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# Sexuality Related Social Support Among Same-Sex Attracted Youth

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UNIVERSITY OF MIAMI

SEXUALITY RELATED SOCIAL SUPPORT AMONG SAME-SEX ATTRACTED  
YOUTH

By

Nathan D. Doty

A DISSERTATION

Submitted to the Faculty  
of the University of Miami  
in partial fulfillment of the requirements for  
the degree of Doctor of Philosophy

Coral Gables, Florida

June 2009

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YOUTH

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Supportive relationships with parents and peers are thought to be important in helping gay, lesbian, bisexual, or questioning youth cope with stressors related to their sexual identity. However, studies of same-sex attracted youth have yielded only minimal evidence for the link between social support and mental health. The lack of empirical findings may relate to inadequate measurement of the types of social support most relevant for same-sex attracted youth. Using matching theory as a theoretical framework, the present study examined same-sex attracted youth's perceptions of support for coping with problems specifically related to their sexuality.

Ninety-eight same-sex attracted young people ages 18-21 were asked about support from family members, heterosexual friends, and sexual minority friends for dealing with problems related to, and not related to, their sexuality. Sexuality related life stressors, substance use severity, and symptoms of emotional distress were also assessed. A within-subject factorial ANOVA revealed differences between sexuality related support and non-sexuality related support across the three relationship types. From family members and heterosexual peers, participants perceived sexuality related support as less available than support for problems not related to sexuality. Non-heterosexual peers provided the highest levels of sexuality related support, and were seen as equally supportive across sexuality related and non-sexuality related domains. Linear regression

analyses examined the roles of sexuality related and non-sexuality related support in predicting two mental health outcomes: emotional distress and substance use severity. Contrary to expectations, main effects for sexuality related support and non-sexuality related support did not predict emotional distress. Tests of “buffering” models revealed participants’ overall perceptions of sexuality related support moderated the relationship between sexuality stress and psychological distress, such that higher levels of sexuality related support may have been protective. Perceptions of non-sexuality related support, on the other hand, did not moderate links between sexuality stress and emotional distress. Neither main effect nor buffering models were significant in predicting substance use severity. Results of this study provide important information about the types of social support most relevant to same-sex attracted youth.

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## CHAPTER 1: BACKGROUND LITERATURE

Research attests that supportive family and peer relationships predict better coping and improved mental health among young people (Cohen, Kessler, & Gordon, 1995; Cohen & Wills, 1985; Holt & Espelage, 2005; Prinstein, La Greca, Vernberg, & Silverman, 1996; Simmons, Carlton-Ford, Blyth, Lerner, & Foch, 1987; Wolchik, Ruehlman, Braver, & Sandler, 1989). Among same-sex attracted (e.g., gay, lesbian, bisexual, and questioning) youth, social support may prove particularly important in coping with stressors related to a stigmatized sexual identity (e.g., Savin-Williams, Montemayor, Adams, & Gullotta, 1994). However, studies focusing specifically on same-sex attracted youth have yielded only minimal evidence for the link between social support and mental health in this population. The lack of empirical findings may stem from inadequate measurement of social support among this population, and a number of researchers have articulated the need for improved measures of social support as experienced by same-sex attracted youth (Grossman & Kerner, 1998).

Using matching theory as a theoretical basis (Cohen & Wills, 1985), the present study sought to employ greater specificity in the measurement of social support among same-sex attracted youth. Matching theory suggests that support will be most protective against stress when the types of assistance available specifically address the stressors at hand (Cohen & Wills, 1985). Applied to same-sex attracted youth, this theory suggests that researchers should evaluate the types and sources of support most helpful in coping with a stigmatized sexual identity. Therefore, the first goal of the current study was to specifically evaluate same-sex attracted young people's perceptions of support for coping with stressors related to their sexuality. After providing information about recent stressors

related to their sexuality, participants rated the availability of support for coping with these stressors. Analyses compared participants' perceptions of support for sexuality related stressors with perceived support for stressors not related to their sexuality. Three sources of support were evaluated: family members, heterosexual friends, and sexual minority (e.g., gay, lesbian, bisexual, transgender, and questioning) friends.

The second goal of the current investigation was to examine the links between same-sex attracted young people's perceptions of social support and two mental health outcomes: emotional distress and substance use severity. In proposed main effect models, both sexuality related and non-sexuality related social support were expected to be unique predictors of individuals' mental health outcomes. Stress buffering models were also proposed, in which sexuality related support was expected to act as a moderator, protecting youth against negative mental health outcomes associated with sexuality stress. Because it does not address needs created by sexuality stress, non-sexuality related social support was not expected to buffer against the mental health effects of sexuality stress.

#### Specifying Social Support Among Same-Sex Attracted Youth

Although most discussions of social support among same-sex attracted youth have focused on the lack of available support (e.g., D'Augelli, Hershberger, & Pilkington, 1998; Mercier & Berger, 1989; Radkowsky & Siegel, 1997), some recent findings suggest that many same-sex attracted young people experience high levels of support from family and friends (Anderson, 1998; Grossman & Kerner, 1998; Herdt & Boxer, 1996). However, little is known about the specific types of support that may or may not be available. In particular, most studies of social support among same-sex attracted youth

have examined overall ratings of support, neglecting important features such as the source and modality of supportive behaviors.

A number of researchers have articulated the need for a multi-faceted approach to measuring social support among same-sex attracted youth. For example, in reporting a null relationship between support satisfaction and emotional distress among gay and lesbian young people, Grossman and Kerner (1998) suggested future studies should focus on specific types of support that may be more relevant to these youth. Despite calls for change, studies of same-sex attracted youth have continued to utilize global measures of support, often relying on single-item ratings. Employing a relevant framework from the mainstream social support literature (Cohen & Wills, 1985), the present study applied greater specificity to the measurement of social support among same-sex attracted youth.

In 1985, Cohen and Wills reviewed the existing literature on social support and its relationship to mental health. The review concluded that, in addition to its overall beneficial effects on mental health, social support was capable of protecting individuals from the potentially adverse effects of life stressors. Recognizing an important pattern in research findings, Cohen and Wills noted that stress buffering occurred only when the types of social support measured were responsive to the specific needs created by the stressors at hand (Cohen & Wills, 1985). This “matching” theory of social support suggests that support will be most protective when there is a fit between the specific features of support and the needs associated with the stressors at hand (Berndt, 1989; Cohen & McKay, 1984; Gore, Cohen, & Syme, 1985). This advancement has led to greater specificity in the measurement of social support, as researchers have increasingly examined the types of assistance deemed to be most relevant to specific stressors (Cauce,

Hannan, & Sargeant, 1992; Cutrona, Russell, Sarason, Sarason, & Pierce, 1990; Gore & Aseltine, 1995; Jackson, 1992). However, researchers of same-sex attracted youth have rarely employed these developments from the broader social support literature. Applied to same-sex attracted youth, matching theory suggests that studies should evaluate the types of support most helpful in coping with stressors related to a stigmatized sexual identity. Thus, the present investigation began with an examination of same-sex attracted young people's experiences of stress related to their sexuality identity.

### Sexuality Stress Among Same-Sex Attracted Youth

Broadly defined as events and conditions that cause change and that require adaptation, stress arises from situations appraised as threatening or demanding (Lazarus, 1966). Youth face a variety of normative stressors related to the immense physical, cognitive, and social-emotional changes that occur during adolescence. Puberty brings about biological changes, thinking becomes more abstract, relationships with parents and peers take different forms, and sexual feelings emerge (Graber, Brooks-Gunn, & Petersen, 1996). In addition to the challenges of typical development, some young people may face the demands of negative life events or chronically stressful situations (e.g., Baer, Garnezy, McLaughlin, & Pokorny, 1987; Compas, Davis, & Forsythe, 1985; Newcomb, Huba, & Bentler, 1981). These additional sources of stress may increase risk for a range of negative outcomes, including poor physical health (Greene, Walker, Hickson, & Thompson, 1989), behavior problems (Vaux & Ruggiero, 1983), academic difficulties (Fontana & Dovidio, 1984), and suicide risk (Cohen-Sandler, Berman, & King, 1982).

In the past two decades, researchers of sexual minorities have argued that, in addition to the stressors experienced by all youth, same-sex attracted youth face a unique set of stressors related to their sexual identity (Durby, 1994; Martin & Hetrick, 1988; Meyer, 1995; Savin-Williams, 1994). The concept of sexuality stress, sometimes termed sexual minority stress, addresses the difficulties experienced by sexual minorities as a result of their stigmatized status. Based on a broader theory of minority stress, sexual minority stress recognizes the social, legal, and personal discrimination experienced by sexual minorities as kin to the experiences of all stigmatized groups (Allport, 1954; Barnett & Baruch, 1987; Pearlin, 1989). Both directly and indirectly related to their stigmatized status, members of minority groups may experience stress in the face of culturally sanctioned prejudice and discrimination (Brooks, 1981). In addition to negative events and daily stressors, minority stress comprises the totality of the minority individual's experience in a dominant society, where societal structures are incongruent with the minority person's culture, needs, and experiences (Meyer, 1995).

Sexual minority stress, like all forms of minority stress, is psychosocial, arising from group members' interactions with the social environment. While psychosocial stressors affect all youth, same-sex attracted youth may experience particularly salient difficulties due to the fact that members of their close social network and the broader society may disapprove of their sexual orientation (Remafedi, Farrow, & Deisher, 1993). The stigma associated with their sexual orientation may profoundly impact young people's relationships with their family, friends, communities, and society in general.

### *Stress from Family Relationships*

As with all youth, family plays an important role in the lives of same-sex attracted young people, providing emotional and practical support as well as a context for growth and learning about themselves and the world. However, relationships with family members may also become a primary source of stress during the development and disclosure of a stigmatized sexual identity (D'Augelli, 1991; Savin-Williams, 1998b; Savin-Williams, 2001b). In a study of same-sex attracted youngsters seeking assistance from a New York City social and educational agency, Martin and Hetrick (1988) noted that family relations were the second most common presenting problem. The most commonly reported problem, isolation, was often related to family difficulties.

Same-sex attracted youth's experiences of family stressors may vary widely, depending upon whether they have disclosed their sexuality to members. Although most same-sex attracted individuals report an awareness of their attractions by early adolescence (Dempsey, 1994), fears about family members' reactions lead many youth to conceal their same-sex attractions until late adolescence or adulthood (Borhek, 1988; Cramer & Roach, 1988; D'Augelli, 1991; Savin-Williams & Diamond, 1999). Although non-disclosing same-sex attracted youth may escape victimization and rejection by family members (D'Augelli et al., 1998), their hidden identity may still profoundly affect family relationships. In fact, the task of concealing one's sexual identity from family members may cause as much stress as the repercussions of disclosure (Rotheram-Borus, Rosario, & Koopman, 1991), as youth who hide their same-sex attractions often feel isolated and alienated from their families.

Despite the potential for adverse reactions, growing numbers of same-sex attracted young people disclose their sexual orientation to family members during adolescence (Cohen & Savin-Williams, 1996; Savin-Williams & Diamond, 1999). For, example, research suggests 40 to 75% of lesbian, gay, and bisexual (LGB) youth have disclosed to their mothers and 30 to 55% have disclosed to their fathers (Savin-Williams, 2003). Estimated rates of disclosure to siblings vary widely, ranging from 5 to 65% (D'Augelli, 1991; Herdt & Boxer, 1996; Savin-Williams, 1998a). Few studies have examined disclosure to other family members (e.g., grandparents, aunts, uncles, and cousins), although rates of disclosure appear considerably lower than for parents and siblings (Boxer, Cook, & Herdt, 1991).

The discovery or disclosure of same-sex attractions among family members brings about a variety of potential stressors, since the revelation is likely to be met with negative reactions and considerable family disruption (Boxer et al., 1991; Savin-Williams, 1994; Strommen, 1989). Family members, particularly parents, may react with shock, denial, anger, bargaining, and depression as they begin to integrate and accept a youngster's sexual identity (Ben-Ari, 1995; Savin-Williams, 2001b; Willoughby, Malik, & Lindahl, 2006). Same-sex attracted youth may experience unique stressors related to these initial reactions. When family members react with shock, their prejudices and fears may surface, precipitating conflict. Indeed, a substantial number of same-sex attracted young people report verbal and even physical abuse from family members. For example, a study of 194 gay, lesbian, and bisexual youth ages 14 to 21 found that slightly over 60% of surveyed individuals had experienced some degree of verbal or physical harassment from a family member, ranging from verbal insults (36%) to physical assaults

(10%) (Pilkington & D'Augelli, 1995). Mothers were the most frequent abusers (22%), followed by brothers (15%), fathers (14%) and sisters (9%). Even if family members do not respond with verbal or physical abuse, their reactions may cause significant stress for the adolescent. Family members in denial of a young person's sexual orientation disclosure may refuse to acknowledge that anything has changed, discount the declaration as "just a phase," or send the child to a therapist for "reorientation" (Muller, 1987). Family members may "bargain" with the child by asking them not to tell others or not to act on their same-sex interests (Savin-Williams, 2001b). Emotional reactions, such as anger or depression, also project a negative view of the adolescent's sexual identity.

Whether concealing or disclosing their sexual identity, same-sex attracted youth may experience significant stressors in their relationships with family members. It is important to note that these youth often disclose their attractions to some family members, while concealing them from others (Savin-Williams, 1998b). Thus, many same-sex attracted young people face simultaneous stressors of disclosure and concealment as they continue to monitor their level of openness with individual family members.

#### *Stress from Peer Relationships*

Relationships with peers may also represent a significant source of distress for same-sex attracted youth. On average, same-sex attracted youth experience more verbal and physical victimization by peers than their heterosexual counterparts (e.g., D'Augelli, 1992; D'Augelli, Pilkington, & Hershberger, 2002; Garnets, Herek, & Levy, 1990; Herek, 1993; Hunter, 1990; Pilkington & D'Augelli, 1995). Victimization of same-sex attracted young people may take a variety of forms. Pilkington and D'Augelli (1995) studied the

experiences of 194 LGB youth ages 14 to 21, recruited from urban community centers for sexual minority youth. Overall, respondents reported a mean of 2.7 instances of victimization, with 80% indicating they had experienced verbal insults and 44% reporting at least one threat of physical violence.

Experiences of sexuality related victimization may have far-reaching implications for same-sex attracted youth. Due to their deep cultural meanings of rejection, vulnerability, and overt discrimination, experiences of sexuality related victimization can have powerful impact beyond the ramifications of non-bias related incidents (Brooks, 1981; McDevitt, Balboni, Garcia, & Gu, 2001). Attacks related to sexual minority status may intensify conflictual feelings about sexual orientation and heighten feelings of vulnerability (Garnets et al., 1990). In Pilkington and D'Augelli's study of LGB youth (1995), increased frequency of victimization related to greater fearfulness about safety at school and in the community. Similarly, in a representative sample of Massachusetts high school students, 25% of LGB youth reported missing school within the past month because of fear, compared to only 5% of the non-LGB youths (Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998).

Consistent with the findings above, researchers have found that youth who are more disclosing of their same-sex attractions experience the highest levels of victimization and rejection from peers (Pilkington & D'Augelli, 1995). Social difficulties and loss of friendships represent particularly damaging consequences for youth, who increasingly rely upon their peers for support and validation (Furman & Buhrmester, 1992). For these reasons, a substantial number of young people choose to conceal their same-sex attractions from peers (Pilkington & D'Augelli, 1995). But, those who choose

to conceal their sexuality may still face a range of stressors in their social relationships. They must often remain vigilant about their secret, employing a variety of strategies including discretion, concealment, and fabrication (Zerubavel, 1982). Research with other populations has linked identity concealment to a range of negative outcomes, including depression, anxiety, loneliness and social isolation (Davis & Franzoi, 1986; Larson & Chastain, 1990; Stokes, 1987). Furthermore, efforts to hide one's sexuality are not always successful, particularly for young people with gender-variant mannerisms, dress, or interests. Even those who successfully "pass" as heterosexual often witness prejudiced remarks or actions. According to one study, 97% of students in public schools report hearing homophobic remarks from peers (Massachusetts Governor's Commission on Gay and Lesbian Youth, 1993).

Peer relationships play a prominent role in the lives of youth. Like all youth, same-sex attracted young people increasingly rely upon their friendships as sources of social companionship, belonging, emotional support, and practical assistance. However, whether hiding or disclosing their attractions, these youth may experience a range of sexuality related stressors in their relationships with peers.

#### *Stress from Internal Psychological Processes*

Although most studies of stress among same-sex attracted youth have focused on experiences of victimization, rejection, and discrimination, recent work has begun to emphasize internal psychological processes of stress. In particular, internalized stigma and the concealment of one's sexual identity represent two sources of stress (Meyer, 2003). Though they initially developed as coping responses to social stressors, these

internal processes may themselves become chronic strains for the same-sex attracted individual.

Internalized homonegativity refers to the direction of society's prejudices and negative attitudes about same-sex attraction toward the self. By the time same-sex attracted individuals begin to recognize their attractions, they may have already internalized societal homonegativity. As they begin to self-label, young people may face their own negative attitudes toward their identity even before its disclosure to others (Meyer, 1995). Research on homonegativity among same-sex attracted youth has found negative attitudes toward homosexuality to be associated with less self-disclosure and greater discomfort with one's own sexuality (Rosario, Hunter, Maguen, Gwadz, & Smith, 2001). Though internalized homophobia may abate through the coming out process, residual antigay attitudes remain an important factor in psychological adjustment throughout life (Downey & Friedman, 1995; Gonsiorek, 1988; Hetrick & Martin, 1987; Malyon, 1982; Meyer, 1995; Williamson, 2000).

Internal processes related to the concealment of sexual orientation represent a second potential stressor. Youth who conceal their sexual orientation status from family, friends, or the general public may carry the burden of guarding their hidden identity. Research indicates that all young people tend to create "false selves" to avoid criticism from others in their social network (Harter, Marold, Whitesell, & Cobbs, 1996). Same-sex attracted youth may attempt to "pass" as heterosexual out of shame or as a way of avoiding the negative consequences of stigma (D'Augelli & Grossman, 2001; Durby, 1994; Uribe & Harbeck, 1991). Indeed, Hetrick and Martin (1987) describe "learning to hide" as the most common coping strategy employed by same-sex attracted youth. Young

people's fears about disclosing their sexual orientation are not unfounded, given the possibility of rejection from both family and friends (D'Augelli et al., 1998). However, concealment of one's identity, and the resulting preoccupation with hiding, can itself become a chronic strain (DiPlacido, 1998; Miller & Major, 2000).

In summary, youth with same-sex attractions may face a unique set of stressors related to their status as a stigmatized minority. Social stress may arise through relationships with family, peers, and broader society. Secondary psychological processes of internalized homonegativity and identity concealment may become further sources of chronic strain. Same-sex attracted young people's experiences of these social and psychological stressors warrant further study, particularly since they may place a youngster at risk for mental health problems. The present study began by examining the occurrence of sexuality stressors within a sample of same-sex attracted youth. Next, individuals' perceptions of support for coping with these stressors were examined in order to better understand the role of social support in the lives of same-sex attracted youth.

#### Sexuality Related Social Support

Like all young people, same-sex attracted youth may rely upon others as sources of social enjoyment, emotional support, practical assistance, or advice and guidance (Nesmith, Burton, & Cosgrove, 1999). However, early evidence suggests that more sexuality specific forms of social support may be particularly meaningful for same-sex attracted youth. For example, young people may seek emotional support in the face of discrimination, rejection, or internal conflict about sexuality. They may turn to others for advice about romantic relationships or guidance in coming out to friends or family.

Practical forms of assistance, such as transportation to gay-identified social events, may represent equally important forms of sexuality related support. Initial evidence suggests same-sex attracted youth highly value these types of sexuality related support. Nesmith, Burton, and Cosgrove (1999) interviewed seventeen gay, lesbian, and bisexual young people (ages 15 to 22) at a sexual minority youth drop-in center about the types of support they received as sexual minorities. Although the sample size was small, content analyses revealed the importance of sexuality specific types of support, including introduction to the gay and lesbian community and advice or guidance about sexuality related issues.

Unfortunately, support for coping with sexuality related issues may be less accessible to same-sex attracted youth than support for other types of problems, particularly from heterosexual friends and family members. In a study of 77 gay young men (ages 14 to 20), Anderson (1998) found that individuals perceived lower levels of overall support from parents and non-gay peers than from LGB peers. Several factors may limit the availability of sexuality related social support, including young people's lack of openness or discomfort in discussing their same-sex attractions, negative attitudes toward homosexuality among potential providers of support, and others' lack of knowledge about the issues facing same-sex attracted youth. While several factors influence the availability of sexuality related support from family members and heterosexual friends, research suggests that friendships with other same-sex attracted youth may provide high levels of such support (D'Augelli, 1991; Nesmith et al., 1999; Savin-Williams et al., 1994; Schneider, 1991). In fact, many same-sex attracted young people actively seek out supportive others who share their stigmatized status, sometimes

referred to as “finding the tribe” (Due, 1995). Given the potential variability of sexuality related support across relationships, the source of support represents an important variable for consideration.

Same-sex attracted young people’s perceptions of support for sexuality related problems may differ vastly from their perceptions of overall supportiveness. Even when family members or friends provide minimal assistance in coping with sexuality related issues, same-sex attracted youth may still rely on them for help with other types of problems. For example, youngsters may conceal their sexual identity, while feeling quite supported by family members and friends in other areas. Even those who experience negative reactions to the disclosure of their sexual orientation may still retain support in other domains. In fact, studies of family members’ reactions to sexual orientation disclosure often describe a state of denial, in which family members seek to reestablished day-to-day normalcy by behaving as if the disclosure has not occurred (Muller, 1987; Savin-Williams, 2001b). In this way, conflict may be limited to the topic of sexual orientation, while support for other areas of personal development remains intact. In each of these cases, individuals’ overall perceptions of support could remain relatively high, despite deficiencies in the types of assistance needed to protect them from the mental health consequences of sexuality stress.

Although a substantial number of same-sex attracted young people report high levels of overall support from their family and friends, more specific investigations of the types and sources of support are needed to truly understand the role of supportive relationships in the lives of same-sex attracted youth. The matching theory of social support provides an important framework for further research, since it emphasizes types

of support most relevant to the stressors at hand. Based on matching theory, the current investigation proposed sexuality related social support as an important construct for consideration. Thus, it examined same-sex attracted young people's perceptions of support for stressors related to their sexuality, with the expectation that sexuality related social support would be less available than non-sexuality related support, and would differ across relationships with family members, heterosexual friends, and other sexual minority friends.

#### Social Support and Mental Health Among Same-Sex Attracted Youth

A second goal of the current investigation focused on examining links between young people's ratings of sexuality related social support and their mental health. Research has frequently characterized same-sex attracted youth as at-risk for a range of mental health problems, including depression, anxiety, and suicidality, as well as risky sexual and substance use behaviors (for review, see Anhalt & Morris, 2003). This investigation examined two commonly studied aspects of youth psychological and behavioral functioning: emotional distress and substance use.

#### *Emotional Distress*

Youth with same-sex attractions may experience higher levels of emotional distress than their heterosexual peers. Compared to the general population, same-sex attracted youth recruited from community centers and support groups have consistently shown elevated levels of anxiety, depression, and suicidality in particular (Anhalt & Morris, 1998; Rotheram-Borus & Langabeer, 2001). Although these recruitment samples have been criticized as non-representative of same-sex attracted youth as a whole, recent probability samples of LGB young people have corroborated their findings (Remafedi,

French, Story, Resnick, & Blum, 1998). For example, analyzing a community-based sample of 1,769 upper middle class high school students, Lock and Steiner (1999) found that sexual minority status related to increased mental health problems. Compared with their heterosexual counterparts, the 106 self-identified LGB respondents reported higher rates of mental health problems, as measured by symptoms of depression, suicidality, stress, anxiety, family problems, self-harm, temper problems, life and social dissatisfaction, and loneliness. Fergusson, Horwood, and Beautrais (1999) reported similar findings from a 21-year, longitudinal study of a birth cohort of 1,265 children. Through periodic diagnostic interviews, they assessed the prevalence of psychiatric disorders and problem behaviors between the ages of 14 and 21. Compared with heterosexual respondents, the 28 LGB youngsters were at increased risk for major depression, generalized anxiety disorder, suicidal ideation, and suicide attempts. The LGB young people in the sample were also more likely to meet criteria for multiple disorders.

The elevated levels of emotional distress and substance use observed among same-sex attracted youth are commonly attributed to the increased stress they face as stigmatized minorities (Garnets et al., 1990; Hancock, 1995; Savin-Williams, 1995). In support of this hypothesis, a number of studies have found associations between individuals' experiences of sexuality related stressors and their symptoms of emotional distress (Hershberger & D'Augelli, 1995; Hershberger, Pilkington, & D'Augelli, 1997). For example, D'Augelli, Pilkington, and Hershberger (2002) found that physical and verbal victimization were associated with increased distress in a geographically diverse sample of 350 LGB youth under the age of 21. The total number of reported incidents of

victimization related to participants' overall symptoms of psychological distress. Other types of sexuality stress also appear to influence mental health. In a convenience sample of 542 LGB youth ages 14 to 21, D'Augelli (2002) found that, in addition to physical and verbal victimization, telling friends about one's sexuality, negative parental reactions, and dissatisfaction with one's sex life all related to increased symptoms of distress. Fears about victimization and rejection also predicted distress, suggesting that internal processes of sexuality stress further impact the mental health of same-sex attracted youth. Associations between sexuality stress and distress also emerged in a predominantly African American and Hispanic sample of gay and bisexual young men between the ages of 14 and 19 (Rosario, Rotheram-Borus, & Reid, 1996). Specifically, sexuality stress (i.e., stress related to disclosure, discovery, and ridicule) was associated with greater emotional distress, as measured by symptoms of anxiety, phobic anxiety, and depression. In the same sample of youth, youth who had made suicide attempts reported more sexuality stress than youth who had not (Rotheram-Borus, Hunter, & Rosario, 1994).

#### *Substance use*

Same-sex attracted young people engage in the use of health-compromising substances (i.e., cigarettes, alcohol, marijuana, and other illicit drugs) more commonly than their heterosexual counterparts (e.g., Rotheram-Borus, Rosario, Meyer-Bahlburg, & Koopman, 1994). In a recent meta-analytic review of studies to date, Marshal and colleagues (Marshal et al., 2008) concluded that the odds of substance use for LGB youth were, on average, 190% higher than for heterosexual youth, and were substantially higher within some subpopulations of LGB youth (i.e., 340% higher for bisexual youth, 400% higher for females). Another study of 154 LGB young people (ages 14 to 21) recruited

from gay-identified organizations found the lifetime prevalence of substance use for same-sex attracted young men was more than four times the male adolescent national average (Rosario, Hunter, & Gwadz, 1997). Young women reporting same-sex attractions had prevalence rates more than six times the national average. Alcohol was the most commonly used substance, followed by cigarettes, marijuana, and other drugs. A more representative survey of youth, the 1993 Massachusetts Youth Risk Behavior Survey, sampled 3,054 high school students. Students who reported same-sex sexual partners were more likely than exclusively heterosexual students to use alcohol, marijuana, cocaine, and other illegal drugs (Faulkner & Cranston, 1998). In the 1995 version of the survey (Garofalo et al., 1998), self-identified LGB young people reported more frequent use of smokeless tobacco, cocaine, and inhalants, and were more likely to have initiated alcohol, marijuana, and cocaine use before the age of 13.

Researchers have suggested sexuality related stressors may heighten risk for substance use among same-sex attracted youth. Youngsters may turn to alcohol or drugs as a means of coping with prejudice, discrimination, or other difficulties related to their sexual identity. Although few studies address the topic, some empirical evidence supports the link between sexuality stress and substance use. For example, Bontempo and D'Augelli (2002) examined the effects of at-school victimization and sexual minority status within a representative sample of 9,188 high school students. LGB students who experienced high levels of victimization (i.e., more than three incidents) reported more frequent use of cigarettes, alcohol, marijuana, and other drugs than those who experienced low levels of victimization. The LGB students who had experienced little or no victimization reported substance use similar to their heterosexual peers. Similarly,

Rostosky and colleagues (Rostosky, Owens, Zimmerman, & Riggle, 2003) found that reduced sense of belonging at school related to elevated alcohol and marijuana use among rural LGB young people. Another study (Rosario et al., 1997) specifically assessed gay, lesbian, and bisexual young people's reasons for initiating substance use. The number of substances used and symptoms of substance abuse related to three psychological coping strategies: "to relax," "to be happier or less sad," and "to escape from problems."

In summary, research suggests high levels of both emotional distress and substance use among some same-sex attracted young people. However, it is inappropriate to characterize all same-sex attracted youth as "at-risk." In his critique of research on sexual minority youth, Savin-Williams (2001a) suggested researchers who consider all gay youth to be at risk for mental health problems distort the truth. Savin-Williams, instead, emphasizes the importance of understanding risk and resilience factors related to young people's well being. Acknowledging the diversity that exists among same-sex attracted young people can provide valuable insight into the factors affecting sexual minority mental health. The present study examined emotional distress and substance use within a sample of same-sex attracted young people, focusing on how social support might influence these aspects of mental health.

#### *Models of Social Support and Mental Health Among Same-Sex Attracted Youth*

Researchers have used two primary approaches to studying the relationship between social support and mental health. The first, known as the main effect model (Cohen & Wills, 1985), examines direct associations between social support and mental health. Main effect studies from the broader social support literature have demonstrated

basic links between supportive relationships and improved mental and physical health (e.g., Cohen et al., 1995; Prinstein et al., 1996; Rhodes & Woods, 1995; Simmons et al., 1987; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). A few studies of same-sex attracted young people have reported positive associations between perceptions of support and psychological well-being. For example, one large-scale study of 197 Flemish gay and lesbian young people (ages 15 to 25) examined the extent to which youngsters had people in their daily environment who would provide emotional support, information, or advice in a time of need (Vincke & Heeringen, 2002). Higher levels of available support related to increased self-esteem as well as lower levels of depression and hopelessness. Another study of 77 young gay men (ages 14 to 20) adapted a 20-item measure of perceived support to assess individuals' perceptions of support from family, heterosexual friends, and gay and lesbian friends (Anderson, 1998). Perceptions of support from family members and sexual minority friends were positively related to individuals' self-esteem and sense of control over their own lives. Similarly, in a sample of 145 school-aged individuals attending an LGB-identified youth center, perceptions of support from family and peers were related to a general measure of mental health (Orban, 2004).

Other studies of same-sex attracted youth, however, have failed to show a connection between social support and mental health. In a sample of 80 urban gay and lesbian young people ages 14 to 21, Grossman and Kerner (1998) found no association between individuals' degree of satisfaction with available social support and their symptoms of emotional distress. Similarly, ratings of available social support did not relate to health risk behaviors (i.e., alcohol/drug use, suicidality, use of violence, and sexual risk-taking) in a sample of 77 LGB young people recently graduating from high

school (Rhee, 2004). Based on this relatively small number of studies, simple associations between overall social support and mental health have not been consistently shown among same-sex attracted youth.

A second theoretical framework from the social support literature examines the effects of social support in the presence of a particular stressor or set of stressors. In this approach, social support is conceptualized as a moderating factor, capable of protecting or buffering individuals against the mental health consequences of life stress (Pearlin, Menaghan, Lieberman, & Mullan, 1981). Social support has been shown to buffer youth against a range of stressors, including physical and emotional victimization (Holt & Espelage, 2005), parental conflict (Wolchik et al., 1989), natural disaster (Prinstein et al., 1996), school transition (Simmons et al., 1987), and strain from negative social interactions (Rhodes & Woods, 1995).

According to the buffering model of social support, high levels of support would be expected to attenuate (i.e., moderate) the negative mental health consequences of sexuality stress. However, the few investigations of this buffering hypothesis have provided little evidence for the protective benefits of social support among same-sex attracted youth. Hershberger and D'Augelli (1995) studied whether family support could buffer the negative psychological consequences of victimization in a sample of 194 LGB young people ages 15 to 21. Family support buffered against the effects of victimization on psychological distress only for a subset of youth with low levels of victimization. At moderate or high levels of victimization, family support did not moderate the relationship between victimization and distress. Furthermore, the supportiveness of family members did not relate directly to psychological distress. A study of school adjustment among 101

gay and lesbian high school students examined whether the supportiveness of close friends moderated the relationship between students' perceptions school climate and their school adjustment (i.e., achievement, belonging, and school behavior) (Murdock & Bolch, 2005). The supportiveness of friends had no effect on the relationship between perceived school climate and school adjustment.

Research with same-sex attracted youth has provided only minimal evidence for the link between social support and mental health, with inconsistent findings for both main and buffering effects (Grossman & Kerner, 1998; Hershberger & D'Augelli, 1995; Murdock & Bolch, 2005; Rhee, 2004). These results conflict with discourse in adolescent mental health, which has commonly stressed the importance of supportive relationships (Felner, Aber, Primavera, & Cauce, 1985). The question, then, is why studies of social support among same-sex attracted young people have failed to reliably demonstrate its mental health benefits. It may be that the coping processes of same-sex attracted youth are qualitatively different, such that social support is somehow less beneficial. This would, however, be counter to most discussions of sexual minority development, which emphasize the importance of supportive relationships (e.g., D'Augelli, 1998; Radkowsky & Siegel, 1997; Ryan, 2001). Instead, the lack of empirical findings in this area may be related to inadequate measurement of social support as it is experienced by same-sex attracted youth. The present investigation measured a specific domain of support that may be particularly relevant to mental health among same-sex attracted youth: sexuality related social support. Hypotheses proposed both main effect and buffering models of sexuality related social support and mental health. Specifically, perceptions of support for sexuality related problems were expected to be directly related to mental health

outcomes, and were expected to buffer individuals against the mental health consequences of sexuality stress.

### The Current Study and Hypotheses

Using matching theory as a theoretical framework, this study of same-sex attracted young people examined the types of support most relevant for coping with sexuality related stressors. Participants rated the extent to which various forms of support would be available for dealing with problems related to their sexuality. Three sources of support were assessed: family members, heterosexual friends, and sexual minority friends. Analyses compared perceptions of support for sexuality related problems with perceived support for problems not related to sexuality. Proposed models also tested the effects of sexuality related social support on mental health, with both main effect and buffering models examined. Specific hypotheses are outlined below.

#### *Hypothesis 1*

It was expected that the interaction between domain (i.e., sexuality related versus non-sexuality related) and source of support (i.e., family members, heterosexual friends, sexual minority friends) would be significant in predicting individuals' perceptions of available support. Specifically, from both family members and heterosexual friends, perceived support for sexuality related problems was expected to be less than perceived support for non-sexuality related problems. From sexual minority friends, perceived support for sexuality related problems was not expected to differ from perceived support for non-sexuality related problems. Additionally, levels of perceived support for sexuality related problems were expected to differ across the three relationship sources, with sexual

minority friends providing greater sexuality related support than both heterosexual friends and family members.

### *Hypothesis 2*

In a main effect model predicting emotional distress from overall levels of sexuality related support and non-sexuality related support, both types of support were expected to be uniquely and negatively associated with emotional distress.

### *Hypothesis 3*

Based on the matching theory of social support, the overall availability of sexuality related social support was expected to buffer (i.e., moderate) the relationship between sexuality stress and emotional distress. That is, higher levels of sexuality related social support should attenuate the association between sexuality stress and emotional distress. Additionally, sexuality stress was expected to be positively associated with emotional distress in the model.

### *Hypothesis 4*

In a main effect model predicting substance use severity from overall levels of sexuality related support and non-sexuality related support, both types of support were expected to be uniquely and negatively associated with substance use severity.

### *Hypothesis 5*

In a model predicting substance use severity from sexuality stress and sexuality related support, the overall availability of sexuality related support was expected to buffer or moderate the relationship between sexuality stress and substance use severity. That is, higher levels of sexuality related social support should attenuate the association between

sexuality stress and substance use severity. Additionally, sexuality stress was expected to be positively associated with substance use severity in the model.

*Hypothesis 6*

Because non-sexuality related social support does not match the needs created by sexuality related stressors, it was not expected to moderate the relationship between sexuality stress and emotional distress or the relationship between sexuality stress and substance use severity.

## CHAPTER 2: METHODS

### Participants

One hundred same-sex attracted individuals between the ages of 14 and 21 were recruited as part of a large-scale study examining adjustment and mental health among same-sex attracted young people and their families. An examination of the age distribution within the sample revealed two 14-year-olds, twenty 18-year-olds, twenty-eight 19-year-olds, twenty-eight 20-year-olds, and twenty-two 21-year-olds. Further analyses revealed that the two 14-year-old participants differed from the other participants across several key study variables. Specifically, 14-year-old participants reported lower levels of substance use problem severity,  $t(97) = -13.70, p = .001$ , lower levels of non-sexuality related support from straight friends,  $t(93) = -2.36, p = .02$ , lower levels of sexuality related support from sexual minority friends,  $t(93) = -3.74, p = .001$ , and lower levels of non-sexuality related support from sexual minority friends,  $t(93) = -3.59, p = .001$ . Based on these preliminary analyses, the two 14-year-old participants were excluded from the final sample, resulting in a more developmentally homogenous sample of 98 youth age 18 to 21 ( $M = 19.5, SD = 1.06$ ).

Participants included young men (67%) and women (33%) who identified themselves as having same-sex attractions and endorsed the following sexual orientations: gay (60%), lesbian (16%), bisexual (19%), and unlabeled (5%). Participants represented a range of ethnicities: White/Anglo-European (52%), Hispanic (20%), African- or Caribbean-American (18%), Asian (5%), and Mixed (5%). Years of education ranged from 8 to 16 ( $M = 13.1, SD = 1.55$ ), and the majority of participants attended high school or college at the time of participation (75%). Participants also

reported on their families' annual incomes, with 15% of families earning between \$0 and \$39,999, 9% between \$40,000 and \$69,999, 9% between \$70,000 and \$99,999, and 21% above \$100,000. Approximately half of participants (46%) reported they did not know their family's annual earnings. Participants indicated they currently lived with the following people: mother (32%), father (20%), siblings (26%), aunts or uncles (4%), stepmother (1%), stepfather (3%), grandparents (2%), roommates or friends (47%), and a romantic partner (2%). Those living alone represented 11% of the sample. Twenty-seven percent of participants endorsed having a current romantic relationship.

All participants had disclosed their sexual orientation to at least one person, with time since initial disclosure ranging from 2 to 120 months ( $M = 40.1$ ,  $SD = 26.0$ ). The majority of participants first disclosed their sexual orientation to a close friend (63%), while others first disclosed to an acquaintance (13%), a parent (6%) or other family member (9%), someone online (3%), or a counselor (1%). At the time of participating in the study, 75% had disclosed their sexuality to at least one parent. Specifically, 57% had disclosed to both parents, 22% had disclosed to their mothers only, and 5% had disclosed only to their father. Of those participants with siblings, 75% had disclosed to at least one sibling.

## Measures

### *Background Questionnaire*

To collect relevant demographic information, participants completed a background information questionnaire assessing variables such as age, education, ethnicity, sexual orientation, parents' income, step or biological family status, disclosure status, and current relationship status. Further, the background information questionnaire

included questions about coming out experiences, such as how long parents and peers have known about the individual's sexuality.

*Measure of Gay-Related Stress (MOGS)*

Participants provided information about their experiences of sexuality stress on the Measure of Gay-Related Stress, a self-report measure of sexuality related stressors (Lewis, Derlega, Berndt, Morris, & Rose, 2001; Lewis, Derlega, Griffin, & Krowinski, 2003). Ten subscales comprise the MOGS: (1) Family Reactions, (2) Family Reactions to My Partner, (3) Visibility with Family and Friends, (4) Visibility with Work and Public, (5) Violence and Harassment, (6) Misunderstanding, (7) Discrimination at Work, (8) General Discrimination, (9) HIV/AIDS, and (10) Sexual Orientation Conflict. For each item, respondents indicate whether a given stressor has occurred within the past year. If the stressor has occurred, the respondent is asked to rate its stressfulness, ranging from 0 to 4 (0 = not at all stressful, 1 = a little stressful, 2 = somewhat stressful, 3 = moderately stressful, 4 = extremely stressful). In the present study, two subscales, Discrimination at Work (7 items) and General Discrimination (3 items), were excluded due to their lack of relevance to same-sex attracted youth. Two items from another subscale, Visibility with Work and Public, were reworded to refer to reflect visibility at school (i.e., "work" was changed to "school"). Also, the word "lover" was changed to "partner" on one item from the Family Reactions to My Partner subscale. Scores from the eight resulting subscales were summed to calculate a composite measure of sexuality stress.

The most recent version of the MOGS includes two potential scoring methods: a severity score and a frequency score. The severity score represents the average severity of only those stressors that have occurred and is obtained by calculating the mean severity

rating for items that are endorsed as occurring. A Frequency Score represents the total number of stressors that have occurred regardless of their severity rating, derived by counting the number of endorsed items. In this study, sexuality stress was calculated as the total number of items endorsed as occurring, with possible scores ranging from 0 to 46. Higher frequency scores indicated exposure to more sexuality stress in the past year. The number of sexuality related stressors, rather than their perceived severity, served as the best measure of sexuality stress, since the perceived severity of stressors could be confounded with youth's success in coping with them.

In studies of adult gay men and lesbians, severity ratings on the MOGS have been shown to have good internal consistency (i.e., Cronbach's alphas from .72 to .90), and predictive validity for depression and degree of openness about sexual orientation (Lewis et al., 2001; Lewis et al., 2003). Because MOGS scoring procedures were only recently revised to include the frequency score, studies have yet to examine its psychometric properties. Additionally, studies have yet to examine the reliability and validity of the MOGS as a measure of sexuality stress in younger populations. In the current study, the total frequency score of the MOGS demonstrated adequate reliability (Cronbach's alpha = .88).

*Behavior Assessment System for Children, Second Edition (BASC-2 SRP)*

Participants reported symptoms of emotional distress on the Emotional Symptoms Index of the Behavior Assessment System for Children, Second Edition – Self-Report of Personality (BASC-2 SRP; Reynolds & Kamphaus, 2004). The BASC-2 SRP is designed for use with individuals ages 12 to 21 and consists of 176 self-report items, which measure the presence and severity of somatic and psychological symptoms. Respondents

indicate their level of agreement with several statements using true/false and Likert-scale responses (1 = Never to 4 = Almost Always). Raw scores are converted into T-scores, which are based on normative data from a non-clinical sample of 4,800 young people. The Emotional Symptoms Index includes items from six subscales: Social Stress, Anxiety, Depression, Sense of Inadequacy, Self-Esteem, and Self-Reliance. The BASC-2 SRP is a reliable and valid measure with up-to-date norms (Reynolds & Kamphaus, 2004).

#### *Personal Experience Screening Questionnaire (PESQ)*

Participants provided information about their substance use behaviors on the Problem Severity scale of the Personal Experience Screening Questionnaire (Winters, 1992), a 40-item self-report questionnaire designed as a screening tool to assist in determining the severity of substance use problems among young people. The instrument consists of a Problem Severity scale, and sections that assess substance use history, psychosocial problems, and response biases (e.g., “faking good” or “faking bad”). The Problem Severity scale, used in the current study, represents a single severity factor (Winters, 1992) and contains items assessing several behavioral domains associated with substance abuse, including substance use consequences, benefits of substance use, and dependence symptoms. The items, which reflect a sixth-grade reading level, ask the respondent to choose from four response options (1 = never, 2 = once or twice, 3 = sometimes, 4 = often). A total Problem Severity score is obtained by adding responses for the 18 items. Total scores range from 18 to 72, with higher scores indicating more problematic substance use. Past studies have demonstrated the internal consistency of the Problem Severity scale (Cronbach’s alpha = .91) as well as its concurrent and predictive

validity (Winters, 1992). The instrument also exhibited good internal consistency (Cronbach's alpha .92-.95) as well as convergent and discriminant validity when utilized with a sample of gay and bisexual young men (Winters, Remafedi, & Chan, 1996). The Problem Severity scale demonstrated adequate reliability in the current study as well (Cronbach's alpha = .90).

#### *Social Support Behaviors Scale-Adapted (SSB)*

Adapted versions of the Social Support Behaviors Scale assessed the perceived availability of two types of support: (1) support for coping with sexuality related problems, and (2) support for coping with problems not related to sexuality. The original SSB is a 45-item instrument designed to assess individuals' perceptions of available supportive behaviors from family and friends (Vaux, Riedel, & Stewart, 1987). Respondents are asked to suppose they had some kind of problem. Each item describes a particular type of assistance that might be provided, and participants rate family and friends on the likelihood that they would provide that type of assistance. Family members and friends are rated separately on a scale from 1 to 5 (1 = No one would do this, 2 = Someone might do this, 3 = Some family member/friend would probably do this, 4 = Some family member/friend would certainly do this, 5 = Most family members/friends would certainly do this). Overall measures of available support are computed by summing individual item ratings. Five subscales, which have been confirmed through factor analysis (Vaux, et al., 1987), assess different types of support, including emotional support, socializing, practical assistance, financial assistance, and advice/guidance. Scores from all subscales can be combined to obtain global measures of support from family and friends.

The SSB has very good internal consistency, with alphas exceeding .85 in samples of college students (Vaux et al., 1987). It also has good concurrent and predictive validity (Vaux & Wood, 1987). A number of researchers have adapted the measure. By changing the wording of the instructions, researchers have used it to examine behaviors actually enacted in the face of a specific stressor. Another adapted version of the instrument measures support from up to ten specific network members (Vaux & Harrison, 1985).

This study adapted the SSB to measure participants' perceptions of support both for sexuality related problems and for problems not related to their sexuality. The instructions, which ask the respondent to suppose he or she had "*some kind of problem,*" were reworded to create two versions of the measure. One version asked about support for "*some kind of problem that was not related to your sexuality,*" while a second referred to "*some kind of problem related to your sexuality, such as those you just checked off in the previous packet*" (i.e., the preceding MOGS questionnaire). Each participant completed both versions of the measure, to assess support for both sexuality related and non-sexuality related problems. The presentation order of these questionnaires was rotated, such that half of study participants completed the sexuality related support measure first and half completed the non-sexuality related support measure first. It is noteworthy that preliminary analyses indicated that the presentation order of the measures had no significant effect on participants' scores. Also, rather than rating support from only family and friends, participants completed sexuality and non-sexuality related versions three times to rate the availability of support from family members, heterosexual friends, and sexual minority friends. With regard to their ratings of support from sexual

minority friends, measure instructions asked participants not to consider support from romantic partners. Prior to completing ratings for each relationship type, participants completed a preliminary set of questions asking them to list the relevant family members or friends and provide information about them (e.g., gender, age, sexuality, knowledge of the youth's sexuality). Youth were then instructed to use those individuals listed as the basis for their social support ratings of each group. Finally, the Financial Assistance (8 items), Practical Assistance (8 items) and Socializing (7 items) subscales were omitted because items on those subscales did not appear to refer to sexuality related or unrelated problems on the adapted forms of the measure. On both versions of the adapted SSB, ratings for the remaining 22 items were summed to create six composite scores, reflecting the availability of both sexuality related and non-sexuality related support from family members, heterosexual friends, and sexual minority friends. For each of the six composites, potential scores ranged from 22 to 110, with higher scores indicating greater availability of support in that domain. In the current study, each of the six composite scores demonstrated excellent internal consistency (alphas ranged from .97 to .98).

#### Procedure

The current study was conducted as part of a larger ongoing study of the peer and family relationships of same-sex attracted young people, approved by the University of Miami's Institutional Review Board (IRB). A variety of recruitment methods were employed. Advertisements were placed in local newspapers and distributed via e-mail to sexual minority social organizations and support groups in Southern Florida. Additionally, research staff visited organizations serving sexual minority youth to disseminate information about the project. Although some participants completed the

study protocol in a laboratory setting at the University of Miami (33%), many individuals recruited from sexual minority organizations participated during arranged meeting times on-site at their organization's facilities (67%). Following participation, individuals received study related advertisements to distribute to acquaintances or friends eligible to participate. Additionally, all study participants were offered up to four individual support sessions with clinically trained project staff to further discuss any issues related to their sexual orientation. Of the total participants, 67% were recruited from sexual minority college groups, 27% from sexual minority community organizations, 3% from study-related advertisements, and 3% from friend referrals. Recruitment took place in the following cities: Miami (63%), Orlando (15%), Fort Lauderdale (14%), and Sarasota (8%).

As part of the larger ongoing investigation, all participants were invited to ask a parent to participate in the study. If interested, parents completed a series of questionnaires and participated in a videotaped problem-solving discussion with their child. A total of 16 young people participated in the broader study with their mother. The sample used in this study comprised all recruited gay and lesbian youngsters, including those eligible for the family-based study as well as those whose family members did not participate in the project. The current study focused on questionnaire data provided by all youth participating in the broader investigation and did not include information obtained from parents.

Individuals not participating in the family-based portion of the project completed the following protocol. First, participants received information about the nature of the study, and provided informed consent. Individuals below the age of 18 provided assent

and obtained signatures of parental consent prior to completing the study. Those under 18 who had not disclosed to a parent or felt that obtaining parental consent would involve significant distress were not eligible to participate in the study. Following consent, participants completed a questionnaire packet in interview format. Upon completion of the questionnaires, participants heard a debriefing statement outlining the study's goals in greater detail.

The protocol differed slightly for individuals who completed the family portion of the project, as they participated along with their mother. First, both youngsters and their mothers received information about the nature of the study, and provided parental informed consent and youth assent. Next, mothers and their children completed separate questionnaire packets. Mother-child dyads then participated in two videotaped problem-solving discussions. Upon completion of the videotaped interaction, participants heard a debriefing statement outlining the study's goal in more detail and received information about the availability of therapeutic support sessions to facilitate individual or family adjustment.

## CHAPTER 3: RESULTS

### Preliminary Analyses

Prior to examining study hypotheses, preliminary analyses assessed for differences in primary demographic variables (i.e., age, gender, ethnicity, sexual orientation, religion, family income, recruitment site, recruitment location, and time since disclosure) across the measures of sexuality stress, sexuality related social support, non-sexuality related social support, emotional distress, and substance use severity. Some demographic characteristics were significantly associated with key study variables.

Increased time since disclosure related to higher ratings of sexuality related support from heterosexual friends,  $r = .20, p = .03$ . Additionally, young men reported a greater number of sexuality related stressors in the past year ( $M = 25.4, SD = 8.74$ ) compared to young women ( $M = 21.4, SD = 6.86$ ),  $F(1,96) = 2.18, p = .03$ . Study variables did not vary across participant age, family income, ethnicities, sexual orientations, religions, or recruitment locations. Further, individuals who participated with a parent did not differ from those who did not for any of the study variables. Because few differences were found across variables, the final sample of 98 same-sex attracted young people was analyzed as a whole. However, due to their significant associations with study variables, time since disclosure and gender were included as control variables in subsequent analyses as appropriate.

Preliminary analyses also examined the psychometric properties of the study measures. Using standards outlined by Kline (2004), reliability was judged to be adequate for all measures. Skewness and kurtosis statistics indicated no significant violations of normality for all study variables, with the exception of some dimensions of social

support. Specifically, the distributions of participants' ratings for non-sexuality support from family members, straight friends, and sexual minority friends were negatively skewed and leptokurtic, as were their ratings of sexuality related support from straight friends and sexual minority friends. Summed ratings of overall sexuality related and non-sexuality related support from all sources showed adequate skewness and kurtosis. Thus, violations of normality occurred only for individual facets of social support, to be analyzed using repeated-measures ANOVA. Because the *F* test is robust to deviations from normality (Lindman, 1974), these data were not transformed.

#### Descriptive Information

Table 3.1 displays means for all variables of interest. With regard to emotional distress, 13.5% of participants scored in the clinically significant range on the BASC-2 Emotional Symptoms scale. An additional 11.5% scored in the at-risk range. In comparison to normative data for the BASC-2 (2% clinically significant, 16% at-risk), a higher percentage of individuals in the current study showed clinically significant levels of emotional symptoms, but a lower percentage of participants were in the at-risk range. Analysis of individual item responses on the PESQ indicated the majority of participants reported using alcohol or other drugs at least once at home (77%), at the homes of friends or relatives (87%), with older friends (86%), and at places on the street where adults hang around (61%). Fewer participants reported having used alcohol or other drugs at school activities (51%), to enjoy music or colors or to feel more creative (37%), when skipping school (32%), or at work (19%). Table 3.2 displays correlations among all study variables.

The current study also yielded descriptive information regarding experiences of sexuality related stress and support among same-sex attracted young people. Analyses of individual items on the Measure of Gay-Related Stress (Lewis et al., 2001; Lewis et al., 2003) indicate participants experienced a range of stressors related to their sexuality during the past year. Participants commonly endorsed family-based stressors such as discussing their sexual orientation with relatives (62%), feeling distant from or misunderstood by family members due to their sexual orientation (58%), having their sexual orientation ignored by family members (52%), and being rejected by family members due to their sexual orientation (36%). Youth also reported stressors related to others' awareness of their sexuality, including telling straight friends about their sexuality (84%), keeping their sexuality a secret from some friends and family members (84%), having people at school find out about their sexuality (77%), and experiencing fears of rejection when disclosing their sexual orientation to others (67%). Some participants reported experiences of victimization. Specifically, 57% of participants endorsed being called names due to their sexual orientation, while 20% had faced threats of violence, and 11% had experienced physical assault due to their sexuality. Forty-four percent of participants had experienced fears of being attacked due to their sexual orientation during the past year. Individuals also endorsed stressors related to societal stigma, including concerns related to others' ignorance about homosexuality (90%), the lack of acceptance in society (76%), and the lack of constitutional guarantee of rights (66%). Stressors due to internal psychological processes included conflicts in self-image due to society's attitudes toward homosexuality (64%), difficulty in accepting same-sex attractions (43%), and sexuality-related shame and guilt (36%).

Prior to completing ratings of social support for each relationship type, young people in the current study were asked to list up to eight of their closest family members, heterosexual friends, and sexual minority friends, and provide information about them (e.g., gender, age, sexuality, knowledge of the participant's sexuality). These descriptive data help to characterize the sources of support examined in the current study. All participants listed at least one close family member. On average, 29% of those listed lived with the participant, 66% knew of the participant's sexual orientation, and 7% also identified as gay, lesbian, or bisexual. Listed family members ranged in age from infancy to 88 years ( $M = 39.1$ ,  $SD = 9.8$ ). Commonly listed family members included mothers (85%), fathers (66%), brothers (50%), sisters (44%), aunts (24%), uncles (10%), grandmothers (17%), grandfathers (8%), and cousins (24%). Participants also provided information about up to eight of their closest heterosexual friends, with all participants listing at least one close heterosexual friend. Those listed were 68% female and 32% male, ranging in age from 9 to 60 ( $M = 20.4$ ,  $SD = 2.2$ ). On average, 90% of the eight closest heterosexual friends listed by each respondent knew about the participant's sexual orientation. Participants also provided information about up to eight of their closest sexual minority friends. All participants reported having at least one close sexual minority friend. Among participants' closest sexual minority friends, 63% were male and 37% were female, with reported sexual orientations of gay (59%), lesbian (26%), bisexual (13%), queer (2%), and other (1%). On average, 97% of sexual minority friends listed knew about the participant's sexual orientation. Following these initial descriptive analyses, two primary sets of analyses were performed.

### Perceptions of Sexuality Related and Non-sexuality Related Support

The first study hypothesis posited that the interaction between domain (i.e., sexuality related versus non-sexuality related) and source of support (i.e., family members, heterosexual friends, sexual minority friends) would significantly relate to youngsters' perceptions of available support. A three-by-two within-subject factorial MANCOVA assessed the effects of these two variables on participants' perceptions of available support, which served as the dependent variable. Within-subject factors included: mode of support with two levels (i.e., support for sexuality related problems and support for non-sexuality related problems) and source of support with three levels (i.e., family members, heterosexual friends, and sexual minority friends). Analyses included time since initial disclosure as a covariate due to its significant correlations with some facets of social support. Gender, although associated with sexuality stress, did not relate to the variables in the model (i.e., participants' ratings of social support). Thus, gender was not included as a control variable in the MANCOVA.

Results of the MANCOVA indicated a significant main effect of the source of support on mean levels of support across sexuality and non-sexuality related domains,  $F(2,88) = 6.97, p = .002$ . There was also a significant main effect of the domain of support on mean ratings of support across the three sources,  $F(1,89) = 40.8, p = .001$ . As expected, there was a significant interaction effect between the domain of support and the source of support,  $F(2,88) = 24.0, p = .001$ , which was probed using a series of planned comparisons with Holm's sequential Bonferroni adjustment to control family-wise error rate. This interaction is depicted in Figure 3.1. Results confirmed study hypotheses. Specifically, from family members,  $t(92) = -9.24, p = .001, r = .69$ , and heterosexual

peers,  $t(92) = -3.79, p = .001, r = .37$ , sexuality related support was perceived as being less available than non-sexuality related support. In contrast, sexual minority friends were seen as equally supportive across sexuality related and non-sexuality related domains,  $t(92) = 1.92, p = .06, r = .20$ . Additionally, sexual minority friends were rated as providing the highest levels of sexuality related support, significantly greater than both family members,  $t(92) = 10.9, p = .001, r = .75$ , and heterosexual friends,  $t(92) = 4.51, p = .001, r = .43$ . Heterosexual friends were seen as providing higher levels of sexuality related support than family members,  $t(92) = 6.50, p = .001, r = .56$ , but not as much sexuality related support as sexual minority friends.

With regard to time since disclosure, which was included as a covariate for analyses, there was a significant interaction between domain of support and time since disclosure,  $F(1,89) = 6.55, p = .01$ . That is, the mean difference between sexuality related support and non-sexuality related support across all sources varied depending on the amount of time that had passed since youth first disclosed their sexuality to someone else. To examine the nature of this interaction, difference scores were calculated by subtracting individuals' average sexuality related support across all sources from their average non-sexuality related support across all sources. The significant negative correlation between this difference score and time since disclosure,  $r = -.26, p = .01$ , indicates that as time since disclosure increased, individuals reported less difference between sexuality related and non-sexuality related support. No other significant main effects or interaction effects for time since disclosure were found.

## Social Support and Outcomes

### *Regression Models Predicting Emotional Distress*

Hypotheses 2 and 3 proposed models predicting emotional distress from participants' ratings of sexuality stress, sexuality related support, and non-sexuality related support. In a main effect model predicting emotional distress from overall levels of sexuality related support and non-sexuality related support, both types of support were expected to be uniquely associated with emotional distress. In a buffering model predicting emotional distress from sexuality related support, non-sexuality related support, and sexual minority stress, overall levels of sexuality related social support were expected to buffer or moderate the relationship between sexuality stress and emotional distress. A single hierarchical linear regression analysis, as implemented through the statistical software package SPSS, was used to examine both hypotheses. Prior to analyses, new variables were created for overall levels of sexuality related support and non-sexuality related support by summing ratings of support from family members, heterosexual friends, and sexual minority friends. Participant gender served as a control variable in the regression due to its association with sexuality stress. Time since initial disclosure, although associated with some components of support, did not relate to the summed ratings of support used in the regression models. Because it was not associated with any model variables, time since disclosure was not included as a control variable. Variables were entered hierarchically. Participant gender was entered in the first step as a control variable. Main effects for sexuality related support and non-sexuality related support were entered in the second step, followed by sexuality stress in the third step, and the interaction of sexuality stress and sexuality related social support in the fourth step.

Table 3.3 shows results from the hierarchical linear regression analysis predicting emotional distress. As shown in the second step, the proposed main effects model predicting emotional distress from sexuality related and non-sexuality related support (controlling for gender) was not significant. However, variance inflation factors (VIF) for the regression model suggested beta error may have contributed to the null findings. Specifically, high VIF statistics suggested potential multicollinearity between predictors in the main effect model (i.e., participant gender VIF = 1.04, sexuality related support VIF = 2.37, non-sexuality related VIF = 2.41). Bowerman and O'Connell (1990) suggest that when the average VIF exceeds 1.0, multicollinearity may bias the regression model, reducing the total variance accounted for by the model and increasing the likelihood of beta error. The overall regression model attained significance in the third step with the addition of sexuality stress as a predictor, although partial regression coefficients revealed that the main effects of sexuality related support, non-sexuality related support, and sexuality stress were not significant predictors of emotional distress. The fourth step of the hierarchical regression examined the proposed buffering model for sexuality related support. As expected, sexuality related support moderated the relationship between sexuality stress and youth emotional distress. That is, the interaction of sexuality related support and sexuality stress accounted for significant variance in emotional distress, over and above the effects of youth gender, sexuality related support, non-sexuality related support, and sexuality stress ( $\Delta R^2 = 0.04$ ,  $\Delta F(1,85) = 4.35$ ,  $p = .04$ ). The final model, which included main effects for participant gender, sexuality related support, non-sexuality related support, and sexuality stress, as well as the interaction of sexuality stress and sexuality related support, accounted for 15% of the variance in youth

emotional distress. Post-hoc analyses of the significant interaction were conducted as described by Holmbeck (2002), evaluating significance of the regression lines at high (i.e., 1 standard deviation above the mean) and low (i.e., 1 standard deviation below the mean) levels of sexuality related support. When sexuality related support was low, increased sexuality stress was associated with greater emotional distress,  $t(85) = 2.74$ ,  $p = .008$  (two-tailed). However, when sexuality related support was high, sexuality stress was not significantly related to emotional distress,  $t(85) = -0.60$ ,  $p = .55$  (two-tailed). This interaction is depicted in Figure 3.2. As expected, increased availability of sexuality related support attenuated the link between young people's experiences of sexuality stress and their emotional distress.

#### *Regression Models Predicting Substance Use Severity*

The above regression procedures were repeated to examine hypotheses 4 and 5, which proposed that identical main effect and buffering models would predict participants' substance use severity. Table 3.4 shows results from the hierarchical linear regression analysis predicting substance use severity. As shown in the second step, a main effects model predicting emotional distress from sexuality related and non-sexuality related support (controlling for gender) was not significant. In the third step, sexuality stress was not found to be a significant predictor of substance use severity. The fourth step of the hierarchical regression, which examined the proposed buffering model for sexuality related support, was also not significant. Contrary to expectations, sexuality related support did not moderate the relationship between sexuality stress and youth substance use severity.

### *Buffering Models of Non-Sexuality Related Support*

Finally, hypothesis 6 posited that the overall availability of non-sexuality related support would not moderate the relationship between sexuality stress and emotional distress or the relationship between sexuality stress and substance use severity. The hierarchical linear regression analyses described above for hypotheses 3 and 5 were repeated, replacing sexuality related support with non-sexuality related support as the moderator. That is, analyses examined whether overall levels of non-sexuality related social support moderated the effects of sexuality stress on emotional distress and substance use severity. Results indicated a buffering model involving non-sexuality related support did not explain significant variance in participants' emotional distress,  $F(5,85) = 1.98, p = .09$ , or substance use severity,  $F(5,87) = 1.10, p = .37$ .

## CHAPTER 4: DISCUSSION

Discourse on same-sex attracted youth suggests supportive relationships with family members and peers play an important role in helping young people cope with stressors related to their sexual identity. However, studies have yielded only minimal evidence for the link between social support and mental health in this population. This lack of empirical findings may stem from inadequate measurement of the types of social support most relevant for same-sex attracted youth. The current investigation is among the first to specifically examine same-sex attracted young people's perceptions of support for problems related to their sexuality. Results suggest that sexuality related social support represents an important construct relevant to both research and clinical work with same-sex attracted youth.

### Descriptive Findings Related to Sexuality Stress and Youth Outcomes

The current study yielded important descriptive information regarding the experiences of same-sex attracted youth. Although these findings may not generalize to all same-sex attracted youth, they provide useful information about the experiences of participants in the current study. Descriptive data revealed that participants experienced a range of sexuality-related stressors, including family-based stressors, difficulties related to hiding or disclosing their sexual orientation, verbal or physical victimization, and experiences of societal stigma. These findings concur with previous studies indicating same-sex attracted youth may experience a wide array of psychosocial stressors related to their stigmatized identity (e.g., D'Augelli, 2002; Savin-Williams & Ream, 2003; Willoughby et al., 2006).

Participants in the current investigation also provided information about their symptoms of emotional distress and their substance use behaviors. Descriptive data suggested a higher percentage of youngsters in the current study endorsed clinically significant levels of emotional distress (13.5%) in comparison to age-matched normative data (2.0%). This finding is consistent with past literature documenting higher rates of mental health problems among same-sex attracted young people. With regard to substance use behaviors, the majority of participants reported using alcohol or other drugs at least once at home, at the homes of friends or relatives, with older friends, and at places on the street where adults hang around. However, young people in the current sample reported substance use behaviors that were roughly comparable to a normative sample of 1,101 high school students ages 16 to 18 ( $M = 34.8$  versus  $M = 33.4$  in normative sample) (Winters, 1992).

#### Perceptions of Sexuality Related and Non-Sexuality Related Social Support

The current study is the first to specifically examine young people's perceptions of support for sexuality related problems, in comparison to support for other types of problems. Based on a multidimensional conceptualization of social support, perceptions of support were compared across relationships (i.e., family members, heterosexual friends, and sexual minority friends) and domains (i.e., support for dealing with problems related to, or not related to sexuality). Consistent with study hypotheses, participants perceived family members as providing far less support for sexuality related problems than for other types of problems. Heterosexual friends provided higher levels of sexuality related support than family members, but were still viewed as providing less support for sexuality related problems than for other types of problems. Sexual minority friends, on

the other hand, provided the highest levels of sexuality related support, and were equally supportive across sexuality related and non-sexuality related domains.

The relative lack of sexuality related support from family members and heterosexual friends may stem from several factors. First, lack of awareness about youngsters' same-sex attractions on the part of family members and friends may pose a significant barrier to support. Past research suggests that a substantial portion of same-sex attracted young people hide their sexual orientation from family members and friends, particularly during the early stages of coming out (e.g., Savin-Williams, 1998b). Further, previous studies indicate that same-sex attracted individuals report greater satisfaction with support from friends or family members who know about their sexual orientation (Grossman, D'Augelli, & Hershberger, 2000; Grossman & Kerner, 1998). In the current study, participants reported that 34% of family members, but only 10% of heterosexual friends, did not know about their same-sex attractions. Heterosexual friends tended to be more aware of participants' sexuality, which may help explain why they were rated as providing higher levels of sexuality related support than family members.

Negative attitudes toward homosexuality may represent a second primary factor limiting the availability of sexuality related support from family members and heterosexual friends (Savin-Williams, 2001b). For family members, a youngster's disclosure of same-sex attractions may instigate a family crisis with the potential to challenge family values, shatter idealized family aspirations, shift relationship boundaries, and disrupt existing systems of support (Willoughby, Doty, & Malik, 2008). Research suggests that family members may experience a range of negative reactions, including shock, anger, sadness, and denial (Willoughby et al., 2006), all of which have

the potential to impede support. Heterosexual friends may also hold overt or covert negative attitudes toward homosexuality, although previous research suggests that youth typically receive greater acceptance from friends than from family members (Boxer et al., 1991; Savin-Williams, 2001b). For both family members and heterosexual friends, negative attitudes toward homosexuality may reduce their likelihood of offering support for sexuality related issues. Similarly, young people may be less likely to seek sexuality related support from those whom they perceive as rejecting of their sexual orientation. This notion is consistent with findings from the broader social support literature, which suggest that conflict surrounding a particular topic has the potential to undermine support in related domains (Lepore, 1992).

Family members and heterosexual friends' lack of knowledge about challenges facing same-sex attracted youth may further limit their provisions of sexuality related support. Family members and friends who are heterosexual may be less equipped to provide advice, guidance, or instrumental support for issues related to the development of a non-heterosexual identity. Even when supportive others do possess relevant knowledge, their *perceived* lack of competence in providing sexuality related support might prevent them from offering such support.

An individual's own support-seeking behaviors may represent a final factor limiting the perceived availability of sexuality related support from family members and heterosexual friends. In particular, youth themselves may feel uncomfortable discussing their sexuality with family members and heterosexual friends, and thus may be less likely to seek support in such matters. Similarly, young people may be less likely to seek support from heterosexual friends and family members if they perceive limits to the types

of support that can be provided by those who do not share their minority experience (Munoz-Plaza, Quinn, & Rounds, 2002). Finally, same-sex attracted young people's perceptions of support from family members may be influenced by developmental factors common to all youth, namely the normative shift toward increasing reliance on peers that accompanies adolescence (Furman & Buhrmester, 1992).

In the current study, the discrepancy between participants' ratings of sexuality related and non-sexuality related support appeared to vary depending on the amount of time that had passed since the first disclosure of their sexual orientation to another person. In particular, youngsters reporting more time since their initial disclosure endorsed levels of sexuality related support that were more comparable to their support in other domains. Several factors likely account for this effect. Over time, friends and family are likely to become more aware of and accepting of individuals' same-sex attractions. Similarly, same-sex attracted individuals may become increasingly comfortable in seeking sexuality related support. Finally, with time, same-sex attracted individuals may develop new relationships or strengthen existing ones with friends or family who are supportive. Results of the current study suggest that time since disclosure may represent an important factor in understanding experiences of support among same-sex attracted youth.

In contrast to family members and heterosexual friends, sexual minority friends were seen as equally supportive of sexuality related and non-sexuality related problems and were rated as providing the highest levels of sexuality related support. Several factors help explain the high levels of support perceived to be available from sexual minority friends. First, in comparison to heterosexual family members and friends, sexual minority

friends are more likely know about and accept youngsters' same-sex attractions (Savin-Williams, 2005). Second, unlike heterosexual friends and family members, sexual minority friends may have first-hand knowledge and understanding of sexuality related issues. In fact, most theories of non-heterosexual identity development cite contact with other sexual minorities as an important step in establishing a positive sexual identity (for a review, see Eliason, 1996). The increased availability of sexuality related support from sexual minority friends is also consistent with existing research indicating that same-sex attracted youth strongly value friendships with other sexual minorities (Anderson, 1998; D'Augelli, 1991; Nesmith et al., 1999; Schneider, 1991).

Research from the broader social psychology literature may also help explain participants' high ratings of support from sexual minority friends. In particular, social identity theory emphasizes the importance of membership in groups of similar others (Tajfel, 1982; Tajfel & Turner, 1986). For individuals with marginalized identities, in-group friendships have been shown to be powerful sources of solidarity in confronting stigmatization, particularly if the stigmatized identity is a concealable one (Frable, Platt, & Hoey, 1998). Additionally, research suggests that individuals prefer support from others they perceive to be similar to themselves (Gottlieb, 1975, 1991).

Finally, it is important to recognize that the majority of participants in the current study were involved in community or university-based organizations for sexual minority youth. Thus, young people in the current study had likely experienced opportunities to meet other sexual minorities in a context that emphasized and scaffolded the development of supportive relationships. These types of groups have been shown to benefit same-sex

attracted youth (Gonsiorek, 1988; Martin & Hetrick, 1988), and likely contributed to the high availability of support from sexual minority friends in the study sample.

### Social Support, Sexuality Stress, and Youth Outcomes

The current investigation examined links between same-sex attracted young people's ratings of social support and two outcomes: emotional distress and substance use severity. Study hypotheses proposed two models predicting outcomes from social support: (1) main effect models, in which both sexuality related and non-sexuality related social support were expected to be simultaneous predictors of outcomes, and (2) stress buffering models, in which sexuality related support was expected to protect youth against negative psychological and behavioral outcomes associated with sexuality stress. Results provided support for some, but not all study hypotheses. Although tests of the main effect model did not demonstrate the expected associations between social support and emotional distress, results confirmed a stress buffering model of sexuality related social support. In particular, higher levels of sexuality related support attenuated the link between sexuality stress and heightened emotional distress. Results did not offer support for main effect or buffering models predicting substance use severity.

### *Social Support, Sexuality Stress, and Emotional Distress*

The present study is among the first to demonstrate the role of social support in moderating the effects of sexuality stress on mental health among same-sex attracted young people. Results suggest that sexuality related social support buffered young people against emotional distress associated with experiences of sexuality stress. Theoretically, social support could buffer same-sex attracted youngsters against the effects of sexuality stress in at least three ways (Cohen & Wills, 1985). First, social support might influence

an individual's initial appraisal of a stressor. For example, the stress of disclosing one's sexuality to a family member may seem more manageable, and therefore less stressful, if an individual feels that support from friends and other family members will be available. Second, social support could aid in the actual coping process through specific provisions of practical assistance, emotional support, or advice relevant to sexuality related issues. Finally, sexuality related support could bolster same-sex attracted young people's own capacities for coping with sexuality related issues, such that they are better prepared to handle stressors when they arise. In each of these ways, sexuality related support may play an important role in protecting same-sex attracted young people against the emotional distress associated with sexuality related stressors.

Results of the current study are consistent with the matching theory of social support, which posits that support protects against stress only when the types of assistance available address the stressors at hand. Based on this conceptualization, sexuality related forms of support proved beneficial to young people in the current study because they specifically addressed needs created by sexuality stress. By contrast, support for other types of problems, although more readily available, did not address sexuality stressors, and thus did not attenuate their negative mental health effects. In work with other populations, matching theory has brought greater specificity to the measurement of social support, as researchers have increasingly examined the types of assistance deemed to be most relevant to specific stressors (e.g., Cauce et al., 1992; Gore & Aseltine, 1995; Jackson, 1992). Results of this investigation suggest that researchers of same-sex attracted youth should employ these developments from the broader social support literature.

Although results of the current study supported a buffering model of sexuality related support, tests of a main effect model did not demonstrate the expected associations between social support and emotional distress. In particular, neither sexuality related nor non-sexuality related support were associated with emotional distress when the two were examined in concert. However, it is noteworthy that this null finding may have been due to multicollinearity between sexuality related and non-sexuality related support, since variance inflation factors suggested possible bias in the main effect regression model. In particular, multicollinearity may have reduced the total variance accounted for by the model and increased the likelihood of beta error (Hutcheson & Sofroniou, 1999). Beta error may also have resulted from the relatively small sample size used in the current investigation, which limited the statistical power of analyses. Despite null findings for the main effects regression model, zero-order correlations may provide some insight into the mental health correlates of sexuality related and non-sexuality related social support. In particular, bivariate correlations indicated higher levels of sexuality related support were associated with decreased emotional distress, while non-sexuality related support was not significantly associated with distress. Taken together, these findings suggest that sexuality related and non-sexuality related components of social support, although overlapping, could be differentially related to youth emotional distress. This may explain why past studies attempting to link broadband unidimensional measures of support to mental health outcomes have yielded inconsistent results. Although neither sexuality related nor non-sexuality related support were associated with emotional distress when the two were examined in concert, findings highlight the need

for future studies examining both sexuality-specific and non-sexuality related forms of support.

*Social Support, Sexuality Stress, and Substance Use Severity*

The current investigation also examined links between sexuality related stress, social support and substance use. Models predicting substance use severity did not offer support for study hypotheses. That is, substance use severity was not associated with sexuality stress, sexuality related support, or non-sexuality related support. The lack of association between sexuality stress and substance use in the current study contradicts existing studies, which have suggested that same-sex attracted youth may be at risk for engaging in substance use as a means of coping with sexuality stress (Bontempo & D'Augelli, 2002; Rosario et al., 1997; Rostosky et al., 2003). Several explanations for these null finding should be considered. First, the relatively small sample size of 98 participants may have been insufficient to detect associations between sexuality stress or social support and substance use, which may be less robust than their associations with emotional distress. Second, substance use may represent a longer term effect of sexuality stress, with important mediating or moderating variables not examined in the current study. The lack of association between sexuality stress and substance use also suggests young people in the current study may have used other means of coping, such as escapism or seeking support from others, to manage stressors related to their sexuality. In fact, initial evidence suggests that adolescents may rely more heavily on interpersonal and instrumental coping strategies, rather than alcohol and drug use, when managing psychosocial stressors such as victimization (e.g., Flannery, Singer, Williams, & Castro, 1998). This may be particularly true for participants in this study, since many were

affiliated with college or community groups aimed at providing these forms of adaptive coping.

Results of the current study suggested that sexuality stress and sexuality related social support were important in understanding youth's emotional distress, but not their substance use behaviors. Although not hypothesized, these disparate findings for emotional distress and substance use are consistent with the broader literature suggesting internalizing problems and externalizing risk behaviors represent distinct types of problems with unique predictors, mediating mechanisms, and trajectories (Block & Block, 1980; Eisenberg et al., 2001; Oland & Shaw, 2005). Even the neurobiological systems underlying these two types of outcomes appear to differ (Rothbart & Bates, 1998). As such, the pathways of risk and resilience linking sexuality stress, social support, and emotional distress may be qualitatively different from those for substance use or other types of risk behaviors. Studies of the broader adolescent population may also help in explaining the null findings for substance use, since past research suggests a complex interplay between social relationships and the development and maintenance of risk behaviors (Fisher, Misovich, & Fisher, 1992). Although peer support has been found to reduce risk behaviors in some cases, close peer affiliations may also relate to increases in risky behaviors (La Greca, Prinstein, & Fetter, 2001). Recent studies of sexual minorities have produced similar findings. For example, Willoughby and colleagues (Willoughby, Lai, Doty, Mackey, & Malik, 2008) found that affiliations with certain peer crowds related to increased risk for marijuana use, binge drinking, and cigarette smoking. Recent evidence also suggests that greater involvement with sexual minority peers may increase risk for substance use and high-risk sexual behavior (Wright & Perry, 2006).

The current study hypothesized that higher levels of social support would relate to decreased substance use, on the basis that support reduced the need for maladaptive coping through substance use. However, null findings with regard to substance use suggest that results may have been confounded by other psychosocial processes (e.g., peer crowd affiliation) not accounted for in the study.

In summary, results of the current investigation suggest that same-sex attracted youth experience less social support for sexuality related problems than for other types of problems, particularly from their family members and heterosexual friends. Sexual minority friends, on the other hand, may provide high levels of support across both sexuality related and non-sexuality related domains. Consistent with matching theory, which suggests that only the most relevant types of support will be protective, the overall availability of sexuality related social support buffered the effects of sexuality stress on participants' emotional distress. Zero-order correlations revealed a significant link between sexuality related support and emotional distress, though neither sexuality related nor non-sexuality related support were associated with emotional distress when considered in concert, and when accounting for gender. Sexuality related social support may represent an important construct in predicting emotional distress among same-sex attracted youth. With regard to substance use, the lack of significant findings in this study suggests differential mechanisms of risk and resilience may be important in understanding the effects of sexuality related stress and support on same-sex attracted young people's risk behaviors.

### Study Limitations

Several limitations to the current findings must be noted. The nature of the study sample represents one such limitation. Participants were predominantly White/Anglo-European (52%), and self-identified gay (60%). Thus, it is important to recognize that results may not generalize to youth of all ethnic backgrounds and sexual orientations, particularly questioning youth, transgender youth, or same-sex attracted youth who do not identify as lesbian, gay, or bisexual. Additionally, results may not generalize beyond the 18 to 21 age range of the final study sample. Further research is needed to determine whether findings from the current investigation apply to younger same-sex attracted adolescents. It is also important to note that participants involved in this study likely represent a relatively motivated subset of young people, as the study protocol took approximately 75 minutes to complete and no compensation was offered.

The extent to which study results generalize across gender remains unclear. Consistent with findings from previous investigations of same-sex attracted youth (e.g., D'Augelli et al., 2002), young men in the current sample reported higher levels of sexuality stress than young women. Based on these gender differences, gender was included as a control variable in models predicting emotional distress and substance use. Although inclusion of gender as a control variable accounted for its effects on the outcome variables (i.e., emotional distress and substance use), these analyses did not examine whether gender moderated the results of the current study. Unfortunately, the small sample size did not provide sufficient power to examine study hypotheses separately for young men and women. Future studies with larger sample sizes will be

important in determining whether findings of the current investigation generalize across gender.

Despite efforts to diversify the sample with multiple recruitment strategies, 94% of participants in the study were recruited from organizations serving sexual minority youth. Individuals participating in such organizations may have higher levels of public outness about their sexuality and higher levels of support than samples of sexual minority young people who are not involved in community or university-based organizations (Meyer & Colten, 1999). Although participants in the current study endorsed higher rates of emotional distress than the general population, young people who are not involved in community or university-based organizations may experience even higher levels of distress. Thus, results of the current investigation may characterize youth seeking services at community or university organizations, but may have less relevance for youth who have not disclosed their sexual orientation to others, or have not sought services at support organizations. Recruitment of diverse samples of sexual minority young people remains a challenge for researchers, and future studies should strive to use multiple recruitment strategies and incentives to obtain diverse samples of lesbian, gay, bisexual, questioning, transgender, and same-sex attracted youth.

The relatively small sample size of 98 participants represents another significant limitation of the current study. While the sample size was sufficient to detect a medium to large effect size at power = .80 (Cohen, 1992; Kline, 2004), analyses may have failed to detect important associations with smaller effects sizes. In particular, null findings with regard to study hypotheses or the significance of demographic variables (e.g., gender, ethnicity, sexual orientation) may reflect beta error. Future studies with larger sample

sizes could detect less robust effects and would also allow for the inclusion of additional mediating or moderating variables. Research with youth of other ages, ethnicities, and sexual orientations will also be essential in determining the generalizability of the current findings.

Another important set of limitations relates to the measurement of primary study variables. In particular, self-report measures were used for all variables, including sexuality stress, social support, emotional distress, and substance use. On one hand, young people are likely to provide the most accurate information about their own experiences on subjective measures of stress and emotional distress, and are likely to be the best reporters of their risk behaviors. On the other hand, as with any self-report measure, individuals' accounts of stressors, symptoms, and risk behaviors likely include some bias. Additionally, given that all variables were assessed by self-report, significant associations may, in part, reflect respondent characteristics. For example, social desirability may have affected individual's willingness to provide information about their psychological or behavioral functioning. Similarly, participants' affective states at the time of participation may have influenced their reports of both sexuality stress and social support. In future studies, measures of sexuality stress, social support, and behavioral functioning gathered from multiple informants could reduce measurement error and more accurately assess the relationships between these variables.

Several limitations in the measurement of social support should also be noted. Even after several decades of research, there remains a lack of consensus with regard the conceptualization and measurement social support. Many researchers have viewed social support as a metaconstruct, comprised of both an individual's perceptions of available

support as well as actual acts of support provided by others (Barrera, Sandler, & Ramsay, 1981; Heller, Swindle, & Dusenbury, 1986; Thoits, 1982; Vaux et al., 1987). Measures of social support in the current study reflect participants' *perceptions* of support, rather than actual enacted behaviors. Participants provided ratings on the basis of their past experiences, but rated the likelihood of support for a supposed future problem. Although participants' perceptions of sexuality related support likely reflected characteristics of their support networks, their perceptions of support may also have been influenced by individual characteristics, including personality features (e.g., optimism), support seeking behaviors, and their degree of openness about sexuality. Despite these possible confounds, the present study examined perceived rather than enacted support, because past research indicates that perceptions of social support are more predictive of mental health than actual supportive behaviors (Barrera et al., 1981; Hirsch, 1980; Procidano & Heller, 1983; Wethington & Kessler, 1986). However, further research is needed to examine the specific social factors and personal characteristics that influence the perceived availability of sexuality related and non-sexuality related support among same-sex attracted youth.

Finally, the retrospective design of the current study represents another important limitation. Participants' accounts of past sexuality stress and social support were linked to current measures of emotional and behavioral functioning. As with all retrospective accounts, individuals' current thoughts and feelings may introduce significant bias. In future studies, innovative research tools, such as hand-held computerized daily diaries, may prove particularly useful in reducing bias associated with retrospective accounts of sexuality stress and support. It is also important to note that retrospective designs cannot

account for participants' baseline levels of functioning, prior to the occurrence of stressors or support. For these reasons, the current study cannot ascertain the causal directions of associations between sexuality stress, social support, and individuals' psychological functioning. However, results suggest a need for longitudinal studies incorporating experiences of both sexuality stress and sexuality related support in predicting psychological and behavioral functioning among same-sex attracted youth. In particular, prospective longitudinal designs will help to determine the mechanisms by which sexuality related support moderates the effects of sexuality stress on emotional distress.

#### Research and Clinical Implications

Findings from the current investigation have important implications for research and clinical interventions with same-sex attracted youth. First, results suggest that sexuality related social support represents an important construct relevant to mental health among same-sex attracted youth. Unfortunately, support for coping with sexuality related problems appears to be less available than support or other types of problems, particularly from family members and heterosexual friends. These findings suggest that unidimensional measures of social support typically employed in studies of same-sex attracted youth fail to capture the specific domains of assistance most relevant to mental health. That is, same-sex attracted individuals' overall perceptions of support could remain relatively high, despite deficiencies in the types of assistance needed to protect them from the mental health consequences of sexuality related stress.

This study's measurement of both sexuality related and non-sexuality related support across three sources represents a significant advancement over previous studies

of same-sex attracted youth. However, given the small number of participants and limited statistical power, associations with mental health variables could not be separately examined for each of the six facets of support. Null findings for some hypotheses in the current study suggest the need for further inquiry in this area. It is hoped that these findings will stimulate future research utilizing multidimensional conceptualizations of social support. In particular, studies should examine whether specific types of support (e.g., sexuality related support from family members) might be more related to mental health than the overall availability of sexuality related support. Additionally, future studies might question youth about support from sources not specifically examined in the current investigation (e.g., parents, siblings, extended family, romantic partners). Even within a particular dimension of support, various types of supportive behaviors (e.g., emotional support, socializing, advice/guidance) may be available to a greater or lesser extent and may have differential effects on mental health (Vaux et al., 1987). Future studies employing multidimensional conceptualizations of support will help to better characterize the types of support most relevant to mental health among same-sex attracted youth.

Further research is also needed to examine individual or contextual factors that may be related to same-sex attracted young people's experiences of support, and that may influence the mental health effects of such support. Results of the current investigation suggest two important variables for consideration. First, participants' experiences of sexuality stress differed across gender. Consistent with previous investigations of same-sex attracted young people (e.g., D'Augelli et al., 2002) and the broader literature on attitudes towards lesbians and gay men (Herek, 1998), young men in the current sample

reported higher levels of sexuality stress than young women. Results of this study also suggested a second relevant contextual factor: the amount of time since an individual's initial sexual orientation disclosure. Specifically, as time since disclosure increased, the overall perceived availability of sexuality related support became more comparable to the availability of support for other types of problems not related to sexuality. The amount of time that has passed since an individual's initial sexual orientation disclosure appears to be an important contextual factor predicting the availability of sexuality related forms of support. Future studies should consider gender and time since disclosure, as well as other contextual factors, when proposing models of psychosocial risk and resilience among same-sex attracted youth.

Further research should also examine how sexuality related stress and social support relate to other psychological and behavioral problems not examined the current study. Outcomes for further investigation might include depression, suicidality, and risky sexual behavior. Although the current study employed a multidimensional conceptualization of *social support*, emerging evidence suggests that even *psychological and behavior outcomes* may differ across domains. For example, studies by Harter and colleagues suggest that adolescents' feelings of self-worth may vary across relational (e.g., friends versus parents) and situational (e.g., academics versus sports) contexts (Harter, Whitesell, & Junkin, 1998). These findings from the broader adolescent population may be particularly relevant to same-sex attracted youth, since they may experience highly disparate levels of stress and support across contexts. Findings of the current investigation highlight the importance of sexuality stress and sexuality related social support in the lives of same-sex attracted youth. As researchers move beyond the

traditional characterization of same-sex attracted youth as uniformly “at-risk,” these important sexuality related constructs may help differentiate youth who are at risk for psychological and behavioral difficulties from those who are not.

Results of the current investigation also have important implications for clinical and policy work with same-sex attracted youth. A substantial portion of young people in the study reported at-risk or clinically significant levels of emotional distress (25%). However, consistent with past studies of resilience of among same-sex attracted youth (Savin-Williams, 2005), the majority of participants did not report significant symptoms of distress. Results of the current study suggest that sexuality related social support may represent an important resiliency factor for youth who face stressors related to their same-sex attractions. Clinically, these findings suggest that bolstering provisions of sexuality related support may be crucial in interventions with these young people. The therapeutic relationship may represent one important source of sexuality related support, but treatment should also focus on addressing barriers to obtaining sexuality related support. For example, youth may benefit from assistance in disclosing their sexuality to potentially supportive family members and friends, overcoming discomfort surrounding sexuality-related support seeking, and connecting with new sources of sexuality related support. Results of this study suggest that other sexual minority peers represent particularly valuable sources of support, as they provide high levels of support across both sexuality related and non-sexuality related domains. Thus, programs that help same-sex attracted youth to connect with other sexual minorities in a supportive environment are likely to be beneficial. From a policy standpoint, the current investigation supports

the continued need for policies and programs aimed at providing same-sex attracted youth with support for coping with issues related to their sexuality.

Family members represent important sources of support for adolescents facing significant life stress. However, results of the current study suggest a dearth of sexuality related support from family members. These findings highlight the need for family-centered approaches to treatment with same-sex attracted youth. Although research on family adjustment to a child's sexual orientation is sparse, emerging evidence suggests that family-based interventions may be helpful in increasing family support and improving mental health outcomes among same-sex attracted young people (Willoughby & Doty, under review; Willoughby, Doty et al., 2008).

Results of the current investigation also inform the broader social support literature. In particular, findings from this study provide further evidence for the matching theory of social support, which suggests that only the most relevant types of support will be protective. This study of same-sex attracted young people provided a unique context for testing matching theory, given that the availability of stressor-relevant types of support (i.e., sexuality related support) differed greatly from the availability of support in other domains. Consistent with matching theory, results of this investigation suggest that research on stress and social support in other populations should also incorporate domain-specific measures of support. For instance, studies of youth with chronic illness should examine illness related forms of support, while research on youth with learning problems should examine forms of support that are relevant to academic functioning. Finally, in considering the broader implications of this study, it is important to note that sexuality related stressors are not exclusive to same-sex attracted youth.

Recent theoretical discourse has emphasized that same-sex attracted young people may be more similar to their heterosexual counterparts than not. Even heterosexual youth may face significant stressors related to their sexuality, including but not limited to sexual health concerns, pregnancy, or sexual harassment. Future research will be important in determining whether the lack of support for sexuality related problems found in the current study is a challenge faced by all youth, same-sex attracted and heterosexual alike.

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Figure 3.1

Figure Depicting the Interaction of Source and Domain in Predicting Perceptions of Available Social Support

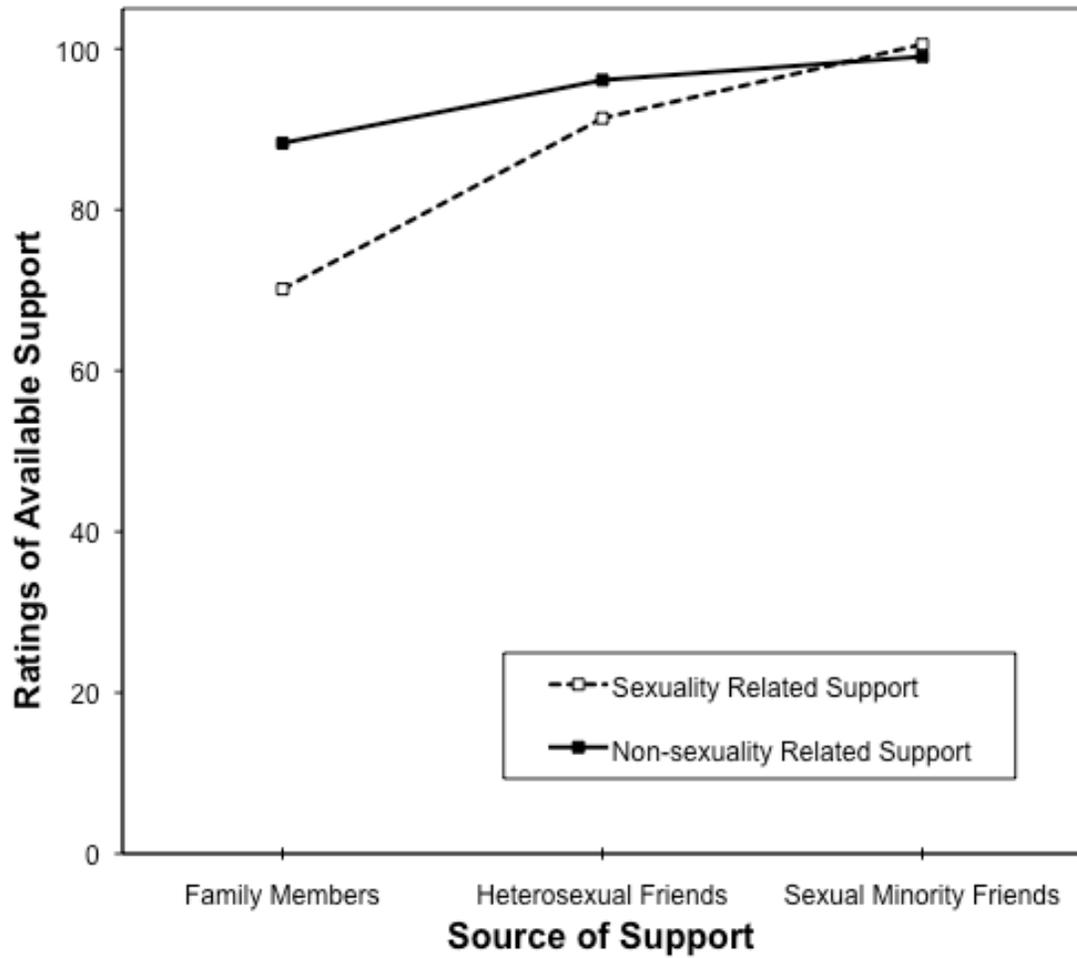


Figure 3.2

Figure Depicting the Interaction of Sexuality Stress and Sexuality Related Support in Predicting Emotional Distress

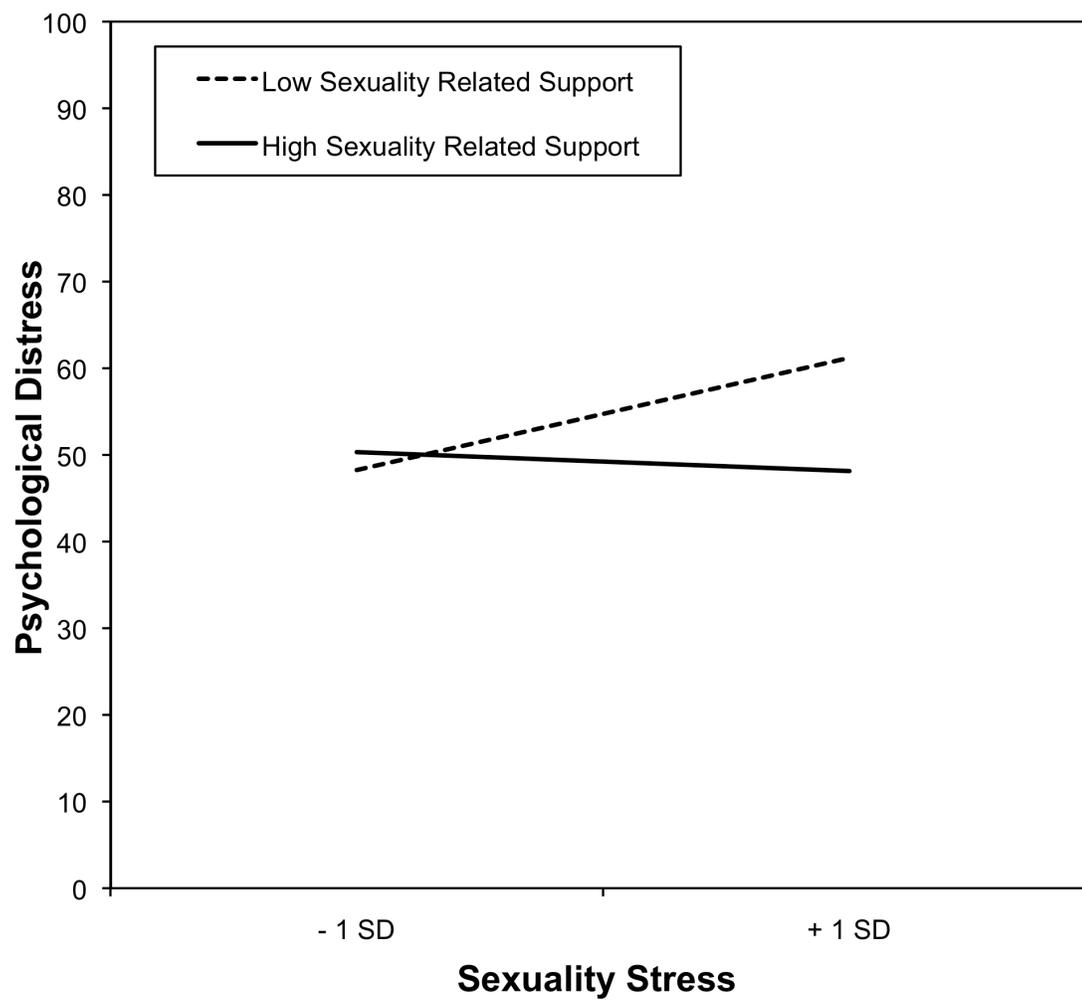


Table 3.1

Means, Standard Deviations, and Ranges of Study Variables (N = 98)

Items	Mean	SD	Range
Participant age (in years)	19.53	1.06	18–21
Time since initial sexuality disclosure (in months)	40.67	25.85	2–120
Total number of sexuality stressors in the past year	24.08	8.41	4–46
Sexuality related support from family members	70.89	24.65	22–110
Non-sexuality related support from family members	88.66	18.64	34–110
Sexuality related support from heterosexual friends	90.84	19.35	22–110
Non-sexuality related support from heterosexual friends	95.46	15.43	22–110
Sexuality related support from sexual minority friends	100.73	14.72	22–110
Non-sexuality related support from sexual minority friends	99.26	14.79	22–110
Total sexuality related support from all sources	262.46	39.71	161–330
Total non-sexuality related support from all sources	283.38	32.60	179–330
Emotional distress	52.51	14.25	5–95
Substance use severity	34.81	12.14	18–62

Table 3.2  
Pearson Correlations among Primary Study Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Total number of sexuality stressors in the past year	-										
2. Sexuality related support from family members	-.15	-									
3. Non-sexuality related support from family members	-.12	.67**	-								
4. Sexuality related support from heterosexual friends	-.03	.11	.01	-							
5. Non-sexuality related support from heterosexual friends	.06	.06	.16	.80**	-						
6. Sexuality related support from sexual minority friends	-.12	.18	.12	.25*	.24*	-					
7. Non-sexuality related support from sexual minority friends	-.15	.14	.11	.24*	.24*	.87**	-				
8. Total sexuality related support from all sources	-.15	.74**	.46**	.65**	.51**	.60**	.53**	-			
9. Total non-sexuality related support from all sources	-.11	.47**	.70**	.49**	.67**	.58**	.63**	.75**	-		
10. Emotional distress	.29**	-.10	-.06	-.30**	-.15	-.07	-.09	-.23*	-.14	-	
11. Substance use severity	.16	.06	.06	.00	.14	.02	.00	.05	.10	.08	-

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

Table 3.3

## Summary of Hierarchical Regression Analyses Predicting Emotional Distress (N = 91)

Predictor Variables	B	SE B	$\beta$
<b>Step 1</b>			
Constant	53.81	1.82	
Gender	-0.13	3.07	-0.13
$F(1,89) = 1.42$ Adjusted $R^2 = 0.01$			
<b>Step 2</b>			
Constant	69.06	12.66	
Gender	-4.04	3.07	-0.14
Total sexuality related support	-0.11	0.05	-0.31
Total non-sexuality related support	0.05	0.07	0.10
$F(3,87) = 2.27$ Adjusted $R^2 = 0.04$			
<b>Step 3</b>			
Constant	59.82	13.60	
Gender	-2.74	3.13	-0.09
Total sexuality related support	-0.09	0.06	-0.26
Total non-sexuality related support	0.04	0.07	0.08
Sexuality stress	0.31	0.18	0.19
$F(4,86) = 2.50^*$ Adjusted $R^2 = 0.06$			
<b>Step 4</b>			
Constant	-10.39	36.23	
Gender	-2.97	3.07	-0.10
Total sexuality related support	0.20	0.15	0.57
Total non-sexuality related support	0.02	0.07	0.04
Sexuality stress	3.29	1.44	1.94*
Sexuality support x Sexuality stress	-0.01	0.01	-1.82*
$F(5,85) = 2.94^*$ Adjusted $R^2 = 0.10$			

\* $p < .05$

Table 3.4

## Summary of Hierarchical Regression Analyses Predicting Substance Use (N = 93)

Predictor Variables	B	SE B	$\beta$
Step 1			
(Constant)	33.77	1.50	
Gender	1.01	2.55	0.04
$F(1,91) = 0.16$ Adjusted $R^2 = -0.01$			
Step 2			
(Constant)	24.64	10.75	
Gender	0.56	2.63	0.02
Total sexuality related support	-0.02	0.05	-0.05
Total non-sexuality related support	0.05	0.06	0.13
$F(3,89) = 0.33$ Adjusted $R^2 = 0.02$			
Step 3			
(Constant)	16.35	11.61	
Gender	1.74	2.68	0.07
Total sexuality related support	0.00	0.05	0.00
Total non-sexuality related support	0.04	0.06	0.11
Sexuality stress	0.27	0.15	0.19
$F(4,88) = 1.04$ Adjusted $R^2 = 0.00$			
Step 4			
(Constant)	-12.78	31.59	
Gender	1.64	2.68	0.07
Total sexuality related support	0.12	0.13	0.40
Total non-sexuality related support	0.03	0.06	0.09
Sexuality stress	1.50	1.26	1.09
Sexuality support x Sexuality stress	-0.01	0.01	-0.93
$F(5,87) = 1.03$ Adjusted $R^2 = 0.00$			

\* $p < .05$

