward homosexuality.

Before examining the impact of attitudes on an individual level, it is important to first consider attitudes toward homosexuality on a societal level, as societal attitudes play a role in shaping individuals' attitudes (Herek, 1995). Attitudes toward homosexuality and the acceptance of gay, lesbian, and bisexual individuals have shifted dramatically in recent decades. In the 1960s, 70% of Americans surveyed reported a negative view of homosexuality (Herek, 2002), while data from the GSS in the 1970s showed an increase in positive attitudes from 1973 to 1977 (Herek, 1988). That trend of increasingly positive attitudes continued in subsequent decades, as research has documented an increase in tolerance toward gay and lesbian individuals in the 1990s and 2000s (Hicks & Lee, 2006), with recent data from the Pew Research Center showing that in 2019, 72% of Americans reported that homosexuality should be accepted (Poushter & Kent, 2020).

While it might be logical to assume that individuals who identify as LGB or engage in same-sex behavior would hold positive attitudes toward homosexuality, this is not necessarily the case. Often, gay, lesbian, and bisexual individuals have attitudes and beliefs about their same-sex identity that mirror the beliefs and attitudes of society (Sophie, 1987). Frequently, these beliefs are characterized by stigma and homophobia, and consequently, lesbian, gay, and bisexual individuals hold beliefs that same-sex attraction and behavior are shameful. Internalization of society's negative and shameful beliefs about homosexuality is referred to as internalized homophobia (Nungesser, 1983) or internalized heterosexism. Internalized heterosexism represents a sexual minority individual's acceptance of societal and cultural sexual stigma as part of their own values and beliefs (Herek et al., 2015; Szymanski et al., 2008). Thus, the internalized heterosexism that many sexual minority individuals experience could be categorized as identity/attitude-incongruent, as the individual identifies as LGB while simultaneously holding negative beliefs about that identity. As congruence theory postulates, incongruence between aspects of the self, such as sexual identity, behavior, and attitudes, can contribute to psychological distress, while greater congruence results in increased psychological well-being and decreased distress.

### **Psychological Well-Being**

Historically, psychological well-being has been defined as the lack of distress or negative symptoms, such as depression (Bierman et al., 2006). However, Ryff (1989) suggested that well-being should not only represent the absence of distress or negative symptoms but also the presence of positive factor/s, such as happiness. Happiness, a measure of psychological well-being, is a subjective state of general well-being, and conveys an individual's perception and self-evaluation of their current life situation. Measuring happiness allows an opportunity to

capture more holistic information than what can be gleaned by relying solely on negative constructs, such as psychological distress or the presence of negative symptoms (Diener, 1994).

### *Psychological Well-Being in Lesbian, Gay, and Bisexual Individuals*

Few studies have examined the relationship between sexual minority identity and psychological well-being or happiness, and of those studies, most have not found a significant, positive relationship between sexual minority identification and happiness (Meyer, 2003; Rieger & Savin-Williams, 2012; Thomeer & Reczek, 2016). One study found that while gender nonconformity was negatively related to well-being, sexual orientation was not a significant predictor of well-being (Rieger & Savin-Williams, 2012). Similarly, a meta-analysis indicated that homosexual and bisexual men experience decreased well-being compared to heterosexual men (Meyer, 2003). Thomeer and Reczek (2016) found that identification as bisexual, gay, or lesbian was negatively related to happiness, although participants who had only same-sex partners since age 18 or in the past 5 years had similar levels of happiness as those with only different-sex partners. The findings by Thomeer and Reczek (2016) highlight the need for additional studies examining the relationship between sexual identity, behavior, and psychological well-being.

While available research is conflicting regarding the relationship between sexual identity and psychological well-being, researchers have largely ignored the role of congruence when examining the relationship between sexual identity and psychological well-being. Based on congruence theory, it was expected that it is the congruence between sexual identity, behavior, and attitudes that would result in decreased psychological well-being, not identification as a sexual minority, per se.

*Psychological Well-Being and Congruence*

Mikulincer and Peer-Goldin (1991) examined the relationship between happiness and self-perception congruence, and found that happiness in a given situation increased with the congruence between the individual's ideal self and their working-self, or behavior in that moment. Schick and colleagues (2012) examined sexual behavior/identity congruence and its impact on physical and mental well-being among a sample of women. Schick et al. (2012) found that the mental, physical, and sexual well-being of participants with sexual identity/behavior congruence was significantly more positive than that of sexual identity/behavior incongruent participants. In contrast, Ketz and Israel (2002) did not find a significant difference in the self-reported mental or physical health of sexual behavior/identity congruent women and incongruent women.

As noted, findings have generally suggested that incongruence between behavior and attitudes results in psychological distress. However, researchers have not examined sexual identity/behavior/attitude congruence, and explored whether higher levels of congruence can predict psychological well-being among individuals that engage in same-sex sexual behavior. Thus, the intent of this study is to examine the relationship between sexual identity, behavior, and attitude congruence and psychological well-being among a sample of individuals who reported engaging in same-sex sexual behavior. The following hypotheses were proposed:

RQ<sub>1</sub>: Within the sample of individuals who report same-sex sexual partners in the last year, is there a relationship between an individual's attitudes toward same-sex sexual behavior and their psychological well-being?

RQ<sub>2</sub>: Within the sample of individuals with reported same-sex sexual partners in the last year, will congruent self-identification as lesbian, gay, or bisexual increase an individual's probability of high psychological well-being?

RQ<sub>3</sub>: Within the sample of individuals engaging in same-sex sexual behavior within the past year, is there a difference in well-being scores based on attitudes and self-identity?

### **Method**

Participants were selected from data collected for the GSS from 2010 through 2016. The GSS is an in-person household-based national probability survey of U.S. adults over the age of 18. The GSS is a nationally representative sample and has been collected annually or semiannually since 1972. The National Opinion Research Center (NORC), a social science research center at the University of Chicago, conducts the GSS biannually using a multi-stage area probability sampling design (Marsden & Smith, 2016).

The GSS was one of the first national probability surveys to collect information on sexual behavior, and in 2008 the GSS began including questions about sexual orientation. The GSS has been used in numerous studies to identify trends in sexual orientation and happiness (Black et al., 2000; Cochran & Mays, 2015; Thomeer, 2013; Thomeer & Reczek, 2016; Yang, 2008). To increase the available sample size, data were pooled, and participants from 2010 through 2016 were included in the current analysis.

The GSS included several questions related to demographics, including age, sex, marital status, race, ethnicity, and geographic region. Age was reported in years and treated as continuous. Race was self-reported, and participants who did not self-identify as Black or White were coded by the interviewer as "other race."

## Measures

### Sexual Behavior

Participants were asked, “*Have your sex partners in the last 12 months been exclusively male, both male and female, or exclusively female?*” Male participants were categorized as having had a same-sex sexual experience if they responded with *exclusively male* or *both male and female*. Female participants were categorized as having had a same-sex sexual experience if they responded with *exclusively female* or *both male and female*. Only participants who endorsed exclusively same-sex sexual partners or both male and female partners were included in the analyses.

### Sexual Identity

The GSS asked participants, “*Which of the following best describes you?*” Response options included 1) gay, lesbian, or homosexual, 2) bisexual, 3) heterosexual or straight, 4) don’t know. Participants were instructed to select one response.

### Attitudes

To measure attitudes toward same-sex sexual behavior and relationships, participants were asked two Likert-type questions. The first, “*What about sexual relations between two adults of the same sex- do you think it is: a) always wrong, b) almost always wrong, c) wrong only sometimes, or d) not wrong at all?*” was coded 1-4 (anchors of *Always wrong* and *Not wrong at all*). Participants were also asked, “*Do you agree or disagree? Homosexual couples should have the right to marry one another.*” Again, response choices were coded 1-5 (anchors of *Strongly agree* and *Strongly disagree*) and reverse scored. Scores were then summed to create an overall score, with higher scores indicating greater acceptance of same-sex sexual behavior and relationships. Previous studies measuring Americans’ attitudes toward homosexuality across

time have used these two items to measure attitudes toward same-sex sexual behavior and relationships (Glick et al., 2015; Twenge et al., 2016).

### **Psychological Well-Being**

Happiness was measured using a single-item: *“Taken all together, how would you say things are these days- would you say that you are very happy, pretty happy, or not too happy?”* Responses were coded 1-3 (anchors of *Very happy* and *Not too happy*). A single-item happiness measure is a reliable and valid indicator of subjective well-being in the general population (Veenhoven, 1992), is highly correlated with the Satisfaction with Life Scale (Diener et al., 1999), and has been used to measure happiness in similar studies (Thomeer & Reczek, 2016).

Participants were also asked about their overall mental health in the past 30 days: *“Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?”* Responses ranged from 0-30, with higher responses indicating more days of poor mental health. A new variable, WELLBEING, was created as the sum of HAPPY and reverse-scaled and standardized MNTLHLTH.

### **Results**

Data was prepared for analysis by pooling all GSS participants from 2010 through 2016 to increase available sample size. From this pool, all individuals who reported same-sex sexual partners in the past year, based on response to GSS question SEXSEX, and recorded responses to each of the following GSS questions, HOMOSEX, MNTLHLTH, MARHOMO, SEXORNT, and HAPPY, were included for analysis. From the initial pool of approximately 9,500 participants, a final sample of 97 respondents met the criteria of inclusion.



Statistical software G\*Power was used to calculate the *a priori* minimum sample size for one-tailed correlative tests assuming significance at  $\alpha = 0.05$ , a medium effect size  $d = 0.3$ , and a power of 0.80. The minimum sample size was calculated to be 64 individuals; therefore, the sample size of  $n = 97$  met that threshold. A post-hoc power analysis was conducted with the true sample size using the same assumptions, and revealed statistical power to be 0.92. Thus, the sample size of the final dataset had enough participants in order to generate power of at least 80% in the statistical analyses.

Participants ranged in age from 18-66, with a mean age of 40.77. The vast majority of participants indicated that they were White (81.4%,  $n = 79$ ), with a smaller percentage of participants indicating that they were Black (12.4%,  $n = 12$ ). A large percentage of the participants identified as gay, lesbian, or homosexual (47.4%,  $n = 46$ ), with others identifying as bisexual (32%,  $n = 31$ ) and heterosexual or straight (20.6%,  $n = 20$ ). See Table 1 for a full summary of demographic variables.

**Table 1**

*Demographic Profiles of Respondents*

Demographic Category	n	Percentage
Sex		
Male	48	49.5
Female	49	50.5
Age		
18-23	8	8.2
24-29	16	16.5
30-35	15	15.5
36-41	14	14.4
42-47	11	11.3
48-53	14	14.4
54-59	8	8.2
60-65	8	8.2

66 +	3	3.1
<b>Race</b>		
White	79	81.4
Black	12	12.4
Other	6	6.2
<b>Marital Status</b>		
Married	28	28.9
Widowed	3	3.1
Divorced	14	14.4
Separated	5	5.2
Never Married	47	48.5
<b>Self-Identified Sexual Orientation</b>		
Heterosexual or Straight	20	20.6
Gay, Lesbian, or Homosexual	46	47.4
Bisexual	31	32.0

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### Attitudes and Psychological Well-Being

A Pearson Correlation Coefficient was calculated to assess the relationship between attitudes toward same-sex sexual behavior and psychological well-being. Two new variables were created to perform these analyses; an attitude variable was created by summing HOMOSEX with reverse-scaled responses to MARHOMO. A well-being variable was also created as the sum of HAPPY and reverse-scaled and standardized MNTLHLTH. There was a nonsignificant and weak negative  $r(95) = -.11, p = .29$  correlative relationship between ATTITUDE and WELLBEING scores among individuals with reported same-sex sexual partners. The Durbin-Watson score (Table 2) within the linear regression summary fell within the acceptable  $1.5 < d < 2.5$  range, indicating that the model met regression assumptions of non-collinearity. However, the model itself revealed a nonsignificant relationship between ATTITUDE and WELLBEING ( $t(88) = -1.06, p = 0.29$ ), with the ATTITUDE variable explaining only 1.2% of the variance in WELLBEING values ( $R^2 = 0.012$ ). Therefore, a

quantitative relationship could not be established between attitudes and psychological well-being.

**Table 2**

*Model Summary and Coefficients of Linear Regression Relationship Between ATTITUDE and WELLBEING Variables*

Model	Predictors	Unstand- ardized	Standard Error	Standard- ized	t	p	95% CI	
							Lower	Upper
1	(Intercept)	5.23	0.40		13.02	< .001	4.43	6.03
	ATTITUDE	-0.05	0.05	-0.11	-1.06	0.29	-0.15	0.05

*Note.*  $R = 0.11$ ,  $R^2 = 0.01$ , Adjusted  $R^2 = 0.001$ , RMSE = 0.92, Durbin-Watson = 1.91, N = 89

### **Sexual Identity and Well-Being**

A binary logistic regression was conducted to evaluate the effect of congruent or incongruent self-identification on psychological well-being. To do so, a binary variable was created to represent whether the individual's self-identification was congruent with their sexual behavior. If the individual reported a same-sex sexual partner in the last year, and self-identified as lesbian, gay, or bisexual, the participant was given a score of 1, whereas if they self-identified as heterosexual, the participant was given a score of 0. An individual's well-being value was compared against their self-identification score in the binary logistic regression, which showed no significant relationship.

### **Attitude, Identity, and Well-Being**

A one-way ANOVA was conducted to compare group means. A categorical variable ID/ATTITUDE was created containing four simple string values: "Congruent/High," "Congruent/Low," "Incongruent/High," and "Incongruent/Low." Individuals who self-identified as lesbian, gay, or bisexual were assigned "Congruent" while individuals who reported as

heterosexual or straight were assigned “Incongruent.” Likewise, individuals who scored 6 and above on the ATTITUDE variable were assigned “High,” indicating high or positive attitudes toward gay marriage and same-sex sexual relationships, while individuals who score 5 or below were assigned “Low,” indicating low or negative attitudes toward gay marriage and same-sex sexual relationships. The ANOVA revealed no significant differences in average WELLBEING values among the four groups of ID/ATTITUDE ( $F(3, 93) = 1.09, p = 0.36$ ). Though not statistically significant, average WELLBEING scores were highest among individuals who incongruently identified as heterosexual and had low ATTITUDE scores.

**Table 3***ANOVA Table for Average WELLBEING Values Between Groups of ID/ATTITUDE*

Cases	Sum of Squares	df	Mean Square	F	p
IDENTITY/ATTITUDE	2.74	3	0.91	1.09	0.36
Residual	77.93	93	0.84		

### Discussion

While considerable research has explored cognitive dissonance theory, and documented the negative outcomes associated with sexual incongruence, the current study did not find a) a positive relationship between attitudes toward same-sex behavior and psychological well-being, b) that congruent self-identification increased the probability of high levels of well-being, or c) a difference in well-being scores based on congruence of both sexual identity and attitudes. The current findings run contrary to the theory and available literature and offer an important contribution.

Several possibilities exist for the lack of significant findings, including a) participant use of dissonance reduction strategies, b) inadequacy of measures, and c) timing of same-sex

activity. As this study focused on the congruence between attitudes and behavior, assuming that those who had inconsistent attitudes would have lower levels of satisfaction, participants may have utilized dissonance reduction strategies to alleviate any discomfort or tension caused by incongruence (Stone & Cooper, 2001). These strategies, such as changing one of the dissonant elements, adding a consonant element, or minimizing the importance of a dissonant element (Festinger, 1957), were not evaluated in the current study. Therefore, if participants with incongruent identities and behaviors or attitudes utilized dissonant reduction strategies, it is possible that no differences in psychological well-being exist between congruent and incongruent individuals as the tension resulting from cognitive dissonance was quickly resolved. While this study did not assess whether these strategies were utilized by participants, future researchers may benefit by including this as a variable. Indeed, several studies have documented successful use of dissonance reduction strategies, such as attitude change (McKimmie et al., 2003), denial of responsibility (Gosling et al., 2006), and distraction (Zanna & Aziza, 1976).

In addition to dissonance-reduction strategies, inadequacy of measures may have contributed to the lack of significant findings. The survey items selected may not have accurately captured participants' experiences of congruence, as happiness and recent mental health could be impacted by many other variables, such as prior mental health diagnoses, health, and relationship satisfaction (Diener & Diener, 2009; Suh & Choi, 2018). Given that mental health and happiness can be influenced by many different factors, behavior, identity, and attitude congruence may not have been captured by the selected survey items. This is particularly salient given the findings of Lourie and Needham (2017), which showed that sexual minority individuals with a history of sexual orientation discordance did not experience increased symptoms of depression. Finally, the timing of potentially dissonance-inducing events or cognitions were not assessed in the current

study, and thus, it is possible that distress occurred at specific times when the incongruence was most salient, but failed to have a long-lasting effect on psychological well-being. As was noted earlier, Reback and Larkins (2010) found that individuals did not experience dissonance with same-sex behavior when those behaviors were infrequent, accidental, or due to economic necessity.

### **Limitations and Future Directions**

The current study had several limitations. First, the survey did not ask specific questions about the recency of same-sex sexual behavior. Given that the majority of cognitive dissonance research has examined responses to dissonant behavior immediately after it occurs, the unknown timing of dissonant events in the participants' lives is a significant limitation. Secondly, the current study did not inquire about participants' sexual attraction. Not measuring sexual attraction is problematic in that a multi-dimensional view of sexual orientation consists of attraction, behavior, and identity (Pega et al., 2013; Savin-Willims & Ream, 2007), and its exclusion in this study may have limited the researcher's understanding of participants' sexual identities. In addition to the inclusion of dissonance-reduction strategies, future research would benefit from qualitative designs, in which participants' experiences of sexual identity, behavior, and attitude congruence and incongruence could be more broadly explored, before further quantitative studies are conducted.

Humans are complex creatures that may behave in both predictable and unpredictable ways—which is likely what is reflected in this study. While it was hypothesized, based on theory and literature, that the current findings would reflect a relationship between attitudes, behaviors, and identity, this was not so. While the researchers are able to explain why the findings counter theory and research, it is a remarkable experience to be reminded that humans are complex

creatures that may not fit neatly into models and that theories may not fully explain the human experience.

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## **Chapter 2**

### **Literature Review**

In this chapter, a summary of the literature is provided. First, psychological theories that address congruence will be reviewed. Second, an overview of the prevalence of same-sex sexual behavior and the process of sexual identity development is provided. Third, attitudes toward lesbian, gay, and bisexual individuals are discussed, specifically, homophobia, heterosexism, and internalized homophobia. Next, psychological well-being and happiness are defined, and the importance of studying psychological well-being in sexual minorities is discussed. Finally, the intersection between behavior, identity, and attitudes is addressed, including how congruence between identity, behavior, and attitudes can impact well-being.

#### **Congruence**

The psychological concept of congruence has been addressed in several different theories, spanning decades. Carl Rogers's (1961) humanistic approach to psychotherapy included the idea of congruence, as Rogers believed that individuals want to behave, and are motivated to behave, in ways that are congruent with their ideal self. Rogers noted that incongruence can occur when people behave in ways that are incongruent with their view of their ideal self, their values, or their feelings. And according to Rogers's theory, when individuals live incongruently, distress can occur.

From a cognitive perspective came the concept of cognitive dissonance (Festinger, 1957). Cognitive dissonance theory posits that people are driven to have harmony in their thoughts and actions. Cognitive dissonance occurs when a person has conflicting cognitions, and the dissonance results in a feeling of discomfort. According to Festinger (1957), the discomfort that arises from dissonance, or disharmony, prompts a person to alter either their beliefs, attitudes, or

behaviors to reduce the discomfort and restore harmony and balance. Festinger proposed that dissonance can be reduced in three ways: changing attitudes to make the relationship harmonious, incorporating new information to outweigh the current dissonant beliefs, or reducing the importance of the beliefs or thoughts. Festinger (1957) believed that while people will go to extraordinary lengths to attempt to resolve dissonance, these efforts may not always be successful.

In response to Festinger's (1957) theory, Aronson (1968, 1992) proposed the self-consistency interpretation of dissonance. The self-consistency theory is based on the concept that situations that result in dissonance are because of inconsistency between the person's self-concept and their behavior. Thus, Aronson and colleagues (1999) argued that it is not merely two inconsistent cognitions that produce dissonance; instead, dissonance depends on how the conflicting cognitions impact a person's self-concept. As most people have a largely positive self-concept, dissonance occurs when they behave in ways that could be construed as immoral or incompetent (Festinger & Carlsmith, 1959). Additionally, dissonance can occur when an individual faces a difficult choice, in which case the dissonance results from how the choice reflects on the individual's self-concept (Aronson et al., 1999).

While Aronson's (1968, 1992) self-consistency theory provided a revision of Festinger's (1957) original theory of cognitive dissonance, not all dissonance researchers agreed with Aronson's interpretation. Cooper and Fazio (1984) studied the underlying process for dissonance arousal, and determined that dissonance was not based on self-esteem concerns. They hypothesized that dissonance occurs whenever a chosen behavior results in unwanted consequences (Cooper, 1999; Scher & Cooper, 1989). However, others have argued that consistency between behaviors and one's self-concept plays a larger role than Cooper and Fazio

acknowledged (Harmon-Jones et al., 1996), and more recent revisions of cognitive dissonance theory have embraced the role of the self in dissonance arousal (Aronson et al., 1999; Tesser, 2000).

Self-discrepancy theory is another approach that offers a framework for understanding the relationship between the self and distress. Self-discrepancy theory was outlined by Higgins (1987), who argued that three domains of the self exist: the actual, the ideal, and the ought. The actual self is how a person perceives themselves to be, and the attributes they perceive themselves to have, while the ideal self consists of a representation of how one would ideally like to be. Finally, the ought self represents the attributes that the person believes they should possess, taking into consideration their responsibilities. From those three domains of the self, two perspectives exist: the own view, or how the person views themselves, and the other view, or how the person perceives others to view them.

Those two perspectives, the own view and the other view, can then be combined with the actual self, ideal self, and ought self to create self-state representations. Combinations that include the actual self are representative of the person's self-concept, while combinations consisting of the ideal self and ought self prompt the person to grow and change (Higgins, 1987), especially when they are incongruent with the person's self-concept. Additionally, incongruence among the self-concept and other states can result in psychological distress (Boyle & Omoto, 2014; Higgins, 1987) with depression arising from discrepancy between the actual self and ideal self, and anxiety from discrepancy between the actual self and ought self (Large & Marcussen, 2000; Strauman, 1989).

Broadly, these theories all posit that individuals are motivated to act in ways that are congruent, and when incongruence exists, distress often occurs. The current study examined the

congruence between sexual identity, sexual behavior, and attitudes, and its relationship with psychological well-being among a sample of people who engaged in same-sex behavior.

### **Sexual Orientation and Identity**

Sexual orientation is a broad term that encompasses several aspects of sexuality: psychological orientation, behavioral orientation, and identity (American Psychological Association Committee on Lesbian & Gay Concerns, 1991; Herek, 1994). Psychological orientation consists of attraction and fantasy, while behavioral orientation captures romantic relationships and sexual interactions. Finally, identity, or self-labeling, is how one chooses to describe their sexual identity.

Discrepancies exist among definitions of sexual orientation in the literature (Kauth, 2005), as some researchers assume that a person's sexual orientation is aligned with desire, attraction, and sexual behavior (Sell, 1997), while others conceptualize sexual orientation as a combination of sexual behavior and feelings (Kinsey et al., 1948).

The literature has supported a multi-dimensional view of sexual orientation, as researchers have found that sexual fantasies are not always congruent with sexual identity, sexual behaviors, and attraction (Amestoy, 2001). In a sample of women with similar sexual behaviors, discrepancies existed in how they conceptualized their sexual history; some women identified as bisexual, and others as lesbian (Rust, 1992). While researchers disagree about the exact dimensions of sexual orientation, attraction, behavior, and identity, are commonly included (Pega et al., 2013; Savin-Williams & Ream, 2007; Sell & Silenzio, 2006).

For the purpose of this study, the term sexual identity was used, rather than the broader term of sexual orientation. As this study aimed to examine the intersectionality of sexual behaviors, attitudes, and self-identification, the more specific term of sexual identity provided

the necessary clarity and distinction, while avoiding the overlap of sexual orientation and sexual behavior. Sexual identity, or how an individual thinks about their sexual orientation, is a self-defined sexual label. In this study, sexual identity referred explicitly to a person's self-defined sexual label, such as heterosexual/straight, bisexual, and homosexual/lesbian/gay.

Although researchers have pointed out that sexual orientation is made up of several components, such as attraction, behavior, and identity, most research studies consider only one of these components when defining a population of interest. This creates several problems, the first being that varying definitions of target groups result in varying prevalence rates of sexual minorities. A study by Savin-Williams and Ream (2007) found that the prevalence rates of non-heterosexuality varied between 1-15% depending on which component of sexual orientation (e.g., heterosexual or homosexual) was used, and the degree of the component (e.g., mostly heterosexual or mostly homosexual). Similarly, Chandra and colleagues (2013) used data from the National Survey of Family Growth, and found that sexual behavior is not always congruent with sexual identity, as 93.6% of women identified as heterosexual, despite 13% reporting same-sex behavior. Finally, as sexual orientation is made up of several components (e.g., attraction, behavior, and identity), if researchers only measure one component of sexual orientation, such as behavior, they are not only missing important information, but are also potentially overlooking how the components of sexual orientation interact or align. This is highlighted by a study in which Igartua and colleagues (2009) explored concordance and discrepancy between three components of sexual orientation, sexual identity, attraction, and behavior, among adolescents. They found that 12% of adolescents reported at least one measure of discrepant heterosexuality, and stressed that multiple questions are needed to assess dimensions of sexual orientation (Igartua et al., 2009).

The findings by Savin-Williams and Ream (2007) and Igartua and colleagues (2009) relate directly to the role of congruence in sexual minorities, as studies based on research examining only one component of sexual orientation may draw erroneous conclusions, as the role of congruence was not considered. In other words, if researchers assess attraction, behavior, and identity separately, they may gain a more complete picture of sexual orientation. Specifically, if the separate components of sexual orientation are all measured, then opportunity exists to explore differences in individuals in which all components of sexual orientation are congruent, and individuals in which there is incongruence in sexual attraction, behavior, and identity.

With this in mind, the current study separated the concepts of sexual identity and sexual behavior, and assessed for both independently.

### ***Sexual Identity/Behavior Congruence***

Estimates of the prevalence of same-sex sexual behavior and the population of lesbian, gay, and bisexual (LGB) individuals vary considerably (Eisenberg & Wechsler, 2003; Herbenick et al., 2010; Laumann et al., 1994; Twenge et al., 2016). Sexual orientation correlates closely, but not completely, with reported sexual behavior (Copen et al., 2016), and younger adults (18-24 years old) are more likely to endorse incongruent sexual identity and behaviors compared to older adults (25-34 years old; Fu et al., 2017).

While sexual involvement with the gender of one's sexual attraction is expected, it is not always the case. Data from the National Health and Social Life Survey (NHSLs) found that less than half of adults in the United States who engaged in same-sex behavior identified as lesbian, gay, or bisexual (Laumann et al., 1994). More recent findings have indicated that approximately half of individuals who reported engaging in same-sex sexual behavior identified as heterosexual

(Twenge et al., 2016). While some of the variation could be due to the specific constructs assessed, types of sexual behavior measured, age group, and time period (Butler, 2005), researchers have concluded that overall the prevalence of same-sex behavior has increased over time (Charlton et al., 2016), though not all individuals engaging in same-sex behavior identify as gay/lesbian or bisexual.

Researchers have long tried to explain the discrepancy between the prevalence of same-sex sexual behavior and reported rates of the LGB population, and why people may not identify as lesbian, gay, or bisexual, despite engaging in same-sex behavior. Humphreys was one of the first researchers to make the distinction between sexual identity and sexual behavior, as he focused on the “homosexual experience.” Humphreys identified men who engaged in same-sex sexual encounters in public restrooms, followed them, and recorded their license plates. He then went to the men’s homes and interviewed them and their wives. Based on his follow-up interviews at the men’s homes, Humphreys and colleagues (1970) found that over half of the individuals identified as heterosexual, and many were married to women. Humphreys’ findings highlighted discrepancies in the men’s behavior and identities, and in his book, *Tearoom Trade*, Humphreys discussed the incongruence between the private and public selves of many of the men.

A wealth of research exists on incongruent sexual identities and sexual behaviors, particularly among heterosexual men (O’Leary & Jones, 2006; Ross et al., 2003). In the literature, these men have often been referred to as “non-gay identified” (Harawa et al., 2008; Williams et al., 2004) men who have sex with men (MSM) or “behaviorally bisexual men” (Dodge et al., 2013; Schrimshaw et al., 2013; Wohl et al., 2002). In particular, research has focused on ethnic and racial minority heterosexually identified men who have sex with men,

(Boykin, 2005; King, 2005; Vargas, 2003) and found that this population is less likely to identify with the LGB community or disclose their same-sex behavior to their female partners (Millet et al., 2005). Decreased disclosure has been associated with significantly lower levels of overall mental health (Schrimshaw et al., 2013), and negative beliefs about non-heterosexual identities and behavior (Pachankis, 2007).

Reback and Larkins (2010) conducted a qualitative study to examine the social and sexual meanings of same-sex sexual encounters for heterosexually identified men. They found that men avoided making emotional connections with their male partners, and explained their same-sex behavior with a variety of reasons, such as economic need, recreation, curiosity, convenience, or anger with their female partner (Reback & Larkins, 2010). Additionally, many expressed shame and guilt following a same-sex sexual encounter.

Several theories exist to explain why individuals may not identify as lesbian, gay, or bisexual, even while engaging in same-sex behavior. These theories include the hypothesis that same-sex behavior among heterosexual women attracts the attention of male partners (Ronen, 2010), and that it represents the sexual objectification of women (Yost & McCarthy, 2012). Additional theories that could explain same-sex behavior among non-LGB individuals are erotic plasticity (Baumeister, 2000), heterosexual identity development (Worthington et al., 2002), and sexual minority identity formation (Calzo et al., 2011).

The first theory conceptualizes the increased rates of college-aged heterosexual women engaging in same-sex behavior, and posits that heterosexual women engage in same-sex behavior to attract the attention of men (Diamond, 2005; Jackson & Gilbertson, 2009; Ronen, 2010; Yost & McCarthy, 2012). Participants in Jackson and Gilbertson's (2009) study on media portrayals of "hot lesbians" reported observing college women kissing other women in an effort



to be viewed as attractive to men. Ronen's (2010) ethnographic study observed college women dancing erotically with other women in an attempt to attract the attention of nearby men.

Additionally, Hamilton (2007) found that approximately half of college heterosexual women reported having kissed or fondled other women at college parties, with the most frequently endorsed reason being to attract attention from men.

Yost and McCarthy (2012) hypothesized that this increase in same-sex behavior among heterosexual college women represents the sexual objectification of women. Prior research has shown that self-objectification can make it difficult for women to understand their own sexual desires, and thus may engage in sexual activity based on their partners' desires (Tolman, 2009). Yost and McCarthy (2012) further argued that same-sex behavior among heterosexual women may not reflect the individual women's desire to engage in the behavior, *per se*, but rather their desire to engage in a behavior that is viewed as attractive by heterosexual men (Garrity, 2001).

A second theory that seeks to explain the increase in same-sex behavior among non-lesbian, gay, or bisexual individuals is the theory of erotic plasticity (Baumeister, 2000). Baumeister (2000) defined erotic plasticity as the amount to which a person's sexual behavior can be changed by cultural and societal factors. Baumeister argued that sociocultural and situational factors can impact women's sexuality, and that women have greater erotic plasticity or fluidity. He believed that this greater erotic plasticity results in more identity-behavior incongruence among women than men, as women may be more likely to engage in sexual activity that is in conflict with their sexual identity or attitudes, and are more likely to change their sexual desires over time (Baumeister, 2004). Indeed, research has shown that women are more likely than men to change their sexual orientation over time (Diamond, 2005; Kinnish et al., 2005; Kitzinger & Wilkinson, 1995).

Research on lesbian, gay, and bisexual youth has found that individuals report shifts in their sexual identities, behavior, and attractions over time (Diamond, 2005 & 2007; Savin-Williams & Ream, 2007). Studies examining the stability of sexual orientation found that same-sex sexual orientation became more stable over time, with bisexual orientations being generally less stable compared to same-sex orientations (Hu et al., 2016; Mock & Eibach, 2012; Ott et al., 2011; Rosario et al., 2001). Given that sexual orientation can vary over time, it is reasonable to assume that some individuals may experience sexual identity/behavior incongruence as a result of evolving or changing orientations.

Another theory that could be used to explain same-sex behavior among heterosexual individuals is the theory of heterosexual identity development (Worthington et al., 2002). While several theories exist to describe the sexual identity development of gay, lesbian, and bisexual individuals (Calzo et al., 2011; Savin-Williams, 2011), Worthington and colleagues (2002) were the first to propose a model of heterosexual development. The model posits that there are five paths that heterosexual individuals may take on the way to forming a heterosexual identity: unexplored commitment, active exploration, diffusion, deepening and commitment, and synthesis. Within this model, active exploration would explain same-sex sexual behavior as a way of gaining increased understanding about one's sexual interests and orientation. Additionally, diffusion represents the rejection of society's norms, and therefore could also explain same-sex sexual behavior along the path to forming a heterosexual identity.

Similarly, others have contended that some heterosexually identified individuals who engage in same-sex behavior are actually in the process of forming a lesbian, gay, or bisexual identity, and thus this behavior is viewed within the context of sexual minority identity formation (Calzo et al., 2011). While many theories exist that attempt to explain why individuals

experience incongruence between their sexual identity and behavior, the focus of the current study is on the impact of congruence on psychological well-being and happiness.

### **Attitudes**

Attitudes toward same-sex behavior, homosexuality, and sexual minority individuals can generally be categorized into positive attitudes and negative attitudes. A significant body of research has examined the impact of negative attitudes, or those embodied by prejudice, discrimination, and a preference for heterosexuality (Herek, 2004; Meyer, 1995), compared to positive or affirmative attitudes that reflect tolerance and egalitarianism (Massey, 2009).

In recent decades, attitudes toward homosexuality, same-sex behavior, and sexual minority individuals have improved dramatically in the United States, as in the 1960s approximately 70% of Americans reported a negative view of homosexuality (Herek, 2002). A study using data from the GSS found that Americans' attitudes toward same-sex behavior became more accepting over time, as in 2014, 49% of Americans surveyed reported that same-sex sexual activity was "not wrong at all," compared to 13% in 1990, and 11% in 1973 (Twenge et al., 2016).

As societal attitudes shape and impact the attitudes of individuals, to understand the impact of attitude congruence on psychological well-being and happiness, a broad review of attitudes toward homophobia will be provided.

### ***Homophobia***

George Weinberg (1972) introduced the term homophobia in the 1960s and defined it as "the dread of being in close quarters with homosexuals- and in the case of homosexuals themselves, self-loathing" (p. 4). Weinberg's definition brought attention to the discrimination

and stigma that lesbian, gay, and bisexual individuals experience, but failed to differentiate between the experiences and views of heterosexuals and sexual minorities.

More recent literature has attempted to capture not only individual reactions to homosexuality, but also societal and cultural aspects (Herek, 2004). Herek, in an extensive body of work, offered a conceptual framework to capture the numerous phenomena often referenced by homophobia under the umbrella term, sexual stigma (Herek, 2004, 2007, 2008, and 2009; Herek et al., 2009). This framework posits that sexual stigma includes the negative view, inferior status, and power differential that society bestows on those who engage in non-heterosexual behaviors or have non-heterosexual identities, relationships, or communities (Herek, 2008; Herek, 2009). Further, sexual stigma is legitimized and furthered by aspects of society, known as structural sexual stigma, or heterosexism (Herek et al., 2009).

While the term homophobia is widely used colloquially, it represents a limited scope of the problem by focusing on the person with the fear, rather than acknowledging the larger, systemic problem (Kitzinger, 1996). Therefore, while homophobia may be used in current literature to reflect an individual belief, the broader term, heterosexism, is more commonly used, as it refers to discrimination and stigma that exist on a structural, or societal, level.

### ***Heterosexism***

According to Herek (2009), heterosexism, or structural sexual stigma, is an ideology expressed through cultural norms, institutional practices, and values and beliefs that place sexual minority groups at a disadvantage. Herek and colleagues (2009) argued that heterosexism works through two general processes. First, the Heterosexual Assumption is the presumption that everyone is heterosexual, thus leaving sexual minorities unacknowledged. Second, when they are acknowledged, however, they are viewed as abnormal (Herek, 2009).

The ideological system of heterosexism (Meyer, 1995; Meyer & Dean, 1998; Simoni & Walters, 2001) can have a profound impact on individuals. There is an extensive body of research that indicates that sexual minorities' experiences of prejudice and discrimination increase the risk of problems with psychology health (King et al., 2008) and physical health (Denton et al., 2014). Indeed, a meta-analysis showed that perceived discrimination was negatively correlated with psychological and physical health (Pascoe & Smart Richman, 2009). A recent meta-analysis supported these findings, and found that perceived discrimination has harmful effects on psychological well-being (Schmitt et al., 2014).

### ***Internalized Heterosexism***

Gay, lesbian, and bisexual individuals may hold negative beliefs and attitudes about their sexual identity, which reflect the internalization of society's negative assumptions and beliefs and acceptance of those beliefs as their own (Herek et al., 2009). The internalization of society's negative and shameful beliefs about homosexuality that lesbian, gay, and bisexual individuals experience is referred to as internalized homophobia (Nungesser, 1983) or internalized heterosexism (Szymanski, 2004).

Reducing levels of internalized heterosexism often accompanies the coming-out process, as higher levels of internalized heterosexism have been correlated with lower stages of homosexual identity formation (Rowen & Malcolm, 2003), and research has shown that individuals who label and disclose their sexual identity to others experience lower levels of internalized heterosexism (Shidlo, 1994). Piggot (2004) found that lesbian and bisexual women in later stages of sexual identity development had significantly lower levels of internalized heterosexism than those in earlier stages of sexual identity development.

Previous research has also connected internalized homophobia with disclosure and concealment of sexual orientation, and its impact on mental health. Several studies have shown that among sexual minorities, higher levels of internalized heterosexism are associated with less sexual orientation disclosure to others (Lewis et al., 2003; McGregor et al., 2001; Rostosky & Riggle, 2002). Some have argued that concealment of sexual orientation negatively impacts mental health (Hatzenbuehler, 2009; Pachankis, 2007), with greater concealment and less disclosure acting as a barrier to resolving internalized heterosexism and gaining social support (Corrigan & Matthew, 2003; Pachankis, 2007).

Research has shown that among samples of lesbian, gay, and bisexual individuals, higher levels of disclosure and lower levels of concealment about sexual orientation are associated with less internalized heterosexism (Stokes et al., 1993; Weiss & Hope, 2011; Wright & Perry, 2006). A study by Schrimshaw and colleagues (2013) found that among a sample of non-gay identified, behaviorally bisexual men who did not disclose their same-sex behavior to their female partners, greater concealment was significantly associated with lower levels of overall mental health. The research by Schrimshaw and colleagues (2013) has particular relevance to the current study, as it highlights the distress that can occur from concealing, or hiding, incongruent sexual behavior, and the current study explored the relationship between congruent behavior, identity, and attitudes and psychological well-being.

### **Sexual Identity/Attitude Congruence**

As noted previously, some gay, lesbian, and bisexual individuals experience internalized heterosexism, where they have internalized society's negative beliefs about homosexuality and same-sex behavior. For many, internalized heterosexism decreases during the coming out process (Rowen & Malcolm, 2003; Shidlo, 1994); however, some sexual minority individuals

continue to experience distress as a result of the incongruence between their sexual identity and attitudes about same-sex behavior or relationships.

Research has shown that internalized heterosexism, or adopting society's negative beliefs and assumptions about homosexuality, can result in psychological distress (Brown, 1988; Szymanski, 2005a), including poorer mental health (Meyer, 1995; Szymanski, 2005b), and self-doubt, self-hatred, and self-destructive behavior (Gonsiorek & Rudolph, 1991). Several studies have found significant negative correlations between internalized heterosexism and self-esteem (Peterson & Gerrity, 2006; Rowen & Malcolm, 2002; Szymanski & Chung, 2001), and significant positive correlations between internalized heterosexism and depression (Piggot, 2004; Szymanski et al., 2001), and psychological distress (McGregor et al., 2001; Szymanski, 2005b; Wagner et al., 1996) among sexual minorities.

A large body of research has also shown that for lesbian, gay, and bisexual individuals, "being out" about their sexual orientation is associated with positive outcomes (Mosher, 2001). Halpin and Allen (2004) examined psychosocial well-being during different stages of Cass's (1979) Homosexual Identity Formation. The researchers found that for the sample of men reporting sexual attraction to other men, well-being was high during the initial stages of Confusion and Comparison, low during Tolerance and Acceptance, and highest during the final stages of Pride and Synthesis. In a sample of lesbian and bisexual women, Morris and colleagues (2001) found that outness predicted lower levels of psychological distress. Corrigan and colleagues (2009) conducted a qualitative analysis of interviews with gay men and lesbian women, and concluded that positive outcomes of coming out included social acceptance by friends and family, support from the gay community, and comfort and happiness about one's sexual orientation. Finally, Whitman and Nadal (2015) examined the relationship between

outness and well-being in a sample of self-identified LGB adults, and found that negative identity dimensions (e.g., need for privacy, internalized homo/bi-negativity, and identity confusion) negatively predicted outness and well-being, and that negative identity mediated the relationship between outness and well-being.

When considered from congruence theory, internalized heterosexism represents incongruence between a person's sexual identity and attitudes. Bearing that in mind, the research on correlates of internalized heterosexism has relevance to the current study.

### **Psychological Well-Being and Happiness**

While much of the research on sexual minorities has focused on negative mental health outcomes, examining the well-being of sexual minority individuals offers a richer understanding of psychological health.

Traditional definitions of psychological well-being define it as the absence of psychological symptoms. As Ryff and Keyes (1995) noted, wellness was often discussed from the lens of dysfunction, rather than wellness. Ryff (1989) reviewed literature from developmental psychology, clinical psychology, and mental health to explore different perspectives on psychological well-being. Incorporating perspectives from Erikson's model of psychosocial development, Bühler's work on basic life tendencies, Neugarten's executive processes of personality, Allport's conceptualization of maturity, Roger's ideas on the fully functioning person, Maslow's theory on self-actualization, Jung's theory of individuation, Jahoda's positive criteria for mental health, and Birren's perspective on positive functioning in ageing populations, Ryff identified six core dimensions of well-being: self-acceptance, purpose in life, environmental mastery, positive relationships, autonomy, and personal growth (Ryff, 1989). This conceptualization of well-being not just as the absence of negative symptoms, but the presence



of positive aspects, and laid the foundation for later work. Ryff's (1989) framework for well-being represents a eudaimonic perspective, where people are hypothesized to feel happy if they perceive their life to have purpose, challenges, and experience growth. Psychological well-being, as defined by Ryff (1989), has been shown to be protective factor against mental illness and psychopathology (Lamers et al., 2015), and diseases such as Alzheimer's (Ryff, 2014).

In addition to the eudaimonic perspective offered by Ryff (1989), well-being can be conceptualized from a hedonic perspective (Keyes et al., 2002). Eudaimonic well-being relies on Maslow's (1943) concept of self-actualization and Rogers' (1963) theory of the fully functioning person, and posits that life purpose and meaning, belongingness, and self-acceptance produce happiness. From a eudaimonic perspective, happiness comes not through the pursuit of pleasure, but rather as a result of developing strengths through the pursuit of life purpose and meaning (Vella-Brodrick et al., 2009). In contrast, hedonic well-being is based on the premise that increased pleasure and decreased pain result in happiness. Subjective well-being represents a hedonic perspective, as it is made up of positive affect, as well as satisfaction with life. Subjective well-being can be assessed through life satisfaction, as well as positive and negative emotions (Diener, 1994), such as happiness. Thus, psychological well-being in research is typically conceptualized to include both positive affect, such as happiness, as well as optimal functioning (Deci & Ryan, 2008).

Since the conceptualization of psychological well-being, this construct has been studied in numerous contexts and found to have implications for mental and physical outcomes. While decreased psychological well-being has been associated with an increase in distress (Ross et al., 2017; Veit & Ware, 1983), enhanced psychological well-being has been linked to several positive outcomes. Enhanced psychological well-being can act as a buffer to stress and improve

an individual's ability to cope with trauma (Ryff & Singer, 1998; Schnyder et al., 1999).

Additionally, psychological well-being has been linked to physical health (Friedman et al., 2005; Keyes, 2005).

Psychological well-being in sexual minorities has been studied extensively, with general findings indicating that homosexual and bisexual individuals experience poorer psychological well-being than their heterosexual peers (Hatzenbuehler, 2009; King et al., 2008; Saewyc, 2011). Research has shown that compared to heterosexual individuals, homosexual and bisexual individuals have poorer mental health and experience higher rates of depression and anxiety (Fergusson et al., 2005; King & Smith, 2004; Ueno, 2010). In a meta-analysis by King and colleagues (2008), findings indicated that lesbian, gay, and bisexual individuals were at greater risk for depressive and anxiety disorders, as well as alcohol and other substance dependence.

While many studies have focused on the physical and mental health symptoms that sexual minority individuals experience as a result of stigma and discrimination, few studies have focused on the relationship between sexual minority identity and positive measures of psychological well-being, including happiness (Rieger & Savin-Williams, 2012; Thomeer & Reczek, 2016). Thomeer and Reczek (2016) used data from the GSS to examine the relationship between sexual minority status and happiness. The researchers found that identifying as LGB, having both male and female partners since age 18, or transitioning to only different-sex sexual partners was negatively related to happiness. However, Thomeer and Reczek (2016) also found that individuals who reported only same-sex sexual partners since age 18 or in the past 5 years had similar levels of happiness to individuals with only different-sex sexual partners since age 18. Further analyses also showed that many of the differences in happiness were non-significant when controlling for various resources, such as finances and social support.

Rieger and Savin-Williams (2012) examined the independent contributions of sexual orientation and gender nonconformity on psychological well-being. Results of a study on high school seniors found that while childhood and adolescent gender nonconformity was significantly negatively related to well-being, sexual orientation was not (Rieger & Savin-Williams, 2012).

### **Congruence and Psychological Well-Being**

Research examining the impact of sexual behavior/identity congruence has linked congruence to positive outcomes. A study on gay men found that sexual identity/behavior congruence was associated with higher rates of HIV testing and condom use (Pathela et al., 2006), while research examining lesbian women found that sexual behavior/identity congruence was linked to regular gynecological exams and mammograms (Kerker et al., 2006). Additionally, Riggle and colleagues (2017) studied outness, concealment, and authenticity in lesbian, gay, and bisexual individuals. While not specifically addressing congruence, concealment and outness are related concepts, as concealing one's LGB identity involves incongruence between attraction or behavior and disclosed identity, and outness resolves that incongruence. Consistent with previous literature, higher levels of LGB concealment were associated with lower psychological well-being and increased depressive symptoms, while higher levels of LGB authenticity were associated with higher psychological well-being (Riggle et al., 2017).

Few studies exist that explore the relationship between sexual identity/behavior/attitude congruence and psychological well-being (Lourie & Needham, 2017; Schick et al., 2012). Lourie and Needham (2017) examined the impact of sexual orientation discordance on mental health using data from the National Longitudinal Study of Adolescent to Adult Health (Add Health). The researchers defined sexual orientation discordance as dissonance between aspects of sexual

orientation, including attraction, behavior, and identity. Approximately 22% of heterosexual individuals (21% of heterosexual males and 22% of heterosexual females) and 50% of sexual minority individuals (50% of sexual minority males and 47% of sexual minority women) experienced either current or previous sexual orientation discordance. Additionally, 92% of mostly heterosexual males and 79% of mostly heterosexual females experienced sexual orientation discordance currently or previously. Findings indicated that among heterosexual women and mostly heterosexual men, sexual orientation discordance predicted significantly increased symptoms of depression. Of note, sexual minority individuals with a history of sexual orientation discordance did not experience increased symptoms of depression, supporting the researchers' hypothesis that sexual orientation discordance is more impactful for heterosexual individuals than non-heterosexual individuals (Lourie & Needham, 2017). In sum, heterosexual individuals with a history of sexual orientation discord had more symptoms of depression, while a history of sexual orientation discord among people who identified as lesbian, gay, or bisexual did not predict symptoms of depression. Thus, sexual orientation discord was more impactful for heterosexual individuals than non-heterosexual individuals, which the researchers hypothesized could be due to distress resulting from engaging in behavior that brings one closer to a more stigmatized identity.

Schick and colleagues (2012) examined the impact of sexual identity/behavior congruence on mental, physical, and sexual well-being among a sample of women who endorsed same-sex attraction, desire, affection, and/or behavior. Findings indicated that participants whose sexual identity was congruent with their recent sexual behavior had significantly more positive mental, physical, and sexual well-being than the sexual identity/behavior incongruent individuals (Schick et al., 2012). The authors argued that considering behavior/identity congruence is

important when examining the mental and physical health outcomes among lesbian and bisexual women, and cautioned against health outcome research that focuses exclusively on sexual behavior without also attending to sexual identity.

### **Summary**

The literature indicates that there is a relationship between sexual identity/behavior congruence and psychological well-being. Additionally, research has shown that incongruence between sexual identity and attitudes toward same-sex behavior and homosexuality can have negative impacts on psychological well-being. However, there has not been examination of sexual identity/behavior/attitude congruence and its impact on psychological well-being. Based on these gaps, the following hypotheses were proposed:

RQ<sub>1</sub>: Within the sample of individuals who report same-sex sexual partners in the last year, is there a relationship between an individual's attitudes toward same-sex sexual behavior and their psychological well-being?

H<sub>1n</sub>: There is no relationship between an individual's attitudes toward same-sex sexual behavior and their psychological well-being.

H<sub>1a</sub>: Positive attitudes toward same-sex sexual behavior and homosexual relationships will predict higher levels of psychological well-being than negative attitudes, among the sample of people with same-sex sexual partners in the past year.

RQ<sub>2</sub>: Within the sample of individuals with reported same-sex sexual partners in the last year, will congruent self-identification as lesbian, gay, or bisexual increase an individual's probability of high psychological well-being?

H<sub>2n</sub>: Self-identification as lesbian, gay, or bisexual will have no influence on probability of psychological well-being than self-identification as heterosexual.

H<sub>2a</sub>: Self-identification as lesbian, gay, or bisexual will predict higher levels of psychological well-being than self-identification as heterosexual or straight.

RQ<sub>3</sub>: Within the sample of individuals engaging in same-sex sexual behavior within the past year, is there a difference in well-being scores based on attitudes and self-identity?

H<sub>3n</sub>: There will be no average difference in well-being scores among individuals who identify as lesbian, gay, or bisexual with high attitudes, individuals who identify as heterosexual or straight with high attitudes, individuals who identify as lesbian, gay, or bisexual with low attitudes, and individuals who identify as heterosexual or straight with low attitudes.

H<sub>3a</sub>: Among the sample of people engaging in same-sex behavior, individuals who identify as lesbian, gay, or bisexual and have high attitudes toward same-sex relationships will have higher average well-being scores than the other three groups.

### Chapter 3

#### Method

As noted previously, the focus of the current study was to examine the relationship between sexual identity, behavior, and attitude congruence and psychological well-being among a sample of individuals who reported engaging in same-sex sexual behavior. The following research questions and accompanying hypotheses were proposed:

RQ<sub>1</sub>: Within the sample of individuals who report same-sex sexual partners in the last year, is there a relationship between an individual's attitudes toward same-sex sexual behavior and their psychological well-being?

H<sub>1n</sub>: There is no relationship between an individual's attitudes toward same-sex sexual behavior and their psychological well-being.

H<sub>1a</sub>: Positive attitudes toward same-sex sexual behavior and homosexual relationships will predict higher levels of psychological well-being than negative attitudes, among the sample of people with same-sex sexual partners in the past year.

RQ<sub>2</sub>: Within the sample of individuals with reported same-sex sexual partners in the last year, will congruent self-identification as lesbian, gay, or bisexual increase an individual's probability of high psychological well-being?

H<sub>2n</sub>: Self-identification as lesbian, gay, or bisexual will have no influence on probability of psychological well-being than self-identification as heterosexual.

H<sub>2a</sub>: Self-identification as lesbian, gay, or bisexual will predict higher levels of psychological well-being than self-identification as heterosexual or straight.

RQ<sub>3</sub>: Within the sample of individuals engaging in same-sex sexual behavior within the past year, is there a difference in well-being scores based on attitudes and self-identity?

H<sub>3n</sub>: There will be no average difference in well-being scores among individuals who identify as lesbian, gay, or bisexual with high attitudes, individuals who identify as heterosexual or straight with high attitudes, individuals who identify as lesbian, gay, or bisexual with low attitudes, and individuals who identify as heterosexual or straight with low attitudes.

H<sub>3a</sub>: Among the sample of people engaging in same-sex behavior, individuals who identify as lesbian, gay, or bisexual and have high attitudes toward same-sex relationships will have higher average well-being scores than the other three groups.

### **Participants**

Participants were selected from data collected for the General Social Survey (GSS) between 2010 through 2016 (collected biannually). For the purposes of this study, data from 2010 through 2016 were pooled to increase the available sample size. The GSS is a nationally representative sample of U.S. adults over the age of 18. The GSS is an in-person household-based study, thus it does not include individuals who reside in prisons, nursing homes, college dormitories, or other residential settings. Until 2006, only English-speaking adults were included in the GSS; however, based on U.S. Census Bureau data, the GSS expanded its target population to include Spanish-speaking adults in 2006.

The GSS is conducted by the National Opinion Research Center (NORC), a social research center at the University of Chicago, and the survey began in 1972. The NORC collected



data annually (except 1979, 1981, and 1992) until 1994; since 1994, data for the GSS has been collected only in even numbered years.

At present, the GSS is conducted every other year, and gathers data on attitudes, behaviors, and attributes of U.S. adults. Data from the GSS are used to track and explain social trends, attitudinal changes, and the general functioning of society. The GSS was one of the first national probability surveys to ask participants about sexual behavior beginning in 1988. In 2008, a question was added about participant's sexual orientation, asking "Which of the following best describes you?" with the options of gay, lesbian, or homosexual; bisexual; heterosexual or straight; or don't know. Several studies have used data from the GSS to identify trends in sexual orientation and behavior, attitudes toward homosexuality, and happiness (Cochran & Mays, 2015; Thomeer, 2013; Thomeer & Reczek, 2016; Twenge et al., 2016; Yang, 2008). Cochran and Mays (2015) used data from the 1988-2002 GSS to examine mortality risk associated with suicide among people reporting same-sex sexual behavior. Thomeer (2013) examined the relationship between same-sex sexual behavior and self-rated health using aggregated data from the 1991 to 2010 GSS. Finally, Thomeer and Reczek (2016) used aggregated data from the GSS to explore how sexual minority status related to happiness.

### **Sampling Method**

For the 2010-2016 GSS dataset, researchers at the NORC used a multi-stage area probability design to sample (Marsden & Smith, 2016). The full-probability design gave each household within a geographic area an equal probability of being included in the sample, and for households that were selected, each eligible respondent had an equal chance of being interviewed. This design randomly selected an adult from each household in selected geographic areas, while avoiding re-interviewing the same participants from one year to the next.

Once households were selected, interviewers contacted the household to determine the constitution of the household, and which members were eligible for participation in the study. Then, one eligible adult was randomly chosen to participate. In-person interviews were preferred by the NORC, although telephone interviews were conducted if in-person administration was impossible. Participants were interviewed in their home, or at a location of their choosing. Interviewers administered questions using computer-assisted personal interview (CAPI) techniques. Interviews typically took 90 minutes, with the option to split the interview into multiple sessions due to participant time constraints.

Data were collected in two phases. During the first phase of data collection, interviewers solicited interviews with participants from all sampled households. Steps were taken to minimize sample bias due to selected participants not being home, such as interviewing on weekday afternoons, on the weekend, or over holidays. During the second phase of data collection, researchers followed up with a random subsample of participants that were unreachable in the first phase. This strategy of randomly subsampling non-respondents from the first phase was employed to limit the high costs associated with obtaining data from difficult-to-interview cases. By randomly subsampling the non-respondents from phase one, it allowed interviewers to focus efforts on obtaining data from a small group of difficult-to-sample individuals.

The GSS website allows researchers to download the complete dataset with all questions asked across all available years, or to select specific variables and years of collection. For the current study, only specific variables were selected for the years 2010-2016. After downloading the dataset, it was further refined for the current study to only include responses that indicated same-sex sexual partners in the past year, and completely answered GSS questions regarding

sexual orientation, attitudes about same-sex sexual behavior, homosexual relationships, happiness, and mental health. Exact selection criteria are outlined further in this chapter.

### **Measures**

Demographic questions, including age, sex, marital status, race, ethnicity, and geographic region, were included in the GSS. Age was reported in years and treated as continuous. Sex was dichotomous, and participants selected either Female or Male. Race was self-reported. For participants who did not self-identify as Black or White, participants were coded by the interviewer as “other race.” In 2000, a demographic question regarding Hispanic ethnicity was added, allowing participants to identify as a) Hispanic or b) Not Hispanic.

### ***Sexual Behavior***

Participants were asked, “*Have your sex partners in the last 12 months been exclusively male, both male and female, or exclusively female?*” For the current study, male participants were categorized as having had a same-sex sexual experience if they responded with *exclusively male* or *both male and female*. Similarly, female participants were categorized as having had a same-sex sexual experience if they responded with *exclusively female* or *both male and female*. Only participants who endorsed exclusively same-sex sexual partners or both male and female partners were included in the analyses, as this study sought to understand the role of sexual identity/behavior/attitude congruence among individuals engaging in same-sex sexual behavior.

Additional questions regarding participants’ sexual behavior were included in GSS, but not used in the current study. For example, one question inquired about the sex of the participants’ sexual partners since age 18, and another question asked about the sex of sexual partners in the last 5 years. These items were not included in the current study, as more recent behaviors are believed to have a greater impact on current psychological functioning than older

behaviors (Thomeer, 2013), particularly within the context of identity/behavior/attitude congruence.

Concerns have been raised about the validity of sexual behavior data collected via surveys (Morris, 1993). The sexual behavior items in the GSS have been shown to be highly valid, as research that compared sexual behavior questions among national surveys found that responses regarding sex of sexual partners were relatively consistent across surveys, and the differences that existed were significantly smaller than those differences associated with demographic questions (Hamilton & Morris, 2010). Several aspects of the GSS contribute to the validity, such as the use of computerized self-administered interviewing, which have been found to reduce the influence of the interviewer (Jones, 2003; Tourangeau & Smith, 1996), and the extensive training that interviewers undergo on asking and recording answers, neutral probing of ambiguous or unclear responses, and data security (Marsden & Smith, 2016).

### ***Sexual Identity***

The GSS asked participants, “*Which of the following best describes you?*” Response options included a) gay, lesbian, or homosexual; b) bisexual; c) heterosexual or straight; c) don’t know. Participants were instructed to only select one response. Previous studies using the GSS have classified respondents’ sexual orientation based on having ever had a same-sex partner (Badgett, 1995; Black et al., 2003; Laumann et al., 1994), having had at least as many same-sex as opposite-sex partners since age 18 (Badgett, 1995; Black et al., 2003), having had exclusively same-sex sex over the last year (Black et al., 2003; Laumann et al., 1994), and having had exclusively same-sex sex over the last 5 years (Black et al., 2003; Laumann et al., 1994). However, categorizing an individual’s sexual orientation based on their reported sexual behavior overlooks the critical component of self-identification (Savin-Williams & Ream, 2007). As noted

previously, sexual behavior and sexual identity are two distinct aspects of sexual orientation that do not always align (Laumann et al., 1994). Thus, recent research has utilized this self-report question to categorize participants' sexual identity (Thomeer & Reczek, 2016), as it is a better measure of sexual identity than inferring identity from reported sexual behavior. As the current study attempted to explore the congruence between sexual behavior and sexual identity, it was imperative to categorize sexual identity based on the individual's self-report.

### ***Attitudes***

To measure attitudes toward same-sex sexual behavior and same-sex relationships, participants were asked two questions with Likert-style response options. The first question, “*What about sexual relations between two adults of the same sex, do you think it is: a) always wrong, b) almost always wrong, (c) wrong only sometimes, or (d) not wrong at all?*” was coded 1-4 (anchors of *Always wrong* and *Not wrong at all*).

Participants were also asked the second question: “*Do you agree or disagree? Homosexual couples should have the right to marry one another.*” Again, response choices were coded 1-5 (anchors of *Strongly agree* and *Strongly disagree*) and reverse scored.

Scores on both questions were summed to create an overall score, with higher scores indicating greater acceptance of same-sex sexual behavior and relationships.

Previous studies have used the GSS, specifically these two items, to measure attitudes toward same-sex sexual behavior and relationships. A study by Glick and colleagues (2015) compared acceptance of homosexuality among racial and ethnic groups using a single-item question, and Twenge and colleagues (2016) utilized the item about sexual relationships between two adults of the same sex to measure Americans' attitudes toward same-sex sexual behavior across time.

### *Happiness and Well-Being*

Happiness was measured using a single-item: “Taken all together, how would you say things are these days- would you say that you are: a) very happy, b) pretty happy, or c) not too happy?” Response choices were coded 1-3 (anchors of *Very happy* and *Not too happy*).

A single-item happiness measure has been used to measure happiness in a similar study, where researchers used data from the GSS to explore how sexual minority status related to happiness (Thomeer & Reczek, 2016). Additionally, a single-item happiness measure has been shown to be a reliable and valid indicator of subjective well-being within the general population (Veenhoven, 1996), and is highly correlated with the Satisfaction with Life Scale (Diener et al., 1999).

Participants were also asked about their overall mental health in the past 30 days: “*Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?*” Responses ranged from 0-30, with higher responses indicating more days of poor mental health. While a significant body of research has shown that sexual minorities have poorer mental health compared to their heterosexual peers (Cochran & Mays, 2000; Cochran et al., 2003; Lourie & Needham, 2017; Strutz et al., 2015), these studies have failed to consider the role of sexual identity/behavior/attitude congruence, highlighting the need for the current study. A study by Lourie and Needham (2017) found that among self-identified heterosexual adolescent females and mostly heterosexual adolescent males, sexual identity/behavior incongruence significantly predicted increased depressive symptoms. This research suggests that a relationship exists between sexual identity/behavior incongruence and mental health symptoms, necessitating further research.

## **Procedure**

### ***Informed Consent***

A request for exemption from Institutional Review Board review was submitted, in accordance with Radford University guidelines regarding the protection of human participants.

### ***Final Dataset Preparation***

Sampling method for generating the raw GSS data is described above, but for the purposes of the current project, the dataset was further refined based on selection criteria pertinent to the research questions. Data was prepared for analysis by initially pooling all GSS participants from 2010 through 2016 to increase the available sample size. From this pool, all individuals who met the following conditions were included for analysis:

- Reported same-sex sexual partner in the past year, based on response to GSS question SEXSEX
- Must have recorded responses to each of the following GSS questions: HOMOSEX, MNTLHLTH, MARHOMO, SEXORNT, and HAPPY (see Table 4)

**Table 4***Definitions of Variables and Questionnaire Items*

Variable	Definition	Questionnaire Item
SEXSEX	Sex of sex partners in the last year	Have your sex partners in the last 12 months been... exclusively male, both male and female, or exclusively female?
HOMOSEX	Homosexual sex relations	What about sexual relations between two adults of the same sex- do you think it is always wrong, almost always wrong, wrong only sometimes, or not wrong at all?
MNTLHLTH	Days of poor mental health in the past 30 days	Now thinking about your mental health, which include stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?
MARHOMO	Homosexuals should have the right to marry	Do you agree or disagree? Homosexual couples should have the right to marry one another.
SEXORNT	Sexual orientation	Which of the following best describes you? Gay lesbian or homosexual; bisexual; heterosexual or straight.
HAPPY	General happiness	Taken all together, how happy would you say things are these days- would you say that you are very happy, pretty happy, or not too happy?

These criteria were used, as the research questions only examine those participants with reported same-sex behavior, and complete responses for the listed headers were necessary for the statistical analyses.

From the initial raw data pool of nearly 9,500 individual respondents, the selection criteria resulted in a sample of 97. The dataset was first filtered to only include individuals with reported same-sex sexual partners in the past year, which reduced the dataset from 9,423 to 247; of those deleted cases, 3,508 were due to a “Not Applicable” response to item SEXSEX, and an additional 5,668 cases were deleted, which only reported opposite-sex sexual partners in the past



year. The dataset was further filtered to exclude 150 cases that included “Not Applicable” responses to items HOMOSEX, MNTLHLTH, MARHOMO, SEXORNT, and/or HAPPY.

While over half of deleted cases were excluded from the final dataset due to only endorsing opposite-sex sexual partners, the remainder of deleted cases resulted from missing data coded as “Not Applicable” in the GSS dataset. The large number of “Not Applicable” responses was a result of the split-ballot design utilized by the GSS, in which core items, such as demographic questions, were included in all ballots and therefore asked of all participants, while rotating items were included in two of the three ballots and therefore asked of two-thirds of participants (Smith, 1988; Smith & Son, 2019). Responses for items not included in a particular ballot were coded as “Not Applicable” to indicate that the participant was not asked that item and to differentiate from a “No Answer” response. Given this design, missing data coded as “Not Applicable” is fundamentally different from “No Answer” missing data, as the former represented data missing due to random ballot assignment, while a “No Answer” response could be influenced by participant factors. Little and colleagues (2014) outlined strategies for handling missing data, and noted that when data is missing due to a missing completely at random (MCAR) process, very little bias is introduced by deleting missing cases. The “Not Applicable” missing data represents a MCAR process, as the randomly assigned ballot is unrelated to the variables examined in the current study, and therefore was excluded from the final dataset. “No Answer” responses were not specifically filtered out of the dataset; however, none remained in the final dataset after the inclusion criteria were applied.

Using statistical software G\*Power, the *a priori* minimum sample size for one-tailed correlative tests assuming significance at  $\alpha = 0.05$ , a medium effect size  $d = 0.3$ , and a power of 0.80, was calculated to be 64 individuals. Therefore, the sample size of  $n = 97$  meets that

threshold. Conducting a post-hoc power analysis with the true sample size using the same assumptions revealed statistical power to be 0.92. Thus, the sample size of the final dataset had enough participants in order to generate power of at least 80% in the statistical analyses.

### **Analyses**

The statistical software package IBM SPSS Statistics was used to produce descriptive statistics describing the demographics of the sample population, including information about sex, age, race, marital status, and self-reported sexual orientation (see Table 5), as well as intercorrelations among all variables included in the analyses (see Table 6).

**Table 5***Demographic Profiles of Respondents*

Demographic Category	n	Percentage
<b>Sex</b>		
Male	48	49.5
Female	49	50.5
<b>Age</b>		
18-23	8	8.2
24-29	16	16.5
30-35	15	15.5
36-41	14	14.4
42-47	11	11.3
48-53	14	14.4
54-59	8	8.2
60-65	8	8.2
66 +	3	3.1
<b>Race</b>		
White	79	81.4
Black	12	12.4
Other	6	6.2
<b>Marital Status</b>		
Married	28	28.9
Widowed	3	3.1
Divorced	14	14.4
Separated	5	5.2
Never Married	47	48.5
<b>Self-Identified Sexual Orientation</b>		
Heterosexual or Straight	20	20.6
Gay, Lesbian, or Homosexual	46	47.4
Bisexual	31	32.0

**Table 6***Intercorrelations for Scores of Study Variables and Age and Sex*

Variable	1	2	3	4	5	6	7	8
1. HOMOSEX	-							
2. MNTLHLTH	-0.198	-						
3. SEXSEX	-0.106	-0.112	-					
4. SEXORNT	-0.333**	-0.021	0.254*	-				
5. HAPPY	-0.153	0.310**	0.041	-0.004	-			
6. MARHOMO	0.669**	-0.011	-0.178	-0.217*	0.009	-		
7. AGE	-0.168	-0.011	-0.001	-0.118	0.162	-0.114	-	
8. SEX	-0.04	-0.083	0.850**	0.204*	-0.021	-0.121	-0.115	-

Note. \* $p < .05$ . \*\* $p < .01$ .

### ***Research Question One***

To address Research Question 1 “Within the sample of individuals who report same-sex sexual partners in the last year, is there a relationship between an individual’s attitudes toward same-sex sexual behavior and their psychological well-being?” a correlation and subsequent linear regression analysis was selected. These analyses were deemed most suitable for Research Question 1, as they are designed to compare the relationship between two quantitative variables. Research Question 1 posits the investigation of an individual’s attitudes compared with their psychological well-being; two quantitative variables representing attitudes and psychological well-being were created from an individual’s responses on the GSS survey. For the correlation and linear regression analyses performed in Research Question 1, two new variables were created, ATTITUDE and WELLBEING. ATTITUDE was generated as the sum of an individual’s reverse-scaled response to MARHOMO with HOMOSEX. WELLBEING was the sum of an individual’s response to HAPPY with a reverse-scaled and standardized MNTLHLTH. Standardization of MNTLHLTH was performed because the range of MNTLHLTH responses

was 0-30, and the range of responses to HAPPY was 0-3. Such a disparity would limit the effect HAPPY would have on the combined variable WELLBEING. Therefore, any MNTLHLTH response 0-9 was given a standardized value of 3, 10-19 was given a value of 2, and 20-30 was given a value of 1. This standardization ensured both HAPPY and MNTLHLTH would contribute equally to the combined final variable WELLBEING. The reliability of WELLBEING was poor (Cronbach's alpha was .471); however, it is difficult to calculate alpha accurately from domains with only two items.

Performing a correlation and linear regression analysis on these new variables allowed a comparison of the quantitative relationship between the attitudes and psychological well-being of the final dataset population. A Durbin-Watson test was conducted alongside the linear regression in order to verify the assumption of non-collinearity.

### ***Research Question Two***

Research Question 2 "Within the sample of individuals with reported same-sex sexual partners in the last year, will congruent self-identification as lesbian, gay, or bisexual increase an individual's probability of high psychological well-being?" is an inquiry into the effect a single binary variable (congruent or incongruent self-identification) has on the probability of a high value along a quantitative scale (psychological well-being). Therefore, binary logistic regression was selected in order to address Research Question 2. In order to do so, the binary variable ORNTSCORE was created, representing whether the individual's self-identification orientation was congruent with their sexual behavior. If the individual reported a same-sex sexual partner in the last year, and self-identified as lesbian, gay, or bisexual, the participant was given an ORNTSCORE of 1, whereas if they self-identified as heterosexual, the participant was given an ORNTSCORE of 0. An individual's WELLBEING score was compared against their

ORNTSCORE in the subsequent binary logistic regression. The logistic regression summary included an odds ratio output for the intercept term in order to address the probability inquiry of Research Question 2. Akaike information criterion (AIC) and Bayesian information criterion (BIC) values were added to the logistic regression model summary to serve as a quantitative reference with other possible models.

### ***Research Question 3***

Finally, for the inquiry put forth in Research Question 3 “Within the sample of individuals engaging in same-sex sexual behavior within the past year, is there a difference in well-being scores based on both attitudes and identity?” a one-way ANOVA was conducted. These analyses were selected to compare the group means of a single quantitative variable by a single categorical group. A categorical variable ID/ATTITUDE was created containing four simple string values: “Congruent/High,” “Congruent/Low,” “Incongruent/High,” and “Incongruent/Low.” Individuals who reported as lesbian, gay, or bisexual were assigned “Congruent” while individuals who reported as heterosexual or straight were assigned “Incongruent.” Likewise, individuals who scored 6 and above on the ATTITUDE variable were assigned “High,” indicating high or positive attitudes toward gay marriage and same-sex sexual relationships, while individuals who score 5 or below were assigned “Low,” indicating low or negative attitudes toward gay marriage and same-sex sexual relationships. Levene’s test was conducted with the ANOVA to verify the assumption of equal variance. Average WELLBEING values were compared among these four categorical groups using one-way ANOVA.

### **Summary**

The present study examined the relationship between sexual behavior/identity/attitude congruence and psychological well-being among individuals who reported engaging in same-sex

sexual behavior. Theories about congruence between values and behavior, such as cognitive dissonance (Festinger, 1957), has proposed that people strive to act in ways that are congruent with their values, beliefs, and identity. Cognitive dissonance theory postulates that when individuals engage in identity-incongruent behavior, distress can occur. The current study applied this theory to sexual identity/behavior/attitude congruence. By utilizing correlation analysis, linear regression, binary logistic regression, and one-way ANOVA, the relationship between psychological well-being and congruence among identity, behavior, and attitudes was explored. These methodologies were selected to contribute to the gap in the literature by quantifying the psychologic relationships typically only opined in a qualitative fashion.

## Chapter 4

### Results

Chapters 1 and 2 examined previous work on sexual identities, the psychological effects of identity congruence, and the relationship that identity/behavior/attitude congruence may have with happiness and well-being. A gap in the literature was highlighted regarding the possible connection between sexual behavior/identity/attitude congruence and psychological well-being among individuals who reported engaging in same-sex sexual behavior. Consistent with cognitive dissonance theory (Festinger, 1957), it was hypothesized that when individuals engage in incongruent behavior, distress would occur. However, no study has applied this theory directly to the psychological well-being of individuals with reported same-sex sexual behavior. Therefore, the purpose of the current study was to apply cognitive dissonance theory specifically to sexual identity/behavior/attitude congruence and predict the levels of psychological well-being among individuals with congruent and incongruent identities and attitudes.

To address this purpose, the following research questions and accompanying hypotheses were constructed:

RQ<sub>1</sub>: Within the sample of individuals who report same-sex sexual partners in the last year, is there a relationship between an individual's attitudes toward same-sex sexual behavior and their psychological well-being?

H<sub>1n</sub>: There is no relationship between an individual's attitudes toward same-sex sexual behavior and their psychological well-being.

H<sub>1a</sub>: Positive attitudes toward same-sex sexual behavior and homosexual relationships will predict higher levels of psychological well-being than negative attitudes, among the sample of people with same-sex sexual partners in the past year.



RQ<sub>2</sub>: Within the sample of individuals with reported same-sex sexual partners in the last year, will congruent self-identification as lesbian, gay, or bisexual increase an individual's probability of high psychological well-being?

H<sub>2n</sub>: Self-identification as lesbian, gay, or bisexual will have no influence on probability of psychological well-being than self-identification as heterosexual.

H<sub>2a</sub>: Self-identification as lesbian, gay, or bisexual will predict higher levels of psychological well-being than self-identification as heterosexual or straight.

RQ<sub>3</sub>: Within the sample of individuals engaging in same-sex sexual behavior within the past year, is there a difference in well-being scores based on attitudes and self-identity?

H<sub>3n</sub>: There will be no average difference in well-being scores among individuals who identify as lesbian, gay, or bisexual with high attitudes, individuals who identify as heterosexual or straight with high attitudes, individuals who identify as lesbian, gay, or bisexual with low attitudes, and individuals who identify as heterosexual or straight with low attitudes.

H<sub>3a</sub>: Among the sample of people engaging in same-sex behavior, individuals who identify as lesbian, gay, or bisexual and have high attitudes toward same-sex relationships will have higher average well-being scores than the other three groups.

This chapter will report the results of the statistical analyses identified to address each research question, discuss issues that arose during the analyses, and outline the findings in preparation of Chapter 5.

The final dataset included 97 individuals with a mean age of 40.77 (range = 18-70). General demographic frequency tables for the dataset population are displayed in Table 5. Descriptive summary of dataset results of ATTITUDE and WELLBEING, along with variable skewness and kurtosis, are displayed below in Table 7.

**Table 7**

*Descriptive Summary of Average Individual Scores on ATTITUDE and WELLBEING*

	ATTITUDE	WELLBEING
n	97	97
Missing	0	0
Mean	7.99	4.81
Std. Deviation	1.91	0.92
Skewness	-2.15	-1.03
Std. Error of Skewness	0.25	0.25
Kurtosis	3.57	1.43
Std. Error of Kurtosis	0.49	0.49
Minimum	2	2
Maximum	9	6

Skewness and kurtosis values for ATTITUDE indicated that dataset scores for that variable displayed a marginal degree of positive distortion and leptokurticity, suggesting that there was a larger proportion of higher ATTITUDE scores than what would be expected in a normal distribution. This was expected, as individuals often display more positive attitudes toward behaviors that they exhibit themselves, and previous literature has documented the increase in support of gay marriage and positive attitudes toward homosexuality in the United States over the past decades using the GSS (Twenge et al., 2016). What positive distortion was identified, this skew was considered during subsequent analysis and interpretation. Skewness and kurtosis values for WELLBEING were within acceptable range. The frequency distribution table for

ORNTSCORE reflected that 79% of individuals in the dataset who displayed same-sex behavior self-identified as lesbian, gay, or bisexual, while 21% incongruently identified as heterosexual.

### Research Question One

Analysis addressing Research Question 1 involved correlation and linear regression analyses between the ATTITUDE and WELLBEING scores among all individuals in the final dataset. Summaries the linear regression analysis is displayed in Table 8.

**Table 8**

*Model Summary and Coefficients of Linear Regression Relationship Between ATTITUDE and WELLBEING Variables*

Model	Predictors	Unstand- ardized	Standard Error	Standard- ized	t	p	95% CI	
							Lower	Upper
1	(Intercept)	5.23	0.40		13.02	< .001	4.43	6.03
	ATTITUDE	-0.05	0.05	-0.11	-1.06	0.29	-0.15	0.05

*Note.*  $R = 0.11$ ,  $R^2 = 0.01$ , Adjusted  $R^2 = 0.001$ , RMSE = 0.92, Durbin-Watson = 1.91, N = 89

A Pearson correlation coefficient was computed to assess the relationship between attitudes toward same-sex sexual relationships and psychological well-being. There was a nonsignificant and weak negative,  $r(95) = -.11$ ,  $p = .29$ , correlative relationship between ATTITUDE and WELLBEING scores among individuals with reported same-sex sexual partners. The Durbin-Watson score (see Table 7) within the linear regression summary fell within the acceptable  $1.5 < d < 2.5$  range, indicating that the model met regression assumptions of non-collinearity. However, the model itself revealed a nonsignificant relationship between ATTITUDE and WELLBEING ( $t(88) = -1.06$ ,  $p = 0.29$ ), with the ATTITUDE variable explaining only 1.2% of the variance in WELLBEING values ( $R^2 = 0.012$ ). Results indicated that a quantitative relationship could not be established between an individual's attitudes toward

same-sex sexual relationships and gay marriage, and their psychological well-being. Thus, the null hypothesis of Research Question 1 was retained.

### Research Question Two

To address Research Question 2, a binary logistic regression with ORNTSCORE as the binary dependent variable, and the WELLBEING score as the covariate of interest, was conducted. The results of the binary logistic regression are summarized in Table 9.

**Table 9**

*Binary Logistic Regression Summary*

	Estimate	Standard Error	Odds Ratio	z	p	95% Confidence interval	
						Lower bound	Upper bound
(Intercept)	3.34	1.60	28.29	2.08	0.04	0.20	6.49
WELLBEING	-0.40	0.32	0.67	-1.28	0.20	-1.03	0.22

*Note.* Model Deviance = 96.90, AIC = 100.90; BIC = 106.04,  $X^2(95) = 1.82$ ,  $p = 0.18$ , -2 Log likelihood = 0.000, McFadden  $R^2 = 0.02$ ; ORNTSCORE level '1' coded as class 1.

The results of the logistic regression showed that there was no significant quantitative relationship between an individual's self-identification as lesbian, gay, bisexual, or heterosexual and their general happiness ( $z = -1.28$ ,  $p = 0.20$ ). The intercept term in the logistic regression was significant ( $p = 0.037$ ). Applied, this means that an individual with same-sex sexual partners who identified incongruently as heterosexual had a WELLBEING value of 3.32 at 28.2-to-1 odds. In other words, an individual with same-sex sexual partners who self-identified as straight or heterosexual was 28 times more likely to have a WELLBEING score of 3.32 than an individual with same-sex sexual partners who self-identified as lesbian, gay, or bisexual. However, the effect size of this observation was negligible. The odds ratio for the observation, while

significant, was still quite high, and the 95% confidence interval of the intercept estimate encompassed the entire possible WELLBEING range (see Table 9). Additionally, no other term in the equation was found to be significant, meaning an individual's WELLBEING score cannot be reliably used to predict whether they congruently self-identify as lesbian, gay, or bisexual. The relatively low AIC and BIC values for the model (see Table 9) indicated a proper model fit. However, since the only variables of interest for Research Question 2 were already used in this model, the AIC and BIC values cannot be used to compare against an alternative model. Based on the total findings from the binary logistic regression, the null hypothesis of Research Question 2 was retained.

### Research Question Three

To address Research Question 3, a one-way ANOVA was conducted comparing average WELLBEING scores among the four groups separated by the variable ID/ATTITUDE. A summary of average scores separated by ID/ATTITUDE is displayed in Table 10. Results of the one-way ANOVA are shown in Table 11. A boxplot describing the distribution of WELLBEING values separated by ID/ATTITUDE is shown in Figure 1.

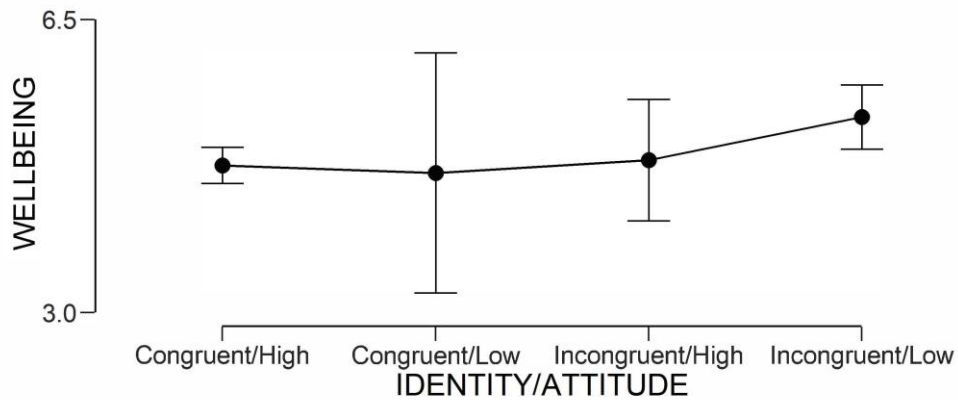
**Table 10**

*Descriptive Summary of WELLBEING Values Separated by ID/ATTITUDE*

	WELLBEING			
	Congruent/High	Congruent/Low	Incongruent/High	Incongruent/Low
Valid n	74	3	11	9
Missing	0	0	0	0
Mean	4.76	4.67	4.82	5.33
Std. Deviation	0.93	0.58	1.08	0.50
Minimum	2	4	2	5
Maximum	6	5	6	6

**Table 11***ANOVA Table for Average WELLBEING Values Between Groups of ID/ATTITUDE*

Cases	Sum of Squares	df	Mean Square	F	p
IDENTITY/ATTITUDE	2.74	3	0.91	1.09	0.36
Residual	77.93	93	0.84		

**Figure 1***Distribution of WELLBEING Values Separated by ID/ATTITUDE*

Levene's test revealed a non-significant ( $F(3, 93) = 0.70, p = 0.55$ ), indicating that the dataset does not violate the ANOVA assumption of equality of variances among groups. Non-significance of the Levene's test indicated equality of variances among groups. Therefore, the original ANOVA was maintained without performing a non-parametric test of Kruskal-Wallis, as the dataset was not shown to be non-parametric. The ANOVA revealed no significant differences in average WELLBEING values among the four groups of ID/ATTITUDE (Table 11,  $F(3, 93) = 1.09, p = 0.36$ ). Average WELLBEING scores were highest among individuals who incongruently identified as heterosexual and had low ATTITUDE scores, although the standard errors of each group kept the differences from being statistically significant (Figure 1).

Because of these non-significant differences among individuals within the ID/ATTITUDE variable, null hypothesis of Research Question 3 was retained. The current analyses indicated that identity and attitude congruence, as categorized by the present study, did not influence psychological well-being.

### **Summary**

The purpose of Chapter 4 was to conduct tests addressing a gap in the literature regarding the possible connection between sexual behavior/identity/attitude congruence and well-being among individuals who reported engaging in same-sex sexual behavior. Previous theories (Festinger, 1957; Rogers, 1961) postulate that when individuals engage in identity-incongruent behavior, distress can occur; however, no study has applied these theories directly to the psychological well-being of individuals with same-sex sexual partners. Therefore, the following research questions were created to guide the method and analyses:

RQ<sub>1</sub>: Within the sample of individuals who report same-sex sexual partners in the last year, is there a relationship between an individual's attitudes toward same-sex behavior and their psychological well-being?

RQ<sub>2</sub>: Within the sample of individuals with reported same-sex sexual partners in the last year, will congruent self-identification as lesbian, gay, or bisexual increase an individual's probability of high psychological well-being?

RQ<sub>3</sub>: Within the sample of individuals engaging in same-sex sexual behavior within the past year, is there a difference in well-being scores based on attitudes and self-identity?

Through the use of correlation analysis, linear regression, binary logistic regression, and one-way ANOVA, the researchers were unable to reject the null hypotheses of all three research

questions. Using the GSS dataset with qualified individuals from 2010-2016, there were no significant differences in well-being scores among individuals based on their attitude toward same-sex relationships and self-identification, nor was there an observable quantitative relationship between an individual's congruency of self-identification and attitudes, and their psychological well-being. While Chapter 4 outlined the results of the analyses, Chapter 5 builds and interprets these results. The findings will be presented within the context of the greater body of literature, and limitations to the current study and suggestions for future research will be outlined.



## **Chapter 5**

### **Discussion**

The following chapter summarizes the findings of the current study and offers interpretations and implications for these findings. Unique contributions of this study are outlined, followed by a description of possible limitations. Finally, future directions for research are provided.

#### **Summary of Study Findings**

The current study explored the relationship between sexual identity, behavior, and attitude congruence and psychological well-being among a sample of individuals who reported engaging in same-sex sexual behavior within the past year. The following research questions were examined:

RQ<sub>1</sub>: Within the sample of individuals who report same-sex sexual partners in the last year, is there a relationship between an individual's attitudes toward same-sex sexual behavior and their psychological well-being?

RQ<sub>2</sub>: Within the sample of individuals with reported same-sex sexual partners in the last year, will congruent self-identification as lesbian, gay, or bisexual increase an individual's probability of high psychological well-being?

RQ<sub>3</sub>: Within the sample of individuals engaging in same-sex sexual behavior within the past year, is there a difference in well-being scores based on attitudes and self-identity?

#### ***Research Question One***

The first hypothesis theorized that sexual behavior and attitude congruence, in which an individual with reported same-sex sexual partners holds positive attitudes toward same-sex

sexual behavior and relationships, would predict higher levels of psychological well-being than sexual behavior and attitude incongruence. As reported in the Results chapter, a statistically significant positive correlative relationship between attitudes toward same-sex sexual behavior and psychological well-being was not found. This research question attempted to address a gap in the current literature, as to date, no research exists examining the relationship between sexual behavior and attitude congruence and psychological well-being. A significant body of literature has explored the effects of negative attitudes toward same-sex sexual behavior and relationships, such as sexual prejudice (Herek, 2004) and heterosexism (Meyer, 1995). Additionally, researchers have explored the impact of internalized heterosexism, in which sexual minority individuals hold beliefs similar to society's negative and shameful views of same-sex sexual behavior and relationships (Szymanski et al., 2008).

However, little research exists that has explored the impact of positive beliefs and attitudes about same-sex behavior and relationships; the majority of the literature in this area has explored the positive effects associated with the beliefs that others hold about sexual minorities, such as therapists' affirming attitudes (Alessi et al., 2015; Kilgore et al., 2005) and parental attitudes and acceptance (Feinstein et al., 2014; Ryan et al., 2010; Savin-Williams, 1989). Finally, while attitude-behavior congruence has been explored extensively within social psychology (Fazio & Zanna, 1981; Scott & Willits, 1994; Weigel et al., 1974; White et al., 2002), it has not been examined within the sexuality literature.

### ***Research Question Two***

The second research question in this study posited that sexual behavior and identity congruence, in which a person with reported same-sex sexual partners congruently identified as either lesbian, gay, or bisexual, will increase an individual's probability of high levels of

psychological well-being. This hypothesis was also not supported by current findings. In the current study, self-identification as lesbian, gay, or bisexual was not found to be significantly related to psychological well-being. In addition, an individual's well-being scores could not be used to predict whether or not they congruently self-identified as lesbian, gay, or bisexual. These findings contradict previous research findings, as a prior study focusing on congruence documented that women whose recent sexual partners were congruent with the participant's sexual identity reported fewer mentally unhealthy days (Schick et al., 2012). Additionally, Baunach and Burgess (2013) found that sexual behavior/identity incongruence was associated with negative homosexuality attitudes, when examining the relationships between sexual identity and sexual behavior, and traditional men's roles attitudes, negative homosexuality attitudes, and contact with the LGBT community.

The discrepant findings may be due to the use of different samples, measures, and timeframes to assess sexual behavior. Baunach and Burgess (2013) utilized a convenience sample of undergraduate sociology students, with a median sample age of 21. Schick and colleagues (2012) measured sexual behavior in the past 30 days, whereas the current study asked about sexual partners in the past year. It is possible that individuals with incongruent sexual identity and behavior do not experience prolonged dissonance and distress, but that the negative consequences are present only when the incongruence was recently experienced, such as shortly after incongruent sexual behavior. This is consistent with cognitive dissonance theory (Festinger, 1957), which proposes that individuals who experience high levels of cognitive dissonance utilize strategies to reduce the resulting distress (Festinger, 1962; Stone & Cooper, 2001).

### ***Research Question Three***

The final research question in this study sought to examine the relationship between sexual behavior, identity, and attitude congruence, and theorized that among the sample of individuals engaging in same-sex sexual behavior, individuals who congruently identify as lesbian, gay, or bisexual and also have congruent (positive) attitudes about same-sex behavior and relationships, will have higher average psychological well-being scores than those individuals who have incongruent identities and/or attitudes. This hypothesis was not supported, as there were no significant differences in average well-being scores between the group of individuals with congruent identities and attitudes, and the individuals with incongruent identities and/or attitudes.

As was noted in earlier chapters, the current study is the only study known to the researchers that examined the relationship between sexual identity, behavior, and attitude congruence and psychological well-being, though a significant body of research exists on the negative impact of sexual incongruence (Herek et al., 2009; Lourie & Needham, 2017; Szymanski, 2005b).

### **Understanding Study Findings**

Based upon the findings of previous studies, researchers in the current study expected to find: (1) a positive relationship between attitudes toward same-sex behavior and psychological well-being, (2) that congruent self-identification increased the probability of high levels of well-being; and (3) a difference in well-being scores based on congruence of both sexual identity and attitudes. However, the researchers were unable to reject the null hypotheses. Possible explanations to understand the lack of findings are discussed, including dissonance reduction and the timing of dissonant events.

Given that incongruence between a person's behavior and their identity or attitudes can be associated with cognitive dissonance (Festinger, 1962; Harmon-Jones, 2000; Stone & Cooper, 2001), it is possible that individuals with incongruent sexual behavior, identity, or attitudes utilized strategies to reduce the dissonance and accompanying psychological distress (Elliot & Devine, 1994; Stone & Cooper, 2001). Festinger (1957) originally proposed three primary modes of dissonance reduction, including a) changing one or more of the dissonant elements, b) adding a new consonant element, and c) minimizing the importance of one or more of the dissonant elements. More recent research has explored the role of social support in dissonance reduction (McKimmie et al., 2003), denial of responsibility (Gosling et al., 2006), trivialization (Simon et al., 1995), cognitive restructuring (Leippe & Eisenstadt, 1999), as well as how dissonance may be decreased when an individual considers the standards against which their behavior may be compared (Stone & Cooper, 2001). If participants in the current study utilized dissonance reduction strategies, then the accompanying psychological distress would likely decrease, providing an explanation for the lack of observed difference in psychological well-being among congruent and incongruent individuals.

However, while it is not possible to conclude what, if any, of the aforementioned strategies were used by participants to mitigate dissonance, dissonance reduction strategies offer a way of interpreting the current findings. For example, several studies have documented participants' successful utilization of dissonance reduction strategies. McKimmie and colleagues (2003) conducted an experiment in which feelings of hypocrisy were induced in participants in experimental conditions of behavioral support and nonsupport. Participants with no support from their in-group showed the greatest dissonance reduction through attitude change and reduced levels of group identification. Gosling and colleagues (2006) conducted three experiments in an

effort to understand the role of denial of responsibility as a method of dissonance reduction. They found that participants utilized the mode of dissonance reduction that was made available to them first, and that denial of responsibility, when used as dissonance reduction strategy, reduced negative affect. A study by Harmon-Jones (2000) induced dissonance in participants who liked chocolate. Participants were first asked to eat a piece of chocolate, and then in a high or low-choice condition, wrote a statement indicating their dislike of chocolate. Harmon-Jones observed an attitude change in the participants in the high-choice condition, as they changed their attitudes to dislike the chocolate. Another notable finding of this study was that participants reported increased negative affect following the writing exercise, which subsided following the attitude change. Finally, Elkin and Leippe (1986) found that dissonance, as measured through galvanic skin response, did not decline after an opportunity for an attitude change, but rather when participants forgot about the dissonance. Similarly, Zanna and Aziza (1976) found that distraction was an effective dissonance reduction strategy. Thus, participants in this study may have experienced dissonance in their attitudes and behavior but subsequently used strategies to avoid experiencing prolonged discomfort.

While dissonance reduction strategies have been well documented in the literature, there are limitations, as variables such as the timing of dissonant events may impact findings. For example, the majority of studies on cognitive dissonance and dissonance reduction take place in a lab environment, utilizing methods such as an induced compliance situation (Gilovich et al., 1995; Harmon-Jones et al, 1996; Jarcho et al., 2011; McGrath, 2017; McKimmie et al., 2003), and often prescribing the dissonance reduction strategy to the participant. This research design enables researchers to measure the psychological distress or arousal resulting from cognitive dissonance soon after the dissonance occurs, and to manipulate or observe the methods of

dissonance reduction that participants utilize. The current study's procedure differed from this model, and as a result, researchers were unaware of when the dissonant behaviors or cognitions took place during the past year. The effect of dissonant events that occurred months prior to data collection may not have been captured by the study measures, as changes in psychological well-being may have been limited in duration, or more recent events in the participants' lives may have overshadowed the dissonant event's impact on psychological well-being. In other words, if dissonant events or cognitions took place several months prior to data collection, then the resulting psychological distress may have resolved or been ameliorated by more recent events, thus negating any difference in psychological well-being between the congruent and incongruent participants. In a similar study, Ketz and Israel (2002) failed to find a significant relationship between women's sexual behavior and identity congruence and perceived wellness, and theorized that individuals may not experience constant distress as a result of incongruence, but that the distress may be experienced during times when the incongruence is more apparent, such as during sexual behavior with a partner whose gender is not congruent with one's sexual identity.

Finally, it is also possible that the survey items used to assess psychological well-being, a single item measure of happiness and an item in which respondents reported how many days during the past 30 days their mental health was "not good" did not accurately measure congruence and incongruence. The reliability of WELLBEING was poor, and therefore it is possible that the two items used, the single item measure of happiness and the reported days of "not good" mental health, were too dissimilar. The survey did not include items about prior mental health diagnoses, or other conditions, beyond congruence, that might impact participants' mental health in the past month. A wealth of research has explored various predictors of

happiness, such as relationship satisfaction, extraversion, and health (Argyle, 1999; Biswas-Diener & Diener, 2006; Clark & Oswald, 2002; Diener & Diener, 2009; Lyubomirsky et al., 2005; Suh & Choi, 2018). Since happiness, mental health, and psychological well-being are not solely influenced by sexual behavior, identity, and attitude congruence, other factors may have exerted more influence on these variables, therefore overshadowing the positive effects of congruence.

The current study may have faced a challenge similar to one faced by cognitive dissonance researchers. Early cognitive dissonance studies inferred that dissonance occurred based on the participants' actions, as they lacked concrete methods for measuring the psychological discomfort that Festinger (1957) theorized. For example, Festinger and Carlsmith (1959) explored whether performing a dull task could create cognitive dissonance through forced compliance, and found that participants who were paid \$1 rated the task as more fun and enjoyable than those that were paid \$20 to lie. In that study, and many others designed in similar fashion, dissonance was not specifically measured, but rather inferred through the participants' attitudes. Several studies have explored whether the arousal hypothesized to exist within cognitive dissonance can be measured, and have utilized methods such as heart rate and skin conductance (Croyle & Cooper, 1983; Elkin & Leippe, 1986; Etgen & Rosen, 1993; Harmon-Jones et al., 1996). Congruence is a similarly difficult concept to quantify, as participants can be labeled by researchers as congruent or incongruent based on self-reported behavior, identity, and attitudes, while their inner experiences are more elusive.

Finally, a significant body of studies has provoked dissonance in participants through designs such as the induced compliance paradigm and documented the participants' utilization of a dissonance reduction strategy. However, these studies lack generalizability, as they are often a



single session in a laboratory setting. To this author's knowledge, no studies to date have examined how individuals respond when confronted with the same dissonance-inducing situation on a repeated basis. More research is needed in this area to determine if, for example, repeated discordant experiences make people more effective at reducing dissonance.

### **Limitations**

As with all research, there were limitations to the current study. While the GSS is a nationally representative sample of U.S. adults over the age of 18, the majority of the respondents in this study were White. The experiences of racial and ethnic minority individuals are likely different from those of White individuals, as studies have found that experiences of discrimination and poverty, such as those experienced by racial and ethnic minority group members, make it more difficult to identify as a sexual minority (Froyum, 2007; Rosario et al, 2004). Additionally, due to higher levels of discrimination toward sexual minorities in some racial or ethnic communities, members of those groups may be less likely than White individuals to identify as lesbian, gay, or bisexual (Pitt, 2010; Rosario et al., 2004; Savin-Williams, 2001). Therefore, a need exists for increased numbers of respondents from various racial and ethnic minority groups.

A second limitation of the current study is the lack of measurement of sexual attraction. The current body literature on sexual orientation supports a multi-dimensional view of sexual orientation, often consisting of attraction, behavior, and identity (Pega et al., 2013; Savin-Williams & Ream, 2007; Sell & Silenzio, 2006). Recent research from Baldwin and colleagues (2017) demonstrated that attraction was an important factor in how many of the participants self-identified. The current study did not inquire about respondents' attraction as a component of sexual orientation, and it is possible that this limited our understanding of respondents' sexual

identities, and the relationship between identity and psychological well-being. An additional limitation of the current study was the fixed-response items, which forced respondents to identify their sexual identity in ways prescribed by the GSS. It is possible that this approach limited, misclassified, or overlooked individuals who do not utilize the lesbian, gay, bisexual, or straight labels, or who identify with multiple labels.

### **Future Research**

Though a significant body of literature exists regarding sexual incongruence and associated negative outcomes, research regarding sexual congruence, particularly sexual identity, behavior, and attitude congruence, is still a relatively small area of study. Future research may explore sexual identity, behavior, and attitude congruence in a qualitative design, which could enable researchers to inquire more broadly about the impact of congruent and incongruent sexual events. Future research would also benefit from including additional measures to gauge levels of dissonance. As was noted earlier, it was not clear in this study whether individuals were actually experiencing dissonance; thus, measuring dissonance of participants would be extremely valuable. Finally, future research may benefit from longitudinal studies. For example, from 1973 to 2014, public acceptance of same-sex sexual behavior has increased from 11% to 49% (Twenge et al., 2016). This cultural change likely impacts the level of dissonance experienced by individuals in the sense that the climate in the United States may be more accepting for sexual minorities. However, to determine whether less dissonance is experienced in the current climate and culture is purely conjecture at this time, and further research will help clarify the role of culture on and individuals' level of dissonance.

**Conclusion**

While the current study did not find a significant relationship between attitudes toward same-sex behavior and psychological well-being, that congruent self-identification increased the probability of high levels of well-being, or a significant difference in well-being scores based on congruence of both sexual identity and attitudes, it does add to the current body of literature on sexual congruence and incongruence. Additionally, this study attempted to explore the constructs of interest from a positive perspective, congruence and well-being, as opposed to the more negative perspectives of incongruence and psychological distress or impairment.

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