University of Nevada, Reno

Functional Specificity in the Minority Stress Model: 
The Influence of Network Characteristics on Mental Health in 
Lesbian, Gay, or Bisexual Individuals Under Age 35

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Abstract

Though the minority stress model has been frequently tested in literature related to LGB health, the mechanisms through which individual social network composition impacts social support, and thereby mental health, have not been widely explored. To better understand the mechanisms at play in the minority stress model this study uses the concept of functional specificity in core discussion networks (CDNs). This theory, proposed by Perry and Pescosolido (2010) rests on the assumption that the discussion networks individuals utilize depend, in large part, on the stressors faced. By integrating the theory of functional specificity and minority stress this work tests the assertion that LGB individuals have functionally specific CDN to address stressors related to their minority sexual identity. Additionally, the characteristics of this network (i.e., homophily with regard to sexual orientation identity) moderate the degree to which these functionally specific CDNs impact mental health. Results of this project provided additional weight to the assertion that each sexual orientation identity is unique in terms of the manner in which the network characteristics and perceived social support buffer minority stress. Identity prominence and identity valence, collectively referred to as minority identity characteristics, are shown to have a relationship with social support. The original minority stress model did not predict this relationship, nor the result indicating minority identity has different effect on perceived social support within the general important matters network and the sexuality-related stressors network. Additionally, this work provides support for the assertion that network characteristics are an important factor to consider when looking at the effectiveness of community as a
moderator of minority stress. Closeness, frequency of contact, and homophily had an impact on mental health directly, as well as a moderating impact on minority stressors. In particular, homophily was shown to have a negative effect on mental health and well-being for bisexual females, whereas homophily was shown to have a positive effect on mental health and well-being for gay males. Finally, support was added to the functional specificity hypothesis by showing LGB individuals utilize different individuals for dealing with sexuality-related stressors. The sexuality-specific stressor network contains unique nodes not present in the general important matters network. This result suggests LGB folks turn to a specific group of individuals for support with sexuality-related issues. Moreover, there are individuals who provide support for general important matters who are not utilized when LGB folks are faced with sexuality-specific stressors. Finally, the proportion of LGB individuals within the sexuality-specific network is higher than the proportion of LGB individuals in the general important matters network.
Dedication

To my LGBTQIA brothers and sisters…your strength, beauty, and diversity constantly awe and inspire me. Thank you!
Acknowledgements

A gigantic chunk of my dissertation focuses on understanding the impact one’s social network has on their life. When I turn the lens around and look at my own life, it comes as no surprise that my social network was crucial to the completion of this work and my trek through graduate school.

Thanks are due to my committee; I am hard-pressed to think of five individuals to whom I would rather entrust my development as a researcher and scholar. To my advisor, Dr. Marta Elliott, your guidance, both personal and professional, was a major driver in the successful completion of this project and my successful completion of this program. Thank you for everything. To Dr. Mariah Evans, your mentorship started in the first semester of my first year in this program. My quantitative skills, both practical and pedagogical, are due to the advice and opportunities you have afforded me, and I am forever grateful for your guidance. To Dr. Clayton People, I never expected to find someone in the program that shared my love of looking up. Our conversations during meteor showers, watching the beautiful Nevada sky, are some of my favorite memories of graduate school – thank you for being a great mentor and friend. To Dr. Paul Devereux and Dr. Anthony Papa, your advice, questions, and suggestions during the formative stages of this endeavor made the project what it is, and I will always be thankful for your insights.

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Finally, I need to thank my friends and colleagues. To Jenny and Vicky for the hours spent as a sounding board for my life, and a font of Real Talk when I need it – I can never repay what you have given me. Sushi is on me for the rest of my life! To Erica, Beth, and Sarah, I can’t remember a time when you weren’t in my life. Your ability to let me slip right back into our friendship after months of silence is something that made everything a little easier to bear. And, last but not least, to the supporting cast of characters (in order of appearance): Bridgit, Brian, Cheryl, Kristy, Megan, Mike, Angela, Alicia, Cat, and Brian – you have each been there for me numerous times during this ordeal. We have laughed, bitched, and drank together, I am grateful for your time, your advice, and your friendship.

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Chapter 1 - Introduction

In June of 2013 the Supreme Court of the United States drastically changed the social geography for lesbian, gay, and bisexual (LGB) individuals. In *United States v. Windsor*, the Court affirmed a Second Circuit ruling, which held that the 1996 Defense of Marriage Act, which recognized federal marriage as a union between opposite-sex partners only, deprived same-sex couples of their Fifth Amendment rights to equal protection under the Due Process Clause. Exactly two years later, in June of 2015, the Supreme Court continued on the path set by the *Windsor* decision; in *Obergefell v. Hodges*, the Court reversed a Sixth Circuit ruling, which held that the State of Ohio had no constitutional obligation to recognize or allow marriage between individuals of the same sex. In the wake of these decisions LGB individuals won a long-fought battle for marriage equality. It may seem that this sea change improved the lives of LGB dramatically. However, this belief is an error.

This dissertation straddles the period of time after the *Windsor* decision and before the *Obergefell* decision, a period in which, legally, society was quickly changing in a positive way for many LGB individuals. However, the health and well-being of LGB individuals, both during this time and prior to it, has not been as positive. In the most extreme case LGB individuals are among the most likely victims of hate crime within the U.S. (Park & Mykhyalyshyn, 2016). The Federal Bureau of Investigation’s (FBI) Uniform Crime Report (UCR) issues yearly statistics regarding hate crimes, which include a ranking of single-bias hate crimes (e.g., FBI, 2015). Reports from 2013 to 2015 show LGB victims account for roughly 20% of all reported hate crimes in the U.S. (FBI, 2013, 2014, 2015). These hate crimes range from crimes against property (e.g.,
destruction of property) to crimes against the person (e.g., assault, rape, murder). This physical violence is not constrained to adults, rather it persists through adolescence and into adulthood. Young LGB individuals report higher levels of bullying and physical violence than heterosexual counterparts (Centers for Disease Control and Prevention [CDC], 2011). In addition, between 11% and 30% of LGB youth were likely to skip school because they were concerned for their safety and well-being (CDC, 2011).

Hate crimes and violence serve as an (extreme) example of the degree to which LGB individuals are exposed to stressors in society. These external stressors have been linked to health disparities that occur in LGB individuals. For example, the American Association of Suicidology (AAS) reports gay males as six times more likely to attempt suicide than straight counterparts, whereas lesbians are two times more likely to attempt suicide than straight counterparts (AAS, nd). The stressors experienced by LGB individuals have also been linked to increased rates of psychological distress, depression, and risky behavior (e.g., excessive substance abuse and unsafe sexual practices; Coker, Austin, & Schuster, 2010).

Yet there are some signs of improvement. LGB adolescents who attended schools that had gay-straight alliances for at least three years reported fewer suicidal thoughts than LGB adolescents at schools without gay-straight alliances (Saewcy, Konishi, Rose, & Homma, 2014). In addition, support from parents and friends has shown to be critical to both current and future health and well-being (Ryan, Huebner, Diaz, & Sanchez, 2009). These individuals provide social support that seems to mitigate the impact of stress on LGB individuals, however the mechanism through which this works is not completely understood. This project focuses on illuminating how the social networks and
social support of LGB individuals impact the effects of stress on mental health and well-being.

In the past decade-and-a-half much research has been done on the health status of LGB individuals. Despite differences in measurement, sample size, sample composition, and operationalization of terms, several relatively robust findings emerge from this literature. In the following sections the findings will be briefly discussed and a critique will be offered regarding the shortcomings apparent in this body of research.

One of the most important and robust items in the literature concerning the physical and mental health of LGB individuals is quite simple: the categories/identities/orientations that make up what is colloquially called “sexual orientation” are more complex than originally anticipated. In the seminal report on the health and well-being of LBGT individuals, the Institute of Medicine (IOM) recommends a three-question approach to assessing sexual orientation (2011) that distinguishes among identity (straight, gay, lesbian, bisexual), attraction (e.g., same-sex, opposite-sex, or both) and behavior (sex with same- or opposite-sex individuals). The need for these distinctions is underscored by variation in findings for these various groupings. When a particular outcome occurs for gay males, lesbians, and bisexuals, the size of the effect is often significantly different between the three groups. Thus, distinguishing among identity, attraction, and behavior is necessary because health factors that impact the lives of gay males do not always impact the lives of lesbians or bisexuals. Nor do these factors always impact the health of straight-identified men who have sex with other men. Similarly, mental health concerns of bissexuals are not always relevant to the mental health of gay males and lesbians, or to individuals who do not identify as bisexual but have a history of
sexual behavior with both sexes. When a particular outcome does occur for gay males, lesbians, and bisexuals the size of the effect is often significantly different between the three groups. In addition, due to failings in the literature to date, this project takes seriously the recommendation found in the IOM Report on the Health of LGB People, a guiding document in the field of health disparities within the LGB community, which contends:

…the committee wishes to highlight the importance of recognizing that the various populations represented by “L,” “G,” “B,” and “T” are distinct groups, each with its own special health-related concerns and needs. The committee believes it is essential to emphasize these differences at the outset of this report because in some contemporary scientific discourse, and in the popular media, these groups are routinely treated as a single population under umbrella terms such as LGB…Whereas “LGB” is appropriate and useful for describing the combined population of lesbian, gay, bisexual, and transgender people, it also can obscure the many differences that distinguish these sexual-and gender-minority groups. Combining lesbians and gay men under a single rubric, for example, obscures gender differences in the experiences of homosexual people. Likewise, collapsing together the experiences of bisexual women and men tends to obscure gender differences (IOM, 2011, p. 11-13).

Therefore, to avoid the reductionist thinking IOM highlights throughout its report, this dissertation treats lesbians, gay males, bisexual males, and bisexual females as distinct groups to be analyzed separately. Since research is lacking that analyzes lesbians, gay males, bisexual males, and bisexual females as distinct groups, there is little basis for direct comparison of the four groups for given dependent variables. This necessitates, at best, comparisons across studies, and at worst, the assertion that sexual orientation identities ought to be analyzed as distinct groups as a means of revealing health outcomes that are, and are not, variable by sexual orientation identity.
Properly assessing mental and physical health outcomes depends on having an adequate number of individuals who exhibit each set of identity-behavior-attraction characteristics. However, even when utilizing large-scale, nationally representative, probability samples that ask at least one question from each of the three domains (identity, behavior, attraction), obtaining an adequate size for each set of identity-behavior-attraction characteristics seldom occurs. The only national survey to currently utilize the three-pronged identity/attraction/behavior question set to obtain a complete picture of sexual orientation is the National Survey for Family Growth (NSFG). However, this survey is designed to elucidate family health and relationships in Americans between the ages of 15 and 45, and thus is not truly representative. Because the NSFG did not set out to sample or oversample LGB individuals, the subsamples are too small for robust statistical analyses. As such, more complicated or specific analyses regarding the prevalence of behaviors or health outcomes within a given identity-behavior-attraction group can be drastically underpowered (Meyer, 2003). Therefore, an additional concern when looking at LGB health has to be the quality of the statistical evidence and the appropriate interpretation of the data.

The quality of any statistical result is only as good as the research methodology that produces it. In this arena, studies related to LGB populations encounter problems due to sampling and operationalization concerns. Because research often utilizes only one of the identity/attraction/behavior questions when operationalizing who is LGB for the purpose of the study, the results frequently lack generalizability beyond the study sample, or a very narrowly defined group matching the identity, attraction, or behavior composition of the sample. Additionally, small cell size makes comparisons of sexual
orientation by other characteristics (e.g., race, specific drug use, religious denomination) difficult if not impossible even when the initial/screening sample is quite large.

A clear example of the cell-size, sampling, and operationalization dilemma can be found in a recent study on same-sex families conducted by sociologist Mark Regnerus (2012). In this study of same-sex families, researchers chose to identify same-sex parents using a behavioral question (whether respondent’s parents ever engaged in a same-sex relationship). This operationalization was chosen, in part, to increase cell sizes from a nationally representative sample of adult respondents. With the loose inclusion criteria of parental behavior, the New Family Structures Study yielded 5.6% of respondents with a mother who had history of at least one single same-sex relationship, and 2.5% of respondents with a father who had a history of at least one single same-sex relationship. Because of the small size of each group, important factors such as duration of parental same-sex relationship and family stability could not be taken into account. In addition, due to operationalization of the target population, the identity and identity salience of a respondent’s parents was not considered. Thus, due to poor operationalization and limited sample size, state-of-the-art sampling methodology still yielded a study with no generalizability and very few substantive findings.

Bearing in mind the practical and theoretical problems that exist in the study of LGB individuals, this dissertation builds on one of three suggested theoretical frames outlined by the IOM for understanding and analyzing the health and mental health outcomes of LGB individuals (2011): the minority stress model. In the following chapter, a conceptual model will be presented that offers additional factors to consider when looking at the moderating role of social support on the effect of stress on mental health.
This dissertation rests on an assertion that individuals have different social networks they turn to for different stressors they encounter. Furthermore, the social support from each social network will moderate the effect of stress on health to differing degrees. Finally, the structure of each social network – how close / similar the respondent is to the individuals in their network – will influence the moderating effect of social support on mental health.

Chapter 2 contains a review of the minority stress model. As one of the dominant paradigms used to study how sexuality-related stress impacts the lives of LGB individuals, this model has been widely tested. However, there is a lack of research into the role of social support posited in the model, as well as the argument that the model may apply differently for separate sexual orientation identities.

Chapter 3 contains a review of social network research. This chapter begins with an overview of how human social networks are structured, how networks function for adolescents, and the impact of networks on health and well-being. The chapter turns to functional aspects of networks, chiefly homophily (i.e., the degree of sameness in a network) and social isolation. Finally, the chapter ends with a discussion of the functional specificity hypothesis, which serves as one of the main foci of this dissertation.

Chapter 4 describes the conceptual model used in this dissertation, highlighting both the similarities and differences between the conceptual model and the original minority stress model. The chapter ends with a discussion of the two research questions and eleven hypotheses central to this dissertation.
Chapter 5 details the methods of data collection and data preparation. Included in this chapter is a thorough discussion of the population of interest and the procedure for obtaining the sample of LGB individuals central to this dissertation.

Chapter 6 explains the items collected via the survey instrument created for this project. For each construct, the question items will be discussed, as will factor structure. Finally, this chapter will end with a discussion of the methods of analysis for the hypotheses discussed in Chapter IV.

Chapter 7 contains the results of the hypotheses in this dissertation. The results of each hypothesis will conclude with a short discussion, highlighting whether the hypotheses were supported or not supported.

Chapter 8 focuses on the patterns of results present in the project as a whole. Of particular interest is the degree to which the results, not all of which conform with the study hypotheses, inform the assertions of the minority stress model and the functional specificity hypothesis. In addition, limitations to this dissertation will be discussed, as will avenues for future work.
Chapter 2 – Minority Stress Theory

Stress and Health

The social environment for LGB individuals living in the United States has changed dramatically over the past 30 years. Changes in public policy and civil liberties, particularly in the past five years, have been significantly more inclusive to LGB individuals. But, progressive public policies do not always trickle down to civil or respectful social interactions. For example, LGB individuals in Canada – arguably significantly more progressive vis-à-vis LGB public policy over the past 30 years than the United States – still note significant discrimination and expressions of stigma in their interactions with others, and that stigma and discrimination has a measurable impact on their physical and mental health (Dysart-Gale, 2010). With this in mind the following discussion makes connections between stress (in the form of prejudice/discrimination) and psychological distress in LGB individuals, beginning with an overview of the role of stress in LGB health.

Understanding the role of stress and health within any distinct population requires a working model for defining how stress influences the individual, ultimately resulting in changes in mental health. Meyer (2003) clearly outlines a model for describing how minorities are influenced via stressors they encounter by virtue of minority status (see Figure 2:1). The Institute of Medicine (IOM) recognizes Meyer’s minority stress model as one of the four preferred methods for analyzing and understanding how prejudice and discrimination impact the health and well-being of LGB individuals (IOM, 2011).
The minority stress model posits that individuals who have a minority status (e.g., sexual orientation, race/ethnicity, gender; box b) are subject to additional stressors directly related to the minority status (boxes d and f). Some of the stressors arise from being perceived by the larger society as a member of a minority group, and thus subjected to some forms of stigma and/or prejudice (box d). Other stressors arise from an individual’s self-identification as a member of a minority (box e) and are more internal (e.g., fear of rejection or identity concealment; box f). These minority stressors directly impact mental health outcomes of individuals (box i) by adding to the general stressors that one encounters throughout life (box c). Within the minority stress model, stressors can be moderated by 1) social support (box h), which itself is influenced by minority identity, and 2) the prominence, valence, and integration of the minority identity (box g; though
this only applies to proximate stressors). Identity prominence is the degree to which an individual’s LGB identity is important to them, identity valence is the positive or negative feelings a respondent has toward LGB identity, and integration is the degree to which one’s LGB identity has become part of their self-concept.

Central to the argument of minority stress is the idea that minority stressors 1) occur in addition to the stressors experienced by all people (i.e., they are not the general stressors that all individuals’ experience); 2) are chronic; and 3) do not stem from the individual, but rather from society. Minority stressors come in two forms: proximal stressors and distal stressors.

Distal stressors are objective stressors and do not depend on an individual self-identifying with the minority status. Examples of distal stressors would be prejudice and discrimination, as well as the verbal and physical violence faced by many minority groups. Distal stressors arise from an individual’s environment – the victim’s actual identity status is not a necessary component or consideration for distal stressors. In other words, a woman who has sexual relations with another woman can be subject to prejudicial actions (e.g., slurs such as “dyke”) even if she personally identifies as bisexual or straight.

Proximal stressors require the individual to self-identify with the minority status. Proximal stressors are internal to an individual and arise, in part, because the individual identifies as a member of the minority community. Internalized homophobia, identity concealment, and expectations of rejection are examples of proximal stressors. For each of these stressors the actual stress arises from an internal thought or belief (e.g., the act of concealing one’s LGB identity) and that thought or belief is the stressor in and of itself.
Additionally, both proximal and distal stressors can be thought of as *major* (e.g., losing a job, death of a loved one) or *minor* (day-to-day experiences of stigma, prejudice, and discrimination).

Proximal and distal stressors have an impact on mental health that is in addition to the impact of general stressors (e.g., economic hardship, relationship dissolution, loss of a loved one). In the minority stress model, the influence of all stressors on mental health is moderated by social support from the community and by individual coping strategies. However, social support and coping are influenced by minority identity (e.g., lesbian, gay, or bisexual).

Aspects of the minority identity are also fundamental to the minority stress model, including its prominence, valence, and integration. The influence of proximal stressors on health is moderated by these identity characteristics. It is posited that as identity valence decreases, proximate stressors have a larger impact on health. The more negative an LGB person’s attitude is toward the LGB identity, the more likely they are to attempt to conceal their identity, have higher expectations of rejection, or experience internalized homophobia, thus decreasing mental health. However, as identity prominence increases, an argument can be made that the impact of proximal stress on health is mixed.

A prominent LGB identity is unlikely to be accompanied by increased internalized homophobia. However, individuals with increased LGB identity prominence may experience more rejection because more people are aware of their sexual orientation; thus, their expectations of rejection may increase. The alternative argument can also be made; individuals who come out experience relief and therefore worry less about social rejection. It is key to remember that *very little* is known about how identity moderates
proximal stress in Meyer’s model, so many of the relationships here are speculative at best and, due to the difficulty of establishing temporal precedence, reverse causality is hard to rule out (Meyer & Frost, 2013).

The proposed project seeks to build upon the minority stress model by exploring the role of identity characteristics as a major moderating construct in the model. Given the suggested expanded role of identity characteristics, a new minority stress model is being posited. This new model holds true to the original minority stress model but adds an expanded role for identity characteristics. In this model identity characteristics moderate both proximal and distal minority stressors, as well as the effect of social support.

**Major sexuality-related stressors and health**

A consistent major form of stress in LGB individuals is unemployment or loss of a job due to prejudice. Analyzing the narratives of LGB individuals shows LGB individuals were more likely than straight counterparts to report being unfairly fired (Mays & Cochran, 2001) or passed over for promotion due to their sexual orientation (Meyer, Ouellet, Haile, & McFarlane, 2011). Empirical evidence bears out these concerns. Experimental research shows that résumés from openly gay males (n = 1,769) were 40% less likely to earn interview callbacks than similarly situated heterosexual counterparts (Tilcsik, 2011). Employment discrimination such as this can have serious repercussions for the mental health of LGB individuals.

A study of urban Latino gay and bisexual males shows that approximately half of respondents note stressors related to poverty: 61% had run out of money for basic necessities, 54% had to borrow money to get by in the past year, and 45% had been
forced to look for additional work in the past year (Diaz, Ayala, Bein, Henne, & Marin, 2001). Though studies suggest that the risk of poverty is higher for LGB individuals in general, the intersection of sexual minority and racial minority increases the risk of poverty (e.g., gay Latinos are at a higher risk for poverty than gay Caucasians). The experiences of homophobia, financial hardship and racism were strong predictors of social isolation and psychological distress in these individuals. Additionally, almost 25% of gay and bisexual men who seek mental health services report significant stress related to unemployment or financial issues (Berg, Mimiaga, & Safren, 2008). Although major distal stressors relating to finances and employment are important, LGB individuals face other problems unrelated to the job market.

Physical victimization is a source of major stress for LGB adolescents. Although it is true that victimization of adolescents, whether of minority status or not, leads to increased suicidal ideation (Rigby & Slee, 1999), LGB individuals are at higher risk for victimization than similarly situated counterparts (Williams, Connolly, Pepler, & Craig, 2005). Victimization in school has further been linked to mental health outcomes and risk for HIV/STIs in LGB adolescents (Russell, Ryan, Toomey, Diaz, & Sanchez, 2011). In fact, gay and bisexual males experience elevated levels of depression and suicidal ideation when they report high rates of school victimization.

Another source of major stress related to LGB adolescents relates to the coming-out process. Adolescents who had lost friends because of their sexual orientation were more likely to report past suicide attempts than those who had not (D’augelli, 2002). This source of stress served as a form of double jeopardy in that not only did the adolescent lose a friend, but the loss raised the probability that friend would “out” the adolescent
increasing the likelihood of further social rejection (though this stressor is admittedly more proximal). As friend rejection due to sexual orientation increased so did the likelihood of physical victimization. However, friends were not the only source of stress due to rejection during the coming-out process. Parental reaction to sexual orientation was a significant predictor of mental health. Adolescents who felt they needed to conceal their identity from parents experienced increases in mental distress, but adolescents living with rejecting parents reported substantially lower mental health than other LGB counterparts.

With regard to instances of homophobic behavior, interactions between sexuality and race/ethnicity can increase stress. In a sample of gay and bisexual men recounting their experiences over the past six months being both GB and Latino: 91% heard that being gay was not normal and 71% heard that gay people grew up to be alone. In addition, 70% said their sexuality hurt or embarrassed family, 64% reported the need to appear straight at some point in their adult lives, and 20% reported police harassment for being gay (Diaz et al, 2001). These homophobic events were correlated to significant deteriorations in health: 80% reported depressed mood; 61% reported trouble sleeping; 20% reported severe sleep problems; 50% reported feelings of anxiety and a general feeling of being sick or not well; 17% reported suicidal ideation at least once (6% report suicidal ideation “a few times”). Overall there was a strong relationship between social discrimination in the past six months, and lower mental health, though the directionality of this relationship cannot be established without longitudinal work.
**Minor sexuality-related stressors and health**

Minor stressors take a serious toll on minority individuals. Minor stressors are smaller, day-to-day stressors that remind minority individuals that society stigmatizes the group to which they belong (Meyer, 2003), and minority stressors exert a significant impact on mental health. LGB individuals reported lifetime and day-to-day experiences with discrimination that were attributed to their sexuality (Mays & Cochran, 2001). LGB individuals were more likely to report that day-to-day discrimination had made their life harder, and had interfered with a full and productive life. Thus, perceived discrimination is associated with decreased quality of life. Finally, the odds of having a psychiatric disorder are higher among individuals with at least one lifetime discriminatory event or day-to-day discrimination. Confirming Meyer’s previous point, the odds of psychiatric disorder are *higher* for individuals who experienced small amounts of day-to-day discrimination than they were for individuals who reported one major act of discrimination. However, the causal order of this relationship between psychiatric disorder and discrimination is unclear. It may be that individuals with psychiatric disorders are more likely to perceive day-to-day discrimination, or an increase in day-to-day discrimination may be related to increased likelihood of psychiatric disorder.

**Social support as a resource.**

Resources can help an individual cope with the negative impact of a stressful event. Many LGB individuals have limited resources at their disposal, however. This is particularly true with regard to social support. Unlike heterosexual counterparts, LGB adolescents perceive an absence of support from parents and family (Munoz-Plaza, Quinn, & Rounds, 2002). In otherwise healthy adolescents, parental support is the key
resource for both major and minor stressors (Frey & Rothlisberger, 1996). Additionally, LGB individuals perceive limits on the amount of emotional support they could receive from heterosexual peers.

Unfortunately, almost no work has been done on the social networks of LGB individuals. However, there is work showing that social integration has some influence on mental health for LGB individuals. Perceived social isolation in gay and bisexual men was a strong predictor of symptoms of psychological distress and depression (Diaz, et al., 2001). Researchers have also shown that integration into LGB-specific communities, though not directly beneficial to mental health, may increase a general sense of belonging for LGB adolescents and thus indirectly benefit mental health (McCallum & McLaren, 2011).

**Conceptual Model**

The conceptual model posits a causal argument in several parts. First an individual encounters a stressful event. Second, the event is appraised in terms of the demands it puts on the individual. Of particular interest to this project are stressful events that occur due to a respondent’s sexual orientation identity (e.g., discriminatory events, stigma, prejudice, coming out) or events that make sexual orientation identity salient (e.g., problems with a significant other). Based on the demands of the stressor, a core discussion network (CDN) is activated. This CDN is comprised of individuals drawn from the respondent’s total social network and is thus limited by the composition of the total network, but represents the individuals in the network who best match the stressor at hand. Therefore, the CDN is functionally specific with regard to the needs of the
individuals; an idea that comes from Perry and Pescosolido’s (2010) study of problem-specific networks related to health concerns.

Thus, the following project rests chiefly on two fields of thought. The first is minority stress theory, which is the foundation for understanding how stressors in the LGB community impact mental health (discussed at length above). The second is functional specificity theory, which is the basis for understanding how social networks function as an interaction between events (e.g., stressors) and network resources (e.g., the type of people you interact with). The way in which network resources impact mental health and well-being is the focus of Chapter 3.
Chapter 3 – Functional Specificity in Social Networks

Social Networks

What are social networks? They are the web of relationships, of varying strength and frequency of contact, in which individuals live (Smith & Christakis, 2008). Analyzing social networks allows researchers to not only understand the influence of a relationship between individuals on factors such as health and well-being, but it also allows researchers to better understand the influence of social structure on individuals imbedded in them (Wasserman & Faust, 1996, pp. 1). Thus, social networks may very well be a methodological expression of interdisciplinary social psychology by providing the ability to obtain and analyze data originating from Individual A while connecting Individual A to others with whom she or he interacts. Ultimately, analyzing social networks allows social psychologists to determine how A’s relationship with B influences A, but also influences B’s relationship to C, which can return through B to influence A. Within social network research, Individual A would be referred to as the “ego”, whereas individuals B and C would be called “alters” or “nodes”. The following pages contain a general overview of network research, including a discussion about the size of discussion networks and network homophily, and finally, a discussion of research on the influence of social networks on health.

An overview of network research.

In social network research, there are three different “brands” of research; egocentric, sociocentric, and network-inspired. Egocentric network research involves a single actor, and is used in many social support and social capital research studies. The primary goal of this research is to understand how an individual’s network impacts other
aspects of concern. For example, Perry and Pescosolido (2010) used egocentric networks to determine with whom individuals discussed important matters, as opposed to with whom they discuss health-related matters. Almost all of the network research done using large probability sampled data sets such as the General Social Survey (GSS), or the National Survey of Adolescent Health (AddHealth), uses egocentric data to draw inferences about the size of discussion networks and social support networks of average Americans (in the case of GSS; e.g., McPherson, Smith-Lovin, & Brashears, 2006), and American adolescents (in the case of AddHealth; e.g., Calvo-Armengol, Patacchini, & Zenou, 2009).

Sociocentric, sociometric, or complete network research involves setting a boundary to define which individuals “belong” to a given network and the focus of such work is normally the relationship, or interdependence, between individuals. One of the best examples of sociocentric work is the Framingham Heart Study, which has allowed the production of myriad research articles. Although most of these papers are unrelated to social networks, much of the work related to the influence of social networks on health come from the Framingham data sets (e.g., Christakis & Fowler, 2007). The Framingham Heart Study set a network boundary around the town of Framingham, Massachusetts. Researchers then set about obtaining survey data from every citizen in Framingham, including the relationships (i.e., network links) between all the residents in Framingham. Data were collected in several waves over a number of years, which led researchers to be able to see how network linkages change over time as well as how the health of respondents change before and after changes in their network. The Framingham study
serves as a rich set of data for exploring the reciprocal effects that individuals and communities have on one another.

Network-inspired research is a blend of both egocentric and sociocentric research, and is typified by interest in not only the individuals in the study, but also the relationship between the individuals. A good example of such research is Putnam’s (2000) *Bowling Alone: The Collapse and Revival of American Community*. Putnam argues community involvement in the United States is in decline due to several factors including advances in technology and a series of political and governmental scandals. Putnam utilizes information from qualitative studies that use interview methods to obtain information about respondents’ social networks as well as large-scale surveys such as the General Social Survey (GSS). Utilizing both sociocentric and egocentric networks research allows Putnam to better explore the nature of community involvement in modern America.

**Network size in humans.**

Using nationally representative probability sampled data sets, researchers have been able to ascertain several key features that are common to the social network of the average American, including network size, the use of social networks, and the interplay between social networks and social isolation. Research determining network size is somewhat varied, partially due to different operationalizations of what one means by “network”. For example, some studies defined social network as including individuals (nodes) of moderate importance as well as the node’s immediate kin.

Assessing human network size can be difficult, however, prior work suggests a biological determination for maximum network size. Research centering on primates and cetaceans (e.g., whales, dolphins, porpoises) led to observations that the volume of a
mammal’s neocortex (the outermost layer of the cerebral cortex) was predictive of total network size (Barton & Dunbar, 1997). In other words, the neocortex acts as a physiological limiter on the number of nodes to which an ego can attend. Based on this research, it was hypothesized that human neocortex volume would yield a social network of approximately 150 alters. This hypothesis was confirmed by using Christmas cards as a means of connecting network nodes (Hill & Dunbar, 2003). Although this study is useful for the purpose of understanding the approximate size of total social network from which one draws, research focusing on core discussion networks is better able to describe the emotional and social resources available to individuals.

One of the earlier works on network size comes from Marsden (1987) who looked at network size and network composition using the 1985 version of the GSS. Marsden found that American social networks were small, kin-centered, and similar in regard to race and education. McPherson, et al. (2006) compared the size and composition of Americans’ core discussion networks (i.e., the individuals one turns to for help with information pertaining to important decisions, or to act as a sounding board for important decisions) using information from the 1985 and 2004 GSS. Using egocentric data and OLS regression analysis and adjusting for demographic and geographic changes over time, these researchers set out to reproduce Marsden’s analyses to determine changes in core discussion network (CDN) size over a 20-year period. Findings suggest that the size of the CDNs decreased from about three in 1985 to approximately two in 2004. The reduction in size primarily came from a decrease in non-kin relationships, thus CDN based on the 2004 GSS are largely centered on a respondent’s romantic significant other. Although age was a factor influencing network size in 1985, results from 2004 indicate
that network size no longer changes with age. Following up on this work, Brashears (2011), using a separate nationally representative sample, reaffirms the 2006 finding that the CDN of the average America is about two individuals. In addition, this research indicates that CDN size is larger for educated individuals. Race and gender also factor into CDN size; females have larger CDNs than males, and Caucasians have larger CDNs than African Americans.

**Adolescent social networks.**

Though the focus of this dissertation is not on adolescents per se, the research contained in this section includes studies in which participants are in late adolescence (early 20s). Given that this dissertation will focus on LGB individuals age 18-35, consideration was given to the wealth of research conducted on LGB individuals in the mid- to late adolescence range. Inasmuch as the term “adolescents” is used in this work, it is used to refer to, and shed light upon, individuals between the ages of 18 and 25, who will make up a significant proportion of this study’s participants.

Adolescent social networks in the 21st century have adopted a number of technological advances in communication, and these advances not only permeate adolescent networks, but also influence how those networks develop. In an analysis of research related to adolescent use of Internet technology, Bargh and McKenna noted that Internet use did not decrease the time spent with important others. Moreover, a substantial proportion of Internet users formed close relationships with those they met on the Internet and 22% of those adolescents turned those close relationships into real-life relationships. When adolescents met individuals online and in real life (IRL), they tended to like individuals better when they met each other online first. The early portions of
many online relationships take place via text or instant messaging. It could be that adolescents attend more closely to the stimulus in the text conversation leading to the assumption that they know online alters more deeply than those met in person. Additionally, stigmatized individuals tend to use the Internet as a way of communicating with like others. These online relationships become quite important to stigmatized individuals and help to influence behavior.

Most adolescents report having a lot (42.5%) or a few (52.5%) close friends, only 5% report no close friends (Bryant, Sanders-Jackson, & Smallwood, 2006). Socially interactive technologies (e.g., texting) are used by many adolescents, often in conjunction with other technologies (e.g., instant messaging and email), in multitasking communication to maintain friendships. However, the number of text message and IM partners adolescents had was greater than the number of friends they listed (Bryant, et al., 2006). In other words, their complete social network contained individuals who did not qualify for a more intimate classification of “friend”. This difference in classification may be similar to a modern-day assessment that would compare the number of Facebook friends to the number of individuals one communicates with on important matters. Bryant et al. also observed no significant difference in the intensity of the relationships between individuals in the friendship networks, text-message networks, and IM networks. Literature on the use of social networking sites in adolescents indicates that many individuals use this technology as a means of feeling integrated in a network (Livingstone, 2008). Moreover, participation in these sites tends to increase identity components related to one’s self-concept. Though adolescents use technology, the physical world still dominates their development. Relationship health and strength in
online social networking communities are dictated by relationships in the real world. If one is strong, the other is strong; if one develops maladapted, so does the other (Mikami, Szwedo, Allen, Evans, & Hare, 2010). However, just as in adult counterparts, both physical and Internet social networks serve a key role as sources for social support and social capital for adolescents beginning college (Pempek, Yermolayeva, & Calvert, 2009).

**Social networks and health: The network effect.**

There are an increasing number of studies that use sociocentric data to ascertain the influence of social networks on individual health. One of the first studies of this type is the obesity study linked to the Framingham Heart Study (Christakis & Fowler, 2007). The overall findings reported that the risk of becoming obese increased 57% for individuals who had a friend become obese, 40% for individuals who had siblings become obese, and 37% for individuals who had a spouse become obese. Additionally alters (an individual the respondent shares a social tie with) of the same sex had more influence than opposite-sex alters.

However, the more interesting result was that when examining a dense (highly interconnected) network of individuals, clusters of obesity were observed. That is, individuals who were obese tended to have social ties to other obese individuals. These clusters were observed in all network timeframes from 1971 to 2003. Obesity clusters extended to three degrees of separation. That is, if Individual A was obese, A’s friend B tended to be obese, and B’s friend C tended to be obese and C’s friend D also tended to be obese. To obtain these results, Christakis and Fowler assessed models that controlled for ego’s dichotomous obesity rating during Time 2, as well as ego’s dichotomous
obesity rating during Time 1. In addition, the estimation included the obesity rating for all alters during Time 1 and Time 2. The inclusion of obesity ratings for ego and alters at Time 1 controls for the effect of homophily. The authors concluded, therefore, that any significant effect of alters’ obesity rating at Time 2 suggests that an alter’s weight effected ego’s weight, or that ego and alter were both exposed to some event that effected both of their weights. Thus, the clusters of obesity that emerged were not solely the result of selective formation of friendships (homophily), but of an additional a network effect that caused the contagion of obesity from one node to another.

Similar patterns were discovered for happiness (Fowler & Christakis, 2007). Individuals within a network seem to cluster by whether they are happy or unhappy. Additionally, as with obesity, the contagion of happiness within a network extends up to three degrees of separation. If happy people surround an individual, that individual is more likely to become happy in the future. Similar controls were applied to rule out homophilous selection within the network. This network effect also applies over a moderate geographic distance. If one has a friend who becomes happy and who lives within a mile, the probability that one will also be happy increases by 25%. Similar effects occur for spouses, siblings and neighbors. Similar patterns to those above have been seen for smoking cessation and sadness (Smith & Christakis, 2008). These studies address the ways in which large networks influence health (i.e., sociocentric research). However, it is important to note that much of the research on networks and health comes from dyadic or egocentric network research (Smith & Christakis, 2008).

Social networks and social support are terms that are often conflated in the literature. However, each is a precise tool used for understanding a specific portion of
social relationships. Analyses involving social networks are concerned with not only who is interconnected, but also what is the nature of their connection. In social networks research the tie is responsible for changes in the outcome of interest (i.e., the dependent variable). Social support, on the other hand, is interested in the quality of the social ties an individual has at his or her disposal. Thus, social support studies reduce information on support to the individual in order to make comparisons across the sample. Social networks look at all respondents’ networks and analyze the influence of network components as well the type of tie between individuals. Network components are variables such as position (where a node resides in relation to other nodes in the network), centrality (how influential is a node within a network), and density (how many potential network ties are actual network ties). Additionally, social networks have properties that emerge that cannot be explained by the component parts when analyzed individually (e.g., the three degrees of obesity contagion, see Watts, 2004).

**Critique of sociocentric social network analysis in health research**

The most vocal criticism of the use of sociocentric data in health research comes from disciplines of mathematics and economics wherein researchers argue that the statistical methods researchers apply to large network data sets, such as the Framingham Heart Study, are misapplied. Cohen-Cole and Fletcher (2008) argue that the analyses performed do not take into account community-level factors that influence changes in health. For example, Christakis and Fowler can control for the increase in fast-food restaurants across time due to the longitudinal style of their analyses. However, this model does not account for community-level difference in the rate of growth for fast-food restaurants (e.g., urban areas will have faster growth of fast-food establishments than
rural areas). They further argue that the network effects seen in studies on obesity or happiness (Christakis & Fowler, 2007; Fowler & Christakis, 2007) are nullified when said environmental and community-level factors are added to the analysis. Using AddHealth data, Cohen-Cole and Fletcher were able to replicate the findings of the network obesity study. However, Cohen-Cole and Fletcher hypothesized that the network effect observed by Christakis and Fowler suffers from environmental confounds based largely on geography. For example, if one were to look at obesity rate, the network effects methodology accounts for year over year changes in the overall environment from which the sample is drawn. Therefore, if unhealthy eating options increase over the data collection period this change in environment is captured. Yet, the network effect method does not account for localized differences. Cohen-Cole and Fletcher argue that if fast-food restaurants open in Reno, NV at twice the rate they open in Sparks, NV this difference should be accounted for in the regression model. The environment in Reno would be more conducive to behaviors likely to increase obesity than Sparks. Arguably, this is accomplished by including a variable that groups networks at the smallest geographic boundary. For example, if one were using the network data from AddHealth, the best grouping variable would be “school”. Including this variable would enable researchers to capture environmental differences that occur at the neighborhood level. When this environmental variable was added to Christakis and Fowler’s model the network effects of obesity dropped out.

The impact of this critique on networks and health research is debatable. It is necessary to point out that many data sets do not contain the type of geographically-based variables discussed by Cohen-Cole and Fletcher (this includes the Framingham data set
on which Christakis and Fowler built their model). Though the amount of network data is increasing, the vast majority of sociocentric network data tends to be bound by geography out of necessity, without the addition of variables akin to those proposed by Cohen-Cole and Fletcher. In absence of such variables, I see no issue with calculating a “network effect” with the caveat that such effects, by design, not only represent the relationships that exist within the boundaries, but also the effects due to the environment in which the network is situated. The debate between “environmental effect” and “network effect” devolves into an argument over minute distinctions that, although important, rest on the assumption of better data than is currently available. Detangling whether the effect observed is an environmental effect or a network effect would require a series of variables that most data sets do not have. For now, it is fair to say that there is an effect that can be captured by controlling for factors that exist outside the individual. Whether one models said outside effects with the use of network variables or community-level variables (if available) is a factor largely limited by the data collection method. Until such time as a study is designed to obtain network data and environmental data, scientists have no way of parsing out whether one or both of these effects exist independent of one another.

**Homophily**

Homophily (individuals with similar characteristics forming social ties) is a dominant characteristic of social relationships. Within the literature homophily has been observed with regard to race, sex/gender, age, religion, education, occupation, social class, network position, behavior, attitudes, abilities, beliefs and assumptions (McPherson, Smith-Lovin, & Cook, 2001). In networks analysis, understanding
homophily is important because it is a dominant characteristic of networks. When determining network effects, it is necessary to understand, and control for the characteristics on which researchers believe individuals will organize themselves. For example, when determining the network influence of the contagion of obesity or happiness from Time 1 to Time 2, it is important to note not only whether the ego node is obese/happy at Time 1 and Time 2, but whether ego’s alters were obese/happy at Time 1 and Time 2 (Christakis & Fowler, 2007; Fowler & Christakis, 2007). One of the basic organizing principles of social relationships is that individuals tend to interact with others who are like them (McPherson, Smith-Lovin, & Cook, 2001). Marsden (1987) noted that within a representative sample of Americans, most CDNs are comprised of individuals who are racially and educationally similar to the respondent. Complimentary research done with children shows homophily in terms of race increases as children age, but homophily in terms of gender decreases (Shrum, Cheek, & Hunter, 1988). So, it would seem that as individuals age, homophily becomes more apparent, at least with regard to race. However, homophily is not restricted to simple demographic variables.

Kandel (1978) found homophily in social networks based on ego’s drug use and educational aspirations. If an ego uses recreational drugs, they tend to gravitate to alters who also use recreational drugs. Similarly, if ego aspires to receive a college education rather than entering the job market directly upon graduation, they will gravitate to alters who echo their view of education. However, educational aspiration was less important when taken in the context of homophily outside of the educational environment. Homophily has an effect in strengthening or weakening network ties. When ego and alter are homophilous on a particular trait (e.g., educational aspiration) their network tie has a
higher probability of continuing into the future (McPherson, et al., 2001). However, when homophily is absent between ego and alter, the continuation of that network tie is less likely. Yet, some forms of homophily appear to be more important for sustaining network ties than other forms of homophily. With regard to the educational aspirations variable above, the initial model found that educational aspirations were a source of homophily within student networks, and absence of this homophily was predictive of tie dissolution (i.e., ego and alter ending their relationship). However, when controlling for other forms of homophily such as race, gender, and family SES, homophily pertaining to educational aspiration was no longer a significant predictor of tie dissolution. Homophily with regard to drug use was the largest source of both homophily and changes in dyadic relationships (i.e., sustaining or dissolving ties). If one member of a dyad did not use drugs while the dyad partner did, either one of the dyad members’ behaviors would change or the relationship would end. Mental health can also serve as a characteristic around which individuals create homophilous groups (Hogue & Steinberg, 1995).

In a large sample of interconnected adults, homophily occurs with regards to body-mass index as well as by smoking behavior (O’Malley & Christakis, 2010), though in both instances differences in BMI and smoking behavior were more likely to result in the dissolution of a relationship rather than tie formation. Interestingly, homophily was not observed for depression, blood pressure, height, or personality type. O’Malley and Christakis argue that homophily may not extend to characteristics that cannot be observed, however other research indicates unobservable traits that can, and do, serve as a basis for homophily in adolescent populations.
Students with internalized distress associate with other students who are internally distressed; similarly, students who score lower on measures of internalized distress associate with other students who score lower on internalized distress measures (Hogue & Steinberg, 1995). Interestingly, students who are internally distressed tend to name more friends than students who are not internally distressed. In other words, distressed individuals generate more names for their social network than non-distressed individuals. But this increase in network size does not translate to relationship stability over time (Savin-Williams & Ream, 2007). That is to say, the homophily within the adolescent peer group was stable, but the membership in the group was more fluid. This could occur for several reasons. First, the data comes from multiple waves of AddHealth and individuals who change sexual orientation could be incorrectly marking their sexual orientation identity. However, the movement in individual identity could simply mean that sexual orientation for adolescents is fluid.

Homophily among networks even extends into cyberspace. Research conducted on adolescents in 2006 shows racial and education homophily with regard to the use of social networking sites; Hispanic Americans were more likely to use MySpace whereas Asian Americans preferred Friendster and Xanga (Hargittai, 2008). Individuals who had at least one parent with a graduate degree were more likely to prefer Facebook, Xanga and Friendster, whereas those adolescents who had two college-educated parents were significantly more likely to solely use Facebook. Given that age is another criterion on which individuals create homophilous networks, it would stand to reason that the way in which these social networks interact might be different from one another. In addition, the
bulk of the research on social networks and health focuses on younger populations. Therefore, the next section deals with how adolescents, in particular, use social networks.

**Homophily and perceived social support**

Giving and receiving social support from similar (i.e., homophilous) others is not an issue that has directly come up in the literature reviewed, but the case for the importance of homophily in social support can be easily inferred from a reading of recent literature. Perry and Pescosolido (2010) found results that indicate functional specificity in core discussion networks (individuals with whom you discuss important matters; CDN). There is a differentiation between CDN for health matters and general important matters. Additionally, although homophily within CDN was similar for both health matters and general important matters, results indicate that respondents were more likely to talk about health matters with individuals who had similar health conditions. This research can be further extended into social support by looking at social support in LGB adolescents with regard to sexuality-related stressors. Doty et al. (2010) found that LGB adolescents report higher perceived social support for sexuality-related stressors from friends who share their minority status. This research shows that social support networks may be both functionally specific and specific with regard to homophily.

**Social Isolation**

Social isolation/integration has a long research tradition dating back to Durkheim (1897:1951), and the link between social isolation and health is clear. For example, adolescents who are socially isolated have higher levels of psychological distress than adolescents who are socially integrated (Hogue & Steinberg, 1995). However, many of the variables that researchers assess when studying the impact of social isolation on
health behaviors are very similar to those proposed by the main effects model of social support (Cacioppo & Hawkley, 2003). In both cases, the logic holds that individuals who are more socially embedded are subject to the health norms of the network in which they are embedded. Thus, on average, an individual who is more embedded would be subject to, and likely adopt, more (or less) healthy behaviors (dependent upon what is deemed normative by the network) than an individual who is less socially embedded.

This conflation between social support and social isolation continues in the literature. There is some argument for defining loneliness as a subjective (perceived) state of lack of embeddedness in a social network, whereas social isolation would be defined as the objective reality of embeddedness (Rook, 1984). However, in this case both loneliness and social isolation would be factors measured in the social support literature. In a review of the literature concerning social support, social networks and social integration/isolation, House, Umberson, and Landis (1988) argue for a typology that defines social isolation/integration as the existence or quantity of social relationships distinguished by type of relationship; social networks are defined as the structural properties of the relationship (e.g., tie reciprocity, density, centrality, multiplexity); social support is defined as part of a broader concept called “relational content” that refers to the function of social relationships which may be distinguished by source (who the tie is).

Using this typology, an argument can be made that several variables used in networks research lend themselves to the study of social support rather than social isolation. The frequency of contact between ego and alter, a measure of communication potential, and access to a particular node would be part of social support work. The frequency with which ego contacts alter is a measure of a function of the shared tie
between ego and alter. Increased contact would seemingly allow for increased
opportunity to garner social support. Similarly, the level of closeness, which can be
thought of as a measure of the emotional connection between ego and alter, is also a
measure of the function of a relationship. The closer ego is to alter the more likely ego is
to ask for support of some type. And, as stated above, homophily is a measure that is
related to social support via the assertion that individuals are likely to tailor the match
between stressor and alter.

Thus, the difference between social isolation and social support becomes clearer.
Research concerned with how many social contacts an individual has would be called
social isolation/integration. Understanding how those connections either influence the
individual to behave in a different way (main effects) or serve to protect the individual
from the slings and arrows of existence (buffering) would be considered social support
research. Thus, much of the current social isolation/integration research that deals with
social influence would necessarily be considered social support, since social influence is
the functional mechanism through which social isolation/integration impact health.
Though this typology certainly makes understanding social support and social isolation
an easier endeavor (by virtue of standardizing definitions alone), it seems to leave social
isolation/integration without much by way of explanatory power, particularly since some
studies have shown that network size in and of itself does not have much impact on
healthy functioning (Frey & Rothlisberger, 1996).

**Perceived and received social support**

The functional specificity theory holds that individuals will access stressor-
specific networks to help them cope with situations. Each network was comprised of the
nodes that are best able to give the individual support when coping with said stressor. However, the existence of these functionally specific networks has been shown only with regard to health and mental health networks. Nonetheless, it is reasonable to assume that sexual identity minorities have functionally specific networks that are activated to help cope with stressors related to their sexual orientation. Though untested, this functional specificity is posited by Meyer’s minority stress model (see Figure 2:1).

Perry and Pescosolido’s extension of the functional specificity theory indicates that homophily is a key component of stressor-related core discussion networks. It can be argued that nodes that are homophilous to the individual and the stressor the individual is facing are able to provide the most knowledgeable and sympathetic social support. In other words, if a respondent is facing prejudice and discrimination because of their sexual orientation, the most knowledgeable and sympathetic nodes they can activate will have a similar sexual orientation (and thus similar experiences with prejudice and discrimination). As such, one would expect core discussion networks (CDNs) that are functionally specific with regard to LGB identity-related stressors to have higher levels of homophily vis-à-vis sexual orientation identity. A logical extension of this assertion is that functionally specific networks that contain higher proportions of homophilous nodes will provide better perceived social support, and thus better moderate the effect of sexuality-related stressors on mental health than functionally specific networks with lower proportions of homophilous nodes.

The role of identity will have an impact on the functional specificity hypothesis. As noted by the minority stress model, identity characteristics (i.e., prominence, valence, integration) play a role in moderating sexuality-related stressors. However, it can be
argued that these same characteristics can moderate the effect of CDN homophily on sexuality-related stressors. So, when sexual orientation identity (SOI) is an important component of an individual’s self, the higher proportion of homophilous nodes in functionally specific networks will result in higher perceived support and better overall mental health. In contrast, if SOI was not an important component of an individual’s self, the proportion of homophilous nodes in a functionally specific network was unrelated to perceived support, and thus unrelated to mental health outcomes.

**Functional Specificity Hypothesis.**

The theory of functional specificity posits that individuals utilize members of their social network as stressor-specific resources (Wellman & Wortley, 1990). In other words, members of a network are a helpful means of social support for different stressors, and very few members of a network are a means of social support for every stressor. Research indicates that individuals tend to pick the members of their overall network that can best help with the stressor they are encountering (Bearman & Parigi, 2004). When an individual encounters a stressor they purposefully seek out a node in their network that can help with that specific stressor. Often the choice of alters in a discussion network depends on a match between the alters’ attributes and the topic at hand, creating a network that is purposefully tailored to help ego with the event.

Many aspects of social support functions occur through verbal exchanges between ego and their network (Sandefur & Laumann, 1998). Therefore, it has been suggested that the need to discuss stressful matters leads individuals to utilize nodes that were more sympathetic, helpful, or knowledgeable about a stressor than other members of the network (Perry & Pescosolido, 2010). It can be argued that the alters best able to supply
sympathy, knowledge, or help for a stressor are those alters who have encountered a similar stressor. If this assertion is correct, then alters would possess a measurable degree of homophily with ego.

In a study of functionally specific networks for individuals who have experienced mental health problems, Perry and Pescosolido (2010) assessed the networks of egos with mental health diagnoses. When faced with stressors related to mental health egos turned to networks that a) were separate from their general important matters discussion network, and b) contained more alters that were homophilous with regard to mental health diagnoses. These findings indicate that there is an overlap between networks for mental health stressors and networks for general stressors, but the overlap is not complete. In other words, there were nodes who were activated solely for helping ego attend to mental health stressors but not with general stressors. In addition, the mental health stressors network contained a high degree of individuals that were homophilous with regard to mental illness, meaning that respondents with a mental illness were more likely to talk about mental health stressors with other individuals who had a mental illness. When a respondent with a mental health issue activated a network to find support for a mental health related stressor, the individuals in that network were more likely to have mental health issues as well.

Extending the idea of functional specificity beyond health discussion networks, one can argue that stress related to a stigmatized identity activates a specific discussion network. This network would, by necessity, contain individuals best able to offer sympathy, knowledge, and help. By extension, these individuals would likely be homophilous in terms of sexual orientation identity. That is, when dealing with a
sexuality-related stressor the alters best able to help ego would be those who have experienced a similar sexuality-related stressor. Lending support to this assertion, Doty, Willoughby, Lindahl, and Malik (2010) attempted to look at how LGB adolescents (18 to 21) use social support for sexuality-related stressors. LGB youth perceive family members as providing less support for sexuality-related stressors than for non-sexuality related stressors. Heterosexual friends were perceived as providing more support for sexuality-related stress than family members. However, non-LGB friends still provided less support for sexuality-related stress than for non-sexuality related stress. LGB friends were perceived as providing the highest levels of support for sexuality-related stress, and were perceived as equally supportive across non-sexuality-related stressors. Although Doty and colleagues did not ascertain social network data from their participants, the results fall in line with the functional specificity hypothesis. The degree to which a node was perceived as supportive was a function of the stressor at hand. In addition, nodes that were homophilous with regard to sexual orientation, and thus arguably more sympathetic to sexuality-related stressors, were perceived as providing the most social support.

Summary

Social networks represent a valuable resource for individuals. Social support arises from social networks and, as discussed above, the success of social support can arguably be tied to the structure of the social networks. Within networks, homophilous nodes are more likely to be perceived by the ego as strong ties and objectively homophilous nodes are more likely to continue in ego’s social network than nodes that are not homophilous. Finally, though humans have a social network that is likely quite large (arguably ~150 distinct nodes), this does not accurately represent the total social
support to which they have access. The functional specificity hypothesis argues that individuals access specific discussion networks for specific stressors. This hypothesis has been tested for individuals with mental health diagnoses. In this body of research, respondents turned to a distinct network of individuals when dealing with stressors related to mental health. This network tended to contain a higher proportion of nodes that were homophilous with regard to mental health diagnoses. In other words, when individuals exhibited a characteristic related to a stressor, not only did they engage a distinct network to give support for said stressor, but also said network tended to be comprised of alters that shared the characteristic related to the aforementioned stressor.

Using the minority stress model discussed in Chapter II, as well as the structure and function of social networks (particularly functional specificity), this dissertation will posit a number of hypothesis to fill gaps in the literature around how social networks and social support operate within the minority stress model. Said hypotheses are discussed at length in the next chapter.
Chapter 4 – Conceptual Model & Hypotheses

Research Questions and Hypotheses

The theory of functional specificity argues that as individuals encounter stressors they activate CDNs that are well suited to help them deal with these stressors (see Figure 4:1). Research focusing on the CDNs of individuals with a mental health diagnosis indicated that homophily represented one potential arena through which the match between alters and stressor was made. However, the idea of functionally specific networks has yet to be used beyond the arena of health networks. If the functional specificity theory holds true in LGB individuals, then the types of people from whom one gives and receives social support would depend, to a degree, on an individual’s identity ($p_1$). For example, bisexuals have a measurably less connected community structure than lesbian and gay communities (Doty, Willoughby, Lindahl, & Malik, 2010). Identity characteristics will likely be different for each sexual orientation identity ($p_2$). Prior research has widely shown differences in the level of perceived discrimination based on sexual orientation identity (e.g., Diaz, Ayala, Bein, Henne, & Marin, 2001; Shilo & Savaya, 2012). Arguably, the internalization of the public’s perceived view of each sexual orientation – which is distinct for lesbians, gay males, bisexual males, and bisexual females – impacts the prominence and valence a respondent has for their sexual orientation identity. Gay males are largely seen as hypersexual, promiscuous, and effeminate, a population with high incidence of sexually transmitted infections – most notably human immunodeficiency virus (HIV). Lesbian females are widely stereotyped as masculine radical feminists engaged in serial monogamy. This portrayal includes elusions to an almost non-existent sex life and a desire to have or adopt children.
Bisexuals, both male and female, suffer from a disbelief in their existence by dominant society, however this disbelief takes different forms (e.g., Balsam & Mohr, 2007). Bisexual females are often thought of as predominantly heterosexual females labeling themselves as bisexual in an effort to seek attention from others. In other words, they are seen as straight females pretending to be temporarily bisexual. Bisexual males are often thought of as gay males who have not yet come to terms with their sexuality (e.g., Hequembourg & Brallier, 2009). In other words, they are temporarily bisexual as a step on the path to coming out as gay. For bisexuals, these stereotypes are also widely endorsed by gay and lesbian members of the LGB community (Hequembourg & Brallier, 2009).

Identity prominence and valence should also impact the structure of social support networks \((p_3)\). The more prominent an identity is, the more likely individuals are to seek out homophilous nodes to interact with (e.g., Kandel, 1978). Egos who have more prominent LGB identities ought to have more LGB individuals than egos with less prominent identities. Similarly, as identity valence becomes more positive, there is a higher likelihood that egos will turn to other LGB alters. In other words, each sexual orientation identity sample (gay male, lesbian female, bisexual male, bisexual female) ought to be different in terms of the stressors they encounter \((p_3\) and \(p_4)\), the identity characteristics they display \((p_2)\), and the social support available to them \((p_1)\). The vast majority of these differences are tied to the fact that society attaches different stigmas and stereotypes to each sexual orientation identity, and respondents will internalize that social stigma (Balsam & Mohr, 2007). Prior research argues not only for different levels of internalized stigma, but also for different levels of identity primacy. Bisexual individuals
show lower levels of sexual orientation importance \( (p_2) \) and less connection to the sexual minority community \( (\text{homophilous alters}; \ p_1) \) than gay and lesbian counterparts. Thus, the bisexual identity directly impacts the LGB social support available. This is compounded by the fact that within the LGB community, several negative stereotypes abound, particularly focusing on the idea that bisexuality is, at best, a temporary condition, and thus bisexuals are not actual members of the LGB community \( \) (Hequembourg & Brallier, 2009). Moreover, research has similarly suggested that each sexual orientation identity is exposed to different stressors and levels of distal stressors \( (p_3) \), particularly stressors related to family and friends’ reaction to their sexual orientation identity (e.g., Diaz, et al., 2001; Doty, et al., 2010). That means that stress related to sexual orientation will be different for each group because societal beliefs and prejudices are distinct for each sexual orientation. Due to the widespread belief in the fleeting nature of bisexuality, coming out as bisexual results in a different reaction than coming out as gay or lesbian. For example, research suggests that individuals with a high need for closure (a cognitive preference for structuring information in a simplistic way) held more negative attitudes of bisexuals than they did of gay males and lesbians (Burke, et al., 2017).

Identity prominence and valence should also have an impact on the structure of the core discussion network (e.g., homophily; \( p_5 \)). Prior research has indicated that stigmatized identities tend to seek out a separate group of nodes that are homophilous on said identity (Perry & Pescosolido, 2010). Not only do LGB individuals seek out other nodes to be part of the sexuality-related CDN, but the degree of overlap between nodes in the sexuality-related network and other networks will depend largely on the strength of
respondents’ LGB identity characteristics. As LGB identity becomes more prominent, prior research suggests that the nodes in the sexuality-related network will become the source for support beyond sexuality-related issues (Doty, et al., 2010). In other words, as minority identity characteristics (e.g., identity prominence and identity valence) increase, the number of unique nodes (nodes that appear in only one CDN rather than multiple CDNs) in each CDN ought to decrease. Finally, each CDN ought to contain a different proportion of LGB homophilous nodes based on the type of stressor the CDN is used to buffer. For example, in prior work, individuals with stigmatized mental health diagnoses created networks that were more homophilous in terms of individuals with mental health diagnoses, but the proportion of homophilous nodes was higher in the CDN responsible for helping egos deal with stress related to mental health than the CDN responsible for helping with general important matters (Perry & Pescosolido, 2010). The general important matters network is best thought of as the default network for handing stressful events. The network is normally identified using questions like, “Who do you discuss important matters with?” It is differentiated from networks that are functionally specific – that is, CDNs that cater to a particular stressor. Thus, germane to the above argument, the proportion of LGB homophilous nodes ought to be higher in CDNs that are activated to help with sexuality-related stressors than general important matters networks.

Though the structure of social support networks is important, the perceived level of social support is also a necessary factor in understanding the degree to which a particular network is able to help buffer against certain stressors. Measuring perceived support allows discernment of the degree to which the structure of a social network impacts the perception of support gained from said network. Prior research has indicated
that some structural features (e.g., homophily) are linked to perceptions of higher social support (Doty, et al. 2010). In particular, LGB adolescents perceived higher levels of support from nodes that were homophilous on sexual orientation identity. Though, arguably, when combining this assumption with the functional specificity theory, it would be rational to assume this effect is prevalent in the sexuality-related stressor network.

These assertions help frame the first research question:

Figure 4:1. Proportion of the model tested for Hypotheses 1, 2, 3, 4, 5, and 6.

R1: Do functionally specific core discussion networks exist for sexuality-related stressors?
**H01**: Each sexual orientation identity will be significantly different in terms of network characteristics ($p_1$, Figure 4:1), sexual orientation identity characteristics ($p_2$), distal minority stress ($p_3$), and proximal minority stress ($p_4$).

**H02**: There will be limited overlap between sexuality-related discussion networks and networks related to general important matters stressors ($p_1$; see Figure 4:2).

*Figure 4:2. Conceptual depiction of CDN overlap.*

**H03**: The overlap between sexuality-related discussion networks and networks related to other stressors will increase as prominence and valence of an individual’s sexual orientation identity increases ($p_5$).

**H04**: Identity prominence and identity valence will be related to perceived social support such that as prominence and valence increase, social support will similarly increase for both the sexuality-related stressor network and the general important matters network ($p_5$).

**H05**: Functionally specific CDN for sexuality-related stressors will contain a higher proportion of LGB homophilous nodes than the general important matters CDN.
**H06:** Higher proportions of LGB homophilous nodes in the functionally specific network will be associated with higher perceived social support from the functionally specific network.

If functionally specific CDN exist for sexuality related stressors, it is possible that these networks are represented in the minority stress model as the part of social support that is influenced by an individual’s sexual orientation identity (see Figure 4.3). If the functional specificity hypothesis holds true, any individual CDN will account for a proportion of the respondent’s total network. In other words, the assumption is, and previous research bears out, that no single CDN is comprised of every member of an individual’s social network. Rather, any two CDNs will have distinct nodes present in one network but not the other, while also containing a proportion of nodes that overlap between the two CDN. This is the assertion made in Hypothesis 2. If Hypothesis 2 and the functional specificity hypothesis hold true, the effect of the structure of each CDN (e.g., homophily, closeness, and interaction) can be measured by isolating the nodes that occur specifically in that network. germane to this dissertation are the CDNs for general important matters and sexuality-related stressors; one can isolate the nodes that occur solely in the sexuality related CDN, then isolate the nodes that occur solely in the general important matters network. This leaves three separate sub-network structures to test: the overlap network, the sexuality-related network, and the general important matters network. The minority stress model posits a moderating effect of social support ($p_{13}$ and $p_{14}$) on proximal ($p_{11}$) and distal ($p_{10}$) stressors. When merging the functional specificity hypothesis and the minority stress hypothesis, one would posit that the structure of each sub-network should have a separate and distinguishable effect on mental health and well-
being, but the sexuality-related CDN would have a stronger impact on mental health and well-being within the minority stress model due to the fact that the stressors within the model are all related to sexual orientation.

This dissertation posits an additional effect of social support directly on mental health and well-being \((p_{16})\). This effect comes out of work showing structural elements of networks, mainly homophily, having an effect on the mental health of LGB adolescents (Doty, et al., 2010). Due to the fact that proximal and distal stressors are specific to sexual orientation identity, the functional specificity hypothesis suggests the structure of the sexuality-related CDN would have a stronger impact on mental health and well-being than the general important matters network.

*Figure 4:3. Proportion of the model tested in Hypotheses 7, 8, 9, and 10.*

**R2:** How does the structure of functionally specific CDN impact mental health and well-being?
**H07:** Improvements in the structure (i.e., homophily, closeness, frequency of contact) of functionally specific CDNs (i.e., general important matters and sexuality-related stressor networks) will be associated with better mental health outcomes \( (p_{16}) \) such that higher levels of homophily, interaction, and closeness will be associated with better mental health scores.

**H08:** Social support within functionally specific CDNs will have a greater relationship to mental health than social support within general important matters \( (p_{16}) \).

**H09:** Network characteristics associated with functionally specific networks will moderate the impact of minority stress on mental health and well-being more than the network characteristics of general matters networks \( (p_{13} \text{ and } p_{14} \text{ on } p_{10} \text{ and } p_{11}) \).

**H10:** The effect of sexuality-related CDN characteristics on mental health and well-being will be moderated by the prominence and valence of an individual’s sexual orientation identity such that network characteristics in functionally specific networks will have a larger effect on mental health outcomes for respondents with more prominent LGB identities or LGB identities with a more positive valence \( (p_{6} \text{ on } p_{16}) \).

Meyer’s initial model for minority stress posits a structure in which identity characteristics only moderate the effect of proximal minority stressors on health outcomes (recall Figure 2.1). In other words, LGB identity prominence and valence moderates the way in which internalized homophobia impacts mental health outcomes, but it would not moderate the way in which prejudice or discrimination impact mental
health outcomes. Given the dearth of research on the role of identity characteristics in the minority stress model (Meyer & Frost, 2013), one could argue that identity prominence and valence ($p_8$ and $p_9$) moderate the effects of both distal ($p_{10}$) and proximal ($p_{11}$) minority stress on mental health and well-being (see Figure 4:4). For example, individuals with more prominent LGB identities may be more likely to be outspoken about their sexual orientation. This increased exposure may lead to additional situations in which one is subject to prejudicial or discriminatory actions from outside forces, thereby increasing the number of distal stressors to which individual is subjected. In addition, as a respondent’s valence for LGB identity increases (i.e., they feel more positively about their sexual orientation identity), the effect of prejudicial and discriminatory actions from society may impact their health and well-being less. When a minority identity is attacked by outside forces, as through prejudicial and discriminatory action, the process of adopting an LGB identity may, in and of itself, provide a source of support (Morris, Waldo, & Rothblum, 2001). The use of identity as a coping mechanism is present in LBG individuals (Crocker & Major, 1989), and it stands to reason that the more positively individuals feel about their LGB identity, the more resistant they will be to the impact of sexuality-related stressors on health. Thus, the last hypothesis in this project is posited:
**H11:** Proximal and distal minority stressors ($p_{10}$ and $p_{11}$) are moderated by identity characteristics (i.e., identity prominence and identity valence; $p_8$ and $p_9$) such that increases in identity prominence and valence reduce the effect of proximal and distal stress on mental health and well-being more strongly when stress is low, but this effect is weaker when proximal and distal stress is high.

The next chapter focuses on methods pertaining to data collection; in particular, it addresses isolating the population of interest for this dissertation, procedures for data collection, and data preparation.
Chapter 5 – Methods of Data Collection and Data Preparation

Population of Interest

Recent demographic estimates put the size of the LGB population in the United States at roughly 3.5% (1.7% gay/lesbian, 1.8% bisexual; The Williams Institute, 2011). Within these breakdowns, there is tremendous gender differentiation; males are more likely to identify as gay, and constitute approximately 67% of the gay/lesbian total. Females are more likely to identify as bisexual, and comprise approximately 61% of the bisexual population. Given that LGB individuals are a small proportion of the U.S. population it is not surprising that sampling issues exist in extant literature. Thus, a vast majority of the samples in LGB studies fall into one of two categories.

The first type of sample is a convenience sample. Much of the early research, and a fair amount of current research, on LGB individuals relied on convenience sampling from urban areas where LGB individuals are more numerous (e.g., Martin & Hetrick, 1988; Meyer, Ouellette, Haile, & McFarlane, 2011). Oftentimes these samples are comprised of LGB individuals who frequent a given business (e.g., bars or clubs within the same city) or belong to a particular social group (e.g., McCallum & McLaren, 2011) within a city. Convenience samples are problematic because selection bias increases the error within the study (Meyer, 2003). Because these samples, by default, target a specific subset of the LGB population with particular geographic and personality characteristics (e.g., “out” individuals from City X who frequent Y Bar/Group) the findings from such studies can only be generalized to LGB individuals who are “out” and visible (Savin-William, 2001).
In order to increase generalizability of results, many researchers have turned to large, nationally representative probability samples. These data sets offer much larger samples of LGB individuals than convenience samples, and error due to selection bias is reduced in these data sets. Moreover, a number of these large data sets, such as the National Longitudinal Survey of Adolescent Health (AddHeath; Savin-Williams & Ream, 2007) and the Youth Behavioral Risk Surveillance System (YBRSS; Garofalo, et al., 1999), are specifically geared toward understanding health outcomes in adolescent populations. Yet, these probability samples still have methodological issues in that none were constructed with the purpose of studying LGB individuals as a group.\(^1\) As such, many of these data sets may ask only one question related to sexual identity, or sexual behavior, or sexual attraction, or household living arrangements. Researchers then infer inclusion or exclusion in the LGB community based on answers to this single question (e.g., Buchmueller & Carpenter, 2010; Conron, et al., 2010). This equivocation regarding the population of interest raises an interesting question.

**Who is LGB?**

Consistency in the operationalization of just who is LGB is problematic in the literature on mental health and LGB individuals. There are three types of questions most often used to identify who “belongs” to the LGB community. Behavioral questions ask respondents about the gender of past sexual or romantic partners (e.g., Buchmueller & Carpenter, 2010). Attraction questions ask respondents to identify the gender to which

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\(^1\) In March of 2017, the only study to attempt a purposeful nationally representative sample of LGB individuals (based on Gates’s estimates) comes from Pew Research Center (2013) and uses Knowledge Networks to secure a sample of approximately 1,200 LGB individuals, at considerable cost (personal communication, B. Mohamed, 2014). The Pew study will be used in future methodological work by the author as a comparison piece for exploring the data quality of an MTurk LGB sample vs. a Knowledge Networks LGB sample.
they are attracted, akin to a Kinsey scale (e.g., Doty, Willoughby, Lindahl, & Malik, 2010). Identity questions simply ask individuals whether they identify as gay, lesbian, bisexual, heterosexual “straight”, or queer/questioning (e.g., Mustanski, Garofalo, & Emerson, 2010). Although there is undoubtedly overlap between each of these three questions, each question inherently taps into a different population. Although this criticism may seem pedantic it has real implications for the study of health in LGB individuals. For example, rates of substance abuse among sexual orientation minorities are much higher when defining sexual orientation by behavior than when identifying sexual orientation by identity (Hughes, 2005). That is to say, men who have sex with men (MSM) report high rates of substance abuse whereas rates of substance abuse for individuals who identify as gay males are not as high.

Gates’s analysis of the size of the LGB population in the U.S. shows a progression in population proportion when defining LGB people by identity (3.5%), behavior (8.2%), or same-sex attraction (11%; The Williams Institute, 2011). Thus, it is possible to have individuals who are attracted to the same sex, have engaged in same-sex sexual behavior, and identify as heterosexual or straight (e.g., Roberts, Austin, Corliss, Vandermorris, & Koenen, 2010). Complicating issues further is the fact that longitudinal assessments of sexual orientation identity in adolescents using the AddHealth survey show self-selection into a given identity or attraction group is not stable across time (although the overall size of the LGB population did not change; Savin-Williams & Ream, 2007). In other words, a respondent who indicated non-heterosexual orientations in Wave 1 of AddHealth did not always indicate non-heterosexual orientations in Wave 2 or Wave 3 of AddHealth.
Between Wave 1 and Wave 2, the reports of same-sex sexual behavior aligned for 39.9% of males and 18.8% of females (Savin-Williams & Ream, 2007). Agreement in reports of engaging in same-sex behavior between Waves 1 and 3 were 28.4% for males and 0.3% for females. Agreement in report of same-sex behavior between Waves 2 and 3 were 48.8% for males and 6.1% for females. Thus, there were significant disparities in reporting for adolescents. Among male respondents, the direction of this change was almost exclusively toward reporting solely opposite-sex behavior; whereas female respondents split 1:3 in identifying bisexual behavior versus opposite-sex behavior. In other words, when adolescent males who reported same-sex behavior in Wave 1 of AddHealth altered their sexual history, it was almost exclusively a removal of previously reported same-sex behavior. However, when female adolescents who reported same-sex behavior in Wave 1 of AddHealth altered their sexual history, approximately 25% of the time that alteration was to move them to bisexual behavior (Savin-Williams & Ream, 2007).

This dissertation will focus only on those individuals who identify as gay, lesbian, or bisexual. The use of self-identification is the narrowest way to define respondents who belong to the LGB population, resulting in a smaller pool from which to draw respondents. However, the assertions made in this dissertation necessitate an operationalization of LGB that relies heavily on the self-reported identities of the respondents rather than the respondents’ sexual behaviors or amorous attractions. The use of proximal stressors within the minority stress model strongly suggests respondents have an internal identity aligning with the LGB community. Furthermore, the model posits social support that is related to an individual’s community, in this case the LGB
community. Access to this community often necessitates acceptance of a minority sexual identity.

**Sampling**

The use of the Internet and online surveys to reach hidden populations has been most often reported in the public health literature, but has also been used in research to reach non-health related populations such as religious minority groups (MacFarlane, 2012; Martini, Springer, Clark, & Richardson, 2017; Springer, Martini, & Richardson, 2015; Woodlock, 2011). Duncan, White, and Nicholson (2003) found that Internet methods produced the largest sample of successful illicit drug users ever surveyed, and consequently recommended using online surveys to reach hidden populations. Koch and Emrey (2001) found that using the Internet to survey marginalized populations did not result in problems related to self-selection / selection bias. Indeed, the characteristics of gay and lesbian participants (their sample of interest) who participated in the online surveys matched national data on the distribution of those same characteristics in the general population. They also concluded that the Internet could be a valuable medium for reaching hard-to-identify populations. Other research has also attested to the advantageous use of technology such as online surveys to improve research with hidden populations (Matthew & Cramer, 2008; Shaghaghi, Bhopal, & Sheikh, 2011).

When using the Internet, one still needs a viable means of reaching the population of interest. In recent years, online crowdsourcing platforms have been successful at obtaining research participants. One such crowdsourcing platform is Amazon’s Mechanical Turk (MTurk). Recent research into hidden populations on MTurk has shown it as a successful avenue for reaching stigmatized groups where entry into the population
can be difficult (e.g., Springer, Martini, & Richardson, 2015). Research has identified that MTurk Worker diversity more closely approximates U.S. population parameters than convenience samples drawn from undergraduate students (Chandler, et al., under review). A recent demographic survey of U.S. MTurk Workers identified a higher proportion of LGB individuals on MTurk than in the general population (Martini, Springer, & Richardson, under review). Thus, a survey on MTurk can expect gay males, lesbians, bisexual males, and bisexual females to be roughly 2.03%, 2.21%, 2.18% and 6.88% of the sample respectively.

Using MTurk for data collection is fast, convenient, and comparatively inexpensive. For example, workers make an average of $2 an hour and prior research paying $.50 for a 10-minute survey collected a sample of 500 respondents in 16 hours (Buhrmester, et al. 2011; Kelley, 2010). Research on compensation rates for MTurk participants has shown that compensation rates between $.10 and $1.00 do not affect data quality, but only data collection time. Participants will have many other opportunities on MTurk to complete tasks that take comparable amounts of time for greater compensation. That being said, community sentiment on MTurk and the increased use of the platform as a resource for survey research, strongly influences the acceptable rate MTurk workers expect to be paid for their time. In general, the norm among many workers requires HIT compensation that equates to $6 to $10 per hour; this standard of payment was utilized in the current study.

**Participants**

The selection criterion for respondent inclusion in this project was quite narrow. Due to the impact of the AIDS epidemic of the 1980’s and early 1990’s, many gay and
bisexual males over the age of 35 have social support networks that are significantly smaller than younger counterparts (Institute of Medicine [IOM], 2011). Thus, network characteristics such as closeness and homophily would arguably be impacted by the loss of homophilous others. In addition, MTurk as a community tends to be younger than the U.S. population (Berinsky, Huber, & Lenz, 2012). Given that there are likely to be fewer LGB individuals over the age of 35, due to the demographic makeup of MTurk, and given that the network characteristics of older LGB respondents may be significantly different from that of younger LGB individual, this project was restricted to respondents between the ages of 18 and 35.

As a theoretical frame, the idea of intersectionality posits that individuals with multiple minority statuses are not experiencing additional minority stress in an additive way, but rather, at the very least in a multiplicative way (Bowleg, 2012). In other words, the experience of LGB individuals of color varies widely from the experiences of white LGB individuals (e.g., Chae & Ayala, 2009; Stirratt, Meyer, Ouellette, & Gara, 2008). In addition, there is evidence that the social networks of racial minorities may operate differently for sexual minorities of color (Yoshikawa, Wilson, Chae, & Cheng, 2004). Though the impact of intersectional minority identities is very important (and an area of interest for the author), collection of an adequate number of participants to create a respectable sample size in each Race X Gender X Sexual Orientation cell is beyond both the temporal and financial capabilities of this project. Thus, respondents for this project were limited to white participants.
Sample size and power

Using the sample size calculator G-Power, an LGB sample of 200 individuals per sexual orientation by gender combination would provide adequate power to test the proposed models with a small effect size (Cohen's d = .02) at a significance level alpha of .05. Given the restricted population for this study (white, self-identified LGB individuals, living in the US, between the ages of 18 and 35), the recruitment of qualified individuals for the survey instrument required a large number of individuals to be screened for eligibility. Recent research on hard-to-reach populations on MTurk has shown that screening surveys allow researchers to find hidden populations without unduly biasing the sample by asking for the desired population outright (Springer, Martini, Lindsey, & Vezich, 2016). This method requires the use of a screening survey that identifies members of the population of interest, and asks them to participate in an additional survey. This method of achieving samples of hidden populations has proven successful with a variety of groups (e.g., religious minorities, occupational minorities).

The sample size for the screening survey is estimated in order to achieve 300 completed surveys by eligible participants in each gender by sexual orientation identity category (e.g., gay, lesbian, bisexual men, bisexual women; for a total of 1,200 respondents). The number of respondents in each sexual orientation identity was increased from 200 to 300 to guard against the potential loss of power that may have arisen from incomplete data or missing values. Qualitative responses from pilot testing revealed the network generator had the potential to be tedious for respondents. However, pilot respondents were not compensated. To guard against missingness arising from the novel network generation method, MTurk workers were compensated at the average rate
of between $8 and $9 per hour of work, and the sample size for each sexual orientation identity was increased to 300.

The number of MTurk workers who required screening to achieve the desired sample size was based on estimates of the prevalence of the LGB individuals in the U.S. MTurk pool, and the anticipated overall response rate for the survey (~75% after meeting screening criteria; Springer, et al., 2016). Note that the number of respondents has been universally rounded up to the next whole number when the divisions did not result in whole numbers (i.e., 20,833.33 = 20,834).

**Bisexual Men and Women:**
300 completes ÷ 2.18% of Mturk population = 13,762 ÷ 75% response rate = 18,350 (men)
300 completes ÷ 6.88% of Mturk population = 4,361 ÷ 75% response rate = 5,815 (women)

**Gay Men and Lesbians:**
300 completes ÷ 2.03% of Mturk population = 14,779 ÷ 75% response rate = 19,706 (lesbian)
300 completes ÷ 2.21% of Mturk population = 13,575 ÷ 75% response rate = 18,100 (gay males)

Because each sub-sample is exclusive, the largest sample size required for the screening survey to identify an adequate number of individuals for each sexual orientation minority was 19,706.

**Procedures**

**Amazon’s Mechanical Turk**

Recruitment took place through MTurk. From the Mechanical Turk homepage, users clicked on the "View a HIT in this group" link to see a specific HIT (in this context, "HIT" is the MTurk terminology for a survey opportunity). The HIT included the name
of the survey, information on the amount users were compensated for participation ($3 USD, three dollars), and the estimated amount of time the survey would take (~20 minutes). Prior to accepting the HIT, MTurk workers answered four short qualification questions (age, race, sexual orientation, gender). MTurk recorded the MTurk identification number for each individual who attempted the qualification questions. So, although workers were able to attempt the qualification questions more than once, each attempt was tied to the same MTurk identification number. Therefore, those individuals who attempted the qualification more than once were easily identified and their data was excluded. The MTurk workers who qualified for the survey (Caucasian, LGB individuals between the ages of 18 and 35) could then choose to preview the HIT before deciding to accept it. The preview included basic information on the survey identical to the introductory message provided in the survey instrument. To enter the consent portion of the survey, potential participants had to select the gold "Accept HIT" button per MTurk rules and regulations.

**Qualtrics**

After accepting the HIT via MTurk, participants clicked on a link that opened a new browser tab, which took them directly to a Qualtrics survey. Qualtrics is a sophisticated survey program that housed the survey instrument and fed data directly into Excel, which was used primarily to remove personal information from the data set (e.g., node names, geotags, and IP addresses). After identifying information was removed, the data was exported to Excel, which was used for deidentification and data cleaning, after which data was imported into SPSS where data preparation and analysis took place.
Main survey

A link to the survey is available and accessed via Dropbox. The brief information page included additional details about the study, and prompted potential respondents to continue to the detailed information sheet (consent documents) if they were interested in participating in the study (see Appendix A). At the end of the detailed information sheet, they were asked to electronically consent (“Yes”) or decline participation (“No”). This was the only question in the survey that mandated a response. Those that entered the survey but chose not to participate (selecting “No”) were directed to a closing statement that thanked them for considering participation in the study. Those that consented to participate (selecting “Yes”) were directed to a screen that presented the survey questions provided in the next chapter.

Respondents were first asked the series of name generator questions. This question set asked respondents to identify individuals from four groups (friends, family, work/school, and the internet) they talk to most frequently. After each name generator respondents answered demographic and network structure questions for each node. A respondent’s completed answers to the four name-generator questions represent their overall social network as defined for this dissertation. Once the overall network was compiled, respondents answered a series of stressor questions aimed at identifying functionally specific core discussion networks.

Each stressor question asked respondents to identify which individuals in their overall network they would discuss each of seven potential stressors with. After each of the nine potential stressor questions respondents were asked how much support they felt they received from each functionally specific network.
Next, respondents were asked a series of questions corresponding to the measures of psychological distress (K6), self-esteem (RSES), life satisfaction (SWLS), and gay-related stressful events. The identity prominence, valence, and concealment items appeared together. Finally, respondents answered the three subjective health items (general subjective health, subjective physical health, and subjective mental health). Each scale appeared on a separate page and included imbedded attention-check questions. Upon completion of the survey, Qualtrics gave respondents one of two codes. One code indicated the respondents successfully completed the survey and passed at least two-thirds of the attention-check questions, whereas the other code indicated failure to pass at least two-thirds of attention check questions. Those passing at least two-thirds of attention check questions were compensated whereas those workers who did not pass attention checks were not compensated (data utilized in this project was obtained solely from compensated MTurk workers). Once respondents had their code, they were thanked for their time and directed away from Qualtrics (back to MTurk) with the suggestion to close their web browser once they entered their completion code on the MTurk HIT screen.

**Data Preparation**

Qualtrics screened 19,242 MTurk workers, approximately 500 respondents shy of the 19,706-participant target discussed previously. Of those individuals screened 1,432 (7.4%) qualified to participate in the survey; 1,364 (95%) of qualified participants accepted the HIT and completed at least 80% of the survey (a completion percentage explicitly described on the Informed Consent page). The sample collection did not meet preset goals in that the sample for lesbians (n = 262) and gay males (n = 290) fell short of
the 300 participant markers (though it cleared the 200-participant goal for adequate power described earlier in this chapter). Bisexual males (n = 348) and bisexual females (n = 464) both surpassed previously set sample collection goals. Qualtrics was used to export data directly to Excel, where data cleaning took place. Within Excel, the names for each node in a respondent’s social network were excluded. Additionally, MTurk IDs and geotags were discarded. The data set, which included all 19,242 individuals who accessed the survey, was then culled to the 1,364 individuals included in the analyses for this dissertation. The resulting data set was then imported into SPSS version 22 (and later 24) where analysis took place.
Chapter 6 – Measurement & Methods of Data Analysis

In the chapter to follow, each scale utilized in this dissertation has been analyzed with regard to descriptive statistics as well as factor structure (where appropriate). The results from the current data collection were compared to past results (if available) to discern whether the current use of scaled items (e.g., Beck Hopelessness Scale) matched prior uses of the scale. In addition, each scale was then analyzed for differences between the sexual orientation identities. Earlier chapters in this work cite research contending the four sexual orientation identities are distinct with regard to their experiences with stress and distress, and thus group differences ought to appear at several points throughout this chapter.

Ego-centric Network Node Generator

The measures included in the survey instrument incorporated a social network name generator, which was adapted from Perry & Pescosolido (2010) and asked respondents to identify the individuals they interact most with in four areas: general interaction (“The following section asks you about the people you interact with the most”), work/school interactions (“… please list additional names of individuals from work or school who are important to you.”), family interactions (“…give the names of additional individuals from your family that are important to you.”), and the Internet (“…give the names of individuals you primarily interact with on the internet who are important to you.”).

For the initial network, individuals were allowed to list up to ten names. For the work/school, family, and Internet networks individuals were allowed to list up to six additional names in each category (for a maximum network size of 28). Average network
size was similar across sexual orientation identities ($M = 15.47$; see Table 1). It should be noted the average network size is larger than prior findings in the general social survey, which was between two and three (GSS; McPherson, et al., 2000) as well as in prior work on functionally specific core discussion networks (Perry & Pescosolido, 2010). This difference could occur for several reasons. First, prior social network generators were used during in-person interviews in which the network generators were given well into the survey (three-quarters of the way through in the case of Perry and Pescosolido’s survey). However, in this dissertation the name generator was the first piece of information obtained from respondents. Thus, the difference in the number of nodes reported could be due to differences in the level of survey fatigue experienced by respondents. A second explanation could be that prior work utilized respondents from a wider age range than this dissertation. As discussed in prior chapters, network size decreases with age, thus it would stand to reason that this sample of comparatively younger individuals would list more nodes than a sample of older respondents. Third, it could be that MTurk workers are significantly different from other respondents in that most MTurk workers are aware that both the quality and the completeness of the work provided plays a role in their subsequent compensation. Thus, perhaps MTurk workers provided more nodes out of the desire to ensure they received full compensation.

In addition to identifying individual nodes, respondents were asked basic demographic information about each node (e.g., sex, race, sexual orientation) as well as basic network questions (see Network Measures below) about each individual named in the generator (see Table 6:1). The adaptation utilized here was designed to elicit the largest overall network possible – which increased the possible choices for each
functionally specific network. In addition, this method is similarly worded to long-standing single-item network questions on the General Social Survey (Brashears, 2011; McPherson, Smith-Lovin, & Brashears, 2006; Perry & Pescosolido, 2010).

**Functionally Specific Core Discussion Network Generator**

When conducting networks research, it is necessary to distinguish between network generators (questions that, as described above, create the pool of possible nodes respondents turn to) and items that obtain functional networks (questions that highlight which nodes a respondent would turn to when experiencing a defined stressor). This section describes the method used to identify functional networks. Respondents were asked to identify which node(s) they would talk to when faced with stressors related to various areas of life (e.g., “Of the individuals you’ve listed, who do you talk about [important matters, health problems, prejudicial or discriminatory event related to your sexual orientation, financial problems, a fight with your significant other, a fight with your friends, a fight with a close family member] with?”). Though various stressor situations were asked, two are germane to this dissertation. The first is the general important matters stressor (“who do you talk to about important matter”); nodes selected during this question comprise the raw members of the general important matters network. The second stressor utilized in this project is the sexuality-related stressor (“who do you talk to about prejudicial or discriminatory events related to your sexual orientation”); nodes selected during this question comprise the raw members of the sexuality-related network. These stressor questions were based on similar questions used in face-to-face interviews to establish CDNs in egocentric network research. Respondents were also asked to write about the most stressful event that occurred in the past 12 months, and then
indicate who, among the individuals they listed, they would talk to about this event. Respondents were then asked to write about a time in the past 12 months when they were treated differently because of their sexual orientation, and then indicate who, among the individuals they listed, they would talk to about this event. Although the open-ended responses were not utilized in this project, they will be analyzed in future work utilizing this data set.

When looking at these two networks, there are two types of nodes to consider, nodes that are unique to a network (e.g., the node appears only in the general important matters network, not in the sexuality-related network), and nodes that overlap networks (e.g. a node that was selected in both the general important matters network and the sexuality-related network; see Table 6:2). Caution should be used when interpreting the average number of nodes in each network. As one may anticipate, there was positive skew to each of these networks. For example, the maximum sexuality-related matters network ranged from 19 for lesbians to 28 for gay males, whereas the maximum was 18 for each sexual orientation identity when considering the general important matters network.

**Network Measures**

Three network measures were collected for each node listed in the name generators: sexual orientation was used to determine homophily; the closeness of the individual named; and the frequency of contact with the individuals.

**Homophily**

Homophily was measured for each of the CDNs identified. Measuring homophily is a multi-step process. Each individual in a respondent’s social network was measured
on sameness of sexual orientation using a “1” to represent the presence of the same (or similar) characteristic shared by the respondent and the network node. In other words, when measuring sameness with regard to sexual orientation if the respondent is a gay male, those members of his network who are gay, lesbian, or bisexual will receive a score of 1, whereas heterosexual members of his network as well as members for whom “don’t know” was selected would receive a 0.

Of course, homophily could have been defined in a more stringent way. For example, with gay male respondents, homophilous nodes could be defined as only other gay males. The problem inherent in this method with these data is that it often yielded no homophily. This point is easy to overlook when assessing the homophily presented below because proportions are used for calculation. However, using arguably the broadest possible definition of homophily within networks yielded approximately two homophilous nodes per network. Defining homophily in stricter terms would have led to a plurality of respondents who had no homophilous nodes in any network.

Once homophily was established for each node, network homophily was determined by two separate methods; first homophily was measured by taking the proportion of nodes within a CDN who possess the same characteristic as the respondent. Thus, homophily with regard to sexual orientation represents the proportion of nodes in a respondent’s CDN who identified with an LGB sexual orientation (see Table 6:3). Second, homophily was measured as the simple raw number of homophilous nodes present in the respondent’s network. It should be noted the raw number of homophilous nodes was calculated as a descriptive step only. Wide variance in both overall network size and functionally specific network size make raw-count homophily an inadequate tool
for understanding the impact of homophily. For the analyses conducted in the following chapters, homophily will refer solely to proportional homophily, or the percent of LGB homophilous nodes in a particular network. One-way analysis of variance (ANOVAs) was conducted by sexual orientation identity (SOI) for each stressor to determine whether there were group differences in either summative or proportional homophily. The average homophily figures can be seen below along with results from post-hoc analyses\(^2\). The results show that lesbians and gay males report both general important matters networks and sexuality-related stressor networks that contain a higher proportion of homophilous nodes than the networks of bisexual respondents. This pattern was mostly echoed by the results for average summative homophily, though lesbians report higher summative homophily in the general important matters network than all other SOI, and the summative homophily in general important matters networks reported by gay male respondents was higher than bisexual females alone. As discussed above, proportional homophily is the better measure here as it takes account of differences in network size, which the summative measure does not.

**Closeness**

A measure of how close respondents felt toward the individuals in their network was measured for each network node during the name generator portion of the study. Closeness was measured on a seven-point Likert-type scale anchored by “Not Close At All” (1) and “Extremely Close” (7). Similar to homophily, closeness measures were

\(^2\) For all one-way ANOVA post-hoc tests reported in the Measurement section Tukey’s Honest Significant Difference statistic was utilized to identify significant group differences where homogeneity of variance was not an issue. When significant Levene’s statistics were present, Dunnett’s T3 statistic was used to identify significant group differences.
calculated for each CDN by averaging the closeness scores for each CDN member. Thus, there were separate closeness measures for each of the functionally specific CDNs (see Table 6.4). One-way ANOVAs indicated no significant differences in closeness between SOI for general important matters network and the sexuality-related stressor network.

**Frequency of contact**

A measure of how often respondents interact with individuals in their network (frequency of contact) was measured for each network node during the name generator portion of the study. Frequency of contact was assessed by asking respondents, “How many days per week do you interact (digitally or in person) with [node] on average?” Response options ranged from 1 day (1) to 7 days (7). One-way ANOVAs indicate no group differences in interaction by SOI (see Table 6:5).

**Perceived Support**

Though not a network characteristic, perceived social support was measured for each CDN. After respondents identified the nodes that belong to each functionally specific network, they were asked three questions regarding the type of support they would receive from the identified network. These three questions appeared at the bottom of the page for each functionally specific CDN in reference to the CDN taken as a whole. The three questions were worded as follows, “If I needed to talk to these individuals about this event… [they would listen to me talk about my feelings, they would give me advice if I asked for it, they would help me out if I needed them to do something].” The answer options for each question were seven-point Likert-style scales anchored by “Strongly Disagree” (1) and “Strongly Agree” (7). These three questions correspond to
proxies for emotional, informational, and instrumental support from the CDN specified for each stressor (see Table 6:6).

Correlations between the perceived support variables were strong and distinct patterns (see Table 6:7). These correlations indicate the social support variables group by CDN. The factor loadings for social support variable show two distinct factors along CDN lines with the loadings for the social support measures in the general important matters network ranging from .88 to .90, and loadings for the social support measures in the sexuality-related stressor network ranging from .92 to .93. When scales were created for social support items in both networks, the reliability of perceived social support in the general important matters network had a Cronbach’s α = .91, and the reliability of perceived social support in the sexuality-related stressor network had a Cronbach’s α = .95. Both scales were aggregated for use in further analyses.

**Mental Health and Well-being**

Mental health was measured using three separate scales. The first scale measured general psychological distress in non-clinical populations. The second scale measured self-esteem in the general population. The third scale measured hopelessness in both clinical and non-clinical populations. All three scales have been used in other large representative studies.

**Psychological distress**

The Kessler 6-question (K6) screening scale was utilized for assessing psychological distress in respondents (Kessler, *et al.*, 2002). Respondents were asked to indicate how often a statement applied to them over the past 30 days. Answer choices range from 0 (none of the time) to 4 (all of the time). For more information on the items
included in K6 see Appendix B. The K6 is a summative scale in which scores from each of the six questions are added to yield a final score, with a range from 0 to 24, with scores above 12 considered very high risk for psychological distress.

Prior research indicates scale reliability for the K6 is good (Cronbach’s $\alpha = .89$; Kessler, et al., 2002). Factor structure for the K6 scale shows loadings between .72 and .89 with an average loading of .78 for two factors. The factor structure was replicated for this study, identifying a single factor solution with factor loadings ranging from .72 to .89, and high reliability (Cronbach’s $\alpha = 90$). One-way ANOVAs indicated significant differences in psychological distress between SOI groups, $F(3, 1358) = 5.54$, $p < .001$. Results indicate that gay males report a lower psychological distress score than bisexual males and females. No other differences were significant. Means, standard deviations, and results from post-hoc tests can be seen in Table 6:8.

**Self-esteem**

The Rosenberg Self-esteem Scale (RSES) is a widely-used tool in survey research for assessing respondent self-esteem (see Appendix C). The original scale consists of 10 items answered on a four-point scale, ranging from strongly disagree to strongly agree (Rosenberg, 1965). Both the original 10-item scale, and the short form, have good validity and reliability (Blascovich & Tomaka, 1993). This study used a six-item short form of the RSES, similar to the short-form used on the National Comorbidity Survey. The response scale for this study was altered to reflect a seven-point Likert-style scale anchored by 1 (Strongly Disagree) and 7 (Strongly Agree). Factor analysis on the six-item scale revealed a single-factor solution with loadings ranging from .72 to .86, with good reliability (Cronbach’s $\alpha = .91$).
The scale was then summed into a single self-esteem variable and a one-way ANOVA was conducted to discern whether there were significant differences by SOI. Results indicate a significant difference in self-esteem by SOI, $F(3, 1358) = 7.24$, $p < .001$. Post-hoc tests revealed that, on average, gay males and lesbians have higher self-esteem than bisexual males and bisexual females (see Table 6:9).

**Hopelessness**

The Beck Hopelessness Scale (BHS) is a series of items used to screen potential threats for suicidal behavior and ideation in individuals between the ages of 17 and 80 (Beck, 1988). The original measure contains 20 items that are scored true/false. Given the length of the instrument, efforts have been made to create a short form of the BHS. Recent research with a nationally representative Hungarian population yielded a four-item version of the BHS (Forintos, Rozsa, Pilling, & Kopp, 2013; see Appendix D).

All four questions concern hopeless thoughts and ask respondents to indicate how often the following statements pertain to them: “I feel that the future is hopeless and that things cannot improve,” “My future seems dark to me,” “Things just won’t work out the way I want them to,” and “There’s no use in really trying to get something I want because I probably won’t get it”. Unlike the traditional BHS, which used true/false response options, this version uses a four-point scale: (0) None of the time, (1) Some of the time, (2) Most of the time, and (3) All of the time. For scoring, the short form sums the values of each item yielding a continuous measure with a score of 6 suggested as a cut-off in clinical populations.

Prior research indicates good internal consistency with factor loadings ranging from .64 to .72 as well as good reliability (Cronbach’s $\alpha = .85$; Forintos, et al., 2013).
Factor analysis with the current sample yielded good internal consistency for a single-factor solution with factor loadings ranging from .85 to .89, as well as similarly good reliability, Cronbach’s α = .89. A one-way ANOVA indicates significant group differences by SOI, $F(3, 1350) = 2.98, p = .03$. Post-hoc analyses did not indicate any variables with significant differences, though a handful of comparisons fell between p-values of .05 and .07 (see Table 6:10). These differences indicate higher levels of hopelessness for bisexual males than for gay males and lesbians, with all groups falling below the clinical cutoff.

**Life satisfaction**

A short five-item life satisfaction scale was used to measure general life satisfaction (Diener, Emmons, Larson, & Griffin, 1985). The Satisfaction With Life Scale (SWLS) asks respondents to agree or disagree on five items using a Likert-style scale anchored by 1 (Strongly Disagree) and 7 (Strongly Agree). For more information on the SWLS see Appendix E. Prior research indicates factor loadings ranging from .61 to .84 with an average factor loading of .75. For the purpose of detecting significant group differences in this dissertation a composite variable was created by averaging the scores for the five items. Prior to doing so, factor analysis was conducted resulting in a single-factor solution with factor loadings ranging from .72 to .92, with similarly good reliability, Cronbach’s α = .91. One-way ANOVA indicates significant differences in SWLS scores between SOI, $F(3, 1357) = 5.20, p = .001$ (see Table 6:11). Satisfaction with life is higher for gay males and lesbians than for bisexual counterpart.
Minority stressors

Distal stressors – gay-related stressful events (GRSE)

Stressors related to sexual orientation are central to Meyer’s model (2003). Rosario, Rotheram-Borus, and Reid (1996) created a 12-item checklist of gay-related stressful events. Respondents then indicated whether each event has occurred in the past six months. The list covers areas broadly focused on family-related, friend-related, and work/school-related events that occurred because of a respondent’s sexuality. The original scale asks about school-related stressful events and work-related stressful events separately as it was developed using high school and college individuals aged 14 to 21. For the purposes of this project, school and work items were combined to shorten the scale and ease applicability to the 18 to 35 year-old respondents for this project (see Appendix F). The items are summed to give a measure of gay-related stressful events. The gay-related stressful life events have been used in prior research positing minority stress (see Table 6:12; Rosario, Schrimshaw, Hunter, & Gwadz, 2002). One-way ANOVA indicates significantly different counts of distal stress between SOI groups, $F(3, 1349) = 11.36, p < .001$. These results suggest that gay males and lesbians report being exposed to a higher number of gay-related stressful events over the past six months than bisexual respondents.

Proximal stressors – identity concealment

The minority stress model differentiates between stressors that occur due to the behavior of others (e.g., prejudice and discrimination) and are endured by LGB individuals, and proximal stressors that are due to the internal thoughts and actions of the LGB individual. Meyer offers three examples of proximal stress, internalized
homophobia, expectations of rejection, and identity concealment. Identity concealment is the degree to which an LGB individual is recognized as LGB without having to disclose the identity and/or chooses to disclose their identity as LGB. Concealment is measured using two items. The first item asked respondents how often they tell others they are LGB. The second item asked respondents how often others know they are LGB without respondent disclosing an LGB identity. Each item has response options ranging from (1) Never to (5) Always. The factor structure for identity concealment revealed a single-factor explaining 72% of the variance, with loadings of .85, with adequate reliability, Cronbach’s $\alpha = .62$. Prior to combining the variables into one identity concealment measure, each item was reverse coded so that higher values correspond with a higher degree of identity concealment (see Table 6:13).

**Characteristics of Minority Identity**

Two characteristics of identity were measured in keeping with the minority stress model: identity prominence and identity valence.

**Identity prominence**

Identity prominence is the degree to which an identity is central, or important, to how an individual views the self (Meyer, 2003). Identity prominence was first measured by using three items that gauge how important the LGB identity is to the respondent (personal identity). In addition, respondents were asked whether they believed other individuals in the SOI could provide them with support (in-group support). Finally, all respondents were asked how much time they spend with other individuals who are LGB (other than as part of a formal social group; in-group alienation). Answer options appeared on a Likert-style scale ranging from Strongly Disagree (1) to Strongly Agree
Initial factor analysis revealed a three-factor solution that followed the areas expressed above, with two items that cross-loaded to the point of possible exclusion (italicized and shaded below, see Table 6:14).

After removing the cross-loading items, the factor analysis was re-run yielding a three-factor solution explaining 76% of the variance. The two factors break down conceptually as in-group support (factor loadings of .90, Cronbach’s α = .88), personal identity (factor loadings between .71 and .83, Cronbach’s α = .73), and in-group alienation (factor loading of .78 and .86, Cronbach’s α = 63). When placing these three factors into the larger dissertation it became clear that the use of in-group social support as a measure of identity prominence would be problematic given that perceived support (discussed above) is used as a dependent variable for several analyses. Therefore, the use of in-group social support as a measure of identity prominence was dropped. Each remaining factor was used to create a composite variable (see Table 6:15). Each composite variable was then tested using one-way ANOVA. Results indicate significant differences between SOI groups for personal identity, $F(3, 1354) = 22.16, p < .001$, and in-group alienation, $F(3, 1354) = 15.71, p < .001$. These results indicate that personal identity is higher among homosexual individuals (e.g., gay males and lesbians), whereas in-group alienation is more pervasive for sexual minority males than sexual minority females.

**Identity valence**

Identity valence is a measure of the positivity or negativity a respondent feels toward their LGB identity (Stirratt, Meyer, Ouellette, & Gara, 2008). Identity valence was measured by two questions. The first asked respondents how negatively or positively
they feel about people who are the respondent’s sexual orientation identity, ranging from very negatively (-50) to very positively (50; personal valence). The second question asked respondents how they negatively or positively they believe most people in the U.S. feel about people who are LGB, ranging from very negatively (-50) to very positively (50; community valence). When considering the identity characteristic that is valence, it is important to note that one’s internal valence of LGB identity may be different than their perception of others’ valence toward LGB identity. Personal valence is a measure of how positively one feels about an identity they ascribe to themselves, whereas community valence is a measure of their overall perception of how society feels toward LGB folks. Correlations indicate a weak relationship between personal valence and community valence, $R = .12$. Community valence has an overall stronger correlation with health variables than personal valence (see Table 6:17). One-way ANOVAs indicate significant differences between SOI values for personal valence, $F (3, 1319) = 14.66, p < .001$, and community valence, $F (3, 1348) = 19.82, p < .001$ (see Tables 6:16 and 6:17). These results suggest that personal and community valence do not break down as simply as the previous variables. Personal valence is higher among lesbians than other SOI and bisexual female respondents have higher personal valence than sexual minority males. Bisexual males have the lower community valence than other SOI and community valence for lesbians is higher than bisexual respondents regardless of gender.

**Demographic Information**

Race, sexual orientation identity, and gender were assessed via the screening protocol on MTurk. Due to space limitations and the desire to keep the survey time as close to 20 minutes as possible, the MTurk protocol questions comprise the entirety of
the demographic screening for this survey. It should be noted that due to the purposeful selection of the sample in this study, 100% of respondents reported being white/Caucasian as well as cis-gender. Though age in this dissertation is limited to individuals between the ages of 18 and 35, a more accurate measurement of age was meant to be included in this study. Unfortunately said item was missed during survey construction.

**Method of Analysis**

The analyses for this project took place exclusively in SPSS. Analysis began using version 22 and ended using version 24. For all analyses contained in this dissertation complete case analysis was utilized. Overall, there was a tolerable amount of missingness in the data and complete case analysis provides relatively unbiased results when the proportion of missing cases is low (< 10%)\(^3\). Factor analyses were conducted on all scales to determine whether the proposed latent structures held true for this sample. Once the factor structure was confirmed, the scales were aggregated or summed (based on the recommendations of the scale’s author), it is this form of the scales that was utilized in the analyses that follow in Chapter 7. The hypotheses for this dissertation were analyzed as described below.

**Hypothesis 1**

Hypothesis 1 argues each sexual orientation identity will be significantly different in terms of social support network characteristics, minority identity characteristics, distal minority stress, and proximal minority stress. To test this assertion, one-way ANOVAs

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\(^3\) Missingness for individual variables ranged from 1 to 42 cases representing between 0.1% and 3.1% of all cases contained in the dataset (complete N = 1365). Each variable contained less than 1.5% missing values with the exception of personal valence which contained 3.1% of missing values. With all variables considered, listwise exclusion yielded N = 1291, or 74 excluded cases representing 5.42% of the sample.
were calculated for which the grouping variable was sexual orientation identity (SOI).
The dependent variables were network characteristics (measured as homophily, closeness, and interaction frequency), distal minority stress (measured by the Gay Related Stressful Events scale), proximal minority stress (measured as identity concealment), and minority identity characteristics (measured by identity prominence and identity valence). When significant results are present, post-hoc analyses were utilized to determine specific group differences. Where assumptions of homogeneity of variance were not violated, Tukey’s Honest Significant Difference was the post-hoc test of choice. When the homogeneity of variance assumption was violated Dunnett’s T3 was the post-hoc test of choice.

**Hypothesis 2**

Hypothesis 2 states there will be limited overlap between sexuality-related discussion networks and networks related to general important matters stressors. To assess this assertion sexuality-related CDNs and general important matters CDNs were identified individually, then each overlap network was identified. Two CDNs are central to this hypothesis – both CDNs were obtained via asking respondents which nodes they would discuss certain stressors with. The general important matters stressor asks individuals, “Of the individuals you’ve listed, who do you talk about important matters with?” Similarly, the sexuality-related stressor asks respondents, “If you were to experience a prejudicial or discriminatory event because of your sexual orientation who would you discuss it with?” (Hereinafter referred to as the sexuality-related stressor network.) Each stressor listed every node provided by respondents during the network generation section of the survey, as well as including an option for “I wouldn’t talk to
anyone about this”. Due to this option, there were 78 individuals excluded from analyses in this hypothesis (and any future hypothesis utilizing these CDNs) because they identified not talking to anyone in one or both networks.

Because each node in a respondent’s network was marked with a unique identifier based on their position during network generation, it was possible to determine which nodes appear solely in the general important matters network, which nodes appear solely in the sexuality-related stressor network, and which nodes appear in both networks (called the overlap network). Due to the aforementioned problem with using the raw number of nodes as a measurement, each of the three networks were modified to represent the proportion of the total number of nodes present in all three networks (i.e., sexuality related nodes + general important matters nodes + overlap nodes). One-way ANOVA was then utilized to determine whether the proportion of nodes in each of the three networks was significantly different. As in Hypothesis 1, when conducting post-hoc testing, Tukey’s HSD and Dunnett’s T3 were utilized based on tests for homogeneity of variance.

**Hypothesis 3**

Hypothesis 3 states that the proportion of node overlap between sexuality-related discussion networks and the general important matters network will increase as prominence and valence of an individual’s sexual orientation identity increases. Identity prominence was measured by three composite variables representing personal identity (i.e., a measure of the amount one feels they are LGB) and in-group alienation (i.e., the amount one feels unaccepted by other LGB individuals). Similarly, identity valence is comprised of two variables, personal valence and community valence. Variables were
entered individually in simple bivariate correlation with the variable representing the proportional size of the overlap network. Prior to calculating correlations, each SOI was isolated.

**Hypothesis 4**

Hypothesis 4 states that identity prominence and identity valence will be related to perceived social support such that as prominence and valence increase social support will similarly increase in both the general important matters network and the sexuality-related stressor network. When asking respondents to identify the members of each CDN they were also asked to indicate the amount of perceived social support they received from said network. The three social support questions highlighted emotional support (i.e., how likely the identified individuals would be to listen to the respondent talk about their feelings), informational support (how likely the identified individuals would be to give respondent advice if asked for), and instrumental support (how likely the identified individuals would be to help the respondent out if needed). As described above, these variables fell into stable factors along network lines such that the social support measures for general important matters network group together, and the social support measure for the sexuality-related stressors network group together. This hypothesis tested the impact that identity prominence (personal identification, in-group alienation) and identity valence (respondent’s LGB valence, and respondent’s perception of community valence) had on social support within each network. For ease of interpretation the social support variables were standardized before use as dependent variables.4

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4 It should be noted that both group-mean standardizations by SOI and grand-mean standardizations were analyzed. There is no appreciable difference in the regression coefficients (standardized or unstandardized) and no substantive difference in the interpretation. Grand-mean standardization was utilized in these analyses.
To determine the direct impact of identity prominence and identity valence on social support, regressions were conducted with the two identity prominence scales, then separate regressions were conducted with the two valence variables. When significant main effects occur, the significant effects were added to a final regression to ensure that both the model and the individual effects remained significant when combined. This process was repeated separately for the sexuality-related stressor network and the general important matters network.

**Hypothesis 5**

Hypothesis 5 states that functionally specific CDNs for sexuality-related stressors will contain a higher proportion of homophilous nodes with regard to sexual orientation than general important matters CDN. To test this assertion the proportion of homophilous nodes in both the sexuality-related CDN and the important matters CDN were compared using a paired samples t-test comparing proportional homophily for both the sexuality-related CDN and the general important matters CDN.

**Hypothesis 6**

Hypothesis 6 stats that higher proportions of LGB homophilous nodes in the functionally specific network will be associated with higher perceived social support from the functionally specific network. Thus, homophily in the sexuality-related CDNs was regressed on perceived support for the sexuality-related CDNs. In keeping with prior research, proportional homophily was used in these analyses rather than summative homophily because proportional homophily controls for differences in the size of reported networks. Only perceived social support for the sexuality-related stressor
network was utilized in this analysis. As in prior hypotheses, each SOI was analyzed individually.

**Hypothesis 7**

Hypothesis 7 states improvements in structure of functionally specific CDNs (e.g., increases in homophily, closeness, and frequency of contact within the sexuality-related network, the general important matters network, and the overlap network between the two) will be associated with better mental health outcomes such that higher levels of homophily, interaction, and closeness will be associated with better mental health scores. Each specific network was identified by isolating the individuals who respondents selected as social support nodes for a) only the general important matters stressor, b) only the sexuality-related stressor, and c) both the general important matters stressor and the sexuality-related stressor (i.e., the overlap network). Network characteristics were then calculated for each network individually. If the functional specificity theory holds true, respondents activate a CDN because the characteristics of that network better suit the stressor at hand. Thus, network characteristics (i.e., closeness, homophily, and frequency of contact) will have a relationship with mental health outcomes (i.e., psychological distress, hopelessness, and self-esteem) and well-being (i.e., life satisfaction).

Regressions were conducted individually for each sexual orientation identity (i.e., lesbians, gay males, bisexual males, bisexual females) resulting in a total of 48 regressions best explained by the equation:

\[ Y_{ij} = \beta_{0j} + \beta_{1j}(\text{Homophily}_{ij}) + \beta_{2j}(\text{Closeness}_{ij}) + \beta_{3j}(\text{Interaction}_{ij}) + e_{ij} \]

where \( j \) is the network (sexuality-related, general important matters, or overlap), variables in the model are the network characteristic, and \( Y \) is the mental health variable being
tested. This equation set repeats itself for each sexual orientation identity. It is worth reiterating here that, due to study design, the regressions are conducted solely on white / Caucasian individuals between the ages of 18 and 35, and each sexual orientation identity controls for sex. Significant models were discussed individually and where relevant, they were compared using two methods highlighted in Perry and Pescosolido, comparison of standardized regression coefficients, and comparison of omnibus model-fit statistics (e.g., $F$-tests).

**Hypothesis 8**

Hypothesis 8 argues perceived social support within the sexuality-related functionally specific CDN will have a greater relationship to mental health than perceived social support within the general important matters. To test this assertion, regression equations were run regressing the four mental health outcomes (i.e., self-esteem, life satisfaction, psychological distress, hopelessness) on group-centered social support measures (see Hypothesis 4, Footnote 4) for the general important matters network and the sexuality-related stressors network. Thus, perceived social support in the general important matters network and in the sexuality-related network serve as independent variables in the equation for each mental health outcome for each SOI.

When both perceived support variables were significant within the same model, comparisons between the two were made using standardized regression coefficients and the confidence intervals within each model. When comparisons were necessary between groups (i.e., sexual orientations), incremental $F$ tests were conducted to determine whether a significant difference exists using the following equation:
\[
F = \frac{(SSE_c + SSE_u) \times (N_1 + N_2 - 2K - 2)}{SSE_u \times (K + 1)}
\]

where \( SSE_c \) is the error sum of squares for the constrained model, \( SSE_u \) is the error sum of squares for the unconstrained model, and \( K \) is the number of independent variables in the equation. Significant results indicate a difference between the two effects.

**Hypothesis 9**

Hypothesis 9 contends that network characteristics associated with functionally specific networks will moderate the impact of minority stress on mental health and well-being more than the network characteristics of general matters networks. To test this hypothesis, it is important to understand the areas in which proximal and distal stressors impact mental health and well-being dependent variables (i.e., the main effect of proximal and distal stress on the mental health and well-being variables). To understand how network characteristics help moderate the impact of stressors on mental health and well-being, interaction terms were created representing the moderation of network characteristics (homophily, closeness, frequency of contact) on both proximal and distal stressors. This results in six interaction terms per dependent variable (life satisfaction, hopelessness, self-esteem, psychological distress) for each network (sexuality-related, general matters, and overlap) and sexual orientation. Models were first built to assess how proximal and distal stressors impact health and well-being, after which the interaction terms were added (including the corresponding main effect terms). Each interaction term was tested individually and then all significant interaction terms in a **sexual orientation X network X dependent variable** category were tested together. Due to the volume of analyses in this hypothesis, only significant final models will be discussed.
Figures representing significant interactions can be found in Appendix G. When multiple significant interaction terms occur within a specific model, comparisons between the two will be made using standardized regression coefficients and the confidence intervals within each model. When comparisons are necessary between groups (i.e., sexual orientations) or mental health variables, incremental $F$ tests will be conducted using the equation discussed in Hypothesis 8.

**Hypothesis 10**

Hypothesis 10 posits that the effects of the network characteristics in the sexuality-related CDN on mental health and well-being are moderated by identity prominence and identity valence such that network characteristics in functionally specific networks will have a larger effect on mental health outcomes for respondents with more prominent LGB identities or LGB identities with a more positive valence. As identity prominence and valence increase the effect of homophily, closeness, and frequency of contact on mental health and well-being should strengthen. In other words, the more prominent LGB identity is and the more positively respondents view LGB identity, the stronger the effect of network characteristics on mental health ought to be – particularly given the network in question is the sexuality-related stressor network.

Identity prominence was measured using two moderating variables discussed in Chapter 6 – personal identity and in-group alienation. Identity valence was measured using two dependent variables representing the personal valence the respondent attributes to their sexual orientation identity and the valence the respondent believes others in society attribute to their sexual orientation identity. This hypothesis highlights network characteristics within the sexuality-related stressors network.
First, a main effects model was tested to ascertain whether the network characteristics of the sexuality-related CDNs had an influence on mental health and well-being for sexual-orientation minorities. Separate regressions were conducted for each mental health and sexual orientation identity combination. Interaction terms were then created for each combination of main effect and identity prominence / identity valence variable. Interaction terms were tested one at a time for each prominence/valence X network characteristic combination. When multiple interaction terms were significant they were added to the same model to determine whether each interaction was significant when controlling for the other.

**Hypothesis 11**

Hypothesis 11 states that proximal and distal minority stressors are moderated by identity characteristics (i.e., identity prominence and identity valence) such that increases in identity prominence and valence reduce the effect of proximal and distal stress on mental health and well-being more strongly when stress is low, but this effect is weaker when proximal and distal stress is high. To test this hypothesis interaction variables were created between proximal (i.e., identity concealment) and distal stressors (i.e., GRSE) and identity characteristics (i.e., prominence and valence). It should be noted here that valence was measured by two items that asked respondents to indicate their personal valence toward LGB individuals and their perception of others’ valence toward LGB individuals. Identity prominence also consisted of two items: in-group alienation measures the degree to which respondents perceive themselves to be isolated from the LGB community and personal identity measures the degree to which being LGB is central to the respondent’s identity. Interaction terms were added to the base model one at
a time, and then all significant interaction terms were added into a final model. Finally, when identity characteristics moderated the same stressors’ impact on the same mental health outcome for multiple sexual orientation identities, comparative F-tests were utilized to ascertain whether the effects in question were significantly different between the two sexual orientations.

With measures identified and the method of analysis described, it is time to turn to the analyses. The next chapter presents results for the previously discussed hypotheses. The results of each hypothesis will be discussed in this chapter, and expanded on in the final chapter of this dissertation.
Chapter 7 – Results

Research Question 1

The first research question for this project asked whether functionally specific core discussion networks exist for sexuality-related stressors.

Hypothesis 1

Hypothesis 1 stated that minority stressors (both distal and proximal stressors), identity characteristics (identity prominence and valence), and the network characteristics within a social support network would all be significantly different for each sexual orientation identity. To test this hypothesis, one-way ANOVAs were conducted on observed variables, which include gay-related stressful events (GRSE, a count variable), identity valence (two single-item measures), and three network characteristics (homophily, closeness, and interaction) to ascertain SOI differences.

Distal minority stressor: Gay-related stressful events (GRSE).

Within the minority stress model, distal minority stressors were identified as those stressors that were external to the individual, rather than thoughts or beliefs that were internalized. There were significant differences in GRSE scores between SOI, $F (3,1349) = 11.36, p < .001$. Post-hoc testing revealed that gay males and lesbians endorsed significantly more stressful events than their bisexual male and bisexual female counterparts (see Table 7:1). Results suggested that, on average, lesbians endorsed 1.32 more gay-related stressful events than bisexual males, and 1.28 more stressful events than bisexual females. Similarly, gay males endorsed .74 more stressful events than bisexual males and .71 more stressful events than bisexual females. From a practical standpoint, these results could be taken to suggest that gay males and lesbians have encountered
about one more stressful even in the past six months than their bisexual counterparts. It should be noted that there were no significant differences between gay males and lesbians, or between bisexual males and bisexual females.

**Proximal minority stressor: Identity concealment.**

In contrast to distal stressors, the minority stress model identified proximal stressors as those that are internal to the individual. Rather than occurrences and interactions with others, proximal stressors were based on beliefs and perceptions. Proximal minority stress was measured by the degree to which respondents conceal their sexual orientation identity. As noted in Chapter 6, subjects were asked two questions about how often they tell someone they are LGB, and how often someone knows they are LGB without the respondent having to reveal this information. Both items, when aggregated, form a measure of identity concealment. There were significant differences in identity concealment by SOI, $F(3, 1353) = 72.62, p < .001$. Results from post-hoc comparisons indicated that gay males and lesbians reported lower levels of identity concealment than bisexual males (.77 points higher than lesbians; .75 points higher than gay males) or bisexual females (.65 points higher than lesbians; .62 points higher than gay males; see Table 7:2).

**Identity valence.**

Identity valence, or the degree to which an individual felt a positive or negative affect toward their LGB identity, was measured by asking two separate items that can best be thought of as measures of personal identity valence and community identity valence. There were significant differences in personal identity valence scores (which range from -50 to 50) by SOI, $F(3,1319) = 14.66, p < .001$. Post-hoc testing revealed that
lesbians had more positive personal valence than all other SOI (on average, 8.53 points higher than gay males, 9.66 points higher than bisexual males, and 3.99 points higher than bisexual females; see Table 7:3). There were no significant differences in personal valence between gay males and bisexual males. This means that, on average, lesbians had a more positive view of their LGB identity than gay males, bisexual males, and bisexual females.

Similarly, there were significant differences in community valence scores (which range from -50 to 50) by SOI, $F(3,1348) = 19.82, p < .001$. Post-hoc testing revealed that lesbians had higher community valence than bisexuals (on average, 12.52 points higher than bisexual males and 4.98 points higher than bisexual females). Gay males reported higher community valence than bisexual males (11.18 points) and bisexual females also reported higher community valence than bisexual males (7.56 points). No other significant pairwise comparisons were found. This means that bisexual males perceived their community as having a more negative view of the LGB community than lesbians, gay males, and bisexual females. In addition, lesbians perceived their community as having a more positive view of the LGB community than bisexual females did.

**Identity prominence.**

Identity prominence was measured by two composite variables – personal identity and in-group alienation. Three one-way ANOVAs were run and yielded significant differences by SOI. Personal identity, the degree to which the LGB identity was central to an individual’s identity, was significantly different for SOI, $F(3, 1354) = 22.16, p < .001$. Post-hoc testing revealed that lesbians had higher personal identity than bisexual males (.85 points lower) and bisexual females (.46 points lower). Similarly, gay males had
higher personal identity than bisexual males (.65 points lower) and bisexual females (.27 points lower). In other words, being gay or lesbian was a more central component of the identity of gay and lesbian individuals than being bisexual was to the identity of bisexual males and females.

In-group alienation, the degree to which individuals believed themselves to be separated from other LGB individuals, was significantly different between SOI, $F(3, 1354) = 15.91, p < .001$. Post-hoc testing revealed that gay males had higher in-group alienation than lesbians (.46 points lower) and bisexual females (.45 points lower). Similarly, bisexual males had higher in-group alienation than lesbians (.53 points lower) and bisexual females (.52 points lower; see Table 7:4). Therefore, in-group alienation was more strongly reported by sexual minority males than it was by sexual minority females.

Network characteristics.

Three network characteristics were examined in this project – homophily, closeness, and interaction (or frequency of contact). To measure homophily, a summative item was created to ascertain the raw number of nodes in a CDN who were homophilous with the respondent. Additionally, a proportional measure of homophily was created, representing the proportion of nodes within each CDN that was homophilous with the respondent. Though homophily for gender and race exist in this project, Hypothesis 1 was particularly concerned with sexual orientation identity homophily. One-way ANOVAs were run for each social network characteristic and stressor. The resulting tests, along with tests for homogeneity of variance, can be seen in Table 7:5.
Means and results from post-hoc tests can be seen in Table 7:6. It was clear that there were significant differences in homophily by SOI. When comparing each of the SOI, it was clear that for both CDNs lesbians and gay males were significantly different from bisexual males and/or bisexual females. In other words, homosexual individuals tended to have higher scores on network characteristics than bisexual individuals (very broadly). When looking at closeness and interaction there were no significant differences.

**Hypothesis 1 – Discussion**

When taken together, a majority of the information points to the fact that sexual orientation identities were different from one another on measures of stress, identity, and network characteristics. Distal minority stressors and proximal minority stressors both suggested that differences were based on sexual orientation (i.e., homosexuals have higher distal stress and lower proximal stress than bisexuals – collapsing for gender). Though the results were in different directions, both cleanly collapsed along SOI lines. Distal stressors were stressors caused by society (e.g., use of slurs). It could be argued that gay males and lesbians are more readily identifiable by individuals in society. Moreover, since they only interact romantically with members of the same sex, every romantic outing represented an opportunity for gay and lesbian respondents to experience distal stress. In addition, because friends and family were more likely to view bisexuality as fleeting, they may be less likely to call attention to a respondent’s bisexuality through the use of slurs or demeaning comments.

Identity prominence and identity valence paint a different picture. Though there were significant differences among the four SOI with regard to identity valence, the differences can be best understood as collapsing along gender lines (i.e., females have
higher identity valence than males). Identity prominence was higher among homosexuals than bisexual counterparts, collapsing along sexual orientation lines. However, alienation was higher among males than females – regardless of sexual orientation collapsing cleanly along gender lines. Many gender scholars have argued that part of the reason for the difference in valence between sexual minority males and females can be traced to beliefs in traditional gender roles (e.g., Kerns & Fine, 1994). Society routinely punishes males more harshly for violations of gender roles than females (e.g., Pascoe, 2005), and when this occurs, epithets utilized to verbally scold tend to be related to sexual orientation (e.g., “stop being a fag”). Thus, it is understandable that gay and bisexual males would see the community as having a more negative opinion of their SOI, as well as why they may report lower personal valence.

Among the network characteristics, homophily differences appeared to be based on sexual orientation, whereas there were no differences based on closeness and frequency of contact. Taken together, there was significant evidence to accept Hypothesis 1 and conclude that each SOI is significantly different from the others and ought to be analyzed as a distinct entity. Both proximal and distal stress may have collapsed via sexual orientation (e.g., homosexuals and bisexuals), but identity valence showed no easily collapsible pattern. Within identity prominence, one factor (personal LGB identity) collapsed along sexual orientation lines, whereas the second factor (in-group alienation) collapsed along gender lines. In other words, when considering all of the variables contained in H1, there was no stable pattern upon which to justify collapsing LGB individuals into one pool for analysis. Because the differences did not clearly fall on either a gender line or a sexual orientation line, but rather both, analyzing each group
separately was the best course of action for ensuring that the overall model accounts for all possible differences.

**Hypothesis 2**

Hypothesis 2 stated that the overlap between respondents’ sexuality-related discussion network and their general important matters network would be incomplete. If the functional specificity hypothesis held true, there would be incomplete overlap between CDNs for a specific stressor (i.e., sexuality-related stressors) and general important matter networks. Within any two CDNs a proportion of nodes would overlap and the overlap between any two CDNs would be incomplete (i.e., < 1.00).

Thus, this hypothesis looked at three separate sub-networks: 1) a network of nodes that were selected solely in the sexuality-related stressor, 2) a network of nodes that were selected solely in the general important matters stressor, and 3) a network of nodes that were selected for both the sexuality-related stressor and the general important matters stressor (i.e., the overlap network). A one-way ANOVA was conducted to highlight SOI differences in overall network size, as well as the proportions of all three sub-networks (see Table 7.7). Results indicated no significant difference in overall combined network size between SOI, $F(3, 1281) = .73, p = .54$. However, there were significant differences in the proportion of nodes solely in the general important matters network, $F(3,1282) = 12.88, p < .001$; the proportion of nodes solely in the sexuality-related stressor network, $F(3, 1281) = 4.70, p = .003$; and the proportion of nodes that overlap between networks, $F(3, 1281) = 7.98, p < .001$.

A test of homogeneity indicated that the only distribution with heterogeneous variances was the distribution for the proportion of nodes in the sexuality-related stressor
network. Thus, group comparisons on this variable would be done using Dunnett’s T3, whereas group comparisons for the remaining variables would use Tukey’s HSD. Results of post-hoc analyses indicated that the proportion of nodes solely in the general important matters network was higher for bisexual males than for gay males (.08 lower) and lesbians (.11 lower). Similarly, the proportion of nodes solely in the general important matters network was higher for bisexual females than for gay males (.07 lower) and lesbians (.10 lower). The proportion of nodes solely in the sexuality-related stressor network was significantly higher for gay males than bisexual males (.05 lower) and bisexual females (.06 lower). Finally, the proportion of nodes that overlap (e.g., occur in both the important matters network and the sexuality-related stressor network) was significantly higher for lesbians than for gay males (.07 lower), bisexual males (.10 lower), and bisexual females (.09 lower).

**Hypothesis 2 – Discussion.**

The core idea being tested in Hypothesis 2 was one of functional specificity. The key question was, do respondents tap into different CDN for general stressors versus sexuality-related stressors? The data here replicated results from prior studies on health networks (see Perry & Pescosolido, 2010). Broadly speaking, the proportion of nodes that occurred in the overlap network was less than .50 (save lesbians, who fall in at .56). That means that individuals were likely to have nodes they discuss general stressors with, but not sexuality-related stressors. Similarly, there were nodes with whom they discussed sexuality-related stressors, but not the general stressors they encountered. Results indicated there was incomplete overlap between the general important matters CDN and the sexuality-related stressor CDN. Gay male respondents had a higher proportion of
nodes in their sexuality-related stressor network than lesbian and bisexual respondents. This could occur because gay males were also more likely to experience higher levels of distal stress than bisexuels, and thus they require a comparably larger sexuality-related CDN. This explanation carries over to the result showing lesbians had a larger proportion of nodes in the overlap network than other SOI. Given that lesbians similarly face higher levels of distal stress than bisexuels, it would stand to reason that they would require a larger network to handle sexuality-related stressors. What was unclear was why lesbian respondents appeared to utilize a higher proportion of nodes for both general important matters and sexuality-related stressors, whereas gay males appeared to utilize nodes more explicitly to handle sexuality-related stressors. The general important matters network was largest for bisexual respondents, which again, was likely attributed to the fact that they report lower levels of both distal stress, while simultaneously reporting higher levels of proximal stress (e.g., identity concealment) than their gay and lesbian counterparts.

**Hypothesis 3**

Hypothesis 3 asserted that the overlap between sexuality-related CDN and important matters CDNs would increase as identity prominence and valence increase. In other words, the correlations with personal valence, community valence, and personal identity ought to be positive, whereas the correlation with in-group alienation ought to be negative (see Table 7.8). The only significant correlations occurred for gay males. In-group alienation, $R = -0.19, p < .01$, was significant suggesting that as identity prominence increased for gay males the proportion of nodes in the overlap network increased.
Hypothesis 3 – Discussion.

For all intents and purposes, Hypothesis 3 was not supported. For the analyses conducted in this hypothesis it could be said that identity prominence and identity valence had no relationship to the proportion of nodes in the overlap network. The hypothesis posited a positive relationship between minority identity characteristics (i.e., identity prominence and identity valence) and the proportion of homophilous nodes in the overlap network. The one exception to this occurred in gay males, for whom in-group alienation did impact overlap proportion such that increased alienation was related to decreases in the proportion of nodes in the overlap network. In other words, higher levels of alienation correlate to increased distinctiveness between the sexuality-related stressor network and the general important matters network. As shown in H2, gay males had a higher proportion of nodes in the sexuality-related network than lesbians and bisexuals. Moreover, they reported higher levels of in-group alienation than sexual minority females, and experienced more distal stress than bisexuals. It could be argued that gay males need a larger sexuality-related stressor network to deal with distal stress, and that network was more likely to contain homophilous nodes than the networks of bisexual respondents (see H1). The combination of high homophily in the sexuality-related network of gay males, teamed with the high in-group alienation, yielded a network that gay males utilize to manage sexuality-related stress, but were reluctant to grant access to other areas of their lives.

Hypothesis 4

Hypothesis 4 stated that identity prominence and identity valence would be related to perceived social supported such that as prominence and valence increased,
social supported would similarly increase in both the general important matters network and the sexuality-related stressor network.

**Perceived social supported in the general important matters network.**

Within the general important matters network, identity prominence and valence were related to social supported for all sexual orientation identities save bisexual females.

*Identity prominence.* For lesbian and gay male respondents, in-group alienation was related to decreased perceived social supported in the general important matters network (see Table 7:9). As alienation from the LGB community increased, respondents’ perceptions of social supported for general stressors decreased. For bisexual male respondents, personal identity as a bisexual was correlated with decreased perceptions of social supported for general stressors. As bisexual males embraced the importance of their identity, perceived social supported in the general important matters network went down.

*Identity valence.* The affective valence of LGB individuals was significantly correlated with perceived social supported for general important matters among lesbians and bisexual male respondents. For both lesbian and bisexual male respondents, higher community valence was related to a decrease in perceived social supported by members of the general important matters network. This result was concerning as it suggested individuals who perceived that the community views LGB individuals positively also perceived their general important matters network as providing less social supported to them. This result was counterintuitive. Given the functional specificity hypothesis, one would expect community valence to had an impact on networks that deal with sexuality-related matters – it did not here. Similarly, one would expect valence to had little, if any,
impact on general important matters networks, but if an impact was observed, the
expected direction would be positive (higher valence corresponds with higher supported).
At present, there was no explanation for this result.

The relationship between personal valence and social supported for bisexual
males was quite different. Higher personal valence was positively related to social
supported in the general important matters network for bisexual male respondents. Thus,
bisexual male respondents who felt more positively about LGB individuals also
perceived higher levels of social supported from individuals in their general important
matters network.

*Perceived social supported in the sexuality-related stressor network.*

*Identity prominence.* Among female respondents, in-group alienation had a
significant relationship to perceived social supported in the functionally specific network.
As scores for perceived in-group alienation increased for female respondents, perceived
social supported scores for the sexuality-related stressor network were lower. As one felt
more alienated among their minority in-group their perceptions of supported for stressors
related to said in-group would likely be lower (see [Table 7:10]).

*Identity valence.* Among bisexual respondents, identity valence had a significant
relationship to perceived social supported within the sexuality-related CDN. The pattern
of the relationship in terms of directionality as well as standardized and metric
coefficients mirrored effects observed in the general important matters CDN. Higher
scores on personal valence among bisexual female respondents was related to higher
scores on perceived social supported within the sexuality-related CDN. Among bisexual
male respondents, community valence held the same perplexing effect observed in the
general important matters CDN. As scores for community valence increased, bisexual male respondents reported lower scores on perceived social supported in the sexuality-related stressor network.

*Hypothesis 4 – Discussion.*

Identity characteristics had a measurable main effect on perceptions of social supported within specific networks among sexual orientation minorities. Within both the general important matters and sexuality-related CDNs, identity prominence and identity valence were significantly related to perceived social supported. The relationship between perceived social supported and identity prominence manifests such that as levels of in-group alienation decreased, perceived social supported grew in both the general important matters network and the sexuality-related stressor network. However, as the personal importance of LGB identity increased, perceived social supported in the general important matters network decreased for bisexual males.

Identity valence had a murkier relationship to perceived social supported. As personal valence increased (i.e., personal attitudes toward LGB individuals became more positive), perceived social supported within both networks was higher than among respondents with lower perceived personal valence. However, when the community valence increased (i.e., respondents perceive others as having more positive attitudes toward LGB individuals), scores on perceived supported in both networks were lower for bisexual males. At present, an explanation for this effect was difficult to articulate. Based on prior research noted in previous chapters, as individuals believe society to be more accepting (e.g., perceptions of LGB valence among others increased) perceived social supported should increase, particularly for the sexuality-related stressor network.
However, the opposite was the case here, at least for bisexual males. As bisexual males perceived society as more accepting of bisexuality, they also observed their own networks as less supportive. Recall that identity concealment for bisexual males was comparably high. Similarly, recall that the items that comprise gay-related stressful events (GRSE) were predicated upon an individual’s sexuality being known. It could be that bisexual males, assuming the worst from their network, viewed the behavior of alters as if they were aware of ego’s bisexuality.

**Hypothesis 5**

Hypothesis 5 asserted that functionally specific CDN for sexuality-related stressors would contain a higher proportion of homophilous nodes with regard to sexual orientation than general important matters CDNs. Five paired samples t-tests were run, testing the proportional homophily of the sexuality-related CDN to the proportional homophily (i.e., the proportion of a network that was lesbian, gay, or bisexual) of the general important matters CDN for lesbians, gay males, bisexual males, bisexual females, and the omnibus survey. Results indicated that the proportion of homophilous nodes was significantly greater in the sexuality-related CDN when compared to the general important matters CDN (see Table 7:11). This pattern was observed for each SOI as well as the complete sample. The difference was greatest in gay males and lowest in bisexual males, meaning that the difference between the proportion of LGB nodes in the important matters CDN and the sexuality-related CDN was highest among gay men.

**Hypothesis 5 – Discussion.**

Hypothesis 5 was supported. For each sexual orientation identity, there was a significant difference between the proportion of LGB nodes in the sexuality-related CDN
and the important matters CDN. This difference was such that the sexuality-related CDN contained a higher proportion of homophilous nodes (i.e., LGB people) than the important matters CDN. This means that, on a whole, when LGB individuals were confronted with a sexuality-related stressor (e.g., prejudice or discrimination), they turned to supported networks that contain more LGB individuals. Although this pattern emerged consistently for each SOI, it was of note that bisexual individuals reported lower proportions of homophilous nodes in both their sexuality-related CDN and their general important matters CDNs. Due to both high levels of identity concealment and high in-group alienation bisexual males were uniquely positioned so that they encountered few sexual minority alters, and disclosed their own sexual orientation less frequently. This combination could explain why bisexual males reported comparatively low levels of homophily. This was compounded by the fact that their sexuality-related network was relatively small, and their general important matters network was relatively large. In other words, the largest network bisexual males had was also the network in which their identity concealment was likely to be greatest (i.e., general important matters network).

**Hypothesis 6**

Hypothesis 6 stated that a higher proportion of sexuality homophilous nodes in the sexuality-related CDN was related to higher perceived supported from the functional network (another characteristic measured for each CDN). Results indicated that the proportion of homophilous nodes in the sexuality-related CDN had an impact on within-network perceived supported for gay males. The proportion of homophilous nodes in sexuality-related CDN had an impact on perceived emotional supported, $b = .45$, $\beta = .19$, $p = .001$; perceived informational supported, $b = .36$, $\beta = .16$, $p = .011$; and perceived
instrumental supported, $b = .42$, $\beta = .18$, $p = .003$ in that same network. The proportion of homophilous nodes accounted for a small amount of the variance in perceived emotional supported ($R^2_{adj} = .03$), informational supported ($R^2_{adj} = .02$), and instrumental supported ($R^2_{adj} = .03$). Additional results indicated that changes in the proportion of homophilous nodes in the sexuality-related CDN did not correlate to changes in perceived emotional, informational, or instrumental supported for lesbians, bisexual males, or bisexual females.

**Hypothesis 6 – Discussion.**

Hypothesis 6 was supported for gay males only. For gay male respondents, the proportion of homophilous nodes in the sexuality-related CDN correlated to changes in perceived supported such that a higher proportion of homophilous nodes (i.e., a higher proportion of LGB individuals) corresponded to higher perceived emotional, informational, and instrumental supported. This means that, when confronted with a sexuality-related stressor, gay males perceived that they were more likely to be listened to, more likely to get advice, and more likely to get help when their CDN contained higher proportions of LGB individuals. These results did not hold true for lesbians, bisexual males, and bisexual females, for whom the proportion of homophilous nodes was unrelated to perceptions of support. When interpreting this result, remember that for the sexuality-related network, gay males had a higher proportion of homophilous nodes than bisexual respondents. In addition, the size of the sexuality-related network was largest for gay males. Thus, they had more homophilous nodes in a network that was already comparably larger. This means that when dealing with sexuality-related stressors their CDN was both larger and more homophilous than the networks of any other SOI.
Therefore, this CDN contains more individuals who were uniquely able to understand the stressor (being similarly members of the LGB community), and thus they could be more likely to provide social supported the respondent views as better.

**Research Question 2**

The second research question asked how functionally specific core discussion networks impacted mental health and well-being.

**Hypothesis 7**

Hypothesis 7 stated the improvements in structure of functionally specific CDN (e.g., increased in homophily, closeness, and frequency of contact within the sexuality-related network and the general important matters network) would be associated with better mental health outcomes such that higher levels of homophily, interaction, and closeness in each of three networks (i.e., the general important matters network, the sexuality-related network, and the overlap network) would be associated with better mental health scores. For ease of explanation the following section will be divided by dependent variable (i.e., mental health scale) and then results will be presented separately by sexual orientation and type of network. In addition, due to the high volume of analyses in this hypothesis, only significant values will be discussed.

**Satisfaction With Life Scale.**

The SWLS ranges from one to seven with higher scores indicating higher satisfaction with life. Each regression in this section was run individually by both sexual orientation and network; therefore, this section consisted of testing 12 individual regressions (three regressions per sexual orientation). A high-level table depicting the results of these regressions can be seen in Table 7:12.
Lesbians. With regard to life satisfaction in lesbian respondents, only one regression yielded significant results. Node closeness within the overlap network had a significant impact on life satisfaction in lesbian respondents, $F(3, 247) = 3.18, p = .03$. The impact of closeness of individuals in the overlap network, $b = .39, \beta = .19, p = .01$, accounted for 2.5% of the variance in life satisfaction for lesbian respondents. In practical terms, this result suggested that when lesbians felt closer to the individuals in their overlap network, they reported higher scores on measures of life satisfaction.

Gay Males. With regard to life satisfaction in gay male respondents, three regressions yielded significant results. Node closeness within the overlap network had a significant impact on life satisfaction in gay male respondents, $F(3, 245) = 3.32, p = .02$. The impact of closeness of individuals in the overlap network, $b = .36, \beta = .20, p = .01$, accounted for 2.7% of the variance in life satisfaction for gay male respondents. In practical terms, this result suggested that when gay males felt closer to the individuals in their overlap network, they reported higher scores on measures of life satisfaction.

Within the sexuality-related stressor network, network homophily and node closeness had significant impact on life satisfaction in gay male respondents, $F(3, 169) = 3.09, p = .03$, accounting for 3.5% of the variance in life satisfaction. The impact of node closeness in the sexuality-related stressor network, $b = .26, \beta = .21, p = .01$, suggested that when gay males felt closer to the individuals in their sexuality-related stressor network they reported higher scores on measures of life satisfaction. The impact of homophily in the sexuality-related stressor network, $b = 4.49, \beta = .15, p = .05$, suggested that when gay males had a higher proportion of LGB individuals in their sexuality-related stressor network they reported higher scores on measures of life satisfaction.
**Bisexual Males.** With regard to life satisfaction in bisexual male respondents, only one regression yielded significant results. Node closeness within the overlap network had a significant impact on life satisfaction in bisexual male respondents, \( F(3, 287) = 2.70, p = .05 \). The impact of closeness of individuals in the overlap network, \( b = .24, \beta = .15, p = .03 \), accounted for 1.7% of the variance in life satisfaction for bisexual male respondents. In practical terms, this result suggested that when bisexual males felt closer to the individuals in their overlap network, they reported higher scores on measures of life satisfaction.

**Bisexual Females.** With regard to life satisfaction in bisexual female respondents, three regressions yielded significant results. Within the overlap network, node closeness had a significant impact on life satisfaction in bisexual female respondents, \( F(3, 425) = 4.11, p = .01 \). The impact of closeness of individuals in the overlap network, \( b = .20, \beta = .11, p = .05 \), accounted for 2.1% of the variance in life satisfaction for bisexual female respondents. In practical terms, this result suggested that when bisexual females felt closer to the individuals in their overlap network, they reported higher scores on measures of life satisfaction.

Within the sexuality-related stressor network, frequency of contact had a significant relationship with life satisfaction in bisexual female respondents, \( F(3, 243) = 2.84, p = .04 \). Node closeness in the general matters network, \( b = .15, \beta = .16, p = .01 \), accounted for 2.2% of the variance in life satisfaction for bisexual female respondents. In practical terms, this result suggested that bisexual females who were in more frequent contact with the nodes in their overlap network reported higher scores on measures of life satisfaction.
In the general matters network, node closeness had a significant relationship with life satisfaction in bisexual female respondents, $F(3, 352) = 2.93, p = .03$. Node closeness in the overlap network, $b = .21, \beta = .13, p = .01$, accounted for 1.6% of the variance in life satisfaction for bisexual female respondents. In practical terms, this result suggested that when bisexual females felt closer to the individuals in their overlap network, they reported higher scores on measures of life satisfaction.

*Beck Hopelessness Scale.*

The Beck Hopelessness Scale (BHS) asked respondents to rate how often they experienced each of four questions on a scale ranging from “none of the time” (0) to “all of the time (3). The four items were then summed, resulting in a scale ranging from 0 to 12, with a cut-off of 6 in clinical populations. Each regression in this section was run individually by both sexual orientation and network; therefore, this section consisted of testing 12 individual regressions (three regressions per sexual orientation). A high-level table depicting the results of these regressions can be seen in Table 7:13.

*Lesbians.* There were no significant regressions when looking at the impact of network characteristics within the social networks on hopelessness for lesbian respondents. That is not to say lesbian respondents experienced no hopelessness, but rather the average BHS score for lesbian respondents had no relationship with network characteristics (homophily, closeness, and frequency of contact) in any of the networks tested (sexuality-related, general matters, and overlap networks).

*Gay Males.* Three regressions yielded significant results when assessing the impact of network characteristics within social networks on hopelessness for gay males. Within the overlap network, node closeness had a significant impact on hopelessness in
gay male respondents, \( F(3, 243) = 2.38, p = .05 \). Node closeness in the overlap network, 
\( b = -.58, \beta = -.17, p = .02 \), accounted for 1.9% of the variance in hopelessness for gay 
male respondents. This result suggested that when gay males felt closer to the individuals 
in their overlap network, they reported lower scores on measures of hopelessness.

Within the general matters network, node closeness and frequency of contact had 
a significant relationship with hopelessness in gay male respondents, \( F(3, 185) = 3.25, p 
= .02 \), accounting for 3.5% of the variance in hopelessness. The impact of node closeness 
in the general matters network, \( b = -.36, \beta = -.16, p = .05 \), suggested that when gay males 
felt closer to individuals in their general matters network they reported lower scores on 
measures of hopelessness. The impact of frequency of contact in the general matters 
network, \( b = .29, \beta = .17, p = .03 \), suggested that when gay males were in more frequent 
contact with individuals in their general matters network, they reported higher scores on 
measures of hopelessness.

*Bisexual Males.* There were no significant regressions when looking at the impact 
of network characteristics within the social networks on hopelessness for bisexual male 
respondents. That was not to say bisexual male respondents experienced no hopelessness, 
but rather, as with lesbians earlier in this section, the average BHS score for bisexual 
male respondents was not related to the network characteristics (homophily, closeness, 
and frequency of contact) in any of the networks tests (sexuality-related, general matters, 
and overlap networks).

*Bisexual Females.* With regard to hopelessness in bisexual female respondents, 
two regressions yielded significant results. In the overlap network, node closeness had a 
significant impact on hopelessness in bisexual female respondents, \( F(3, 425) = 4.59, p < 

.01. The impact of node closeness in the overlap network, $b = -.44, \beta = -.14, p = .02$, accounted for 2.5% of the variance in hopelessness for bisexual female respondents, suggesting that when bisexual females felt closer to the individuals in their overlap network, they reported lower scores on measures of hopelessness.

In the general matters network, node closeness also had a significant impact on hopelessness in bisexual female respondents, $F(3, 352) = 3.49, p = .02$. The impact of node closeness in the general matters network, $b = -.41, \beta = -.16, p < .01$, accounted for 2.1% of the variance in hopelessness for bisexual female respondents, suggesting that when bisexual females felt closer to the individuals in their general matters network, they reported lower scores on measures of hopelessness.

**Rosenberg Self-esteem Scale.**

The Rosenberg Self-esteem Scale (RSES) asked respondents to rate how strongly they agreed or disagreed with each of six questions on a scale ranging from “strongly disagree” (1) to “strongly agree” (7). The six items were then summed, resulting in a scale ranging from 1 to 42. Each regression in this section was run individually by both sexual orientation and network; therefore, this section consisted of testing 12 individual regressions (three regressions per sexual orientation). A high-level table depicting the results of these regressions can be seen in Table 7:14.

**Lesbians.** With regard to self-esteem in lesbian respondents, one regression yielded significant results. In the overlap network, node closeness had a significant impact on self-esteem in lesbian respondents, $F(3, 247) = 2.60, p = .05$. The connection between node closeness in the overlap network, $b = 1.89, \beta = .18, p = .02$, accounted for 1.9% of the variance in self-esteem for lesbian respondents. In practical terms, this result
suggested that when lesbians felt closer to the individuals in their overlap network, they reported higher scores on measures of self-esteem.

**Gay Males.** With regard to self-esteem in gay male respondents, one regression yielded significant results. In the general matters network, node closeness had a significant relationship with self-esteem in gay male respondents, $F(3, 186) = 3.24, p = .02$. Node closeness in the general matters network, $B = 1.49, \beta = .24, p < .01$, accounted for 3.4% of the variance in self-esteem for gay male respondents. In practical terms, this result suggested that when gay males felt closer to the individuals in their general matters network, they reported higher scores on measures of self-esteem.

**Bisexual Males.** With regard to self-esteem in bisexual male respondents, none of the regressions yielded significant results. The self-esteem of bisexual male respondents was not impacted by the network characteristics of the functional networks assessed in this hypothesis.

**Bisexual Females.** With regard to bisexual females, one regression yielded significant results. In the overlap network, the proportion of homophilous nodes had a significant relationship with self-esteem in bisexual female respondents, $F(3, 426) = 3.79, p = .01$. Homophily in the overlap network, $B = -20.80, \beta = -.10, p = .04$, accounted for 1.9% of the variance in self-esteem in bisexual female respondents. In practical terms, this result suggested that bisexual females with higher proportions of LGB homophilous nodes in their overlap network reported lower scores on measures of self-esteem.

**Kessler 6-item Psychological Distress Scale.**

The Kessler 6-item measure of psychological distress (K6) asked respondents to rate how frequently each of six statements applied to them in the past 30 days. Answer
options ranged from “none of the time” (0) to “all of the time” (4). The six items were then summed, resulting in a scale ranging from 1 to 24. A cut-off of 12 indicates individuals with very high psychological distress who were considered at risk. Each regression in this section was run individually by both sexual orientation and network; therefore, this section consisted of testing 12 individual regressions (three regressions per sexual orientation). A high-level table depicting the results of these regressions can be seen in Table 7:15.

Lesbians, Gay Males, Bisexual Males. There were no significant regressions when looking at the impact of network characteristics within the social networks on psychological distress for lesbian, gay male, or bisexual male respondents. That was not to say these respondents experienced no psychological distress, but rather the average K6 score for respondents was not related to network characteristics (homophily, closeness, and frequency of contact) in any of the networks tests (sexuality-related, general matters, and overlap networks).

Bisexual Females. With regard to psychological distress in bisexual female respondents, three regressions yielded significant results. Within the overlap network, homophily had a significant relationship with psychological distress in bisexual female respondents, $F(3, 426) = 4.49, p < .01$. Homophily within the overlap network, $b = 15.74, \beta = .11, p = .02$, accounted for 2.4% of the variance in psychological distress for bisexual female respondents, suggesting that bisexual females with a higher proportion of LGB homophilous nodes in their overlap network reported higher scores on measures of psychological distress. Within the sexuality-related network, homophily had a significant relationship with psychological distress in bisexual female respondents, $F(3, 244) = 5.25,$
$p < .01$. Homophily within the sexuality-related network, $b = 23.82, \beta = .19, p < .01$, accounted for 4.9% of the variance in psychological distress for bisexual female respondents, suggesting that bisexual females with a higher proportion of LGB homophilous nodes in their sexuality-related network reported higher scores on measures of psychological distress. The impact of frequency of contact in the sexuality-related matters network was also related to psychological distress, $b = -.55, \beta = -.15, p = .02$, suggesting that when bisexual females were in more frequent contact with individuals in their sexuality-related stressor network, they reported lower scores on measures of psychological distress.

**Hypothesis 7 – Discussion.**

Hypothesis 7 posited that characteristics of functionally specific CDNs as well as the overlap between each of two networks would have an impact on mental health and well-being. This hypothesis was supported in part. The structure of the general important matters functional network had no impact on the well-being or mental health of lesbian and bisexual male respondents. Increases in average node closeness within the general matters network was significantly related to lower scores in hopelessness for bisexual females and gay males. Closeness within the general matters network was also associated with higher life satisfaction for bisexual females and higher self-esteem for gay males. Overall, within the general important matters network, as the closeness within the network increased, mental health and well-being improved for gay males and bisexual females. Finally, as the frequency of contact increased within the general matters network, gay male respondents tended to reported higher levels of hopelessness. This final result, increased in frequency of contact correlating with higher reports of
hopelessness, contradicts the proposed hypothesis (suggesting that increased in frequency of contact with nodes in the general important matters network correlate with increased in reported hopelessness for gay males). This result could occur as an unintended consequence of high levels of perceived supported in the sexuality-related network. The sexuality-related network of gay males was highly adept at providing social supported for sexuality-related stressors. Increasing the frequency of contact with a network that was, by comparison, less uniquely tailored to a particular stressor may create a perceived absence of supported, which increased hopelessness.

The structure of the sexuality-related stressor network had no impact on the mental health and well-being of lesbian or bisexual male respondents. Life satisfaction in gay males and bisexual females was significantly related to network characteristics in the sexuality-related functional network. As the proportion of node homophily or the average closeness increased, gay male respondents were more likely to reported higher levels of life satisfaction. As the frequency of contact with nodes in the sexuality-related stressor network increased the life satisfaction of bisexual females increased. The structure of the sexuality-related stressor network had significant impact on the psychological distress of bisexual female respondents. As the proportion of homophilous nodes in the sexuality-related stressor network increased scores on psychological distress among bisexual female respondents increased. However, as the frequency of contact with the sexuality-related stressor network increased psychological distress among bisexual females decreased.

By and large, the results in the sexuality-related stressor network partially supported the assertions made in Hypothesis 7. With the exception of homophily,
improvements in the structure of gay male and bisexual female respondents’ sexuality-related CDNs were correlated with improvements in mental health and well-being. However, it was necessary to point out that for bisexual females, increased in homophily within the sexuality-related CDN correlated with increased in psychological distress. In other words, when bisexual females experienced sexuality-related stressors, having more LGB nodes in their sexuality-related CDN was related to poorer mental health. This could be due to the fact that research suggested bisexuality to be a stigmatized orientation even among those in the LGB community, with portions of the gay and lesbian community denying the existence of bisexual folks altogether (e.g., Ross, Dobinson, & Eady, 2010).

The overlap network had a significant impact on all measures of mental health and well-being for sexual minority respondents. As average node closeness in the overlap network increased life satisfaction similarly increased. This effect was present for all sexual orientation identities, but more pronounced for lesbian and gay male respondents than for bisexual male or bisexual female respondents. Increased closeness in the overlap network was also associated with lower hopelessness for gay males and bisexual females, as well as increased self-esteem for lesbians. Increasing the proportion of homophilous nodes in the overlap network reduced self-esteem and increased psychological distress in bisexual females. These results aligned with prior research indicating that negative stereotypes among bisexuels exist for many gay males and lesbians (e.g., Hequembourg & Brallier, 2009). Thus, as bisexual females increase the proportion of LGB nodes in their networks, they could simultaneously be increasing the proportion of nodes that hold negative stereotypes about them – or even doubt the existence of their sexuality.
Network Characteristics. It has been argued in earlier chapters of this dissertation that network characteristics could impact the mental health and well-being of individuals. Moreover, it has been suggested that LGB homophily, in particular, had an important role to play in the promoting the health and well-being of LGB individuals. Results in Hypothesis 7 suggested that LGB homophily did play an important role in mental health and well-being. However, these results suggested that where homophily has an effect this effect was mostly negative. A higher proportion of LGB homophily in the overlap network was linked to lower life satisfaction and higher psychological distress in bisexual females, whereas increased homophily in the sexuality-related stressor network similarly increased psychological distress for bisexual females. The only positive result for LGB homophily occurred for gay males, for whom increased proportions of LGB homophily in the sexuality-related stressor networks were related to higher reports of life satisfaction.

Though homophily had an impact, average node closeness was the most consistently significant network characteristic that influenced mental health and well-being. There are a few explanations for this result. First, as discussed above, the negative relationship between homophily and mental health and well-being for bisexuals was an unfortunate, but possible, result of the negative attitude many lesbians and gay males had toward bisexual individuals. The strain of having nodes that potentially discount ego’s identity, and thus membership in the LGB community could make bisexual respondents less likely to seek supported and less likely to perceive said supported as effective. Moreover, this explanation aligned with the results of gay males, for who homophily has a positive relationship with mental health. Because the identity of gay males, and thus
their membership in the LGB community was never in question, gay males may seek supported more frequently from their networks and perceive that supported as more effective. Second, these results could also be partially explained by structural differences in the network of gay males and bisexuals. Gay males had larger sexuality-related networks with a high proportion of LGB nodes, whereas bisexuals had comparably small sexuality-related network with a lower proportion of LGB nodes. At the same time, bisexuals had larger general important matters network than gay males and said network contained fewer homophilous nodes. Therefore, structurally, the networks of bisexuals were largely positioned to handle general important matters. In this network, it could be argued LGB homophily was not seen as helpful.

Hypothesis 8

Hypothesis 8 posited that social supported within the functionally specific CDN will have a greater relationship to mental health than social supported within the general important matters network. Perceived social supported within the general important matters network was negatively related to hopelessness scores among lesbian respondents. This hypothesis was tested separately for each of the SOI and for each measure of mental health. However, results were only significant for the dependent variable of hopelessness. Perceived social supported within the general important matters network was negatively related to hopelessness among lesbian respondents. The model (see Table 7:16) was significant, \( F(2, 255) = 5.06, p = .01 \), and perceived supported accounted for 3.1% of the variance in hopelessness for lesbian respondents. Substantively, as perceived social supported increased, hopelessness scores decreased, \( b \)
= -.47, β = -.15, p = .04. Since perceived supported was not related to hopelessness in the sexuality-specific network for lesbians, Hypothesis 8 was not supported in this case.

However, social supported was negatively related to hopelessness among bisexual females in the sexuality-related network, but not in the general important matters network, thus supporting Hypothesis 8. The model was significant, $F(2, 457) = 4.16, p = .02$, and perceived social supported accounted for 1.4% of the variance in hopelessness for bisexual female respondents. Substantively, as perceived social supported increased hopelessness scores decreased, $b = -.44, \beta = -.13, p = .01$, in the sexuality-specific network. In addition, perceived social supported within the sexuality-related stressors network (but not the general important matters network) was positively related to self-esteem for bisexual female respondents. The model was significant, $F(2, 457) = 6.80, p < .01$, and perceived social supported accounted for 2.4% of the variance in self-esteem for bisexual female respondents. Substantively, as perceived social supported increased self-esteem scores increased, $b = 1.50, \beta = .15, p < .01$, in the sexuality-related stressor network. An Incremental $F$ test comparing the effect of social supported on hopelessness indicates that though the social supported arises from two separate functionally specific CDNs (the general important matters network for lesbians and the sexuality-related network for bisexual females), the effects were not significantly different from one another in terms of strength, $F(3, 713) = 1.45, p = ns$. There were no results for sexual minority males that required analysis using the Incremental $F$ test.

**Hypothesis 8 – Discussion.**

Hypothesis 8 posited that social supported from the sexuality-related stressor network would have a stronger relationship to mental health outcomes than perceived
social supported in the general important matters network. This hypothesis was partially supported, but only among bisexual females and only for hopelessness and self-esteem. Perceived social supported was related to mental health outcomes, but only among female sexual minority respondents. For lesbian respondents, perceived social supported within the general important matters network had a negative relationship with hopelessness, but not in the sexuality-specific network, in direct contradiction to Hypothesis 8. However, perceived social supported in the sexuality-related stressor network had a significant relationship with self-esteem and hopelessness among bisexual females, yet not in the general important matters network, as would be predicted by Hypothesis 8.

These results could be due to the idea that females more readily utilize their social supported than males do. Thus, if females were more likely to utilize their social supported then perceptions of that supported would matter. If one was accessing social supported and said social supported was seen as being effective, it could be argued that hopelessness – one of the more extreme measures of mental health in this dissertation – would be influenced. This perception was likely influenced by the differences in the size of the general important matters and sexuality-related networks for lesbians and bisexual females. The general important matters network was comparably small among lesbian respondents, who tend to had larger overlap networks, which were not tested here. Similarly, bisexual females had a comparably smaller sexuality-related stressor network. Thus, there were a small number of nodes that ego perceived to be fairly good at providing social supported.
Hypothesis 9

Hypothesis 9 argued that the structure of the sexuality-related CDN moderates the relationship between proximal and distal stress and mental health and well-being more so than it moderates the same impact in the general important matters network. Prior to testing this assertion, it was necessary to confirm the direct impact of proximal and distal minority stress on the mental health dependent variables. Proximal stress (i.e., identity concealment) and distal stress (i.e., gay-related stressful events) were tested for each combination of sexual orientation identity and mental health dependent variable (see Table 7:17).

When looking at the pattern of results it was clear that distal stress has a more frequent impact on mental health and well-being than proximal stress. The number of gay-related stressful events respondents encountered was positively related to hopelessness and psychological distress for every SOI, with the exception of gay males and hopelessness. This suggested that proximal stress did not have a consistent effect for those mental health variables that can be considered “negative”. Moreover, distal stress had a consistent relationship on all tested facets of mental health and well-being. These results could arise because distal stress was more readily interpreted as stress. Identity concealment causes the most strain when individuals were contemplating coming out, rather than when they were already out. Thus, for some individuals, identity concealment may not be a tangible stressor, particularly because respondents could assume that they were in control of this stressor – thus limiting its negative impact. On the other hand, distal stress was experienced by the individual regardless of their desire to conceal their identity. Each item in the GRSE was a behavior a member of society performs because of
the sexual orientation of the respondent. Respondents had no control over this stressor. The respondent experienced it and there was nothing they could do to eliminate or mitigate this stress.

**Sexuality-related stressor network.**

In the sexuality-related stressor CDN, six interaction terms were significant (see Table 7:18). Despite this low number, a relatively stable pattern seemed to emerge. Network characteristics of the sexuality-related CDN had a significant moderating effect on the relationship between distal stressors (GRSE) and mental health (see Appendix H). However, this moderating effect tends to be in direct contradiction to Hypothesis 9. That was, moderation in the expected direction appeared to occur at lows levels of minority stress, but the opposite occurred at high levels of stress. For instance, the network characteristic of closeness had a significant positive impact on mental health and well-being in lesbian respondents at low levels of minority stress, but a significant negative impact at high levels. Specifically, for lesbian respondents with low gay-related stress, increases in network closeness within the sexuality-related stressor network were positively associated with scores on measures of self-esteem and life satisfaction and negatively associated with scores on measures of psychological distress (see Figures H1, H2, and H3). In contrast, for lesbian respondents with high gay-related stress, increased in network closeness within the sexuality-related stressor network were negatively associated with scores on measures of self-esteem and life satisfaction and positively associated with scores on measures of psychological distress. In other words, when distal minority stress was low, the closer lesbian respondents were to nodes in their sexuality-related network the more positive their mental health tended to be. However, when distal
minority stress was high, lesbian respondents tend to reported less positive scores on mental health the closer they were to their sexuality-related network.

It was puzzling why these results were the direct opposite of what one would expect to find in a stress-buffering model such as the minority stress model. Rather, the structure of a network, particularly the closeness ego felt toward the network, seemed to help in low stress, but be harmful when stress was high. When looking at the items that comprised GRSE, half involved issues that arose with individuals who could be thought of as “close” to a respondent (e.g., parents, siblings, other family, friends). If the sexuality-specific CDN contains individuals who may be the cause of the high GRSE, which may explain why closeness had the opposite anticipated effect.

For lesbian respondents, frequency of contact with nodes in the sexuality-related stressor network had an effect similar to that seen in psychological distress described above (e.g., positively associated poor mental health with high gay-related stress; negatively associated poor mental health with low gay-related stress; see Figure H4). For lesbians and gay males, average node homophily in the sexuality-related stressor network was not related to a buffering effect (see Figures H5 and H6). That is, among lesbian and gay male respondents with high average node homophily, differences in the level of gay-related stress was associated with relatively little, if any, change in self-esteem and psychological distress, whereas at low average node homophily differences in gay-related stress was associated with stark differences in self-esteem and psychological distress.

However, for bisexual males the moderating effect of homophily on the relationship between distal stress and psychological distress was such that higher average node homophily was positively associated with high gay-related stress and negatively
associated with low gay-related stress (see Figure H7). In other words, the results suggested that higher reports of structural homophily were related to lower reports of psychological distress when distal stress was low, but higher reports of psychological distress when distal stress was high. Once again, this was the opposite of the effect one would expect to see in a stress-buffering model. This effect could be explained by the fact that bisexual individuals often experienced stigma from other member of the LGB community. When dealing with gay-related stress, increased LGB homophily may not be as helpful because other LGB nodes may not recognize sexuality-related stress as affecting bisexuals.

These results partially supported H9 in that the impact of distal stressors on mental health and well-being did appear to be moderated by the network characteristics of sexuality-related CDNs. However, this moderation appeared to occur largely for lesbian respondents and in the opposite direction of what was expected. Proximal stressors, inasmuch as they impacted mental health and well-being, did not appeared to interact with social network characteristics of the sexuality-related core-discussion network. And none of the significant structural characteristics moderate the effect of distal stress on mental health in a manner consistent with the stress-buffering hypothesis implicit in the minority stress model.

**General important matters network.**

Testing the general important matters CDN yielded three significant interactions. For lesbians, identity concealment interacted with both frequency of contact and closeness in life satisfaction and hopelessness, respectively (see Figures H8 and H9). For lesbian respondents, increased in the frequency of contact with individuals in their
general important matters network was positively associated with life satisfaction (and negatively associated with hopelessness) scores for individuals with low identity concealment (considered an indication of low proximal stress), and was negatively associated with life satisfaction (and positively associated with hopelessness) scores for individuals with high identity concealment (i.e., high proximal stress). For bisexual male respondents, there was a significant interaction between homophily and distal stressors such that bisexual male respondents with lower than average gay-related stress showed a negative association between hopelessness scores and the proportion of homophilous nodes, whereas bisexual male respondents with higher than average gay-related stress showed a positive association between hopelessness scores and the proportion of LGB homophilous nodes (see Table 7:19, and Figure H10).

These results mirrored those of the sexuality-related CDN, adding to the perplexing results that operate in opposition to expected effects in a buffering model. A similar pattern was observed for lesbian respondents with regard to proximal stressors (e.g., identity concealment). The nature of this moderation was largely identical to that of the moderation seen in the sexuality-related stressor network. When frequency of contact or closeness was low, differences in identity concealment yield little, if any, difference in satisfaction with life and hopelessness. However, when frequency of contact or closeness was high, low identity concealment was related to better mental health (e.g., lower hopelessness and higher life satisfaction), whereas high identity concealment was related to poorer mental health (e.g., higher hopelessness and lower life satisfaction).

As seen in the sexuality-related stressor network, homophily was a significant moderating factor for bisexual men. These results seemed to suggest that network
characteristics impact stressors in a similar fashion – at least for lesbian and bisexual male respondents – in both the general important matters network and the sexuality-related stressor network. Moreover, the pattern of these effects appeared similar in both networks despite the fact that, in lesbian respondents, they were moderating different stressors. In every case, the moderating effects, though similar in both CDN, remain in opposition to what one would expect to find. The moderating effect of network structure, when significant, was related to more positive mental health outcomes when minority stress was low, but more negative mental health outcomes when minority stress was high. So, having a close and/or homophilous network correlated with positive mental health outcomes when respondents encountered comparatively little minority stress; yet inexplicably, when respondents encountered significant minority stress close and/or homophilous networks correlated with negative mental health outcomes.

_Hypothesis 9 – Discussion._

Hypothesis 9 sought to understand the nature of network characteristics as moderating factors of proximal and distal stress on mental health and well-being, and to compare them between sexuality-specific versus the general important matters networks. There were distinct differences in the way network characteristics moderate distal versus proximal stressors. Therefore, the following section will discuss the impact of network characteristics within each stressor individually.

_Proximal Stressors – Identity Concealment._ There were two interesting findings that were immediately visible when looking at the results of Hypothesis 9 as it pertains to proximal stressors. First, network characteristics had no significant moderating effect on proximal stressors (identity concealment) in sexuality-related stressor networks. In other
words, homophily, closeness, and frequency of contact in the sexuality-related stressor network did not impact any effect identity concealment may had on life satisfaction, hopelessness, self-esteem, or psychological distress for any sexual orientation group in this study. Second, it was noted that when the moderation of identity concealment had a significant impact on mental health and well-being in the general important matters network, the effect occurred exclusively for female respondents, and it was in the opposite direct of what was predicted.

This was not to say that identity concealment had no effect on mental health and well-being. In fact, identity concealment was shown to significantly impact self-esteem and life satisfaction for sexual minority males. When looking at individual CDN s, bisexual male respondents’ identity concealment in the general matters network was related to decreases in life satisfaction (a negative outcome).

It is worth mentioning that identity concealment was seldom significant, either as a main effect or as part of an interaction effect. This may largely be due to the operationalization of identity concealment in this study. As operationalized, identity concealment was measured as the aggregate of two variables asking respondents how often a) others knew respondents were a sexual minority, and b) respondents told others they were a sexual minority. Although this measure did capture the spirit of identity concealment (the degree to which one hides his or her sexual orientation) it was a relatively crude measurement tool for assessing a concept as complex as one’s ability, desire, and overt attempts at concealing their sexual orientation.

**Distal Stressors – Gay-Related Stressful Events.** There were several stable patterns that can be observed in the results for the interaction of distal stress and network
characteristics. First, the results for interaction between gay-related stress and frequency of contact suggest that there was a stable main effect of gay-related stress such that increased in gay-related stress result in decreased in mental health and well-being (e.g., higher psychological distress, lower self-esteem). However, the moderating effect of frequency of contact results in a stronger effect of gay-related stress for those respondents who had high frequency of contact. These results occurred most often for lesbian respondents in the sexuality-related stressor network. For each interaction, the effect of frequency of contact works such that individuals with low levels of gay-related stress score more positively on measures of psychological distress and self-esteem. At average levels of gay-related stress, respondents with high levels of contact with their networks still reported self-esteem and psychological distress scores that were marginally better than similarly situated respondents with low frequency of contact. When respondents reported high levels of gay-related stress, individuals with low frequency of contact reported scores on psychological distress and self-esteem that were more positive than similarly situated individuals with high frequency of contact.

These results suggest that gay-related stress impacts individuals with high frequency of contact much more than individuals with low frequency of contact. It should be noted psychological distress and self-esteem for respondents with low frequency of contact were still, on average, slightly higher than scores for respondents with high frequency of contact. But the impact of gay-related stress was so much stronger for individuals with high frequency of contact that at high levels of gay-related stress mental health outcomes were lower than those of low frequency of contact counterparts.
In other words, contrary to the prediction made in Hypothesis 9, frequency of contact did not buffer the effect of gay-related stress on mental health and well-being, it exacerbated the effect. Respondents with low to average gay-related stress reported better scores in their mental health and well-being as frequency of contact increased, whereas individual with high gay-related stress reported reductions in their mental health and well-being as frequency of contact increased. It may be that, in general, having contact with your networks serves to improve the mental health of individuals with low-to-average stress. However, as the amount of that stress grows higher, frequency of contact may result in a higher amount of rumination on said gay-related stress, and thus a reduction in mental health and well-being. Moreover, networks were reciprocal enterprises. When individuals were experiencing high levels of gay-related stress, increased contact with alters gives respondents an opportunity to dwell on the stress they were enduring. In addition, homophilous nodes may try to commiserate by revealing their own gay-related stress to the respondent. In other words, having frequent interactions with nodes may mean recounting life events. It also means opening one’s self up to hearing about the stressors encountered by LGB homophilous nodes, leading to rumination on not only ego’s stressors but potentially the stressors of alters. As both the number of gay-related stressful events increased and the frequency of rumination increased, mental health and well-being would decline.

The pattern that emerged for the interaction of node closeness and distal stress was very similar to the pattern observed for frequency of contact. This similarity included the sexual orientations with significant interactions (i.e., bisexual males and lesbians, though more the latter than the former), and the outcomes (i.e., psychological distress,
self-esteem, and satisfaction with life). The explanation for the results, similarly, is the same at for frequency of contact. Contrary to the predictions made by Hypothesis 9, closeness did not buffer the impact that gay-related stress had on mental health and well-being. Rather, increases in closeness seemed to exacerbate the effects of gay-related stress. Individuals with low-to-average gay-related stress reported more positive scores for mental health and well-being measures as closeness increased. However, individuals with high levels of gay-related stress reported more negative score on measures of mental health and well-being as closeness increased. The same rumination explanation may have been at work here; levels of closeness may have resulted in more frequent rumination and recall on said stressful events of both ego and alter. This retelling may have been valuable with low or average levels of stress, but at high levels of stress it could result in a feeling of being constantly under attack.

In the four significant interactions between homophily and distal stress, results indicated that homophily was positively associated with mental health and well-being when gay-related stress was high and negatively associated with mental health and well-being when gay-related stress was low. This was true for lesbian and gay male respondents when measuring self-esteem and psychological distress in the sexuality-related stressor network, as well as for bisexual males in the general matters network. For these interactions, respondents reported mental health scores that one might expect. Low gay-related stress was related to better mental health and well-being than high gay-related stress. As the proportion of homophilous nodes in a network increased, the effects of gay-related stress resulted in improvements in mental health and well-being for individuals with high levels of gay-related stress, but decreases in mental health and well-being for
individuals with low levels of gay-related stress. Gay-related stress had a smaller effect among those individuals with high levels of homophily than low levels of homophily. The only contrary result occurred for the interaction of homophily and gay-related stress on psychological distress in bisexual males. This interaction suggested that increases in homophily were related to increases in psychological distress for individuals with high gay-related stress, whereas increases in homophily were related to decreases in psychological distress for individuals with low gay-related stress.

To summarize, the results for Hypothesis 9 indicated that no single network characteristic, or team of network characteristics, improve mental health and well-being for every level of gay-related stress and identity concealment. Thus, the assertion that said characteristics would be more crucial for the sexuality-related network than for the general matters network. Although many of the results indicate improvements in mental health and well-being for individuals reporting low or average gay-related stress, these same results indicate an increase in the deleterious effects of gay-related stress for those individuals who experienced higher-than-average levels of said stress. Thus, it must be reiterated that these results not only fail to support Hypothesis 9, but were in many instances the reverse of what one would expect to find in a stress buffering model.

**Hypothesis 10**

Hypothesis 10 posits that the effects of the network characteristics in the sexuality-related CDNs on mental health and well-being were moderated by identity prominence and identity valence such that network characteristics in functionally specific networks will had a larger effect on mental health outcomes for respondents with more prominent LGB identities or LGB identities with a more positive valence.
Main effects models.

To better understand the context of interactions in Hypothesis 10 this section begins with the main effects. However, few of the main effect models for network characteristics were significant, thus this portion of Hypothesis 10 was only partially supported (see Table 7:20). Average node closeness had a significant impact on life satisfaction with gay males such that increased closeness was associated with higher life satisfaction, \( b = .26, \beta = .21, p = .01 \). Bisexual females were the only remaining sexual orientation identity with significant main effects. For bisexual females, average frequency of contact with nodes in their sexuality-related network had a significant relationship with mental health and well-being. As average reported frequency of contact increased life satisfaction increased, \( b = .14, \beta = .14, p = .03 \). Similarly, higher reports on frequency of contact were associated with lower scores on psychological distress, \( b = -.56, \beta = -.15, p = .02 \). Thus, increased in average frequency of contact with nodes in the sexuality-related stressor network were associated with better mental health and well-being. Finally, the proportion of homophily within the sexuality-related stressor network was positively associated with increased in psychological distress, \( b =24.16, \beta = .20, p < .01 \). Thus, as the sexuality-related CDNs became more homophilous with regard to LGB identity, reports on psychological distress increase. It was worth noting that this relationship was the opposite of the predicted impact of network characteristics. Similarly, this result runs contrary to prior work identifying increased LGB homophily as beneficial for sexual minorities. It would be helpful to note, once again, that this work has taken pains to conduct separate analyses for each sexual-orientation identity, and this result – though contradictory to health research – was in line with work on bisexuals that note high levels
of perceived prejudice and discrimination from within the LGB community. As the proportion of homophilous nodes increase within the sexuality-related CDN, bisexual females may be experiencing both sexuality-related stress and additional stigma from LGB individuals. It bears repeating, had a more stringent operationalization of homophily been used (e.g., bisexual female alters were homophilous with bisexual female egos) the results may had been different. The main effects of identity prominence and identity valence impacted mental health and well-being as expected. In-group alienation was positively associated with psychological distress and hopelessness and negatively associated with self-esteem and life satisfaction. In other words, increased in reported in-group alienation were associated with decreased reports of mental health and well-being. In-group social supported was positively associated with life satisfaction, which was the only dependent variable that social supported had an impact on in these models. Similarly, personal LGB identity solely had a positive association with psychological distress for bisexual males. That was, the stronger a bisexual male’s LGB identity was, the higher was his likely score on psychological distress. Finally, others’ perceived LGB valence had a main effect such that it was positively associated with life satisfaction and self-esteem and negatively associated with psychological distress and hopelessness.

**Homophily.**

There were ten significant interaction models between the proportion of LGB homophilous nodes and identity prominence or identity valence. Significant interaction models were listed below with their appropriate statistics (see Table 7:2). Similarly, figures graphically depicting predicted values for each interaction can be found in Appendix 1.
Homophily Discussion. When looking at interaction models containing the network characteristic of homophily, there was a relatively stable pattern across sexual orientation identities. As homophily increased for low prominence gay males, mental health decreased (i.e., self-esteem decreased; hopelessness increased; see Figures 11 and 12). As homophily increased for high prominence gay males, mental health increased (i.e., self-esteem increased, hopelessness decreased). As homophily increased for low valence bisexual males, mental health decreased (i.e., life satisfaction decreased, hopelessness increased; see Figures 13 and 14). However, for high valence bisexual males increased in homophily were associated with increased in mental health (i.e., life satisfaction increased, hopelessness decreased). Increased in homophily in the sexuality-related CDN of bisexual females was associated with decreased in mental health (see Figures 15, 16, and 17). However, the decreases were more pronounced for bisexual females with low prominence than high prominence (i.e., low/high perceptions of alienation).

Furthermore, there were some trends that were noticeable vis-à-vis gender. The mental health and well-being of male respondents was largely influenced by interactions with internal measures (personal LGB identity and personal valence) whereas the mental health and well-being of female respondents was influenced by external measures (in-group alienation). As a whole these results suggest that where identity prominence and identity valence moderate the impact of homophily on mental health and well-being, positive identity prominence and identity valence were associated with better mental health and well-being as a function of increasing homophily, thereby supporting H10 in part.
Closeness.

There were ten significant interaction models between the average node closeness and identity prominence or identity valence. Significant interaction models were listed below with their appropriate statistics (see Table 7:22). Similarly, figures graphically depicting predicted values for each interaction can be found in Appendix I.

Closeness Discussion. When looking at the impact of average node closeness across the sexual orientation identities, a pattern of effects similar to the observed effects of homophily emerges with one variation. For bisexual male respondents, lower scores of perceived alienation correspond to higher reported psychological distress as node closeness increased, whereas higher perceived alienation corresponded to lower psychological distress as node closeness increased (see Figure I9). With regard to self-esteem, as closeness increased bisexual female respondents with high in-group alienation reported lower self-esteem, whereas respondents with low in-group alienation reported higher in self-esteem (see Figure I10). For bisexual female and gay male respondents, the community valence had a significant relationship with hopelessness and psychological distress (see Figures I8 and I11). Respondents reporting higher perceptions of others’ valence reported better mental health and well-being scores (i.e., lower psychological distress and lower hopelessness), whereas respondents reporting lower perceptions of others’ valence reported lower mental health scores. Thus, when it comes to the effect of closeness on mental health and well-being, identity valence was a significant moderator, particularly respondents’ perceptions of society’s valence toward LGB individuals. Similarly, alienation moderates the impact of closeness on mental health; however, this effect appeared to be beneficial in bisexual males (i.e., higher alienation, increasing
closeness corresponds to lower psychological distress; lower alienation, increasing closeness corresponds to higher psychological distress) and deleterious in bisexual females (i.e., higher alienation, higher closeness corresponds to lower self-esteem; lower alienation, lower closeness corresponds to higher self-esteem).

The difference in the moderating effect of alienation could be due to differential treatment of bisexual males and females within the LGB community. Much social discourse looks at bisexual females as adopting the bisexual identity as a means of garnering attention. In other words, they aren’t “real” sexual minorities. On the other hand, bisexual males were seen as being “real” sexual minorities, though not truly bisexual. So, male bisexuality may be seen as a stepping-stone to other sexual minority identities. If these stigmas play a part, for bisexual males perceived alienation was the result of not having access to their community, whereas for bisexual females perceived alienation was the result of not being accepted by the community.

**Frequency of contact.**

There were ten significant interaction models between the frequency of contact with nodes in the sexuality-related stressor network and identity prominence or identity valence. Significant interaction models were listed below with their appropriate statistics (see Table 7:23). Similarly, figures graphically depicting predicted values for each interaction can be found in Appendix I.

**Frequency of Contact Discussion.** Frequency of contact was the network characteristic with the highest number of significant interactions. When discussing the results for frequency of contact (i.e., interaction) results mirrored those for homophily and closeness – including the addendum for in-group alienation discussed above. It’s
necessary to note that, similar to results for H7, there was a decent amount of overlap between significant results for closeness and frequency of contact – and the pattern of those results were also largely similar. As with the homophily and closeness results reported above, these results served to support the assertion made in H10 that identity prominence and identity valence would moderate the impact of network characteristics on mental health and well-being. These results suggested that individuals reporting more positive identity prominence and identity valence also tended to report more positive scores on measures of mental health and well-being when frequency of contact was high. When frequency of contact was low, increases in identity prominence and identity valence were associated with lower scores on measure of mental health and well-being.

There were two significant interaction terms across combinations of SOI and dependent variable combination that required analysis utilizing comparative F-tests. For the effect of frequency of contact on hopelessness, the moderating effect of in-group alienation was significant for both gay and bisexual males. However, the moderation was not significantly different between sexual orientation identities, $F(10, 315) = 1.35, p = ns$. In other words, the moderating effect of in-group alienation was not statistically different for sexual minority males. For the effect of frequency of contact on hopelessness, the moderating effect of respondent perceptions of community valence was significantly different for gay males and bisexual females, $F(10,391) = 2.07, p = .03$. Careful comparison of the standardized regression coefficients for gay males, $\beta = -.55$, and bisexual females, $\beta = .34$, suggested the moderation was stronger for gay males than it was for bisexual females. As frequency of contact with nodes in the sexuality-related network increased, it would make sense that respondent’s perceptions of community
valence would impact hopelessness (see Figure 125). If one believed society did not positively perceive LGB individuals, increasing contact with others would increase hopelessness overall. This effect could be stronger for gay males, who may perceive their sexual orientation as more difficult to hide than bisexual females.

**Hypothesis 11**

Hypothesis 11 stated that proximal and distal minority stressors were moderated by identity characteristics (i.e., identity prominence and identity valence) such that increased in identity prominence and valence reduce the effect of proximal and distal stress on mental health and well-being more strongly when stress was low, but this effect was weaker when proximal and distal stress was high.

**Main effects.**

Main effects models highlight the impact of proximal and distal stress on mental health and well-being in each of the sexual orientation identities. Within three of the four sexual orientation identities there was a distinct and interpretable pattern; however, this pattern was unique to each sexual orientation identity. In other words, proximal and distal stressors do impact mental health and well-being for sexual minorities, but this effect was different for each sexual orientation identity.

*Lesbian and gay respondents.* Among lesbian respondents, results indicated that increases in distal stress (i.e., gay-related stressful events) were related to decreases in mental health. As distal stress increased self-esteem and satisfaction with life decreased, whereas psychological distress and hopelessness increased as distal stress increased (see Table 7:24). Among gay male respondents, results indicate increased in distal stress were related to decreased in mental health via an increase in psychological distress. These
results indicate, for the sample collected, though the minority stress model posits separate
effects for proximal and distal stress, for gay and lesbian respondents proximal stress did
not have a significant impact on mental health.

_Bisexual respondents._ Among bisexual respondents, results indicated that
increases in both proximal (i.e., identity concealment) and distal stress (i.e., gay-related
stressful events) were related to changes in mental health. For bisexual male respondents
as distal stress decreased self-esteem and satisfaction with life decreased, whereas
psychological distress and hopelessness increased as distal stress increased (see Table
7:25). Among bisexual male respondents increases in proximal stress were associated
with decreases in self-esteem and satisfaction with life. Taken together these results
suggested that as distal stress increases mental health scores decrease, and when proximal
stress increases the positive aspects of mental health (self-esteem and satisfaction with
life) decrease.

Among bisexual female respondents as distal stress increased self-esteem and
satisfaction with life decreased, whereas psychological distress and hopelessness
increased as distal stress increased (see Table 7:26). However, bisexual female
respondents reporting higher scores in proximal stress reported lower scores in
psychological distress and hopelessness. The pattern of the effects for proximal stress for
bisexual females was the reverse of that seen in other sexual orientation identities,
indicating that for bisexual females increases in proximal stress may actually improve
mental health. That is to say, concealing one’s identity as a bisexual female decreased
psychological distress and hopelessness. The pattern of main effects for distal stress was
similar to that of the other sexual orientation identities. As distal stress increased all measured aspects of mental health became worse for bisexual females.

Interaction effects.

The interaction models for Hypothesis 11 concerned the two main effects variables, proximal (identity concealment) and distal (gay-related stressful events) stressors (see Table 7:27). Analyses revealed 15 interaction terms as well as a relatively stable pattern of interaction within the two main effects. All interactions have been graphed and can be seen in Appendix J.

Gay-Related Stressful Events (distal stressors) and LGB valence. The effect of gay-related stressful events on mental health was moderated by LGB valence. For lesbian females and bisexual males, community valence had an influence on the effect of distal stress on psychological distress and satisfaction with life (see Figures J1 and J3). When community valence improved, mental health improved (i.e., psychological distress and/or hopelessness decreased, satisfaction with life and/or self-esteem increase) for those individuals with low distal stress. However, for individuals with high distal stress increased community valence resulted in either a) no change in mental health, or b) a decrease in mental health. Again, these results were opposite what one would expect to find from a stress-buffering model.

For gay males, personal valence moderated the impact of distal stress on mental health, particularly hopelessness. When distal stress was low, increases in personal valence was correlated with improved mental health (e.g., lower hopelessness; see Figure J2). However, when distal stress was high, increased personal valence was correlated with decreased mental health (e.g., higher hopelessness).
Both results taken together seem to suggest that the valence held toward LGB individuals did impact the mental health of respondents. The moderation resulted in improvements in mental health for those individuals who perceive positive affective valence for LGB individuals so long as their level of distal stress remains relatively low. As distal stress increased, an increase in affective valence toward LGB individuals was associated with decreased mental health. This result may have occurred because individuals who perceive LGB valence (both internally and externally) as relatively high (positive), yet encountered high levels of GRSE, felt particularly unlucky or expressly targeted by a minority of individuals who do not hold positive affective valence toward LGB individuals. In other words, if you perceived LGB individuals positively, and you think other people perceived LGB individuals positively, but you’re still subjected to a high level of sexuality-related stressors you may have felt like your lot in life was much worse than other LGB individuals. This feeling could cause decreases in mental health outcomes.

Identity concealment: In-Group alienation. In-group alienation had a moderating influence on the effect of proximal stress on mental health in bisexual respondents. In male bisexual respondents, there was a significant interaction between in-group alienation and identity concealment (proximal stress), which functioned such that increases in identity concealment were correlated with decreases in mental health (i.e., increased in hopelessness and psychological distress) when in-group alienation increased (see Figures J4 and J5). As in-group alienation increased the decrease in mental health was more pronounced for individuals with low identity concealment than high identity concealment. In other words, as in-group alienation increased, starker declines in mental
health were correlated with bisexual males who concealed their bisexual identity. When bisexual males did not conceal their bisexual identity, increases in alienation were still correlated with decreases in mental health, but the decrease was less pronounced than in respondents with high identity concealment. It should be noted that at low levels of in-group alienation, differences in identity concealment correlated with significantly different mental health scores for bisexual males. That is to say, when bisexual males did not feel alienated from the LGB community, the degree to which they concealed their bisexual identity appeared to have a meaningful relationship with mental health (i.e., hopelessness and psychological distress). However, at high levels of in-group alienation differences in identity concealment did not correlate with significantly different scores on mental health measures.

As noted above in-group alienation had a moderating influence on the effect of proximal stress on mental health for bisexual females. As in-group alienation increased for bisexual female respondents, mental health (i.e., hopelessness and psychological distress) decreased regardless of identity concealment (see Figures J6 and J7). However, this effect was more pronounced among bisexual female respondents with low identity concealment. That is to say, though increased reports of in-group alienation were generally correlated with decreases in mental health, these decreases were more pronounced among bisexual females with low levels of identity concealment. Moreover, at low levels in-group alienation, differences in reported identity concealment correlated with little to no significant difference in reported mental health for bisexual female respondents. However, at high levels of in-group alienation there were significant differences in reported levels of mental health based on respondents’ identity
concealment. Low identity concealment was related to significantly lower mental health when compared to bisexual female respondents with high identity concealment.

In sum, in-group alienation moderated the effect of proximal stress on mental health for bisexual males and females. For bisexuals, as proximal stress increased mental health decreased, however this effect was more pronounced among bisexual respondents with higher perceptions of in-group alienation.

**Identity concealment: Personal LGB identity.** Personal LGB identity moderated the effect of proximal stress on self-esteem for bisexual females. The pattern of this moderation was such that for bisexual females with low identity concealment increases reported personal LGB identity was related to higher scores on measures of self-esteem. For bisexual females who reported high identity concealment, increased reports of personal LGB identity were related to lower scores on measures of self-esteem. In other words, when identity concealment was high, high personal LGB identity was correlated with lower self-esteem. When identity concealment was low, high personal LGB identity was correlated with high self-esteem (see *Figure J8*).

**Personal valence.** Personal valence had a moderating influence on the impact of identity concealment on mental health for bisexuals. This pattern was such that when identity concealment was high, increases in respondents’ personal valence was related to higher scores on psychological distress and hopelessness (see Figures *J9* and *J10*). When identity concealment was low, increases in personal valence was related to lower scores on psychological distress and hopelessness. In other words, when respondents were concealing their LGB identity, higher valence toward the LGB community corresponded with worse mental health. It should be noted, though the direction of the moderation was
similar for both psychological distress in bisexual males and hopelessness in bisexual females the end result of the moderation looked quite different for the outcomes of hopelessness and psychological distress. When personal valence was high there was a significant difference in the scores of psychological distress for bisexual males. However, when personal valence was similarly high in bisexual females, hopelessness scores were basically the same regardless of identity concealment. Thus, for bisexual females, having high LGB valence correlates with no change in hopelessness when identity concealment fluctuated. However, for bisexual males, high personal valence correlated to significant change in psychological distress when identity concealment fluctuates.

Community valence. The perception respondents had of community valence had an impact on the influence of identity concealment on mental health in bisexuals. For both male and female bisexual respondents, community valence moderated the influence of proximal stress (identity concealment) on psychological distress and hopelessness (see Figures J11, J12, and J13). As community valence increased, scores on measures of psychological distress and hopelessness decreased. This effect was stronger for individuals with high identity concealment than it was for respondents with low identity concealment. In other words, when respondents perceived others as having more positive views of LGB individuals, those respondents reported lower levels of psychological distress and hopelessness. However, when respondents were concealing their LGB identity, increases in community valence resulted in a larger decrease in psychological distress and hopelessness than for respondents who were not concealing their identity. So, in the case of LGB individuals who were concealing their LGB identity, higher perceived community valence suggested better mental health.
The above general trend was the same for both bisexual males and bisexual females. However, there was a difference in how this interaction ultimately manifested itself. For bisexual males this effect was such that at low levels of community valence there was a significant difference in psychological distress and hopelessness between individuals with low identity concealment and high identity concealment. When community valence was high, differences in levels of identity concealment resulted in relatively insignificant differences in psychological distress and hopelessness. This relationship was reversed in bisexual females. That was to say, when community valence was low, the level of identity concealment among bisexual female respondents was not related to a significant difference in psychological distress or hopelessness. When community valence was high the level of identity concealment among bisexual females was related to a significant difference in psychological distress or hopelessness.

Bisexual female respondents’ community valence also moderated the relationship between identity concealment and self-esteem (see Figure J14). Among respondents with low identity concealment, community valence had little if any impact on self-esteem. However, among respondents with high identity concealment community valence was positively related to self-esteem scores. For bisexual females with higher identity concealment community valence corresponded to lower self-esteem scores than respondents that reported low identity concealment; however, when community valence was high respondents with high identity concealment reported higher self-esteem scores than respondents with low identity concealment. In other words, when bisexual females were concealing their bisexual identity perceiving the community to had high LGB valence was related to higher self-esteem scores.
Comparative F-tests. Calculations for comparative F-tests were conducted on four interactions that appeared significant for both bisexual males and females. These were the moderating effects of alienation on psychological distress and hopelessness, and the moderating effect of community valence on psychological distress and hopelessness. Of the four pairings only one yielded a significant result. The moderating effect of in-group alienation on the relationship between proximal stress and psychological distress, \( F(10, 755) = 2.20, p = .02 \). The comparative F-test suggested that the effect of the moderation was significantly different between bisexual males and bisexual females. When looking at the interaction graphs, as well as the standardized coefficients for the moderations, this suggested in-group alienation was a stronger moderator of the impact of proximal stress on psychological distress for bisexual males, \( \beta = -.58 \), than bisexual females, \( \beta = -.51 \), (see Figure J15).

Hypothesis 11 – Discussion.

Hypothesis 11 stated that proximal and distal minority stressors were moderated by identity characteristics (i.e., identity prominence and identity valence) such that increases in identity prominence and valence reduced the effect of proximal and distal stress on mental health and well-being more strongly when stress was low, but this effect was weaker when proximal and distal stress was high. The minority stress model originally posits a moderating effect of identity characteristics on proximal stress, omitting distal stress. Results indicate that this hypothesis was partially supported. As Meyer’s original model predicts, proximal stress was the minority stressor most often significantly moderated. However, those moderations occurred exclusively for bisexuals, and most often moderated the effects of proximal stress on negative mental health.
outcomes (psychological distress and hopelessness). This suggested that identity prominence (particularly in-group alienation) and identity valence significantly moderate the effect of identity concealment on mental health. In-group alienation moderates the impact of identity concealment on mental health such that increased in alienation result in lower scores on psychological distress and hopelessness when identity concealment was high rather than low. In other words, bisexual individuals who were not concealing their identity tend to have higher psychological distress and higher levels of hopelessness when alienation increased. This makes sense as individuals concealing their sexual orientation may view in-group alienation under these circumstances to be self-imposed to a degree.

With regard to community valence, results suggest that community valence moderates the impact of mental health and well-being (particularly psychological distress, hopelessness, and self-esteem). The pattern of results indicated that increases in community valence were related to improvements in mental health (lower psychological distress and hopelessness, higher self-esteem), however this improvement was stronger for those with high identity concealment. In other words, when bisexuas were concealing their sexual minority identity, a more positive perception of society’s view of LGB folks was related to better mental health. When looking at personal valence the results suggest that higher personal valence was associated with better mental health (lower psychological distress and hopelessness) when identity concealment was low, but higher personal valence was associated with lower mental health when identity concealment was high.
Taken together these results suggested that identity valence was an important moderator of proximal stress in bisexuals; with increases in personal valence most effective when identity concealment was low, and increase in community valence was most effective when identity concealment was high. In other words, if respondents were hiding their sexual orientation their perceptions of how society feels about LGB folks significantly impacts mental health. However, when respondents were not concealing their bisexuality, their own personal valence has a stronger impact on how proximal stress improves mental health.

Distal stress was moderated by identity valence only. Keep in mind that distal stressors were stressors related to experiences of discrimination and prejudice. The perceived LGB valence of others moderated the impact of distal stress on both psychological distress in lesbian females and life satisfaction in bisexual males. Personal valence moderated the impact of distal stress on hopelessness. The pattern of effects indicates that as valence increased, mental health improves for individuals who were experiencing low levels of distal stress; however for those experiencing high levels of distal stress, higher identity valence was associated with decreased mental health. The results here were intuitive, the more positively one views LGB individuals the more impactful gay-related stressors were likely to be.

The previous chapter catered each discussion to single hypotheses. Chapter 8 has the expressed purpose of looking at the pattern of results over the entire dissertation. This includes patterns of supported and non-supported hypotheses in addition to trends in how data collapse along sexual orientation or gender lines. In addition, the chapter will offer an assessment of the limitations of this project as well as avenues for future work.
Chapter 8 – Discussion

This study aimed to fill a critical gap in the literature pertaining to the functional relationships among minority stress, network characteristics, and mental health. Though the minority stress model has been frequently tested in literature related to LGB health, the mechanisms through which individual social network composition impacts network-specific social support, and thereby mental health, have not been widely explored. To better understand the mechanisms at play in the minority stress model, this study used the concept of functional specificity in core discussion networks. This theory, proposed by Perry and Pescosolido (2010), rests on the assumption that the discussion networks individuals utilize depend, in large part, on the stressors faced. By integrating the theories of functional specificity and minority stress this work tested the assertion that, not only do LGB individuals have functionally specific CDNs to address stressors related to their minority sexual identity, but the characteristics of these networks (i.e., homophily with regard to sexual orientation identity) moderate the degree to which these functionally specific CDNs impact mental health. To that end, this project posited 11 hypotheses in two research questions aimed at understanding how network characteristics and the functional specificity hypothesis aid understanding of the minority stress model.

Chapter 7 presented the results of each individual hypothesis. Chapter 8 draws broader conclusions by looking at the patterns of results between the several hypotheses. Discussion of the broader implications falls into four sections: 1) reproduction and clarification of the minority stress model, 2) functional specificity in sexual minority respondents, 3) sex and sexual orientation in the minority stress model, 4) online methods for egocentric network acquisition. It is important to note that each hypothesis does not
appear in every section – rather the hypotheses are placed in sections in which they have explanatory power. Initially, the hypotheses that were not supported in this work and an analysis of why that may be are discussed.

Unsupported Hypotheses

Within Research Question 1 there were two hypotheses that were unsupported. Hypothesis 3 posited that the proportion of nodes in the overlap network would increase as identity prominence and identity valence increased. As individuals become more open about their sexual orientation (e.g., prominence increases) and as their perception of societal attitudes toward LGB individuals improves (e.g., valence increases), the need for more distinctive functional networks would decrease. When respondents perceive less stigma associated with their identity there would be less need for distinctiveness. However, identity prominence and identity valence had no impact on the size of the overlap network. It could be that the size of the overlap network is a function of node availability rather than a characteristic of the ego. Thus, individual psychological constructs would have little impact on the nodes that do or do not appear in the functionally specific network. Much like a supply and demand problem, ego creates functional networks out of the nodes available to them.

Hypothesis 6 posited that increased homophily in the sexuality-related stressor network would increase the perceived social supportiveness of nodes in the sexuality-related stressor network. This hypothesis was unsupported for every sexual orientation save gay males. A possible explanation for this result is the network structure for all SOI made this result likely. Gay males had the largest sexuality-related stressor network, whereas lesbians had the largest overlap network and bisexuals had the largest general
important matters network. Moreover, the sexuality-related stressor network in gay males held a significantly higher proportion of homophilous nodes than the sexuality-related stressor networks of lesbians and bisexuals. Thus, in terms of node distribution, gay males had more nodes to draw from than other SOI. In addition, those nodes were far more likely to be homophilous with regard to SOI. Bisexual individuals, in comparison, had relatively small sexuality-related stressor networks and were less likely to have homophilous nodes in said network. In addition, bisexuals perceive that gay males and lesbians hold the belief that the identity of bisexuals is inauthentic (Hequembourg & Brallier, 2009); thus homophilous nodes may not be perceived as helpful (indeed they may not actually be helpful if those perceptions are accurate). Lesbian respondents were more likely to have large overlap networks (and similarly high homophily in said networks). This suggests that bisexual individuals may be working against the numbers (few nodes and low homophily), and thus homophily has little opportunity to impact social support. Whereas the strength of lesbian respondents’ networks was in the overlap network, which had a high degree of homophily in it, Hypothesis 6 may have been looking at the wrong network.

**Reproduction and Clarification of the Minority Stress Model**

The minority stress model theorizes that LGB individuals experience stressors related to their sexual orientation identity. This minority stress occurs as both proximal stress (stressors that are internal to the individual) and distal stress (prejudice and discrimination). The degree to which proximal stress impacts mental health and well-being is moderated by minority identity characteristics (identity prominence and valence;
see Figure 2:1). Moreover, social support is seen to moderate the effects of all stressors on mental health and well-being.

It is important to note, though asserted by the theory, prior to this dissertation there was no evidence to support the claim that minority identity impacts social support or that social support from functionally specific CDNs moderates minority stress. The model presented in this dissertation sought to fill these gaps in the literature. Hypothesis 1 partially supports the assertion that characteristics of social networks are different for lesbians, gay males, and bisexuals. This hypothesis grew out of an analysis of several research projects that show differences between gay men and lesbians in terms of who is in said networks (e.g., Doty, et al., 2010) and the perceived support LGB respondents receive from individuals in their networks (e.g., McCallum & McLaren, 2011). In addition, this hypothesis (and subsequent hypotheses) heeds the Institution of Medicine’s recommendation that collapsing LGB individuals into one category may obscure differences between said groups.

Specifically, the results from Hypothesis 1 suggest that homophily is higher in the networks of gay males and lesbians than of bisexual males or bisexual females. Average node closeness and frequency of contact were similar for each sexual orientation identity. This result makes sense when considering the literature on bisexual individuals. Particularly, prior work suggests that bisexuals experience more confusion over their sexual orientation and lower levels of community connectedness than gay males and lesbians (e.g., Balsam & Mohr, 2007). In addition, bisexuals perceive gay males and lesbians as holding the belief that the identity of bisexual is inauthentic (Hequembourg & Brallier, 2009). Thus, the results of Hypothesis 1, in this light, could mean that bisexual
respondents either have less access to members of the LGB community, or they are reluctant to engage lesbians and gay males in their networks because they feel stigmatized by them.

In addition, results for proximal stress, distal stress, identity prominence and identity valence strongly support the assertion that each SOI is unique for the purposes of the minority stress model. It is worth mentioning that from a stress perspective, gay males and lesbians had significantly higher scores on distal stress and significantly lower scores on proximal stress. Thus, stress appears to collapse along sexuality. However, identity prominence and identity valence did not allow the groups to be collapsed as cleanly.

Hypothesis 9 supports the general assertion that both proximal and distal stress impact mental health and well-being as assessed by this project. Similarly, Hypothesis 8 partially supported the assertion that social support moderates the relationship between minority stress and mental health. However, this moderation occurs only for female sexual minorities who report higher levels of social support in the sexuality-related network than their male counterparts. There are a number of reasons why this result may exist. The data seem to point to a possible rationale in both the structure and function of social networks. Both gay and bisexual males report higher levels of perceived alienation than sexual minority females. In the case of bisexual males this is likely a network structure problem – as discussed above they simply do not have the same supply of LGB nodes that gay males and lesbians have. But gay males reported sexuality-related stressor networks that were significantly higher in homophily than bisexual males or bisexual females. The size of their sexuality-related stressor networks was larger than that of any other SOI. Thus, gay males have substantial homophilous nodes, but still perceive high
levels of alienation. Gay males had significantly higher reports of distal stress (compared to bisexuals), large functional networks, with high proportions of LGB nodes, that they felt alienated by; thus, they likely did not engage this network to its fullest potential. On the other end of the spectrum, bisexual males report high levels of proximal stress (compared to homosexuals) and have relatively small functional networks containing few homophilous nodes they similarly feel alienated by; thus, even if bisexual males want to engage their functionally-specific network said network is unlikely to provide adequate support.

Hypothesis 11 posited a modification of the minority stress model in that identity characteristics would moderate both proximal and distal stressors. This assertion was partially supported. Distal stress was moderated by identity valence but only in three cases, moderating the impact of distal stress on 1) psychological distress in lesbian respondents, 2) hopelessness in gay male respondents, and 3) life satisfaction in bisexual male respondents. Additionally, results indicate that identity characteristics moderate the relationship between proximal stress and mental health and well-being, but only for bisexual respondents. These results show that identity prominence and identity valence may play a larger role in the minority stress model. However, the smattering of results here could as easily be chalked up to Type I Error as a legitimate role, particularly given the lack of a consistent pattern in the results.

Lastly, this project sought to add weight to the argument that sexual orientation identities are each distinct groups; in this project it is asserted that the effectiveness of the minority stress model in explaining and predicting changes in mental health and well-being is different for each sexual orientation identity. This assertion has received wide
support throughout the many and varied hypotheses above. One large take-away from this project was that minority stress and social support have varied relationships with mental health and well-being for lesbians, gay males, bisexual males and bisexual females. The difficulty in obtaining exclusive samples of individuals from one (or all) sexual orientation identities has long been a rationale for collapsing these distinct groups into one. This collapsing of cells gives larger samples that yield higher statistical power allowing researchers to begin to delve into the experiences of LGB respondents. However, ignoring the crucial differences among these four groups is likely to lead to pervasive Type I Error in LGB studies thereby negating any real advantage increased sample size might provide. An example of this can be seen in Hypothesis 11. The literature has long indicated that identity characteristics moderate the effect of proximal stress on health. However, when analyzing each sexual orientation identity separately results showed the effect was largely carried by the fact that identity characteristics were exclusively significant for bisexuals. Thus, when SOI is collapsed, the strength of the bisexual effect would make it appear as though proximal stressors were significant moderators for all sexual orientation identities, when the results presented here suggest the effect was more nuanced.

The results of Hypothesis 9 suggested that network characteristics impact stressors in a similar fashion for lesbian and bisexual male respondents in both the general important matters network and the sexuality-related stressor network. The moderating effects, though similar in both CDNs, remain in opposition to what one would expect to find from a buffering model. The moderating effect of network structure was related to positive mental health outcomes when minority stress is low, but negative
mental health outcomes when minority stress was high. So, having a close and/or homophilous network correlated with positive mental health outcomes when respondents encountered comparatively little minority stress; yet when respondents encountered significant minority stress close and/or homophilous networks correlated with negative mental health outcomes. This result did not comport to typical results for buffering models. It could be that network characteristics in and of themselves do not actually aid in buffering stress, but rather serve as a guide to the strengths and weaknesses of certain functional networks when dealing with minority stress. In other words, increasing closeness and frequency of contact with the general important matters network could exacerbate problems because those networks do not possess the structure necessary to adequately buffer stress. As discussed previously bisexual individuals have very large general important matters networks, but few homophilous nodes, whereas lesbian respondents have a comparatively small general matters network. Thus, when minority stress is high these general important matters networks are inadequate and increasing contact and closeness with said networks may be akin to twisting the proverbial knife. Moreover, the stressor types may also play a role here. Bisexuals are more likely to conceal their SOI than their gay and lesbian counterparts. This concealment, teamed with the increase in contact and interaction, means that they are repeatedly engaging with people who could be the source of the stress (i.e., people they’re hiding their sexual orientation from, or people who are decidedly not LGB thus highlighting alienation).

In fact, it could be argued that the results from Hypothesis 11 actually lend support to this assertion, because identity prominence and identity valence actually tended to work as buffers, whereas network characteristics did not. As identity
prominence increases individuals feel less alienation from the LGB community and their personal LGB identity becomes a larger part of their life. In particular, bisexual respondents who have low identity concealment (proximal stress) show improvements in mental health (psychological distress) when alienation decreases. In other words, as bisexuals reduce the degree to which they hide their sexual orientation increasing their connectedness to the LGB community improves well-being. However, the opposite of this relationship is also true, given that bisexual respondents report higher proximal stress than gay and lesbian counterparts, and bisexual males experience higher levels of alienation than lesbian counterparts. So, it stands to reason that mental health and well-being would decrease under these conditions.

In sum, the results of this project provide further support for the efficacy of the minority stress model in explaining how sexuality-related stressors impact the lives of LGB individuals. Testing the degree to which minority characteristics impact proximal and distal stress can add further refinements to the model through discussions of the role of gender in this model. Treating each sexual orientation identity as a distinct group throughout this project, though tedious, brought to light some distinct differences among these four groups and furthers discussions around whether the stressors and support systems utilized by LGB persons are best understood through a gender or a sexual orientation lens or both.

**Functional Specificity in Sexual Minority Respondents**

The functional specificity hypothesis contends that individuals match core discussion networks to specific stressors as a means of obtaining the most effective social support (Perry & Pescosolido, 2010). Prior research has shown functional specificity in
CDNs related to health issues. This project aimed to expand functional specificity to stressors experienced by LGB individuals. In keeping with existing research in functional specificity, the results of Hypothesis 2 show incomplete overlap of the sexuality-related CDN and the general important matters CDN. Prior research indicated that roughly 33% of health and general important matters networks do not overlap. Hypothesis 2 suggests that the overlap network in LGB folks is approximately 50%. The general important matters network for bisexual respondents contains significantly more nodes than the general important matters network of gay males and lesbians. The overlap network for lesbian respondents contains significantly more nodes than the overlap networks for bisexuals and gay males. The sexuality-related stressor network for gay male respondents contains significantly more nodes than the sexuality-related stressor network for lesbian and bisexual respondents. These results suggest that for all sexual orientation identities there are distinct nodes that appear in the sexuality-related stressor network, but not the general important matters network; and similarly distinct nodes appear in the general important matters network but not the sexuality-related stressor network. This mirrors the work of Perry and Pescosolido (2010), while reinforcing the idea that the degree to which sexuality-related and general important matters networks overlap varies along sexual orientation lines.

As previously discussed, the differences in the structure of the networks may largely be a function of how each distinct group is positioned within the LGB community, and how they perceive their relationships with other LGB individuals. For example, lesbian respondents do not report the level of alienation from the LGB community that gay males report, yet, they have similar homophily in their networks.
Thus, lesbian women have access to more LGB individuals they do not feel alienated by. It would stand to reason that they would move some of these individuals to the overlap network (e.g., they are helpful for sexuality-related stressors and other stressors). Bisexuals on the other hand, have comparatively little access to LGB individuals, and their levels of identity concealment (proximal stress) are higher than that of homosexuals. Therefore, bisexuals are hiding their identity, and have little access to LGB folks. It makes sense that under those conditions, that their general important matters network is significantly larger than that of homosexual counterparts.

A second contention of the functional specificity hypothesis is that CDNs for specific stressors will contain nodes that are homophilous with respect to an important characteristic. Prior research found that nodes in a functionally specific network dedicated to mental health were significantly more likely to suffer from mental health conditions than nodes in a general important matters network (Perry & Pescosolido, 2010). Additionally, research on LGB youth has suggested that the CDNs of LGB youth contain a higher proportion of nodes homophilous with regard to sexual orientation (Doty, et al., 2010) than the CDN for general important matters.

The homophily assertion has strong support in social-psychological literature. Individuals tend to surround themselves with individuals who are like them (McPherson, et al., 2001). When observing racial minority individuals homophily with regard to race has been observed in CDN; only 8% of nodes are not racial minorities (Marsden, 1987). However, the level of homophily and the characteristics that are homophilous change over time. For example, within adolescent relationships racial homophily increased and
gender homophily decreased as adolescents moved through middle and high school (Shrum, Cheek, & Hunter, 1988).

With prior research in mind, Hypothesis 5 posited that sexual orientation homophily would be higher within the sexuality-related CDN than the general important matters CDN. This hypothesis was supported; for each sexual orientation identity the sexuality-related CDN contained more LGB homophilous nodes than the general important matters network. Moreover, it is noteworthy that lesbian and gay male respondents reported a higher proportion of homophilous nodes in both the sexuality related CDN and the important matters CDN than bisexual counterparts. Reasons for this difference have already been discussed. However it is worth noting again that the degree to which bisexual individuals feel stigmatized by lesbians and gay males likely plays an important role. Further stigmatization by the lesbian and gay communities teamed with the overall belief that bisexuality is either inauthentic or fleeting likely plays a strong part in the results of Hypothesis 5. In fact, it could be argued that part of the alienation felt by bisexual males may come from this very stigma, though this assertion has no empirical basis in the data collected. It could also be that lesbian and gay individuals have formed a more cohesive community allowing for homophilous individuals to meet and form ties. Prior work suggests that bisexual individuals do not feel as connected to the LGB community as their gay and lesbian counterparts, lending credence to this perspective (Balsam & Mohr, 2007). On the other hand, there is wide support for the assertion that bisexual individuals are less likely to be accepted by members of the LGB community. This lack of acceptance may explain the lower proportion of LGB homophilous nodes in bisexual respondents’ sexuality-related CDN.
In addition to the existence of functionally specific networks, Hypothesis 7 asserts that network characteristics of social networks will influence mental health and well-being. This hypothesis was partially supported in that some network characteristics were significantly related to mental health scores for some sexual orientation identities. Within the general important matters CDN closeness and frequency of contact had positive relationships to mental health scores but only for gay males and bisexual females. Within the sexuality-related stressors CDN each network characteristic had significant relationships; closeness was positively related to life satisfaction for gay males, and frequency of contact was positively related to life satisfaction and negatively related to psychological distress for bisexual females. Within the overlap network closeness was positively related to life satisfaction for all sexual orientation identities and self-esteem for lesbians. Similarly, closeness in the overlap network was negatively related to hopelessness for gay males and bisexual females. Homophily was a unique case; within the sexuality-related stressors CDN and the overlap network, homophily was negatively related to self-esteem and positively related to psychological distress for bisexual female respondents.

The results suggest that network characteristics matter more for gay male and bisexual female respondents than for lesbians or bisexual males; these sexual orientation identities had significant relationships between network characteristics and mental health in each CDN. Closeness was a significant network characteristic within each CDN. This is unsurprising as closeness can be thought of as a proxy for strong relationships which have been shown to increase well-being (e.g., Berkman, 1995). However, homophily is surprising in that for bisexual women increased homophily decreased mental health and
well-being. Gay males on the other hand report higher life satisfaction when homophily increases. This result for bisexual women is contrary to work that regards homophily as a positive and important factor in social networks (e.g., McPherson, et al., 2001; Perry & Pescosolido, 2010; Shrum, et al., 1988). It is further curious that these relationships run in opposite directions for bisexual women and gay men when other significant characteristics show stable directions regardless of the sexual orientation identity. It could be that the sexual orientation identity of bisexual females is more likely to be questioned by other members of the LGB community. Therefore, when bisexual females encounter sexuality-related stressors, the homophily present in their sexuality-related CDN functions against them, as they are not seen as “legitimate” members of the LGB community for the purposes of experiencing stress.

It is worth noting that the measure of homophily used in this project was not ideal. In previous sections the argument has been made – and data support – that each sexual orientation identity is a distinct group, and collapsing these groups together without rational or empirical evidence is ill advised. Yet, the measure of homophily utilized in this project does just that. This decision was made for pragmatic reasons – a finer definition of homophily would have left multiple individuals (mostly bisexuals) with no homophilous nodes, thus dropping them from analyses and significantly reducing sample size. However, it stands to reason that a better definition of homophily may have yielded quite different results in this project, particularly for bisexual individuals. If the argument for homophily is the ability to find support from someone who is “like you” then the operationalization of that term must also appropriately define who is “like” enough. It
may be, for bisexuals in particular, that the differences in the lived experiences of these groups make them different enough to not be homophilous.

In total, the results from this dissertation support the assertion that the functional specificity hypothesis exists in LGB individuals experiencing sexuality-related stressors. In addition, certain network characteristics within the specific CDNs are related to higher scores on measures of mental health and well-being, particularly for gay males and bisexual females. In general, as network characteristics increase (i.e., stronger feelings of closeness, increased frequency of contact, higher proportion of LGB homophily) mental health and well-being improve. These changes occur in both the general important matters network as well as the sexuality-related stressor network. However, the negative relationship between homophily and psychological distress in bisexual females serves to highlight the problematic relationship bisexual females have with the LGB community, to the point that increased homophily – which is positively related to mental health in other sexual orientation identities – may negatively impact the health of bisexual females.

**Sex and Sexual Orientation Identity in the Minority Stress Model**

The patterns of results in this project strongly suggest circumstances in which the effects of the minority stress model collapse along gender lines and other circumstances in which the effects collapse along sexual orientation lines. The results of Hypothesis 8 collapse along gender lines; social support has an impact on mental health and well-being for female respondents only. Both lesbian and bisexual female respondents report negative relationships between social support in the general important matters network and hopelessness.
Just as there are results that collapse along gender lines, there are patterns of results that collapse along sexual orientation. That is to say that there is a distinct difference in results between bisexual respondents and homosexual respondents. Results for Hypothesis 2 collapse such that bisexuals report a higher proportion of nodes in their general important matters network than homosexuals report in their general important matters network. This result suggests that gay and lesbian respondents are more likely to have individuals either exclusively in their sexuality-related network (as is the case for gay males) or in both their sexuality-related network and the general important matters network (as is the case in the overlap network for lesbians). Results from Hypothesis 10 suggest that personal LGB valence impacts mental health and well-being for bisexual respondents. Finally, results from Hypothesis 11 suggest that identity characteristics (both prominence and valence) moderate the influence of proximal stressors on mental health and well-being for bisexual respondents only. These results insinuate that identity characteristics do not hold the same sway for bisexual and homosexual respondents. This makes sense because identity characteristics for bisexual individuals are highly stigmatized in both sexual majority and sexual minority communities. Thus, it would make sense that identity characteristics, particularly identity valence (a marker of how positively or negatively the respondent and society views respondents’ sexual orientation identity), would act differently for bisexuals.

When looking at the roles that gender and sexual orientation play within the minority stress model, the results cannot be reduced to gender or sexual orientation alone. Although there are cases in which effects collapse along gender and/or sexual orientation lines, neither reduction of the model provides a clear vision of how the minority stress
model operates. Rather, the results strengthen the assertion that the significant effects within the model arise in unique forms for each of the four individual sexual orientation identities – that is, the four combinations of gender and sexual orientation. These combinations result in unique characteristics that modify how the minority stress model operates.

**Online Name Generator for Egocentric Networks**

This project sought to use a novel method for collection of detailed information relating to egocentric networks. Prior research collecting detailed network data relied on in-person contact and interviewer-driven data collection (e.g., Dawber, 1980; Perry & Pescosolido, 2010). Name generators throughout networks research typically rely on the role of interviewers to generate a relevant and adequate pool of names, and then feed said names into additional questions for the purpose of obtaining network characteristics (Campbell & Lee, 1991). Prior research suggested variations in name generators result in significant differences in network size, but similarity in regard to network composition. Moreover, the characteristics of the networks could tend to be altered by virtue of how name generator questions were asked.

This project used a series of four name generators for the purpose of collecting a relatively large social network. The name generator began by asking respondents to give the first name of up to ten individuals they turn to when they need to discuss important matters. This question was modeled on the name generator utilized by the General Social Survey. The next three name generators allowed respondents to add an additional six names representing people in three additional areas (i.e., work, friends, and online). After each name generator, respondents were asked about the characteristics of each node the
generator produced. There was a potential for respondents to refuse engagement with the additional name generators on the basis of knowledge that each additional answer would create more questions to answer. However, results from this study do not bear this out. Each additional name generator produced, on average, three additional names, for an average network size of 15.5 ± 6 alters.

These results suggest it is possible to achieve significant network size using a series of name generators. Furthermore, cleaning procedures to remove twice named alters (i.e., nodes with the same name, race, gender, and sexual orientation) showed a negligible number of repeat names (< 10 repeats for the entire sample). This suggests that respondents both understood and heeded the request for additional unnamed nodes in each of the three secondary name generators. The methodology utilized in this project produced a sizeable network with a wide variety of characteristics without the burdensome cost inherent in the face-to-face interviewer methods utilized by many other network researchers.

Limitations

As with all research, this project has a number of limitations that must be addressed. First, the data collection method relied on utilizing Amazon’s Mechanical Turk, which is becoming a more common fixture in social science research. This project utilized a short four-question screener to determine whether MTurk workers qualified for this project. Workers needed to be white, between the ages of 18 and 35, and homosexual or bisexual. This screening process is a variation of multistep survey methodology being adapted to target hard to reach populations (see Springer, Martini, Vezich, & Lindsay, 2016). However, the high value of the secondary survey may clue a subset of MTurk
workers into the fact that researchers are looking for minority respondents. Thus workers may be untruthful on the demographic questions that serve as an initial screener. This could result in non-white, non-LGB respondents who are pretending to hold these characteristics for the purpose of answering the primary survey.

Though it is impossible to know which, if any, respondents were being disingenuous it is worth noting that approximately 8% of nearly 20,000 respondents who completed the initial screener attempted the screener a second time. Of those, less than 5% achieved the correct combination of characteristics necessary to pass through the screener to the primary survey. Each individual response of the aforementioned 5% was excluded from analysis. It is relatively simple to find and exclude individuals who attempted to guess their way into the primary survey. However, one cannot logically surmise that all individuals with this idea needed a second attempt. In other words, it is possible this project contains an unknowable number of individuals who are feigning some facet of minority status, and said individuals entered and exited the survey unnoticed. However, when posting the survey on MTurk no indications were given regarding the nature of the survey, the topics to be assessed, nor the minority groups that would be preferred. In addition, respondents were re-asked their sexual orientation toward the end of the survey, and each respondent’s answer matched the question in the screener.\[5\]

Second, upon examining responses to the network characteristics of closeness and frequency of contact, it is not clear that respondents saw these two questions as distinct constructs. Several results show similar effects and effect sizes for frequency of contact

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5 This was not done as a “check” on respondents, but rather as a tool to pipe SOI into other questions that occurred at the end of the survey.
and closeness. This could be due to the fact that frequency of contact and closeness operate via similar mechanisms within social networks. Or, it could be that, without an interviewer, respondents were unclear as to the distinction between closeness and frequency of contact and were unable to ask for clarification.

It should also be noted that, as with homophily above, there are some issues with the measurement of both closeness and frequency of contact. The measure used in this project was the average. Though the average is, generally speaking, a good measure, it could yield the same answer for very different networks. For example, one respondent’s network may have a few nodes they are very close with, as well as a few nodes they are not at all close too. This result would be identical to a respondent who had an average level of closeness with all nodes in their network. Thus, the use of average closeness and average frequency of contact could result in identical scores for networks that are functionally quite different from one another.

Third, there was an error in survey construction resulting in the age variable being excluded from data collection. The piping within the survey caused respondents to skip the age item. As a result the models in this project do not control for the effects of age, if such effects exist. It should be noted that the age range in this survey (18 to 35) covers the generation colloquially referred to as “millennials” (those born between 1981 and 1997; Pew, 2016). Regardless of how similar white, LGB millennials might be, the inability to use age as a control variable is a significant limitation on these results. The lived experience of LGB individuals varies to a noticeable degree over the almost two decades covered. This variation is best summed up by changes in the social acceptance of LGB individuals from the early 2000’s to the early 2010’s. These dramatic cultural
changes come on the heels of the AIDS crisis of the 1980’s and 1990’s, and serves as a precipitating factor in the ultimate push toward marriage equality. As such, individuals in this age range could have substantially different experiences with both proximal and distal stressors, with younger respondents reporting less stress. In other words, by virtue of being alive, older respondents would have accumulated higher levels of stress and hardship than younger counterparts. However, the data here were collected at one moment in time, negating the possibility of capturing any period effects. For this one moment in time all individuals in the survey were experiencing relatively similar levels of social acceptance and/or rejection based on sexual orientation, though the level of this acceptance/rejection is arguably different for each SOI.

In addition, the age range for this project, 18 to 35, contains huge shifts in individuals as they change physically, socially, economically, and mentally. This age range represents the period of time when most individuals emerge from adolescence to adulthood. Many attend and leave college (in various stages of completion). The financial state of an individual who is 35 is likely to be much more stable than the financial state of an individual who is 18 (income was a measured demographic characteristic). At the age of 35, many individuals already have children; this is far less likely to be true of respondents who are 18. As respondents get older they are more likely to have had significant long-term relationships, perhaps even marriage. Some of those relationships may not have ended well, perhaps ending in divorce (relationship status was a measured demographic characteristic). Younger respondents are more likely to have come out recently, and thus are more likely to experience negative reactions from friends and
family. Many older individuals came out longer ago, and it is likely that their network no longer contains close friends and family who would create said negative experiences.

Though these limitations are present, it is important to note that this project attempted to reduce these issues when possible. All MTurk identification numbers were processed with the explicit purpose of finding duplicate entries. Because MTurk ID numbers are unique to the individual, and payment is routed through MTurk ID, this represents a thorough and reasonable – if imperfect – attempt at curbing duplicate entries, as individuals could make additional MTurk accounts and mask their IP address and thus gain additional attempts to “beat” the screener. To create better understanding of the closeness and frequency of contact variables, different scales were utilized. Contact was rated on a scale of one to seven anchored by “Not at all close” and “Extremely close”, whereas frequency of contact was measured in terms of the number of days per week in which respondents had contact with each alter (ranging from one day to seven days). The original age range was purposefully chosen but having the variable to further control for age difference is a missed opportunity.

**Conclusion and Future Research**

This project highlights the assertion that the minority stress model does not operate equally for every sexual orientation. In particular, this project provided additional evidence to back the assertion that each sexual orientation identity is unique in terms of the manner in which the network characteristics and perceived social support react with minority stress. Identity prominence and identity valence, collectively referred to as minority identity characteristics, are shown to have a relationship with within-network social support. The original minority stress model did not predict this relationship, nor the
result indicating that minority identity has different effects on perceived social support within the general important matters network and the sexuality-related stressors network.

Additionally, this work provides support for the assertion that network characteristics are an important factor to consider when looking at the effectiveness of community as a moderator of minority stress. Closeness, frequency of contact, and homophily had direct impacts on mental health, as well as a moderating impacts on minority stressors. In particular, homophily was shown to have a negative effect on mental health and well-being for bisexual females, whereas homophily was shown to have a positive effect on mental health and well-being for gay males.

Finally, support was added to the functional specificity hypothesis by showing that LGB individuals utilize different individuals for dealing with sexuality-related stressors. The sexuality-specific stressor network contains unique nodes not present in the general important matters network. This result suggests that LGB individuals turn to a specific group for support with sexuality-related issues. Moreover, there are nodes that provide support for general important matters who are not utilized when LGB people are faced with sexuality-specific stressors. Finally, the proportion of LGB individuals within the sexuality-specific network is higher than the proportion of LGB individuals in the general important matters network.

Given the results of this project there are numerous routes for future research. First and foremost replication of the functional specificity hypothesis in LGB individuals is a necessary step in moving forward. The most obvious area for expansion is the inclusion of LGB people of color in future research. This work purposefully excluded LGB people of color because untangling the complexities of intersectionality require
significant increases in sample size. Finding a large sample of LGB people of color would require a massive temporal and financial undertaking, though the opportunity to better understand how structural differences in social support – particularly with regard to both LGB and racial homophily – impact the relationship between stress and mental health would be worthwhile. It can be hypothesized that the way in which both the functionally specific CDN and its network characteristics work within the minority stress model may be fundamentally different for LGB people of color. The minority stressors experienced by LGB people of color would exist on several levels: 1) minority stress based on color, 2) minority stress based on sexual orientation, and 3) minority stress based on being a person of color who is also a sexual minority. Additionally, as with bisexuals, the lesbian and gay communities have not been particularly welcoming to LGB people of color. Gay males in particular are rather notorious for their poor treatment of gay and bisexual males of color (e.g., Chae & Ayala, 2009). Thus, it could be that the minority stress model does not adequately predict or explain the lived experience of LGB people of color. Given the unpredicted results of LGB homophily in this project future work could also seek to better explain why homophily negatively impacts the mental health and well-being of bisexual females. It may well be that homophily for LGB individuals needs to be specific to gender and sexual orientation – which may create an even more complex landscape when considering homophily among LGB people of color.
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Hispanic backgrounds. *Journal of Community Psychology,* 24, 136-159.


### Tables

**Table 6:1. Average net size by sexual orientation identity**

<table>
<thead>
<tr>
<th></th>
<th>General</th>
<th>Work/School</th>
<th>Family</th>
<th>Internet</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>6.84</td>
<td>3.18</td>
<td>3.16</td>
<td>2.36</td>
<td>15.54</td>
</tr>
<tr>
<td>Gay</td>
<td>6.55</td>
<td>3.37</td>
<td>2.92</td>
<td>2.21</td>
<td>15.05</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td>6.8</td>
<td>3.35</td>
<td>2.92</td>
<td>2.38</td>
<td>15.45</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td>7.08</td>
<td>3.16</td>
<td>3.16</td>
<td>2.45</td>
<td>15.85</td>
</tr>
<tr>
<td>M</td>
<td>6.82</td>
<td>3.27</td>
<td>3.04</td>
<td>2.35</td>
<td>15.47</td>
</tr>
</tbody>
</table>

**Table 6:2. Average functional network size by sexual orientation identity**

<table>
<thead>
<tr>
<th></th>
<th>General Important Matters</th>
<th>Sexuality-Related</th>
<th>Overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>5.00 (2.74)</td>
<td>4.86 (3.30)</td>
<td>3.35 (2.05)</td>
</tr>
<tr>
<td>Gay</td>
<td>4.40 (2.64)</td>
<td>4.77 (3.87)</td>
<td>2.85 (2.15)</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td>4.70 (2.71)</td>
<td>3.98 (3.06)</td>
<td>2.60 (1.95)</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td>4.84 (2.75)</td>
<td>4.04 (2.92)</td>
<td>2.74 (2.03)</td>
</tr>
</tbody>
</table>

**Table 6:3. Average summative and proportional SOI homophily by SOI and stressor**

<table>
<thead>
<tr>
<th></th>
<th>Summative Homophily</th>
<th>Proportional Homophily</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesbian</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>1.93(^1), 2, 3</td>
<td>.39(^1), 2</td>
</tr>
<tr>
<td>Sexuality-Related Stressor</td>
<td>2.42(^1), 2</td>
<td>.53(^1), 2</td>
</tr>
<tr>
<td><strong>Gay</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>1.45(^2)</td>
<td>.32(^1), 2</td>
</tr>
<tr>
<td>Sexuality-Related Stressor</td>
<td>2.16(^1), 2</td>
<td>.50(^1), 2</td>
</tr>
<tr>
<td><strong>Bisexual Male</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>1.20</td>
<td>.23</td>
</tr>
<tr>
<td>Sexuality-Related Stressor</td>
<td>1.56</td>
<td>.42</td>
</tr>
<tr>
<td><strong>Bisexual Female</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>1.10</td>
<td>.20</td>
</tr>
<tr>
<td>Sexuality-Related Stressor</td>
<td>1.54</td>
<td>.39</td>
</tr>
</tbody>
</table>

\(^1\) Higher than Bisexual Males  
\(^2\) Higher than Bisexual Females  
\(^3\) Higher than Gay Men
Table 6.4. Average closeness by SOI and stressor.

<table>
<thead>
<tr>
<th></th>
<th>General Important Matters</th>
<th>Sexuality-Related Stressor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesbian</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>5.96 (.78)</td>
<td>5.67 (.95)</td>
</tr>
<tr>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matters</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gay</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>5.86 (.89)</td>
<td>5.51 (1.01)</td>
</tr>
<tr>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matters</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bisexual Male</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>5.86 (.84)</td>
<td>5.52 (1.20)</td>
</tr>
<tr>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matters</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bisexual Female</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>5.94 (.79)</td>
<td>5.69 (1.05)</td>
</tr>
<tr>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Matters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6.5. Average interaction by SOI and stressor.

<table>
<thead>
<tr>
<th></th>
<th>Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesbian</strong></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>4.74 (1.25)</td>
</tr>
<tr>
<td>Important</td>
<td>4.65 (1.33)</td>
</tr>
<tr>
<td>Matters</td>
<td></td>
</tr>
<tr>
<td><strong>Gay</strong></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>4.56 (1.49)</td>
</tr>
<tr>
<td>Important</td>
<td>4.34 (1.51)</td>
</tr>
<tr>
<td>Matters</td>
<td></td>
</tr>
<tr>
<td><strong>Bisexual Male</strong></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>4.55 (1.45)</td>
</tr>
<tr>
<td>Important</td>
<td>4.53 (1.48)</td>
</tr>
<tr>
<td>Matters</td>
<td></td>
</tr>
<tr>
<td><strong>Bisexual Female</strong></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>4.81 (1.31)</td>
</tr>
<tr>
<td>Important</td>
<td>4.64 (1.48)</td>
</tr>
<tr>
<td>Matters</td>
<td></td>
</tr>
</tbody>
</table>
### Table 6:6. Average CDN support type by SOI and stressor.

<table>
<thead>
<tr>
<th></th>
<th>Emotional Support</th>
<th>Informational Support</th>
<th>Instrumental Support</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesbian</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>6.49 (.94)</td>
<td>6.51 (.93)</td>
<td>6.48 (.96)</td>
</tr>
<tr>
<td>Sexuality-Related Stressor</td>
<td>6.54(^{1,2}) (.87)</td>
<td>6.51(^{1}) (.90)</td>
<td>6.48(^{1}) (.90)</td>
</tr>
<tr>
<td><strong>Gay</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>6.30 (1.02)</td>
<td>6.40 (.95)</td>
<td>6.32 (1.05)</td>
</tr>
<tr>
<td>Sexuality-Related Stressor</td>
<td>6.31 (1.10)</td>
<td>6.33 (1.07)</td>
<td>6.30 (1.09)</td>
</tr>
<tr>
<td><strong>Bisexual Male</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>6.34 (1.05)</td>
<td>6.39 (.96)</td>
<td>6.33 (1.03)</td>
</tr>
<tr>
<td>Sexuality-Related Stressor</td>
<td>6.17 (1.23)</td>
<td>6.15 (1.27)</td>
<td>6.08 (1.31)</td>
</tr>
<tr>
<td><strong>Bisexual Female</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>6.46 (.96)</td>
<td>6.50 (.95)</td>
<td>6.41 (1.04)</td>
</tr>
<tr>
<td>Sexuality-Related Stressor</td>
<td>6.55(^{1,2}) (.81)</td>
<td>6.51(^{1}) (.84)</td>
<td>6.45(^{1}) (.90)</td>
</tr>
</tbody>
</table>

\(^{1}\) Higher than Bisexual Males  
\(^{2}\) Higher than Gay males

### Table 6:7. Correlations among social support variables by CDN.

<table>
<thead>
<tr>
<th></th>
<th>GIM Emotnl</th>
<th>GIM Informatnl</th>
<th>GIM Instrumentnl</th>
<th>S-RS Emotnl</th>
<th>S-RS Informatnl</th>
<th>S-RS Instrumentnl</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIM Emot.</td>
<td>1.00</td>
<td>.789</td>
<td>.757</td>
<td>.494</td>
<td>.43</td>
<td>.402</td>
</tr>
<tr>
<td>GIM Info.</td>
<td>1.00</td>
<td>.782</td>
<td>.437</td>
<td>.448</td>
<td>.404</td>
<td>.404</td>
</tr>
<tr>
<td>GIM Inst.</td>
<td>1.00</td>
<td>.408</td>
<td>.401</td>
<td>.454</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-RS Emot.</td>
<td>1.00</td>
<td></td>
<td>.874</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-RS Info.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.848</td>
<td></td>
</tr>
<tr>
<td>S-RS Inst.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

### Table 6:8. K6 scores by SOI.

<table>
<thead>
<tr>
<th></th>
<th>K6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>9.54 (5.67)</td>
</tr>
<tr>
<td>Gay</td>
<td>9.01(^{1,2}) (5.68)</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td>10.29 (5.68)</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td>10.61 (5.68)</td>
</tr>
</tbody>
</table>

\(^{1}\) Lower than Bisexual Males, \(p < .05\)  
\(^{2}\) Lower than Bisexual Females, \(p < .05\)
Table 6:9. Average RSES by SOI.

<table>
<thead>
<tr>
<th></th>
<th>RSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>23.24¹⁺² (8.23)</td>
</tr>
<tr>
<td>Gay</td>
<td>23.89¹⁺² (8.08)</td>
</tr>
<tr>
<td>Bisexual male</td>
<td>21.41 (8.29)</td>
</tr>
<tr>
<td>Bisexual female</td>
<td>21.59 (8.32)</td>
</tr>
</tbody>
</table>

¹ Higher than bisexual males
² Higher than bisexual females

Table 6:10. Average BHS score by SOI

<table>
<thead>
<tr>
<th></th>
<th>BHS Short-form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>3.38⁺ (2.88)</td>
</tr>
<tr>
<td>Gay</td>
<td>3.38⁺ (2.86)</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td>3.95 (2.89)</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td>3.69 (2.80)</td>
</tr>
</tbody>
</table>

⁺ Lower than Bisexual Males, *p* < .10

Table 6:11. Average SWLS by SOI

<table>
<thead>
<tr>
<th></th>
<th>SWLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>4.03¹⁺² (1.52)</td>
</tr>
<tr>
<td>Gay</td>
<td>4.06¹⁺² (1.42)</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td>3.71 (1.51)</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td>3.72 (1.50)</td>
</tr>
</tbody>
</table>

¹ Higher than Bisexual Males
² Higher than Bisexual Females

Table 6:12. Average GRSE by SOI.

<table>
<thead>
<tr>
<th></th>
<th>GRSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>5.86¹⁺² (3.66)</td>
</tr>
<tr>
<td>Gay</td>
<td>5.29¹⁺² (3.50)</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td>4.55 (3.07)</td>
</tr>
<tr>
<td>Bisexual Females</td>
<td>4.58 (3.10)</td>
</tr>
</tbody>
</table>

¹ Higher score than Bisexual Males
² Higher score than Bisexual Females
Table 6:13. Average identity concealment by SOI.

<table>
<thead>
<tr>
<th>Identity Concealment</th>
<th>Lesbian</th>
<th>Gay</th>
<th>Bisexual Male</th>
<th>Bisexual Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.08, 1, 2 (.84)</td>
<td>3.11, 1, 2 (.87)</td>
<td>3.85 (.87)</td>
<td>3.73 (.83)</td>
</tr>
</tbody>
</table>

1 Higher score than Bisexual Males
2 Higher score than Bisexual Females

Table 6:14. Rotated matrix factor loadings for identity prominence items.

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can turn to other people who are [LGB] when I am feeling down.</td>
<td>.87</td>
<td>.08</td>
</tr>
<tr>
<td>If I had a problem, I know that other people who are [LGB] would help me.</td>
<td>.87</td>
<td>.10</td>
</tr>
<tr>
<td><em>I think people who are [LGB] have a lot to be proud of.</em></td>
<td>.52</td>
<td>.38</td>
</tr>
<tr>
<td>Being [LGB] is central to my identity.</td>
<td>.35</td>
<td>.80</td>
</tr>
<tr>
<td>Being [LGB] is an important aspect of who I am.</td>
<td>.39</td>
<td>.78</td>
</tr>
<tr>
<td>Being [LGB] has little do to with how I think about myself (reversed).</td>
<td>-.22</td>
<td>.71</td>
</tr>
<tr>
<td>I feel out of place being around other people who are [LGB].</td>
<td>.14</td>
<td>-.02</td>
</tr>
<tr>
<td>I do not feel a bond with other people who are also [LGB].</td>
<td>.18</td>
<td>.27</td>
</tr>
<tr>
<td><em>I identify with other people who are [LGB].</em></td>
<td>.52</td>
<td>.40</td>
</tr>
</tbody>
</table>

Table 6:15. Identity prominence variables by SOI.

<table>
<thead>
<tr>
<th></th>
<th>Personal Identity</th>
<th>In-group Alienation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbians</td>
<td>4.43, 1, 2 (1.34)</td>
<td>2.92 (1.30)</td>
</tr>
<tr>
<td>Gay Males</td>
<td>4.23, 1, 2 (1.34)</td>
<td>3.38, 2, 3 (1.48)</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td>3.58 (1.44)</td>
<td>3.45, 2, 3 (1.29)</td>
</tr>
<tr>
<td>Bisexual Females</td>
<td>3.96, 1 (1.33)</td>
<td>2.92 (1.22)</td>
</tr>
</tbody>
</table>

1 Higher than bisexual males
2 Higher than bisexual females
3 Higher than lesbians
Table 6.16. Average identity valence by SOI.

<table>
<thead>
<tr>
<th></th>
<th>Personal Valence</th>
<th>Community Valence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>36.731,2,3 (15.26)</td>
<td>-2.812,3 (21.94)</td>
</tr>
<tr>
<td>Gay</td>
<td>28.20 (22.11)</td>
<td>-4.152 (21.68)</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td>27.07 (20.55)</td>
<td>-15.33 (22.05)</td>
</tr>
<tr>
<td>Bisexual Females</td>
<td>32.741,2 (20.04)</td>
<td>-7.772 (23.19)</td>
</tr>
</tbody>
</table>

1 Higher than Gay males  
2 Higher than Bisexual Males  
3 Higher than Bisexual Females

Table 6.17. Correlations between identity valence and health.

<table>
<thead>
<tr>
<th></th>
<th>Personal Valence</th>
<th>Community Valence</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Health</td>
<td>.05</td>
<td>.18</td>
</tr>
<tr>
<td>Mental Health</td>
<td>.04</td>
<td>.22</td>
</tr>
<tr>
<td>Physical Health</td>
<td>.04</td>
<td>.15</td>
</tr>
</tbody>
</table>

Table 7.1. Average GRSE by SOI.

<table>
<thead>
<tr>
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<th>GRSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>5.861,2 (3.66)</td>
</tr>
<tr>
<td>Gay</td>
<td>5.291,2 (3.50)</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td>4.55 (3.07)</td>
</tr>
<tr>
<td>Bisexual Females</td>
<td>4.58 (3.10)</td>
</tr>
</tbody>
</table>

1 Higher score than Bisexual Males  
2 Higher score than Bisexual Females

Table 7.2. Average identity concealment by SOI.

<table>
<thead>
<tr>
<th></th>
<th>Identity Concealment</th>
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<tbody>
<tr>
<td>Lesbian</td>
<td>3.081,2 (.84)</td>
</tr>
<tr>
<td>Gay</td>
<td>3.111,2 (.87)</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td>3.85 (.87)</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td>3.73 (.83)</td>
</tr>
</tbody>
</table>

1 Lower than Bisexual Males  
2 Lower than Bisexual Females

Table 7.3. Average identity valence by SOI.

<table>
<thead>
<tr>
<th></th>
<th>Personal Valence</th>
<th>Community Valence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>36.731,2,3 (15.26)</td>
<td>-2.812,3 (21.94)</td>
</tr>
<tr>
<td>Gay</td>
<td>28.20 (22.11)</td>
<td>-4.152 (21.68)</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td>27.07 (20.55)</td>
<td>-15.33 (22.05)</td>
</tr>
<tr>
<td>Bisexual Females</td>
<td>32.741,2 (20.04)</td>
<td>-7.772 (23.19)</td>
</tr>
</tbody>
</table>

1 Higher than Gay males  
2 Higher than Bisexual Males  
3 Higher than Bisexual Females
Table 7:4. Identity prominence variables by SOI.

<table>
<thead>
<tr>
<th>SOI</th>
<th>Personal Identity Mean (SD)</th>
<th>In-group Alienation Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbians</td>
<td>4.43&lt;sup&gt;1,2&lt;/sup&gt; (1.34)</td>
<td>2.92 (1.30)</td>
</tr>
<tr>
<td>Gay Males</td>
<td>4.23&lt;sup&gt;1,2&lt;/sup&gt; (1.34)</td>
<td>3.38&lt;sup&gt;2,4&lt;/sup&gt; (1.48)</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td>3.58 (1.44)</td>
<td>3.45&lt;sup&gt;2,4&lt;/sup&gt; (1.29)</td>
</tr>
<tr>
<td>Bisexual Females</td>
<td>3.96&lt;sup&gt;1&lt;/sup&gt; (1.33)</td>
<td>2.92 (1.22)</td>
</tr>
</tbody>
</table>

<sup>1</sup> Higher than Bisexual Males  
<sup>2</sup> Higher than Bisexual Females  
<sup>3</sup> Higher than Gay Males  
<sup>4</sup> Higher than Lesbians

Table 7:5. ANOVA results for network characteristics by stressor.

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>F</th>
<th>Levene’s Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homophily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>(3, 1346)</td>
<td>29.44&lt;sup&gt;***&lt;/sup&gt;</td>
<td>2.77&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Prejudice &amp; Discrimination</td>
<td>(3, 1287)</td>
<td>14.31&lt;sup&gt;***&lt;/sup&gt;</td>
<td>5.29&lt;sup&gt;***&lt;/sup&gt;</td>
</tr>
<tr>
<td>Closeness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>(3, 1346)</td>
<td>1.27</td>
<td>1.87</td>
</tr>
<tr>
<td>Prejudice &amp; Discrimination</td>
<td>(3, 1288)</td>
<td>2.76&lt;sup&gt;*&lt;/sup&gt;</td>
<td>6.15&lt;sup&gt;***&lt;/sup&gt;</td>
</tr>
<tr>
<td>Interactions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>(3, 1346)</td>
<td>3.18&lt;sup&gt;*&lt;/sup&gt;</td>
<td>5.35&lt;sup&gt;***&lt;/sup&gt;</td>
</tr>
<tr>
<td>Prejudice &amp; Discrimination</td>
<td>(3, 1288)</td>
<td>2.70&lt;sup&gt;*&lt;/sup&gt;</td>
<td>4.82&lt;sup&gt;**&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>***</sup> p ≤ .001  
<sup>**</sup> p ≤ .01  
<sup>*</sup> p ≤ .05

Table 7:6. Average summative and proportional SOI homophily by SOI and stressor.

<table>
<thead>
<tr>
<th></th>
<th>Summative Homophily</th>
<th>Proportional Homophily</th>
<th>Closeness Mean</th>
<th>Interaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>1.93&lt;sup&gt;1,2,3&lt;/sup&gt;</td>
<td>.42&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>5.96</td>
<td>4.74</td>
</tr>
<tr>
<td>Prejudice &amp; Discrimination</td>
<td>2.42&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>.55&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>5.67</td>
<td>4.65</td>
</tr>
<tr>
<td>Gay</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>1.45&lt;sup&gt;2&lt;/sup&gt;</td>
<td>.36&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>5.86</td>
<td>4.56</td>
</tr>
<tr>
<td>Prejudice &amp; Discrimination</td>
<td>2.16&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>.50&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>5.51</td>
<td>4.34</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>1.20</td>
<td>.27</td>
<td>5.86</td>
<td>4.55</td>
</tr>
<tr>
<td>Prejudice &amp; Discrimination</td>
<td>1.56</td>
<td>.42</td>
<td>5.52</td>
<td>4.53</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Important Matters</td>
<td>1.10</td>
<td>.24</td>
<td>5.94</td>
<td>4.81</td>
</tr>
<tr>
<td>Prejudice &amp; Discrimination</td>
<td>1.54</td>
<td>.39</td>
<td>5.69</td>
<td>4.64</td>
</tr>
</tbody>
</table>

<sup>1</sup> Higher than Bisexual Males  
<sup>2</sup> Higher than Bisexual Females  
<sup>3</sup> Higher than Gay Men
### Table 7.7. Functional specificity in general important matters and sexuality related stressor CDN by SOI.

<table>
<thead>
<tr>
<th></th>
<th>Combined Network Size</th>
<th>Sexuality-Related Stressor Network</th>
<th>General Important Matters Network</th>
<th>Overlap Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>6.54 (3.66)</td>
<td>.20 (.20)</td>
<td>.25 (.24)</td>
<td>.56(^1,2,3) (.25)</td>
</tr>
<tr>
<td>Gay</td>
<td>6.39 (3.98)</td>
<td>.24(^1,2) (.23)</td>
<td>.27 (.27)</td>
<td>.48 (.28)</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td>6.18 (3.46)</td>
<td>.19 (.21)</td>
<td>.35(^3,4) (.26)</td>
<td>.46 (.27)</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td>6.18 (3.35)</td>
<td>.19 (.22)</td>
<td>.34(^3,4) (.26)</td>
<td>.47 (.25)</td>
</tr>
</tbody>
</table>

1 Higher than bisexual males  
2 Higher than bisexual females  
3 Higher than gay males  
4 Higher than lesbians

### Table 7.8. Correlation between proportional size of overlap network and identity prominence and identity valence.

<table>
<thead>
<tr>
<th></th>
<th>Personal Valence</th>
<th>Community Valence</th>
<th>In-Group Alienation</th>
<th>Personal Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbians</td>
<td>.02</td>
<td>-.03</td>
<td>-.02</td>
<td>-.10</td>
</tr>
<tr>
<td>Gay Males</td>
<td>.10</td>
<td>-.003</td>
<td>-.19(^*)</td>
<td>.10</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td>-.01</td>
<td>-.03</td>
<td>-.09</td>
<td>.03</td>
</tr>
<tr>
<td>Bisexual Females</td>
<td>-.03</td>
<td>.003</td>
<td>-.01</td>
<td>-.01</td>
</tr>
</tbody>
</table>

\(^*\) \(p < .01\)

### Table 7.9. Effect of identity prominence and identity valence on social supported in the general important matters network.

<table>
<thead>
<tr>
<th></th>
<th>(F)</th>
<th>(b)</th>
<th>(\beta)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Group Alienation</td>
<td>3.94(^*)</td>
<td>-.12</td>
<td>-.16(^*)</td>
</tr>
<tr>
<td>Community Valence</td>
<td>3.94(^*)</td>
<td>-.01</td>
<td>-.18(^*)</td>
</tr>
<tr>
<td>Gay Males</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Group Alienation</td>
<td>2.34(^*)</td>
<td>-.10</td>
<td>-.15(^*)</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Identity</td>
<td>5.32(^***)</td>
<td>-.12</td>
<td>-.16(^*)</td>
</tr>
<tr>
<td>Personal Valence</td>
<td>5.32(^***)</td>
<td>.01</td>
<td>.19(^*)</td>
</tr>
<tr>
<td>Community Valence</td>
<td>5.32(^***)</td>
<td>-.01</td>
<td>-.14(^*)</td>
</tr>
</tbody>
</table>

\(^*\) \(p < .05\)  
\(^*\) \(p < .01\)  
\(^***\) \(p < .001\)
Table 7:10. Effect of identity prominence and identity valence on social supported in the sexuality-related stressors network.

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>b</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Group Alienation</td>
<td>4.56*</td>
<td>-14</td>
<td>-21</td>
</tr>
<tr>
<td>Bisexual Males</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Valence</td>
<td>5.67***</td>
<td>.01</td>
<td>.17**</td>
</tr>
<tr>
<td>Community Valence</td>
<td>5.67***</td>
<td>-.01</td>
<td>-.13*</td>
</tr>
<tr>
<td>Bisexual Females</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Group Alienation</td>
<td>8.29***</td>
<td>-.09</td>
<td>-.14**</td>
</tr>
<tr>
<td>Personal Valence</td>
<td>8.29***</td>
<td>.01</td>
<td>.19**</td>
</tr>
</tbody>
</table>

*p < .05
**p < .01
***p < .001

Table 7:11. Difference in proportionate SOI homophily for general important matters and sexuality-related stressors CDN.

<table>
<thead>
<tr>
<th></th>
<th>M_{general}</th>
<th>M_{sexuality}</th>
<th>M_{difference}</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>.28</td>
<td>.36</td>
<td>-.08</td>
<td>-5.66***</td>
</tr>
<tr>
<td>Gay Male</td>
<td>.26</td>
<td>.38</td>
<td>-.12</td>
<td>-6.92***</td>
</tr>
<tr>
<td>Bisexual Male</td>
<td>.22</td>
<td>.28</td>
<td>-.06</td>
<td>-5.00***</td>
</tr>
<tr>
<td>Bisexual Female</td>
<td>.18</td>
<td>.26</td>
<td>-.08</td>
<td>-7.52***</td>
</tr>
<tr>
<td>Total</td>
<td>.22</td>
<td>.31</td>
<td>-.08</td>
<td>-12.63***</td>
</tr>
</tbody>
</table>

***p < .001
Table 7.12. Significant regressions SWLS against network characteristics by SOI and CDN.

<table>
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<th>Homophily</th>
<th></th>
<th>Closeness</th>
<th></th>
<th>Freq. of Contact</th>
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<td>$b$</td>
<td>$\beta$</td>
<td>$b$</td>
<td>$\beta$</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sexuality-related</td>
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<td></td>
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</tr>
<tr>
<td>General matters</td>
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<td></td>
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</tr>
<tr>
<td>Overlap</td>
<td></td>
<td></td>
<td>.39</td>
<td>.19**</td>
<td></td>
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</tr>
<tr>
<td>Gay male</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sexuality-related</td>
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<td>.15*</td>
<td>.26</td>
<td>.21*</td>
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<td>General matters</td>
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<tr>
<td>Overlap</td>
<td>.36</td>
<td></td>
<td>.20**</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bisexual Male</td>
<td></td>
<td></td>
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<tr>
<td>Sexuality-related</td>
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</tr>
<tr>
<td>General matters</td>
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<td>.24</td>
<td>.15**</td>
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<td>Overlap</td>
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<tr>
<td>Bisexual Female</td>
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<td>.16*</td>
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<td>.21</td>
<td>.15**</td>
<td></td>
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</tr>
</tbody>
</table>

* $p < .05$  
** $p < .01$

$b$ indicates metric regression coefficient  
$\beta$ indicates standardized regression coefficient

Table 7.13. Significant regressions of BHS on network characteristics by SOI and CDN.

<table>
<thead>
<tr>
<th></th>
<th>Homophily</th>
<th></th>
<th>Closeness</th>
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<th>Freq. of Cont.</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>$b$</td>
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<td>$b$</td>
<td>$\beta$</td>
<td>$b$</td>
<td>$\beta$</td>
</tr>
<tr>
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<td></td>
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<tr>
<td>Sexuality-related</td>
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</tr>
<tr>
<td>General matters</td>
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<td></td>
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</tr>
<tr>
<td>Overlap</td>
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* $p < .05$  
** $p < .01$

$b$ indicates metric regression coefficient  
$\beta$ indicates standardized regression coefficient
Table 7:14. Significant regressions for RSES against network characteristics by SOI and CDN.

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* $p < .05$  
** $p < .01$  

$b$ indicates metric regression coefficient  
$\beta$ indicates standardized regression coefficient

Table 7:15. Significant regressions of K6 against network characteristics by SOI and CDN.

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<tr>
<td>Overlap</td>
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<tr>
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<td>General matters</td>
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* $p < .05$  
** $p < .01$  

$b$ indicates metric regression coefficient  
$\beta$ indicates standardized regression coefficient
Table 7.16. Regressing hopelessness and self-esteem on perceived social supported in the general important matters network and the sexuality-related network.

<table>
<thead>
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<th>Dependent Variable</th>
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<th>$\beta$</th>
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<td>-.15*</td>
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<td>S-R Network Supported</td>
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<tr>
<td>Bisexual Female Hopelessness</td>
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<td>1.50</td>
<td>.15**</td>
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* $p < .05$
** $p < .01$
*** $p < .001$

Table 7.17. Direct effect of proximal and distal minority stress on mental health.

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<th>$\beta$</th>
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<td>Lesbians</td>
<td>GRSE</td>
<td>10.91***</td>
<td>-.62</td>
<td>-.28***</td>
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<td>Identity Concealment</td>
<td>3.11*</td>
<td>-.128</td>
<td>-.12*</td>
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<tr>
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<td>-.56</td>
<td>-.19***</td>
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<td>-.21***</td>
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<td>4.16*</td>
<td>.14</td>
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* $p < .05$
** $p < .01$
*** $p < .001$
Table 7:18. Stress and network characteristics on mental health in sexuality-related stressor networks.

<table>
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<tr>
<th>DV</th>
<th>SOI</th>
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<th>Interaction Eff.</th>
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<td>GRSE</td>
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* p < .05  
** p < .01  
*** p < .001

Table 7:19. Stress and network characteristics on mental health in general matters networks.

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<th>Interaction Eff.</th>
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<th>b</th>
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<td>-.09</td>
<td>-.24**</td>
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<td>ID Conceal X FoC</td>
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<td>1.09*</td>
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<td>GRSE</td>
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<td>15.01***</td>
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* p < .05  
** p < .01  
*** p < .001

Table 7:20. Main effects of network characteristics on mental health and well-being.

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<td>Closeness</td>
<td>Life Satisfaction</td>
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* p < .05  
** p < .01
Table 7.21. Significant interactions between homophily and identity prominence/identity valence.

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<th>Interaction</th>
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<th>$b$</th>
<th>$\beta$</th>
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<td>Homo X IG Alien</td>
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<td>16.03</td>
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<td>Self LGB Valence</td>
<td>Homo X Pers Val</td>
<td>3.93***</td>
<td>0.28</td>
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<td>In-Group Alienation</td>
<td>Homo X IG Alien</td>
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<td>Homo X IG Alien</td>
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<td>Homo X Pers Val</td>
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* $p < .05$
** $p < .01$
*** $p < .001$

Table 7.22. Significant main effects and interactions between closeness and identity prominence/identity valence.

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<th>SOI</th>
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<th>$b$</th>
<th>$\beta$</th>
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<td>Close X IG Alien</td>
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<td>Bi. Male</td>
<td>In-Group Alienation</td>
<td>Close X IG Alien</td>
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<td>-0.52</td>
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<td>Close X Comm Val</td>
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<td>Community Valence</td>
<td>Close X Comm Val</td>
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<td>-0.02</td>
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* $p < .05$
** $p < .01$
*** $p < .001$
Table 7:23. Significant interactions between frequency of contact and identity prominence/identity valence.

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<th>Interaction</th>
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<th>$\beta$</th>
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<td></td>
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<tr>
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<td>5.28***</td>
<td>0.1</td>
<td>.44*</td>
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<td>In-Group Alienation</td>
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<td>3.50***</td>
<td>1.23</td>
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<tr>
<td></td>
<td>Self LGB Valence</td>
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<td>FoC X PersID</td>
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<tr>
<td></td>
<td></td>
<td>FoC X Comm Val</td>
<td>2.40*</td>
<td>-0.02</td>
<td>-.16*</td>
</tr>
</tbody>
</table>

* $p < .05$
** $p < .01$
*** $p < .001$
Table 7.24. Relationship between distal stress and mental health outcomes in lesbian and gay respondents.

<table>
<thead>
<tr>
<th></th>
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<th>β</th>
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<td>Lesbians</td>
<td></td>
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<td>Self-esteem</td>
<td>3.74**</td>
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<td>-.28***</td>
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<tr>
<td>Satisfaction with Life</td>
<td>3.74**</td>
<td>-.10</td>
<td>-.24***</td>
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<td>5.05***</td>
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<td>.35***</td>
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<tr>
<td>Hopelessness</td>
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<td>.19**</td>
</tr>
<tr>
<td>Gay Males</td>
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<td></td>
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<td>.21</td>
<td>.13*</td>
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</table>

*p < .05  
**p < .01  
***p < .001

Table 7.25. Relationship between proximal and distal stress and mental health outcomes in bisexual male respondents.

<table>
<thead>
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<th></th>
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<th>β</th>
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<tbody>
<tr>
<td>Distal Stress (Gay-Related Stressful Events)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>7.04***</td>
<td>-.54</td>
<td>-.20**</td>
</tr>
<tr>
<td>Satisfaction with Life</td>
<td>8.12**</td>
<td>-.11</td>
<td>-.23***</td>
</tr>
<tr>
<td>Psychological Distress</td>
<td>11.55***</td>
<td>.59</td>
<td>.33***</td>
</tr>
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<td>Hopelessness</td>
<td>6.57***</td>
<td>.17</td>
<td>.18**</td>
</tr>
<tr>
<td>Proximal Stress (Identity Concealment)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>7.04***</td>
<td>-1.44</td>
<td>-.14*</td>
</tr>
<tr>
<td>Satisfaction with Life</td>
<td>8.12**</td>
<td>-.43</td>
<td>-.23***</td>
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</table>

*p < .05  
**p < .01  
***p < .001

Table 7.26. Relationship between proximal and distal stress and mental health outcomes in bisexual female respondents.

<table>
<thead>
<tr>
<th></th>
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<th>b</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distal Stress (Gay-Related Stressful Events)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>7.91***</td>
<td>-.60</td>
<td>-.22***</td>
</tr>
<tr>
<td>Satisfaction with Life</td>
<td>8.69***</td>
<td>-.11</td>
<td>-.23***</td>
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<td>Psychological Distress</td>
<td>6.63***</td>
<td>.45</td>
<td>.23***</td>
</tr>
<tr>
<td>Hopelessness</td>
<td>7.39***</td>
<td>.17</td>
<td>.19***</td>
</tr>
<tr>
<td>Proximal Stress (Identity Concealment)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>6.63***</td>
<td>-.89</td>
<td>-.11*</td>
</tr>
<tr>
<td>Hopelessness</td>
<td>7.39***</td>
<td>-.48</td>
<td>-.12*</td>
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</table>

***p < .001  
**p < .01  
*p < .05
<table>
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<tr>
<th>1st Main Eff.</th>
<th>Moderator</th>
<th>Interaction</th>
<th>DV</th>
<th>F</th>
<th>b</th>
<th>β</th>
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<td>Lesbian</td>
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<td></td>
<td>K6</td>
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<td>.51</td>
<td>.33***</td>
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<td></td>
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<td>K6</td>
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<td>.01</td>
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<td></td>
<td>Personal Val.</td>
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<td></td>
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<td>Community Val.</td>
<td>GRSExCommVal</td>
<td>SWLS</td>
<td>8.18**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SWLS</td>
<td>8.14***</td>
<td>0.00</td>
<td>-0.26**</td>
</tr>
<tr>
<td>ID Conc.</td>
<td>IDConcxIGAlien</td>
<td>Community Val.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>K6</td>
<td></td>
<td></td>
<td>10.28**</td>
<td>-0.52</td>
<td>-0.51*</td>
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<tr>
<td></td>
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<td>K6</td>
<td>RSES</td>
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<td>-0.63***</td>
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<td>-0.26***</td>
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<td>K6</td>
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<td>RSES</td>
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<td>.45*</td>
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<td>-.52*</td>
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<tr>
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<td>-0.51*</td>
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<td>-0.64**</td>
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<td>.60*</td>
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<tr>
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<td>-0.01</td>
<td>-0.43*</td>
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</table>

*** $p < .001$
** $p < .01$
* $p < .05$
Appendix A

LGB Networks and Health

Thank you for your interest in our study!

We would like to know about your social network and how they help you cope with issues. Your responses will help us better understand how social support helps individuals cope with stressful situations. You are being asked to participate because you successfully passed the screening instrument and are at least 18 years old.

This survey will take between 20 and 30 minutes of your time.

This survey is part of a study of how social networks help individuals cope with stressful situations. It contains questions about your social network and your thoughts about yourself, and your way of thinking about the world. We're asking you about these things to help understand the impact of social networks on an individual's life.

If you are interested in taking part in this study, please click on the arrow below.

The next page will present you with detailed information about the survey and about your rights and responsibilities as a participant in this research.
UNIVERSITY OF NEVADA, RENO SOCIAL BEHAVIORAL INSTITUTIONAL REVIEW BOARD INFORMATION SHEET

TITLE OF STUDY: Social Networks, Social Support, and Mental Health
INVESTIGATOR(S): Marta Elliott and Peter Martini
PROTOCOL #: 606368-2

PURPOSE We would like to know about your social network and how they help you cope with stress. Your responses will help us better understand how your thoughts, feelings, and experiences are impacted by the people in your life.

PARTICIPANTS You are being asked to participate because have passed the pre-screening survey, live in the United States, and are at least 18 years old.

PROCEDURES If you agree to participate in this research study you will be asked to complete an online survey about your social network, life-satisfaction, well-being, and mental health. There are five sections to this survey. About half of the questions are multiple choice, the other half ask you to type in an answer. We anticipate that it will take between 20 and 30 minutes of your time.

DISCOMFORTS, INCONVENIENCES, AND/OR RISKS There are no anticipated risks associated with participating in this survey. The only inconvenience is the amount of time it takes to complete the survey. The survey is designed to minimize this inconvenience. The survey contains some questions that ask about negative experiences you may have had. This may present some degree of psychological discomfort for you. All questions are voluntary and you do not have to respond to questions on topics that you do not wish to think about.

BENEFITS There may be no direct benefits to you as a participant in this study. However, your responses will provide us with valuable insight into how your identity reflects your unique thoughts, feelings, and experiences. Your participation will also help us improve the way in which research is conducted with members of your community by improving our scales and our ways of interacting with you to conduct meaningful research that is respectful and does not inconvenience you.

CONFIDENTIALITY Your identity will be protected to the extent allowed by law. You will not be personally identified in any reports or publications that may result from this study. Your answers to the questions posed in this survey will be affiliated with the information that you have already provided in the Social and Demographic Background of MTurk Users survey. At no time will any of your responses be linked to your personal identity (your name, e-mail address or otherwise).

The U.S. Department of Health and Human Service (HHS), other federal agencies as necessary, the University of Nevada, Reno Social Behavioral Institutional Review Board may inspect your study records. Study records will be stored securely in locked offices at
the Grant Sawyer Center for Justice Studies at the University of Nevada, Reno. All data related to the survey will be stored on a secure file server managed by the Information Technology department at the University. Data will only be accessible by the researchers and will be maintained at all times on password protected computers. The data will be kept for approximately seven years following the end of the project. At that time it will be permanently destroyed.

COSTS/COMPENSATION You will be compensated $3 USD for successful participation of this survey (completion of 80% or more of the survey).

DISCLOSURE OF FINANCIAL INTERESTS There are no financial conflicts of interest associated with the study.

RIGHT TO REFUSE OR WITHDRAW You may refuse to participate or withdraw from the study at any time and still receive the care you would normally receive if you were not in the study. If the study design or use of the data is to be changed, you will be so informed and your consent re-obtained. You will be told of any significant new findings developed during the course of this study, which may relate to your willingness to continue participation.

QUESTIONS If you have questions about this study or wish to report a research-related injury, please contact Dr. Marta Elliott at +1 (775) 784-4884 at any time. You may also reach Dr. Elliott via e-mail at melliott@unr.edu or the e-mail address for this study unr.social.research@gmail.com.

You may ask about your rights as a research subject or you may report (anonymously if you so choose) any comments, concern, or complaints to the University of Nevada, Reno Social Behavioral Institutional Review Board, telephone number +1 (775) 327-2368, or by addressing a letter to the Chair of the Board, care of the UNR Office of Human Research Protection, 205 Ross Hall / 331, University of Nevada, Reno, Reno, Nevada, 89557.

Would you like to participate in this study?
☑ Yes (1)
☑ No (2)

If No Is Selected, Then Skip To End of Survey
### Appendix B

#### K6

**During the past 30 days, about how often did you...**

<table>
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<th></th>
<th>None of the time</th>
<th>A little of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>...feel so depressed that nothing could cheer you up?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>...feel hopeless?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>...feel restless or fidgety?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>...feel that everything was an effort?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>...feel worthless?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>...feel nervous?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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Appendix C

**RSES**

Please select how strongly you agree or disagree with the following statements…

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am satisfied with myself*</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>At times I think I am no good at all</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I wish I could have more respect for myself</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am inclined to feel that I am a failure</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am a person of worth, equal to others*</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

*Reverse coded
### Appendix D

**BHS**

<table>
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<tr>
<th>How often do the following pertain to you?</th>
<th>None of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that the future is hopeless and that things cannot improve.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My future seems dark to me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Things just won’t work out the way I want them to.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>There’s no use in really trying to get something I want because I probably won’t get it.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Appendix E

The Satisfaction with Life Scale

By Ed Diener, Ph.D.

DIRECTIONS: Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number in the line preceding that item. Please be open and honest in your responding.

1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree or Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.
Appendix F

GRSE

Please indicate whether each even happened to you in the last 6 months.

<table>
<thead>
<tr>
<th>Event</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argument between your parents about your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Trouble with your brother or sister because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Arguments with your parents because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Arguments with other family members because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Trouble with your teacher / boss because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Trouble with classmates / co-workers because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Losing a friend because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Getting in trouble with the police because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Being physically assaulted because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Being verbally assaulted because of your sexuality</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>

**Abstract:**
Online crowdsourcing technology provides social science researchers with a ready pool of individuals who want to complete tasks (e.g., surveys) for a nominal cost. To date, limited research has been done on the demographic breakdown of the Workers on these crowdsourcing sites, and available research focuses on broad demographics (e.g., race, gender, age). This research aims to increase our understanding of Workers on Amazon’s Mechanical Turk (MTurk). Focusing on measures of sexual orientation identity, religious denomination, political orientation, health, and substance abuse behaviors, we compare MTurk Workers to respondents from nationally representative surveys. Results indicate that MTurk Workers are more likely than respondents in representative U.S. surveys to be younger, female, from a minority religious denomination or have no religious denomination, slightly “left” on political matters, slightly less healthy, and use recreational drugs.

**Available via this link:**
https://www.dropbox.com/s/gtp5glh4slzsc3f/Martini_Springer_Richardson_-_Conducting_population_research_using_online_crowdsourcing.pdf
Appendix H

Sexuality-related stressor network

Figure H1. Interaction effect for closeness and gay-related stress on life satisfaction in lesbians.

Figure H2. Interaction effect for closeness and gay-related stress on self-esteem in lesbians.
Figure H3. Interaction effect for average closeness and gay-related stress on psychological distress in lesbians

Figure H4. Interaction effect for average closeness and gay-related stress on psychological distress in lesbians
Figure H5. Interaction effect for proportion of LGB homophily and gay-related stress on self-esteem in lesbians.

Figure H6. Interaction effect for proportion of LGB homophily and gay-related stress on psychological distress in gay males.
**Figure H7.** Interaction effect for proportion of LGB homophily and gay-related stress on psychological distress in bisexual males.

**General Important Matters Network**

**Figure H8.** Interaction effect for frequency of contact and identity concealment on life satisfaction in lesbians.
Figure H9. Interaction effect for closeness and identity concealment on hopelessness in lesbians

Figure H10. Interaction effect for proportion of LGB homophilous nodes and gay-related stress on hopelessness in bisexual males.
Appendix I

Homophily

Figure 11. Interaction effect for homophily and personal LGB identity on self-esteem in gay males.

Figure 12. Interaction effect for homophily and personal LGB identity on hopelessness in gay males.
Figure 13. Interaction effect for average LGB node homophily and personal valence on life satisfaction in bisexual males.

Figure 14. Interaction effect for average LGB node homophily and personal valence on hopelessness in bisexual males.
Figure 15. Interaction effect for average node homophily and in-group alienation on self-esteem in bisexual females.

Figure 16. Interaction effect for average node homophily and in-group alienation on psychological distress in bisexual females.
Figure I7. Interaction effect for average node homophily and in-group alienation on satisfaction with life in bisexual females.

![Graph showing interaction effect for average node homophily and in-group alienation on satisfaction with life in bisexual females.](image1)

Closeness

Figure I8. Interaction effect for average closeness and Community Valence on hopelessness in gay males.

![Graph showing interaction effect for average closeness and Community Valence on hopelessness in gay males.](image2)
Figure I9. Interaction effect for average node closeness and in-group alienation on psychological distress in bisexual males.

Figure I10. Interaction effect for average node average node closeness and in-group alienation on self-esteem in bisexual females.
Figure I11. Interaction effect for average node average node closeness and others’ personal valence on psychological distress in bisexual females.

Frequency of Contact

Figure I12. Interaction effect for frequency of contact and personal LGB identity on psychological distress in lesbians.
Figure II3. Interaction effect for average frequency of contact and in-alienation on self-esteem in gay males.

Figure II4. Interaction effect for average frequency of contact and in-group social support on satisfaction with life in gay males.
Figure 115. Interaction effect for average frequency of contact and personal valence on satisfaction with life in gay males.

Figure 116. Interaction effect for average frequency of contact and in-group social support on hopelessness in gay males.
Figure 117. Interaction effect for average frequency of contact and personal valence on hopelessness in gay males.

Figure 118. Interaction effect for average frequency of contact and respondents’ perception of community valence on hopelessness in gay males.
Figure I19. Interaction effect for average frequency of contact and in-group alienation on psychological distress in bisexual males.

Figure I20. Interaction effect for average frequency of contact and in-group alienation on hopelessness in bisexual males.
Figure I21. Interaction effect for average frequency of contact and others’ personal valence on psychological distress in bisexual females.

Figure I22. Interaction effect for average frequency of contact and personal LGB identity on satisfaction with life in bisexual females.
Figure I23. Interaction effect for average frequency of contact and personal LGB identity on hopelessness in bisexual females.

Figure I24. Interaction effect for average frequency of contact and others’ personal valence on hopelessness in bisexual females.
Discussion Graphs

Figure 125. Moderating effect of Community Valence on frequency of contact’s impact on hopelessness for gay males and bisexual females.
Appendix J

Gay-related Stressful Events (GRSE)

*Figure J1.* Interaction effect for gay-related stressful events and Community Valence on psychological distress in lesbians.

*Figure J2.* Interaction effect for gay-related stressful events and self LGB Valence on hopelessness in gay males.
**Figure J3.** Interaction effect for gay-related stressful events and Community Valence on life satisfaction in bisexual males.

![Graph showing interaction effect for gay-related stressful events and Community Valence on life satisfaction in bisexual males.](image)

**Identity Concealment**

**Figure J4.** Interaction effect for identity concealment and in-group alienation on psychological distress in bisexual males.

![Graph showing interaction effect for identity concealment and in-group alienation on psychological distress in bisexual males.](image)
Figure J5. Interaction effect for identity concealment and in-group alienation on hopelessness in bisexual males.

Figure J6. Interaction effect for identity concealment and in-group alienation on psychological distress in bisexual females.
**Figure J7. Interaction effect for identity concealment and in-group alienation on hopelessness in bisexual females.**

**Figure J8. Interaction effect for identity concealment and personal identity on life satisfaction in bisexual females.**
Figure J9. Interaction effect for identity concealment and self LGB valence on psychological distress in bisexual males.

Figure J10. Interaction effect for identity concealment and personal valence on hopelessness in bisexual females.
Figure J11. Interaction effect for identity concealment and Community Valence on hopelessness in bisexual males.

Figure J12. Interaction effect for identity concealment and community valence on hopelessness in bisexual females.
Figure J13. Interaction effect for identity concealment and community valence on psychological distress in bisexual females.

Figure J14. Interaction effect for identity concealment and Community Valence on life satisfaction in bisexual females.
Discussion Graphs

Figure J15. Moderating effect in-group alienation on proximal stress’s impact on psychological distress bisexuals.