

PSYCHOLOGICAL ADJUSTMENT OF SEXUAL MINORITY YOUTH
FROM RURAL AND NON-RURAL AREAS

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Chapter 1

Adolescent development does not occur in a vacuum, but is affected by multiple influences, including personal factors, social interactions with others, and the impact of one's culture and environment (Bronfenbrenner, 2001). Such factors are integral when an individual is developing his or her sexual identity as well (D'Augelli, 1994b). Sexual minority or gay, lesbian, bisexual, and questioning (GLBQ) adolescents, are often faced with distinct challenges and barriers due to environmental and interpersonal factors. Such barriers and challenges may ultimately impact their psychosocial development.

The unique challenges faced by sexual minority adolescents include the disclosure of one's sexuality, victimization, a lack of social support, an increase in rates of depression and suicidality, and a decrease in levels of self-esteem (Boxer, Cook, & Guilbert, 1999; Cohen & Savin-Williams, 1996; D'Augelli, Hershberger & Pilkington, 2001; Galliher, Rotosky, & Hughes, 2004; Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998; Martin & D'Augelli, 2003). Based on an ecological theory of development (Bronfenbrenner, 1979), if an individual grows up in a heterosexist macrosystem, such as a rural environment (Herek, 2002), then a sexual minority adolescent would be expected to have poorer psychosocial adjustment as compared to someone not from such an environment. A rural environment in the current study is defined as any area in the United States that has a population density of less than 500 people per square mile (United States Census Bureau, 2002). The purpose of this study is to explore whether

there are differences in psychosocial adjustment among rural and non-rural sexual minority male and female college students.

Ecological Theory of Human Development

Bronfenbrenner's (1988, 2001) Ecological Theory of Human Development proposes that proximal and distal influences impact individual development. This theory postulates that ongoing reciprocal interactions exist between personal variables (genetic, biological and psychological factors), others within the individual's immediate setting, and the individual's culture. The subjective experience of interpersonal and environmental interactions, and the emotional connection to these interactions, can influence current and future development (Bronfenbrenner, 2001). Importance is placed on direct interpersonal interactions and the influence the environment has on them. Bronfenbrenner (1979, 1988) theorized that individual development centers on the reciprocal interaction of a variety of systems in one's environment. The aforementioned systems are the microsystem, mesosystem, exosystem, and macrosystem, and are seen as having an interdependent influence upon one another. A change in one system has the potential to impact all other systems.

Emphasis in this study is placed on the microsystem (interpersonal interactions) and how the macrosystem (culture or environment) impacts the processes which take place in the microsystem. Development is highly affected by the individual's microsystem. Proximal influences, such as persons or objects, are features of the microsystem which have a direct impact on an individual, and have the most potential to

influence development (Bronfenbrenner, 1988). Thus, positive proximal influences are integral in healthy development (Bronfenbrenner & Ceci, 1994).

Distal mechanisms, on the other hand, are features in the environment that impact the strength or direction of proximal processes, and are the characteristics of the macrosystem that affect the microsystem (Bronfenbrenner, 1988). Such characteristics include an individual's culture, subculture, or specific societies (Bronfenbrenner, 1979). The macrosystem is the most distal means of influence, and consists of an "overarching pattern of ideology and organization of the social institutions common to a particular culture or subculture" (Bronfenbrenner, 1988, p.81). Thus, a microsystem is directly and indirectly influenced by the values and beliefs of a macrosystem. Positive distal influences are also a necessity as such influences encourage healthy development of all facets (Bronfenbrenner, 1979, 1988).

Sexual Identity Development

An aspect of development that has the propensity to be impacted by the macrosystem is sexual identity development. A lifespan model of sexual identity development created by D'Augelli (1994b), with emphasis placed on cultural, social and historical factors, is used in conjunction with the ecological theory of development. Sexual identity development is seen as a response to environmental cues, and biological and psychological variables. It is often characterized by shame and fear (D'Augelli, 1994a). Such shame and fear is often a result of interpersonal interactions with others in an individual's environment.

D'Augelli (1994a) proposes six steps that lead to the integration of sexual identity: exiting heterosexual identity, developing a LGB (lesbian, gay bisexual) personal identity status, developing a LGB social identity, becoming a LGB offspring, developing a LGB intimacy status, and entering a LGB community (D'Augelli, 1994a). Integral to these steps is self-acceptance, soliciting support from others, developing a sense of meaning and identity, integrating and challenging heterosexist messages which are perpetuated by the macrosystem, developing intimate same sex relationships, and if an individual chooses to, advocating for social change (D'Augelli, 1994a). An individual's environment or macrosystem has the potential to influence how much time is spent in each step; furthermore, a change in environment may encourage or hinder development (D'Augelli, 1994a). Thus, the importance of living in an accepting macrosystem cannot be overlooked in sexual identity development. Unfortunately, many sexual minorities from rural areas are not afforded such an environment (Herek, 2002).

Attitudes towards Sexual Minorities

Residents of rural areas have been found to express more hostile attitudes towards sexual minorities than those from non-rural areas (Herek, 2002). Many characteristics common to individuals in rural areas have been found to correlate with negative attitudes towards sexual minorities: political conservatism, higher levels of religiosity, and valuing traditional morals (Eldridge, Mack & Swank, 2006; Herek, 1994; Herek, 2002; Lindhorst, 1997; Lyons, 2003; Moses & Buckner, 1980; Overby & Barth, 2002; Rounds, 1988). However, the amount of education and contact with this population has been found to account for more variance in attitudes towards sexual

minorities than these other variables. It has been established that individuals in rural areas are less educated in general and have less contact with sexual minorities, which may lead to such negative attitudes (Bauman & Graf, 2003; Eldridge et al., 2006; Herek & Glunt, 1993; Loftus, 2001; Overby & Barth, 2002). Therefore, being faced with such attitudes is likely to impact rural sexual minorities in a negative way.

Issues Faced by Sexual Minority Adolescents in Rural Areas

The impact such a macrosystem has on sexual minority adolescents may be further perpetuated by the barriers to receiving mental health care in rural areas. Individuals from rural areas have less access to mental health treatment than those in non-rural areas (Wagner, Menke, & Ciccone, 1995). Only 25% of youth from rural areas who need mental health services receive them (Cutrona, Halvorson & Russell, 1996; Martin, Kupersmidt, & Harter, 1996). It is likely that this statistic may be higher for rural sexual minority adolescents since they may not feel comfortable seeking help for such issues, even though no information could be found on the topic. Based on Bronfenbrenner's (1979) theory, sexual minority adolescents from rural environments are likely to have higher rates of psychosocial maladjustment, due to living in a macrosystem that perpetuates negative attitudes. Additionally, the fact that mental health services may not be available to deal with the effects of such a macrosystem could also perpetuate psychological maladjustment among gay and lesbian adolescents.

Sexual Minority Adolescent Psychosocial Adjustment

Sexual Minority adolescents have higher rates of depression and suicide, and have lower levels of self-esteem as compared to heterosexual youth (Boxer et al., 1999; Cohen

& Savin-Williams, 1996; D'Augelli et al., 2001; Galliher et al., 2004; Garofalo et al., 1998; Martin, & D'Augelli, 2003). Findings regarding rates of depression and suicidality have been mixed between rural and non-rural environments (Adcock, Nagy & Janis, 1991; Caldwell, Jorm & Dear, 2004; Hirsch, 2006; Kovess-Masfety, Lecoutour & Delavelle, 2005; Patten, Stuart, Russell, Maxwell & Arboleda-Florez, 2003; Wang, 2004). No differences between members of rural and non-rural communities on levels of self-esteem have been found, however (Cohen & Savin-Williams, 1996; Galliher et al., 2004). Little quantitative research has been conducted looking at differences between rural and non-rural sexual minority adolescents. However, based on Bronfenbrenner's theory, one would expect sexual minority adolescents from a heterosexist rural environment, with less access to mental health care, to be at a higher risk for depression, suicidality and victimization, and lower rates of self-esteem (psychosocial maladjustment) than other groups.

Depression. Research consistently finds that sexual minority adolescents have higher rates of depression as compared to heterosexual adolescents (Bontempo & D'Augelli, 2002; Boxer et al., 1999; Elze, 2002; Galliher et al., 2004; Safren & Heimberg, 1999; Urdy & Chantala, 2002). Within group differences have also been found on rates of depression among the sexual minority adolescent population (Galliher et al., 2004). However, studies assessing rates of depression between persons from rural and non-rural communities have produced mixed findings. Some reported higher rates of depression in urban areas, while others have found higher rates of hospitalization for depression in rural areas, and some have found no difference at all between rural and

non-rural areas (Adcock et al., 1991; Kovess-Masfety et al., 2005; Patten et al., 2003; Wang, 2004). Therefore, it is important to assess whether or not being a sexual minority adolescent puts an individual at a higher risk for depression if he or she lives in a rural environment.

Urdu and Chantala (2002) found that gay male adolescents reported being more depressed than did bisexual or heterosexual males. Lesbian adolescents were found to have twice the rate of depression as their bisexual or heterosexual counterparts, as well. However, females in general were found to have higher rates of depression than males in this study. Galliher et al. (2004) also found that females in general reported the highest rates of depressive symptoms, while rural males were found to have the lowest rates of depression as compared to all other groups. Heterosexual adolescents were found to have the lowest levels of depression as compared to bisexual and homosexual adolescents as well.

Reasons for higher rates of depression in gay and lesbian adolescents are not usually assessed in these studies. However, Safren and Heimberg (1999) assessed rates of psychological adjustment among sexual minority adolescents and explored external variables that may influence adjustment. Rates of depression were predicted by an adolescent's lack of social support, level of stress, and attempts to deal with being accepted by others, rather than sexual minority status alone. Based on such results, sexual minority adolescents in rural areas who are faced with negative attitudes may struggle with being accepted by others and lack social support, which ultimately may lead to higher levels of depression.

Suicidality. It is not surprising, since sexual minority adolescents are at high risk for depression, that this population is also found to be at a higher risk for suicidality (D'Augelli et al., 2001; Eisenberg & Resnick, 2006; Garofalo et al., 1998; Russell & Joyner, 2001; Savin-Williams & Cohen, 1996; Safren & Heimberg, 1999; Urdy & Chantala, 2002). Some researchers contend that sexual minority status alone may not be to blame for such high rates, however (Savin-Williams, 2001; Savin-Williams & Ream, 2003b; Shaffer, Fisher, Hicks, Parides & Gould, 1995).

Approximately 35% of sexual minority adolescents have admitted to having suicidal ideation and making suicide attempts (D'Augelli, et al., 2001; Eisenberg & Resnick, 2006; Rosario, Schrimshaw & Hunter, 2005; Safren & Heimberg, 1999). Other studies have compared levels of suicidality among sexual minority and heterosexual adolescents, and have found that sexual minority adolescents are two to three times more likely to have suicidal thoughts or attempts than heterosexual adolescents (Garofalo et al., 1998; Russell & Joyner, 2001). Reasons for such high rates of suicidality have been proposed. Some suggest that suicidality is related in part to an individual's sexual orientation status, with higher rates of suicide attempts occurring among those who had not disclosed his or her sexuality to a parent (D'Augelli et al., 2001). Other researchers argued that sexual orientation status has little to do with suicidality. Sexual orientation status was found to only account for 1% of the variance in predicting suicidality when environmental factors such as social support, acceptance, and stress were taken into account (Safren & Heimberg, 1999). In addition, having lower levels of social support

and feelings of safety in one's environment were found to account for higher rates of suicidality than sexual orientation (Eisenberg & Resnick, 2006).

Researchers have also challenged the notion that sexual minorities are at a higher risk for suicidality. The way suicidality and sexual minority status has been operationalized in past studies may have biased the results of research studies with this population (Savin-Williams, 2001). For example, Savin-Williams and Ream (2003b) contended that methodological issues, such as only recruiting participants from GLBT support groups, may inflate statistics, since the makeup of the support group may lead to oversampling of suicidality. Thus, assessing a more representative population may reflect more accurate rates.

Self-esteem. Just as depression and suicidality have been found to be high in adolescent sexual minorities, self-esteem has also been identified as an important variable in the adjustment of this population. Sexual minority adolescents have consistently been found to have low levels of self-esteem (Boxer et al., 1999; Galliher et al., 2004; Rosario, Rotheram-Borus & Reid, 1996). Additionally, a positive relationship has been found between disclosure of one's sexuality and increased levels of self-esteem (Boxer et al., 1999; Cohen & Savin-Williams, 1996; Rosario et al., 1996). Minimal research has been conducted exploring the differences on levels of self-esteem of sexual minorities from rural and non-rural environments (Galliher et al., 2004).

Prior to coming out about his or her sexuality, a sexual minority adolescent is likely to have low levels of self-esteem; however, after such disclosure, there appears to be a rise in self-esteem (Boxer et al., 1999). Rosario et al. (1996) found similar results

regarding changes in self-esteem; however, the researcher noted that higher levels of self-esteem did not necessarily protect sexual minority adolescents from stress or problematic behaviors. Another study, however, contradicts such findings, showing no differences on levels of self-esteem of sexual minority adolescents between those who had disclosed their sexuality and those who had not (Diamond & Lucas, 2004). However, such a discrepancy may be due to participants in the Diamond and Lucas (2004) study being more open in general about their sexuality and having a large number of sexual minority friends; as well, methodological differences between the three samples may also have led to conflicting results.

Cohen and Savin-Williams (1996) found urban adolescents tended to be more open about their sexual identity than rural adolescents. It is possible that this may be due to sexual minorities in rural areas trying to remain invisible because of the nature of such environments (D'Augelli & Hart, 1987). Therefore, lower levels of self-esteem might be expected among rural sexual minority adolescents since such an individual is less likely to be open about his or her sexual orientation. Main effects for differences between rural and non-rural sexual minorities were not found, though (Galliher et al., 2004). Even though such differences have not been found, the impact of being open about one's sexuality on self-esteem cannot be denied. Even though contradictory evidence exists on the impact of coming out on self-esteem, having supportive others to disclose one's sexuality to, appears to aid in the development of self-esteem (Boxer et al., 1999; Rosario et al., 1996); therefore, the importance of social support cannot be overlooked.

Social Support. Social support has been found to contribute to psychological adjustment among sexual minority adolescents (D'Augelli, et al., 1987; Espelage, Aragon, Birkett & Koenig, 2008; Goodenow, Szalacha & Westheimer, 2006; Kosciw, Diaz & Greytak, 2008; Munoz-Plaza, Quinn & Rounds, 2002; Ueno, 2005). It has also been identified as a buffer against the effects of victimization (Hershberger & D'Augelli, 1995; Goodenow, et al., 2006; Kosciw, et al., 2008; Ueno, 2005). However, minimal research has been conducted on the impact of social support on sexual minority adolescents in rural areas (Ueno, 2005).

Ueno (2005) reported that psychological distress of sexual minority adolescents is higher among those who have been victimized, have had arguments with parents, and have had negative interpersonal interactions with others. In addition, distress was found to be lower among those who had a good attachment to parents and friends. Support from family members was a buffer against the psychological impact that victimization had on sexual minority adolescents as well (Ueno, 2005). Parental support also mediated the effects of homophobic teasing on adolescent males, with moderate to high levels of parental support leading to higher rates of psychological adjustment (Espelage et al., 2008).

No significant differences in social support have been found for sexual minority adolescents based on urbanicity (Ueno, 2005). Yet, involvement with social groups and social activities for adult lesbians in a rural community was found to correlate with fewer personal problems (D'Augelli et al., 1987). Adolescent sexual minorities may not have the same opportunity to join social groups as adult sexual minorities in rural areas,

however (D'Augelli et al., 1987). In fact, Ueno (2005) reported that sexual minority adolescents often do not belong to gay communities, primarily because sexual minority adolescents often underestimate the presence of other sexual minorities in the same school. In addition, they may not belong to such groups because of the fact that they may lose anonymity. Thus, if sexual minority adolescents in general have trouble joining groups, it would be even harder for someone in a rural community.

Sexual minority adolescents are at a disadvantage not belonging to gay communities because social support has proven to be a protective factor for this population. Level of attachment to parents and support from peers has been found to positively correlate with psychosocial adjustment (Ueno, 2005). However, little research exists looking at whether or not social support ameliorates sexual minority adolescent's psychological maladjustment. Therefore, social support is essential to this study, especially since it buffers the effects of victimization.

Victimization. Sexual minority adolescents have been found to have higher rates of victimization than heterosexual adolescents (Bontempo & D'Augelli, 2002; Busseri, Willoughby, Chalmers, & Bogaert, 2006; Espelage et al., 2008; Saewyc et al., 2006; Swearer, Turner, Givens & Pollack, 2008). Higher rates of victimization have also been found among sexual minority youth living in rural environments as compared to those in non-rural environments (Kosciw et al., 2008), and the more open an individual is about his or her sexuality, the more likely that individual is to be victimized (D'Augelli, Pilkington & Hershberger, 2002; Pilkington & D'Augelli, 1995). A negative correlation has been found between sexual minority victimization and psychosocial adjustment

(Bontempo & D'Augelli, 2002; Busseri et al., 2006; Espelage et al., 2008; Kosciw et al., 2008; Russell & Joyner, 2001; Swearer et al., 2008); however, if such an individual has higher rates of parental support and self-acceptance, the psychological effects of victimization appears to be lessened (Hershberger & D'Augelli, 1995).

Kosciw et al. (2008) reported that 90% of GLBT students surveyed reported hearing anti-GLBT remarks on a regular basis. Sexual minority victimization of adolescents is more often verbal than physical in nature (Kosciw et al., 2008; Pilkington & D'Augelli, 1995). However, a large percentage (44%) of the sexual minority population also experiences physical harassment (Kosciw et al., 2008). Sexual minority males have been found to experience higher rates of verbal and physical victimization as compared to females (D'Augelli et al., 2002). Furthermore, males have been found to have more severe reactions to such victimization. For example, highly victimized males are more likely to change public behaviors, carry a weapon for self-defense, abuse substances, and have higher rates of suicidality than females (Bontempo & D'Augelli, 2002; Pilkington & D'Augelli, 1995).

Higher rates of victimization have been found among sexual minority adolescents in rural environments as compared to non-rural environments as well (Kosciw et al., 2008). Individuals from rural environments report more sexual, relational and electronic harassment due to one's sexual orientation, as compared to those from nonrural areas (Kosciw, et al., 2008). Higher rates of homophobic language have been reported by adolescents in rural high schools as compared to nonrural high schools; adolescents from

rural areas also reported less support in dealing with such language in schools as compared to nonrural adolescents (Kosciw et al., 2008).

Compared to high schools, though, there appears to be a trend in the research showing that victimization on college campuses has decreased over the last few decades (D'Augelli, 1992; Rankin, 2003). Such a decrease would suggest that college campuses are becoming more accepting of sexual minority students. In the late 1980's, D'Augelli (1992) reported that 77% of sexual minorities surveyed experienced victimization on a college campus. Most reported verbal abuse, while one quarter reported some sort of physical abuse. However, in comparison, a study conducted by Rankin (2003) showed a dramatic difference in rates of victimization. Only 36% of students reported verbal harassment, which demonstrates a 40% drop in one decade. Such information supports the fact that college campuses are not immune to victimization, but have also become less hostile over the past few years. Methodological issues in sampling may be the real reason there has been a decrease in rates of victimization, with the D'Augelli (1992) study only including those who self-identified and were open about their sexuality. Nevertheless, in comparison to the 90% of students experiencing verbal homonegativity and 44% experiencing physical harassment in high schools (Kosciw et al., 2008), the college environment appears to be a less hostile macrosystem.

It is apparent that victimization negatively affects psychological adjustment in the sexual minority population. Furthermore, higher rates of victimization are experienced by rural sexual minorities, and sexual minorities in high school, while less victimization in general is reported on college campuses. Based on such information, rural sexual

minorities would be expected to have higher rates of victimization, which has the propensity to impact psychological adjustment.

Summary

Based on this review of the research, sexual minority adolescents are at risk for higher levels of depression, suicidality, and victimization, and lower levels of self-esteem than their sexual majority adolescent counterparts. Gender differences were also found, with males reporting higher rates of victimization and higher levels of suicidality than females, while females reported higher rates of depression and lower levels of self-esteem than males. Social support has been found to be an important factor in impacting these psychological variables, as well as buffering the impact of victimization. Rates of verbal, physical and electronic harassment are higher among rural than non-rural sexual minority adolescents. Research suggests that victimization on college campuses on the other hand, has decreased over the last decade; however, little research has been conducted looking at the psychological impact of victimization on sexual minority college students.

When viewing such information through Bronfenbrenner's (1979) framework, sexual minority adolescents living in a macrosystem that values a heterosexist philosophy may be at a disadvantage as compared to their heterosexual counterparts. Such a macrosystem may perpetuate negative microsystems, such as victimization. Furthermore, lacking positive proximal influences, such as social support and mental health resources in rural areas, sexual minority adolescents in rural areas may have poorer psychological adjustment than those in non-rural areas or a more accepting macrosystem.

Purpose of the Present Study

The purpose of the present study is to explore differences between sexual minority adolescents from rural and non-rural areas on depression, suicidality, and self-esteem (as the composite variable psychological maladjustment), when controlling for social support. Furthermore, the present study is also interested in whether there is a change in the aforementioned variables when an individual spends more time in a less hostile macrosystem. Bronfenbrenner's (1979) theory contends that a change in macrosystem can impact individual adjustment in a positive or negative manner, depending on the macrosystem; however, this theory makes no proposition about how long an individual needs to experience the new macrosystem before a noticeable change occurs. Thus, the current study attempts to explore the time element, with hopes that this may add a new component to his theory. In addition, the present study is interested in exploring the impact of victimization on sexual minority adolescents' psychological adjustment and whether or not higher rates of victimization are experienced by those in rural areas compared to those in nonrural areas.

Research Questions

1. Do gay and lesbian adolescents from rural environments have higher rates of depression and suicidality, and lower rates of self-esteem, than those from non-rural environments after controlling for social support?
2. Is a college campus a less hostile macrosystem than a rural environment for sexual minorities from rural areas?

3. Does the amount of time spent in a less hostile macrosystem decrease depression and suicidality, and increase rates of self-esteem for rural sexual minority college students after controlling for social support?
4. Are there differences in rates of victimization between sexual minorities from rural and non-rural environments?
5. Will gender differences exist on levels of depression, suicidality, self-esteem and victimization among sexual minority college students after controlling for social support?
6. Does amount of victimization experienced by sexual minorities correlated with rates of depression, suicidality and self-esteem?

Hypotheses

1. Rural sexual minority male and female students will report higher rates of psychological maladjustment (depression, suicidality, self-esteem) than non-rural sexual minority male and female students, after controlling for social support.
2. Rural sexual minority male and female students will report lower rates of victimization at college than in their home environment.
3. The amount of time spent at college for rural sexual minority male and female students will be positively correlated with psychological adjustment, after controlling for social support.
4. Rural sexual minority male and female students will report higher rates of victimization overall than non-rural sexual minority male and female students.

5. Sexual minority male and female students will differ on rates of victimization reported, and level of suicidality, depression and self-esteem, after controlling for social support.
 - 5a. Regardless of home environment and time spent in the macrosystem, sexual minority males will report higher rates of victimization and suicidality than sexual minority females, after controlling for social support.
 - 5b. Regardless of home environment and time spent in the macrosystem, sexual minority females will report higher levels of depression and lower levels of self-esteem than sexual minority males, after controlling for social support.
6. The amount of victimization experienced by sexual minority students will be positively correlated with psychological maladjustment (i.e., the higher the level of victimization, the higher rates of depression and suicidality, and the lower the levels of self-esteem).

Definition of Terms

Variables in the current study will be operationally defined as follows.

Sexual Minority: An individual who self-identifies as having engaged in same sex behavior, having same sex attraction, fantasies and thoughts at least 50% of the time; and, any individual who self identifies as a sexual minority, whether or not the individual has engaged in same sex behavior (Meyer & Wilson, 2009).

Rural: Any area in the United States with a population density of less than 500 people per square mile (United States Census, 2002).

Non-rural: Any area in the United States with a population density of greater than 500 people per square mile (United States Census Bureau, 2002).

Depression: Depression is a state of being that is characterized by a decreased mood which may include the following: sadness, irritability, anhedonia, change in weight or appetite, psychomotor agitation or retardation, feelings of worthlessness, and thoughts of death or suicidal ideation (American Psychiatric Association, 2000), as measured by the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977).

Suicidality: The presence of suicidal threats, ideation, or attempts, currently or in the past. Suicidality is also defined as the likelihood that an individual will commit suicide in the future, as measured by the Suicidal Behavior Questionnaire- Revised (SBQ-R; Osman, Bagge, Guitierrez, Konick, Kopper et al., 2001).

Self-Esteem: Self-esteem is an individual's general feelings of self-acceptance and worth, the overall positive or negative attitude one has towards the self, as measured by the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1989). For the purpose of this study, self-esteem is viewed globally, rather than specific.

Social Support: Social support is an individual's perception of having important others available when in need, feeling as if he or she has someone to talk to, and feeling that he or she has someone to receive help from when needed (Zimet, Dahlem, Zimet & Farley, 1988). Social support received from family, friends or significant others are of focus for the current study, as measured by the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988).

Victimization: Victimization is defined as actual or threatened verbal and physical harassment, which may occur in person or electronically, based on one's sexual orientation, as measured by a scale developed by Herek and Berrill (1992) and a measure developed by Finn (2004).

Chapter 2

Literature Review

Individual development does not occur in a vacuum, but is affected by multiple influences. Such influences are an individual's personal factors, social interaction with others, and the influence of one's culture and environment (Bronfenbrenner, 2001). These factors are integral when an individual is developing his or her sexual identity as well (D'Augelli, 1994b). Sexual minority adolescents are often faced with unique challenges which stem from the environment they are in. Environments or macrosystems which are affirming and accepting are likely to promote positive interpersonal interactions and growth within the individual, while negative environments may impede an individual's development and lead to psychosocial maladjustment (Bronfenbrenner, 2001).

Based on an ecological theory of development, if an individual grows up in a heterosexist macrosystem, such as a rural environment (Herek, 2002), then a sexual minority individual would be expected to have poorer psychosocial adjustment as compared to those from a more accepting environment. Therefore, the current study explores whether there are differences in psychosocial adjustment among rural and non-rural sexual minority male and female college students. Furthermore, based on an ecological theory of development, the more time a rural sexual minority adolescent is

exposed to an accepting macrosystem, such as a college campus, it is assumed that such distal influences will affect one's proximal interactions, and lead to better psychosocial adjustment.

A great deal of research over the past decade or so has confirmed the psychological maladjustment of sexual minority adolescents in general; however, little to no research has been conducted on psychosocial adjustment of this population on college campuses (Rhoads, 1994). Of the research that does exist regarding sexual minorities in higher education, a general trend of maladjustment has been found (Peterson & Gerrity, 2006; Westefeld, Maples, Buford & Taylor, 2001). In a review of the literature, Rhoads (1994) found the majority of studies (77%) focused on attitudes towards sexual minority students on campuses, while the minority focused on experiences of such students (23%). Most studies looking at sexual minority psychosocial adjustment reviewed in the current paper include participants between the ages of 14 and 21. Even though college students may be included in the studies reviewed, little emphasis has been placed on college students' experiences and adjustment in higher education. For the purposes of the current research question, however, emphasis will be placed on the psychosocial adjustment of college students, those typically ranging between 18 and 22.

Ecological Theory of Human Development

Bronfenbrenner's (1988, 2001) Ecological Theory of Human Development postulates that an individual's development is influenced by proximal and distal influences. This theory proposes that an individual's development is an ongoing reciprocal interaction between personal variables (genetic, biological and psychological

factors), others within the individual's immediate setting, and the individual's culture. Emphasis is placed on an individual's direct interpersonal interactions, and the environment in which these interactions take place. One's phenomenological experience of his or her environment and interactions, and the presence of positive or negative emotions, can contribute to one's current and future development (Bronfenbrenner, 2001). Bronfenbrenner (1979, 1988) theorizes that one's development hinges on the reciprocal interaction of the various systems in the environment. These systems are identified as the individual's microsystem, mesosystem, exosystem, and macrosystem. The ecological environment is seen as a set of systems, each nested inside of the next. A change in one system has the potential to affect all other systems.

Bronfenbrenner (1988) proposes that proximal mechanisms are certain features in the microsystem (persons, objects or symbols), which have a direct impact on an individual, and have the potential to influence developmental change. These mechanisms are most influential early in an individual's development, but also directly affect the course of an individual's lifespan (Bronfenbrenner & Ceci, 1994). Bronfenbrenner and Ceci (1994) further promote the importance of such processes by proposing that proximal influences can have a direct impact on the degree to which one's genetic potentials are brought to fruition. In doing so, proximal processes also have the potential to lead to more sophisticated levels of development. The reciprocal nature of proximal processes cannot be overlooked. The developing individual influences or shapes the reactions of important others in the immediate environment, just as important

others influence the individual. Emphasis is also placed on the consistency of regular positive interactions with proximal mechanisms over a period of time.

Proximal influences are present in an individual's microsystem. Since this is where proximal processes occur, development is impacted the most by this system. One's role, interpersonal interactions, and everyday activities are considered the building blocks of the microsystem. Microsystems consist of daily, one-on-one reciprocal interactions in the home, school, church or other settings in which proximal influences are present (Bronfenbrenner, 1979). Bronfenbrenner (1979) proposes that "the aspects of the environment that are most powerful in shaping the course of psychological growth are overwhelmingly those that have meaning to a person in a given situation" (p. 22). Therefore, positive interpersonal interactions or bonds are emphasized as vital proximal influences of healthy development, and are even seen as buffers against negative environments or deficits in heritability (Bronfenbrenner & Ceci, 1994). Conversely, negative proximal processes are assumed to impede an individual's healthy development and functioning.

Even though the microsystem is seen as pivotal, Bronfenbrenner (1979) also emphasizes the importance of distal influences. Distal mechanisms are characteristics in the environment which impact the strength or direction of proximal processes (Bronfenbrenner, 1988). The mesosystem is a combination of the individual's different microsystems in which reciprocal interaction between microsystems occur in some manner. An individual's different microsystems may be connected through various social networks, by other individuals who are participants in both microsystems, or

through differing types of communication which can occur between microsystems. In addition, the individual's phenomenological experience of the differing values and expectations of the different microsystems can also create one's mesosystem. Furthermore, characteristics of one's mesosystem change when an individual becomes involved in a new microsystem (Bronfenbrenner, 1979).

Distal mechanisms also have the propensity to impact proximal processes indirectly. The exosystem contains multiple settings, of which an individual may participate in some, but not others. However, a distal influence in which the individual has no direct interaction, still affects the individual's development by influencing proximal processes. Therefore, an individual's development is not only affected by settings in which he or she is an active participant, but is also influenced by settings the individual is not actively engaged in. Such settings may be ones in which the individual's parent participates, such as work or various social groups. Another influence would be a microsystem an individual's friend participates in, such as interaction with his or her family or another school. Nevertheless, interactions which occur outside of the individual's microsystems are still found to indirectly influence interactions with the individual in some manner (Bronfenbrenner, 1979).

Even more distal influences are found to impact an individual through one's macrosystem. This system represents one's culture, which includes the characteristics of specific societies or subcultures (Bronfenbrenner, 1979). The macrosystem is seen as the most distal means of influence. This system consists of an "overarching pattern of ideology and organization of the social institutions common to a particular culture or

subculture” (Bronfenbrenner, 1988, p.81). Interactions between one’s microsystem, mesosystem, and exosystem are directly influenced by the values and beliefs present in one’s society and environment. Just as positive proximal interactions in one’s microsystem are necessary for development and attainment of one’s potential, so are distal processes present in the other systems. Distal mechanisms may influence the ability of proximal processes to promote healthy development within an individual (Bronfenbrenner, 1979, 1988). Thus the importance of reciprocal interaction between systems cannot be denied. If an individual is in a positive environment which encourages individuality and promotes growth, proximal processes may not be as pivotal. However, in an environment which impedes individual development in some manner, positive proximal interactions may overcompensate for such deficits, and promote healthy development and the achievement of maximum heritability (Bronfenbrenner & Ceci, 1994).

Summary. Adolescent development is affected by proximal and distal influences. Such influences occur in a reciprocal manner, based on the adolescent’s interactions with important others, society, and culture. Variables such as genetic and psychological issues are impacted by such interactions. Emphasis in this theory is placed on an individual’s direct interpersonal interactions with influential others. The more positive the interaction an adolescent has, the better his or her development overall. One’s macrosystem is seen as the most distal form of influence; however, such influence can strongly impact one’s microsystems and the other interrelated systems. Change in the macrosystem has the potential to influence all other systems in the ecological

environment, as well as personal factors within the individual. As sexual minority adolescents transition from a non accepting macrosystem, such as a rural community, to a more accepting macrosystem, such as an affirming college campus, they may experience an increase in social support, and a decrease in negative attitudes. In turn, this may lead to a change in the individual's personal factors and interactions with his or her microsystems, which may have the propensity to positively impact sexual identity development.

Sexual Identity Development

D'Augelli's Model of Sexual Identity Development (1994b) proposes a lifespan model of development for both male and female sexual identity development. The author emphasizes the importance of cultural, social and historical factors as influences in the development of sexual identity. In contrast to other sexual identity theories, D'Augelli theorizes that individuals develop and change throughout the lifetime, in a response to environmental cues, and biological and psychological variables. Such a model assumes individual differences in development, and views sexuality as fluid during some parts of the lifespan, and more set during others. Family is also regarded as an active influence on the sexual identity development of a gay or lesbian adolescent. This model is not a stage model; instead, sexual identity development is seen as a lifelong process where individuals may work on multiple phases at the same time.

Sexual identity development is a personal struggle which is characterized by shame and fear (D'Augelli, 1994a). Such shame and fear results from interactions with significant others and proximal and distal environments. Identity development of sexual

minorities is a self-directed process in response to a heterosexist culture; therefore, one may struggle with few resources in cultures that may adhere to more heterosexual ideologies. D'Augelli proposes six steps towards an integration of sexual identity within an individual: exiting heterosexual identity, developing a LGB personal identity status, developing a LGB social identity, becoming a LGB offspring, developing a LGB intimacy status, and entering a LGB community.

D'Augelli (1994a) characterizes lesbian and gay identity development as beginning when an individual exits his or her heterosexual identity. First, an individual begins to understand that his or her sexual orientation is not heterosexual, begins to have same sex attraction, to name it as such, and also discloses such information to at least one individual. Exiting heterosexual identity, or "coming out" to one's self, is the first step in the process of coming out. The coming out process or disclosure of an individual's sexuality is seen as occurring throughout a lifetime. It is fluid in nature, and plays a key role in this model of sexual identity development.

In the second step, the individual is likely to begin to develop a personal identity as a sexual minority, which is important to the current study. Through exposure to other sexual minority proximal influences, he or she learns what it means to be a sexual minority, and begins to develop his or her own sense of meaning. During this phase, individuals begin to integrate and challenge internalized heterosexist messages which are based on distal influences. If an individual resides in a rural macrosystem, he or she may struggle challenging the internalized messages sent to him or her about sexual minorities, which may ultimately impede sexual identity development.

The third step, developing a social identity, is important to the current study as well. When an individual discloses his or her sexuality, or comes out to more people, he or she begins to construct a social support network. D'Augelli (1994a) emphasizes that doing so has a pronounced impact on sexual identity development, especially if such supports are affirmative in nature. An individual can gain support through heterosexual or sexual minority friends, as well as through various sexual minority support groups. However, residing in a non accepting macrosystem, with limited supports, may impede individual development.

The fourth step is becoming an LGB offspring, or disclosing sexuality to one's family. Often an individual's disclosure of his or her identity status disrupts familial relationships. D'Augelli (1994a) proposes that this phase begins after such a disruption. New roles are then negotiated within the family. The family and the individual begin to rebuild relationships that may have been distressed when the individual disclosed his or her sexuality, and the family explores what it means to have a sexual minority family member. The more affirmative and supportive one's family is, the more healthy the individual's sexual identity development.

The fifth step is developing an intimacy status. Such a process is often difficult, since society typically models heterosexual relationships. Same sex relationship models are often rare or limited in various cultures and environments; sexual minority individuals often struggle with how to have such a relationship. The roles have to be negotiated in the face of cultural norms. The relationships that are modeled for the individual are highly influenced by the macrosystem the individual resides in. Thus, those from rural

areas may have less opportunity to see a sexual minority relationship, which could ultimately hinder the development of intimate relationships.

D'Augelli (1994a) theorizes that the sixth and last step of development, entering a LGB community, may not be achieved by everyone. For instance, if an individual chooses to limit disclosure of his or her sexual identity status, or has limited access to such reference groups due to living in a more heterosexist macrosystem, then that individual may never enter a sexual minority community. However, if one is committed to changing opportunities for this group, then the sexual minority individual may be more apt to challenge cultural, social and political norms. With this last step, the individual moves towards integration of his or her sexual identity.

D'Augelli (1994a) states that an individual becomes fully integrated into his or her identity if he or she experiences and works through all six steps. Being fully integrated is not necessary however, but is hypothesized by D'Augelli (1994a) as optimal sexual identity development. Throughout a lifetime, an individual may fluctuate between the various steps in this model, however. For example, depending on one's environment, the individual may spend more time in some steps as compared to others due to having more or less social support or residing in an affirming or non affirming environment. An individual may also choose to disclose his or her sexuality to his or her siblings first, then his or her parents at a later date. Furthermore, a change in environment (or a shift in macrosystems, as in Bronfenbrenner's model), may impede or foster sexual identity development and progress through the various phases. Therefore, if a sexual minority adolescent moves from a non accepting rural environment to an accepting college

campus, this may promote his or her development and progress through the phases, which may have been stalled prior to this macrosystem shift.

Disclosure of Sexual Orientation. “Coming out is the process of disclosing one’s sexual orientation; it begins with self-acknowledgement and expands outward to others” (Rhoads, 1994; p.77). Disclosure of an individual’s sexual identity to others is integral in D’Augelli’s (1994a) model of sexual identity development. Coming out has been found to have both a positive and negative impact on an individual, and may be a defining feature in psychosocial adjustment individual development (D’Augelli, 1994a). However, a sexual minority individual who is a part of a nonaccepting macrosystem may hesitate to disclose such information to others. If such disclosure occurs to individuals who are supportive in nature, then the impact will likely be positive. If disclosure occurs to non supportive individuals, then one’s adjustment may ultimately be hindered.

Research suggests that disclosure of sexual orientation does not typically occur until middle to late adolescence (Cohen & Savin-Williams, 1996; D’Augelli, Grossman & Starks, 2005; D’Augelli, Hershberger & Pilkington, 1998; Mathy, Carol & Schillace, 2003), even though orientation is typically self-identified much earlier. Often there are many years between self-identification and coming out to others in which an individual chooses not to disclose such information. Even though coming out is associated with a sense of empowerment, excitement, and an increase in self-esteem, social support and comfort with one’s sexual identity (Cohen & Savin-Williams, 1996; Rhoads, 1994; Rosario, Hunter, Mguen, Gwadz & Smith, 2001; Stevens, 2004), fear is commonly associated with an individual’s decision to disclose his or her sexual orientation to others

(D'Augelli et al., 2005; Savin-Williams & Ream, 2003a; Stevens, 2004). Such an emotion appears to be warranted. Once an individual discloses his or her sexual identity to others, he or she is likely to be rejected by important others, feel isolated, and is more likely to be victimized (D'Augelli et al., 1998; Rhoads, 1994; Savin-Williams & Ream, 2003a).

Self-awareness is seen as the first step in the coming out process. In a review of the research, Cohen and Savin-Williams (1996) found the age of first awareness of same sex feelings to range between nine and 13 years; while D'Augelli et al. (1998) and D'Augelli et al. (2005) reported the mean age of first same sex attraction to be at age 10. The age of first disclosure tends to have higher variability among studies. D'Augelli et al. (1998) reported participants to be a mean age of 16 and D'Augelli et al. (2005) found participants disclosed at an average age of 14.5, while in a review of the literature, the age of first self-disclosure ranged from 16 to 28 (Cohen & Savin-Williams, 1996). It must be noted however, that a trend towards earlier disclosure appeared in the review, with individuals in the 1990s disclosing in the late teenage years as compared to those in the 1980s disclosing in their twenties. One possible confound to such rates of disclosure is that participants in the two D'Augelli studies and a large majority of participants in Cohen and Savin-Williams (1996) review were recruited from sexual minority support groups; therefore, having the support of like others may lead to earlier rates of disclosure than those who do not have such support. Thus, disclosure at such early ages may not be representative of the non support group population. It is possible, therefore, that sexual

minority individuals who do not perceive their environments to be supportive wait longer to self-disclose.

Disclosure rates have also been found to vary based on community, at least for lesbians. Mathy et al., (2003) found differences between ages of disclosure among lesbians based on two samples. In an internet sample, participants from urban areas reported an average age of disclosure to be 17, while rural individuals reported an average age of 20. In a sample gained through recruitment in coffee houses, the urban individuals reported to be on average, three years younger than rural participants. Thus, age of average age of disclosure was 14 in urban individuals, and 17 in rural individuals. The age range varied depending on who one disclosed to, with disclosure to friends or others occurring first. Average age of disclosure to friends and others was 18 for urban participants and 21 for rural participants. However, the largest difference was found in disclosure to family and parents. Urban individuals' average age of disclosure to family was approximately 19 years, while rural individual's average age was around 24.5 years. A strengths-based model was used to explain that such a delay in disclosure rates was a protective factor, which allows for social and interpersonal maturity among female sexual minorities in rural areas. Mathy et al. (2003) acknowledged that even though higher rates of heterosexism are probable in rural environments, it is also just as likely that lesbians have closer knit friendships in rural areas as compared to urban areas, which protect against heterosexism. However, no research was cited to support this idea, and it was asserted purely out of speculation. Therefore, delay in disclosure by persons from rural areas may stem from other reasons than maturity.

An overall theme related to disclosure of one's sexuality is fear, which may contribute to the age difference between self-awareness and coming out. Such hesitation is associated with the potential for rejection from family and friends, as well as fear of victimization (D'Augelli et al., 1998; D'Augelli et al., 2005; Pilkington & D'Augelli, 1995; Stevens, 2004). D'Augelli et al. (1998) reported that, of those who had disclosed to families, only half perceived that family was fully accepting of their sexual identity. One third of the sample reported family tolerated, but did not accept their identity, while 25% reported being rejected by family upon disclosure. Fathers' reactions were found to be significantly more negative than those of mothers, which was consistent with a finding in a study by Pilkington and D'Augelli (1995). On the other hand, D'Augelli et al. (2005) and Rhoads (1994) found equally positive and negative reactions from parents, with no significant differences between mothers and fathers. Those who disclosed also reported higher rates of verbal and physical abuse from family as compared to those who had not disclosed to one's family (D'Augelli et al., 2005; D'Augelli et al., 1998).

Pilkington and D'Augelli (1995) also reported a connection between an individual's level of self-disclosure and victimization. Participants perceived that disclosure of one's sexuality resulted in greater amounts of victimization. Such victimization pushed individuals to act "more straight," to hide one's sexuality while at school and to avoid other sexual minorities lest they also be labeled. D'Augelli et al. (2002) reported that individual's levels of openness in high school were correlated with rates of verbal attacks by others. The rate of verbal attacks rose the more open one was about his or her sexuality. Once the individual had fully disclosed his or her sexuality,

the rate of victimization did not decrease, but stayed at a constant level. Therefore, a clear interaction between the level of disclosure and rate of victimization exists.

It is evident that self disclosure may bring negative consequences. However, there are also positive consequences to coming out. Once an individual has disclosed his or her sexuality, his or her social support network tends to grow (Stevens, 2004). Additionally, Stevens found that an increase in self-acceptance led to such disclosure; which ultimately aided in one's commitment to one's sexual identity. If other reactions to the disclosure were positive, this promoted additional disclosure to others. However, if an individual had a negative experience, such interaction impeded further disclosure. Additionally, Rhoads (1994) found that of the individuals who had come out to at least one other person (e.g. a friend or family member), 86% reported that it was the most significant experience in his or her life, which was characterized with relief. The majority of those who had disclosed their sexuality to a friend or family member also described it as a positive event. Rosario et al. (2001) also confirmed the positive impact of coming out, where coming out demonstrated to be related to higher rates of self-esteem and lower levels of anxiety. Level of sexual identity development has also been found to positively correlate with self-esteem among lesbian undergraduates (Peterson & Gerrity, 2006). The more comfortable one was with her sexuality, the more her self-esteem rose. Level of internalized homophobia was also found to negatively correlate with identity development. Furthermore, a negative relationship between level of self-esteem and internalized homophobia was found.

Coming out in college. Sexual minority college students are faced with many decisions related to whether or not to come out to others. Such a choice may surround deciding whether or not to come out to a roommate, coming out to new friends, or coming out to parents who are often the only source of financial support for college students. Evans (2001) proposes that coming to college gives rise to more social opportunities for sexual minority individuals than when living at home; however, such an opportunity may also put a strain on other relationships. “At college, geographical distance from family and new social, emotional, and sexual opportunities encourage a freer exploration of sexual orientation than was possible during high school. College students’ relationships with parents and siblings may become strained during this time for reasons that family members do not understand” (p. 210). Evans noted that most individuals typically put off coming out to parents until they are away at college, and thus safe from negative family reactions. However, sexual minority college students are in a double bind of sorts. If a parent funds a student’s education, coming out or being honest about one’s sexuality may jeopardize his or her education (Rasmussen, 2004; Savin-Williams, 1998).

Savin-Williams (1998) examined the literature to assess the aforementioned possibility. Based on a review of ten studies, four assessing disclosure of sexuality among college students and six among support group members, Savin-Williams (1998) found that on average college students are 20% less likely to disclose their sexuality to parents as compared to those in support groups. Such students are typically freshman and sophomores, who have not solidified a sexual identity yet. However, such low rates of

disclosure may be due to methodological issues surrounding the population sampled. In fact, the majority of research looking at coming out among college students has been conducted on those from rural areas, thus, a delay in disclosure among this population may be due to the individual waiting to be completely detached from a non-accepting environment before disclosing such sensitive information. This confound may increase the actual results of disclosure rates. Nevertheless, these students are faced with making a choice. The student can stay closeted while in college due to fears of familial reactions or the campus climate surrounding sexual minority issues, or the student may choose to maintain two identities simultaneously: a heterosexual identity while at home and a non heterosexual identity at school (Evans, 2001). As a result, college friends become such individual's main source of social support.

Summary. Sexual identity development is a process, which begins with an individual exiting the heterosexual identity, coming out to the self, others, family and developing new romantic, family and community relationships (D'Augelli, 1994a). An individual will likely be faced with disclosing his or her sexuality throughout the lifetime, and may cycle through the various phases of sexual identity development, especially if there is a change in microsystems or macrosystems. Based on the research reviewed for this study, self-disclosure appears to have varying impacts on sexual minorities. For some it is coupled with rejection, and for others comes an increase in social support and psychological adjustment. However, it must be noted, minimal research has been conducted on those who come out in rural environments.

The information reviewed regarding community differences shows differences in ages of disclosure, but did not show differences in the experience of the coming out process for such individuals. What is known is that rural sexual minorities wait to come out to friends and family significantly longer than those from urban areas. Based on a review of research conducted on individuals in the process of coming out, Cohen and Savin-Williams (1996) and Savin-Williams (1998) confirm these findings. Older adolescents, upper classmen in college, and those from urban areas are more likely to be out than younger adolescents, freshman and sophomores and individuals from non urban areas. Such a delay may be a protective factor, to allow individuals to gain social and interpersonal maturity, and independence from family members (Evans, 2001; Mathy et al., 2003). However, such a delay may also have to do with heterosexist attitudes present in a rural macrosystem. Victimization and rejection are likely to be experienced by those who are out, and those in rural areas may experience such reactions even more than those in other communities. It appears that sexual minority adolescents from a rural environment may be in a double bind of sorts. By not disclosing their sexuality, they lack the positive impact of social support on overall adjustment and self-esteem. At the same time, if they are open about their sexuality, then they will likely experience victimization and the impact of a heterosexist macrosystem. Unfortunately, either choice has the propensity to lead to psychological maladjustment among sexual minority adolescents from rural macrosystems.

Rural Environments

The United States Census Bureau (2002) characterizes rural environments as all territory, population, and housing units which are located outside of an urbanized cluster or area. Population density estimates of rural areas are all areas located outside of urbanized clusters with less than 500 residents per square mile. Below, general characteristics of individuals in rural environment will be discussed. The correlation between characteristics of those in rural environments and negative attitudes towards sexual minorities is addressed. Such attitudes promoted in one's community can influence overall adolescent development, as well as one's sexual identity development. Based on the presence of negative attitudes and lack of mental health care available in rural environments, sexual minority adolescents are expected to have poor psychosocial adjustment.

Characteristics of individuals in rural environments. Based on Bronfenbrenner's theory of development, the community one resides in, or one's macrosystem, has the opportunity to either impede or promote individual development. Individuals who live in rural environments have been found to be more fundamentally religious, more conservative, value traditional morals, and are more resistant to change than individuals in urban or suburban areas (Lindhorst, 1997; Moses & Buckner, 1980; Rounds, 1988). A negative relationship has been found to exist between traditional values and community size (Fischer, 1975). The church is often central to rural communities, and may reinforce such traditional and conservative beliefs (Lindhorst, 1997).

Lyons (2003) reported that in comparison to non-rural areas, individuals in rural communities have been found to have higher levels of religiosity, are more likely to feel that religion is an important aspect in one's life, and are more likely to have confidence in one's church or religion. Furthermore, individuals who are more religious also tend to align with more conservative political views (Jones, 2003). Jones found that 73% of conservative individuals report belonging to a church or synagogue, as compared to 48% of liberals. Conservatives are more likely to report that religion is very important in one's life, and are more likely to believe that religion could answers today's problems. Conservative individuals are more likely to place faith in one's government to support moral principles of one's society; whereas, liberal individuals are more likely to promote giving power to the individual in deciding the morality in ones actions (Jones, 2003). Therefore, the presence of more religious and politically conservative individuals in rural areas, who tend to conform to more traditional values, would influence others to hold similar beliefs. Such distal influences in ones macrosystem are likely to influence proximal processes in one's microsystem. It must be noted that not all rural environments present with such characteristics, but a general trend towards traditionalism, conservatism and religiosity has been found.

Rural attitudes towards sexual minorities. A general trend of acceptance of sexual minorities has been found over the past few decades in the United States (Loftus, 2001; Yang, 1997). Despite such a trend, demographic variables common to rural areas such as living on a farm, being politically conservative and a fundamentalist Christian are found to account for a small amount of variance, while having lower levels of education

accounts for the most variance in negative attitudes towards sexual minorities (Loftus, 2001). Based on census data collected in the year 2000, a higher percentage of educated individuals live in metropolitan areas or large university towns (Bauman & Graf, 2003). Therefore, a dichotomy appears to exist between communities where individuals accept sexual minorities. Despite the overall trend in more positive attitudes towards this population in the United States, negative attitudes are still evident.

Consistent characteristics have been identified as predictors of individuals who have greater hostility towards sexual minorities. Specifically, individuals who accept traditional gender roles, who are highly religious or members of conservative denominations, who are politically conservative, and who lack interpersonal contact with sexual minorities are found to have greater hostility towards this population (Eldridge, et al., 2006; Herek, 1994; Herek, 2002; Herek & Glunt, 1993; Overby & Barth, 2002). Saad (2006) found significant differences between attitudes towards homosexuality in the United States. The perceived morality of same sex relationships appears to be the underlying issue that creates such divisions. Approximately 70% of Republicans and conservative individuals and 80% who worship weekly consider same sex relationships to be morally wrong. However, the perceived morality of same sex relationships among Americans has slowly increased since 1990 (Loftus, 2001). Loftus theorizes that this decline in negative attitudes may be due to more personal and distal exposure to members of the sexual minority population over the past few decades. However, consistent evidence has been found to support, that lack of contact with such a population may account more for negative attitudes than one's values.

Comfort with same sex relationships has been found to be positively correlated with the amount of contact an individual has with this population (Eldridge, et al., 2006; Herek & Glunt, 1993; Overby & Barth, 2002). Eldridge et al. (2006) found those who were more religiously conservative and who grew up in a rural setting as a child had lower levels of comfort; however, after entering these variables into a regression equation, these variables were no longer found to be significant, but amount of contact was significant. Contact with sexual minority school mates, siblings and best friends were the best predictor of comfort with homosexuality. Therefore, the amount of contact an individual has with this population may have accounted for the lack of comfort among those who grew up in a rural area, since sexual minorities in rural setting tend to be less visible (D'Augelli & Hart, 1987).

Overby and Barth (2002) found similar results; the more contact people had with sexual minority individuals, the more likely they were to have positive attitudes towards same sex relationships in general. Similar variables were found to correlate with negative feelings towards this population: individuals with more conservative ideologies, fundamentalist Christians, those who believe homosexuality is a choice, and those who live in the South and Midwest were more likely to have such feelings. These variables accounted for over half of the variance in feelings towards this population.

Conflicting evidence has been found regarding community size and negative attitudes, however. Herek (2002) found that residents of rural and small towns expressed more negative attitudes towards sexual minorities than those in suburban and urban areas. As noted previously, Eldridge et al. (2006) found initial correlations between negative

attitudes and individuals from rural environments; however, once entered into a regression analysis, amount of contact with sexual minorities accounted for more variance. Marsiglio (1993) found a nonsignificant relationship between teenage boys living in an urban environment and attitudes towards homosexuality. Overby and Barth (2002) reported that urbanicity was not found to be statistically significant, either; however, the researchers proposed that this may be due more to urbanicity being measured as a subjective, dichotomous and descriptive variable, rather than it being a contributing factor to feelings towards sexual minorities.

It must be noted that a causal relationship between such characteristics and attitudes cannot necessarily be established. However, a reciprocal interaction is likely. Those who tend to be more politically conservative and fundamentally religious may have less of an opportunity to interact with sexual minorities; conversely, those who are politically liberal, more educated and who are younger may place themselves in an environment that fosters contact with such a population (Herek & Glunt; 1993). Therefore, individuals in rural environments who may be more politically conservative and fundamentally religious may have minimal contact with sexual minorities. This lack of contact is more likely due to the fact that sexual minorities in rural environments try to be invisible, rather than the fact that these individuals do not live there (D'Augelli & Hart; 1987). Such lack of contact then further promotes negative attitudes and treatment of such individuals.

Sexual minority adolescents from rural environments. If one's macrosystem perpetuates such attitudes and ideologies, this is likely to affect the proximal processes

which influence individual development (Bronfenbrenner, 1979). Bronfenbrenner postulates that microsystems are the most pivotal in an individual's development. Therefore, if a parent or important other has negative attitudes toward sexual minorities, this has the potential of leading to maladaptive development in an adolescent. An adolescent who identifies as heterosexual may internalize such attitudes and beliefs, whereas an adolescent who is questioning or has identified oneself as a sexual minority, may not feel accepted by important others or have positive feelings towards oneself. Sexual minorities growing up in rural areas may be impacted by negative attitudes perpetuated by a microsystem or macrosystem; which, ultimately may lead to psychosocial maladjustment.

Such a population is not only at risk for psychosocial maladjustment due to distal and proximal influences, but is also at risk due to the lack of mental health care in such areas. Individuals who live in rural areas are at a disadvantage in receiving mental health treatment. Access to mental health and health care in rural communities is limited, due to having fewer providers in rural areas. Specific barriers found in mental health treatment include the following. Rural populations are typically spread across larger geographical areas, with access to fewer qualified providers than urban areas. There are fewer resources, less access to public transportation (Wagner et al., 1995), and of the rural children who need treatment, only 25% receive services (Cutrona et al., 1996; Martin et al., 1996). Therefore, sexual minority youth in such an environment may have a propensity towards psychosocial maladjustment, due to a lack of mental health treatment in rural areas, and lack of treatment for sexual minorities in general.

Summary. People who live in rural environments may possess more hostile attitudes towards sexual minority individuals than those in non-rural areas. Attributes common to those who live in rural areas such as political conservatism, high religiosity and valuing traditional morals have been found to correlate with negative attitudes towards sexual minorities. However, the amount of contact an individual has with sexual minorities and level of education accounts for more variability in attitudes among rural individuals. Sexual minority adolescents may be at risk growing up in a rural environment. Not only are they likely to be faced with the aforementioned attitudes in such a macrosystem, but they are also likely to lack support from mental health providers, which may also put such individuals at a higher risk for psychological maladjustment.

Sexual Minority Adolescents' Psychological Adjustment

Sexual minority adolescents have higher rates of depression, and suicidality, and are more likely to miss school due to fears of victimization than heterosexual adolescents (Bontempo & D'Augelli, 2002; Boxer et al., 1999; D'Augelli et al., 2001; Eisenberg & Resnick, 2006; Galliher et al., 2004, Kosciw et al 2008). Such individuals are faced with the challenge of coming out to others, which can ultimately affect levels of self-esteem. Sexual minority adolescents are also more likely to lack support from family and friends, and feel more lonely as compared to heterosexual youth (Boxer et al., 1999; Cohen & Savin-Williams, 1996; D'Augelli et al., 2001; Galliher et al., 2004; Garofalo, et al., 1998; Martin, & D'Augelli (2003). Based on these findings, one would expect sexual minority youth from rural environments, with less access to mental health services, to be at a higher risk for psychosocial maladjustment than those from other groups.

Depression. Information regarding rates of depression between rural and non-rural communities has produced mixed findings (Adcock et al., 1991; Kovess-Masfety et al., 2005; Patten et al., 2003; Wang, 2004). However, research consistently confirms that sexual minority youth have higher rates of depression compared to heterosexual youth (Bontempo & D'Augelli, 2002; Boxer et al., 1999; Elze, 2002; Galliher, et al., 2004; Safren & Heimberg, 1999; Urdy & Chantala, 2002). Within group differences among sexual minority adolescents have also been found (Galliher, et. al., 2004). However, reasons for higher rates of depression have been linked to variables associated with being a sexual minority, rather than sexual minority status in and of itself (Safren & Heimberg, 1999).

Conflicting evidence exists on rates of depression in rural environments. Patten et al. (2003) found statistically significant evidence supporting higher rates of depression in urban adults (17.1%) as compared to adults living in rural areas (10.6%). However, urban participants were found to present with higher rates of substance abuse, tended to be younger, lacked social support, and had more prevalence of recent life events which contributed to such emotional states. When controlling for these variables, no differences were found between rural and urban individuals. Kovess-Masfety et al. (2005) found similar results. Personal factors and life events were found to account for more variance on levels of depression than environment. Wang (2004) also found no significant differences between rural and urban areas when looking at depression among adolescents, and attributed this non significance to the presence of multiple factors other than the environment. It must be noted that rural participants in this study were less likely to seek

mental health treatment for depressive symptoms than urban individuals. Conversely, a higher rate of hospitalization for depression in rural primary care patients as compared to urban patients has also been found by Rost, Adams, Xu and Dong (2007). Such high rates were attributed to lack of outpatient care among rural individuals which lead to an increased severity of depression among this population. A few limitations must be addressed in the above studies. Three of the studies were performed outside of the United States, two in Canada, and one in France. Therefore, cultural differences may affect the generalizability of such results to the United States. Thus, little evidence exists regarding whether or not there are true differences on rates of depression among environments in the United States.

The sexual minority adolescent population has been found to have higher rates of depression as compared to heterosexual adolescents (Bontempo & D'Augelli, 2002; Boxer et al., 1999; Elze, 2002; Galliher et al., 2004; Safren & Heimberg, 1999; Urdy & Chantala, 2002). Biernbaum and Ruscio (2004) found significant differences on rates of depression among sexual minority and heterosexual college students, with sexual minority students reporting higher rates than heterosexual students. Several limitations apply to this study, however. The sample size was very small, with only 28 participants in each group. This leads to possible problems with power. Additionally, possible explanations for such differences were not assessed.

Urdy and Chantala (2002) found that adolescent boys with same sex partners reported being more depressed than boys with both sex partners or opposite sex partners. Girls were found to have twice the rate of depression when attracted to both sexes, as

compared to the opposite or same sex. It must be noted that overall, females in this study had higher rates of depression in general, no matter what their sexual orientation was. Therefore, this supports the idea that gender differences may also exist among the sexual minority population on rates of depression.

Galliher et al. (2004) also confirmed gender differences among sexual orientation groups. The researchers assessed differences between sexual attraction status, gender and community. Significant main effects were found between gender and sexual attraction status on depressive symptoms. Those attracted to the same or both sexes were found to have higher rates of depressive symptoms as compared to those attracted to the opposite sex only. Again, female adolescents were found to report the highest rate of depressive symptoms overall. Conversely, heterosexual males were found to have the lowest levels of depression, with rural males having the lowest rate of depression as compared to all other groups. Main effects on levels of depression were not found between communities, however. These results should be viewed critically however, since individuals did not self-identify as being a sexual minority or engaging in sexual behaviors with the same sex. Individuals were placed into sexual orientation categories based solely on sexual attraction ratings, which may have little to do with an individual's overall sexual identity.

Often, only rates of depression are assessed among the sexual minority adolescent population and the underlying causes have been overlooked. However, Safren and Heimberg (1999) not only confirmed differences between heterosexual and sexual minority adolescents reports of depression, suicidality and hopelessness, but the researchers also looked at reasons for an increase on such constructs. Psychological

variables, such as depression, were found to be the consequence of the individual's level of stress, lack of social support, and attempts to deal with being accepted by others, rather than being a sexual minority.

Summary. Research confirms the presence of higher rates of depression among sexual minority youth as compared to heterosexual youth. Additionally, within group differences have also been found among sexual minority adolescents, with females having higher rates of depression than males. Such results among this population may be due to lack of social support, stress, and one trying to gain acceptance as a sexual minority, rather than sexual orientation status alone. Similar issues arise when looking at differences between rates of depression among communities. Limited evidence suggests urban rates of depression are higher than rural rates. However, when accounting for environmental and personal factors, such differences no longer exist. The importance of social support and stressful events cannot be ignored. If those in an individual's microsystem are not offering support, or hold heterosexist values based on distal influences, this is likely to create stressful events for sexual minority adolescents, which may ultimately lead to depression.

Suicidality. Since it has been established that sexual minority adolescents are at a higher risk for depression, it is imperative that rates of suicidality be assessed as well, since the constructs often have a high concordance rate. In addition, since mental health services are scarce for sexual minorities in rural areas, such a population may be at a higher risk. The majority of research surrounding psychological adjustment among sexual minority adolescents has focused on the risk of suicide. Findings typically

indicate that sexual minority youth are at higher risk for suicide than heterosexual youth (D'Augelli, et al., 2001; Eisenberg & Resnick, 2006; Garofalo et al., 1998; Russell & Joyner, 2001; Savin-Williams & Cohen, 1996; Safren & Heimberg, 1999; Urdy & Chantala, 2002). Sexual minority college students have also been found to have significantly higher rates of suicidal ideation as compared to heterosexual college students. However, other researchers argue that such generalizations cannot be based on sexual minority status alone, and environmental issues associated with sexual orientation status are more to blame (Savin-Williams, 2001; Savin-Williams & Ream, 2003b; Shaffer, et al., 1995). Conflicting evidence has also been found regarding suicide rates in rural areas as compared to non-rural areas (Caldwell, et al., 2004; Hirsch, 2006).

Rates of suicidality have been found to vary in sexual minority adolescent research, but on average it appears that 35% of gay and lesbian adolescents have ideation or make attempts at some point in time (D'Augelli et al., 2001; Eisenberg & Resnick, 2006; Rosario, et al., 2005; Safren & Heimberg, 1999). Further studies estimate that suicidal ideation and attempts are two to three times more likely among sexual minority as compared to heterosexual adolescents (Garofalo et al., 1998; Russell & Joyner, 2001). However, conflicting evidence has been found regarding reasons for sexual minority youth having higher rates of suicidality.

D'Augelli et al. (2001) reported that 47% of sexual minority youth who had been suicidal at some point, stated that their suicidal thoughts were either highly, or to some degree, related to one's sexual orientation. The average number of suicide attempts was found to be three among this sample. Males were found to have a higher number of

suicide attempts related to orientation, with 14% reporting some attempts were related to sexual orientation, and 59% reporting all attempts were related to sexual orientation. Females reported 60% of attempts were related to sexual orientation in some way. Furthermore, those whose attempts were related to sexual orientation also had significantly higher scores on personal homonegativity. In addition, a pattern was found between suicidality and disclosure of sexual orientation. Fifty-four percent of those who attempted suicide did so before either parent was aware of his or her sexual orientation. Therefore, such correlates of suicidality appear to be unique to sexual minority individuals. It must be noted that these results should be viewed critically. Participants recruited for this study were all members of various sexual minority support groups; therefore, such high rates of suicidality may be due to the individual identifying as a sexual minority which correlates highly with maltreatment, or it is likely that those who seek such support do so because of experiencing preexisting risk factors for suicide.

Other research has found that sexual orientation status has little to do with suicidality. Safren and Heimberg (1999) found sexual orientation to initially account for 11% of variance in predicting suicidality. However, when entering environmental factors of stress, social support and coping through accepting one's self, sexual orientation accounted for only 1% of the unique variance. Eisenberg and Resnick (2006) also demonstrated that higher rates of suicidality among sexual minority adolescents were not due to sexual orientation status. The researchers reported that sexual minority adolescents overall had lower levels of the theorized protective factors related to suicidality. Consistent with Safren and Heimberg's results, environmental factors

accounted for more variance in suicidality than did sexual orientation. School safety, family connectedness and other caring adults were found to protect against suicide. Family connectedness was found to account for the most variance among rates of suicide. Therefore, those who have less social support and lower levels of connection to one's family are at a higher risk for suicidality than sexual minorities who have such protective factors.

The idea that sexual minority adolescents are at a high risk for suicidality has also been challenged. Savin-Williams and Ream (2003b) discussed methodological issues which inflate reports of suicidality. For example, the researchers noted that most sexual minority adolescent participants are recruited from support groups. They found that sexual minority adolescents in support groups were 3.3 times more likely to report suicidality than those not in support groups. Even though the researchers challenged such inflated rates of suicide, it was also confirmed that environmental reactions were more likely to influence suicidality rather than sexual orientation status.

Savin-Williams (2001) reported that the way suicidality has been assessed in past studies, as well as the way sexual minority status has been operationalized, has inflated such results. Specifically, past studies have used dichotomous labels as ways to identify sexual minority status, which overlooks those with various levels of same sex attraction. In addition, the researcher pointed out a misrepresentation of suicide attempts among those surveyed. The researcher attempted to conduct a methodologically sound assessment based on the previously mentioned limitations, and confirmed that previous inflated results are due to a restriction in the population (support groups, crisis groups)

and not differentiating between false attempts and non-life threatening attempts. When such issues are accounted for, rates of suicidality decrease. Thus, 45% of sexual minorities in support groups were found to be suicidal versus 13% of those not in a support group. Savin-Williams noted that sexual minority adolescents in general are at a higher risk for suicidality than heterosexual youth; no gender differences were found.

Mixed findings have been reported regarding differences among rural and non-rural suicidality. In a review of the literature, Hirsch (2006) reported a significant rise in suicide rates in rural areas (17.9%) as compared to urban areas (14.9%) over the last two decades. The researchers state that rural ideology often stigmatizes those with mental health needs. In addition, individuals in rural areas tend to be more isolated due to lower levels of population density; thus, leading to limited social support and mental health resources. Caldwell, et al. (2004) found significant differences between community size and rates of suicide. Males had higher rates of suicidality in non-metropolitan areas, with males ages 20-29 living in non-metropolitan areas having the highest rates. Adcock and Nagy (1991) assessed risk factors in suicide attempts between rural and urban adolescents. The researchers found no significant differences on risk factors of suicidality between communities. Therefore, it appears that epidemiological information supports higher rates of suicide in rural areas, while differences on adolescent risk factors between communities do not exist. Since such limited and conflicting information exists, it is imperative to look at such differences between communities.

Summary. Research supports the idea that sexual minority youth are at higher risk for suicide and report higher rates of suicidal ideation and attempts compared to

heterosexual youth. Conflicting evidence has also been found regarding suicidality within different community environments, and no research has been conducted assessing sexual minorities rates of suicide based on community size. However, since sexual orientation status alone accounts for minimal variance in suicidality as compared to social support, family support and stressful life events, individuals from rural areas who may lack such support and may find being a sexual minority as more stressful, would be expected to have higher rates of suicidality. If one's macrosystem promotes heterosexual ideology, which impacts proximal processes, a sexual minority adolescent in a rural setting may be affected more by such negative environmental factors than his or her urban counterpart.

Self-Esteem. Not only are depression and suicidality imperative factors to assess among sexual minority adolescents, but self-esteem is often of focus in the research on this population. Sexual minority adolescents often report low levels of self-esteem (Boxer, et al, 1999; Galliher et. al., 2004; Rosario, et al., 1996). "Coming out" about one's sexuality is often associated with level of self-esteem. Mixed results have been found about level of disclosure and self-esteem however (Boxer et al., 1999; Cohen & Savin-Williams, 1996; Diamond & Lucas, 2004; Rosario et al., 1996). It has been found to be an important factor in predicting rural adolescent male's life satisfaction; however, differences between communities have not been established (Galliher, et al., 2004; Wilson & Peterson, 1988).

Boxer et al. (1999) assessed the coming out process, which is unique to the sexual minority population. The researchers found an individual's level of self-esteem was

lower before he or she disclosed his or her sexuality in a qualitative study. Therefore, coming out was reported by participants to have positive effects on participant's self-esteem. These results may be problematic for individuals in an environment in which one feels it necessary to remain invisible. Similar results were found in a study conducted by Rosario et al. (1996). Once an individual came out, there was an increase in the individual's self-esteem. However, despite whether or not an individual had disclosed his or her sexual identity, high levels of self-esteem did not appear to mediate the effects of emotional distress in response to stressful life events, or the amount of problematic behaviors an individual engaged in. Therefore, self-esteem was not found to be a protective factor for this population, but may coincide with overall levels of psychosocial maladjustment.

Diamond and Lucas (2004), however, found no difference in levels of self-esteem between sexual minority adolescents had and had not disclosed their sexuality. Therefore, this directly contradicts the above stated information regarding such a relationship. It must be noted that the sexual minority participants in this study were more open about issues pertaining to one's sexuality, had a large amount of sexual minority friends, and participated in a great deal of sexual minority activities. In addition, the differences may be because the later group had an overwhelming amount of Caucasian participants (80%) as compared to the first two groups, which only ranged between 22% and 40% of Caucasian participants. Thus, the inclusion of more minority participants in the first two groups may negatively influence levels of self-esteem due to the majority of participants being double minorities. It is important to point out that all

three samples were comprised of individuals from urban areas, thus individuals from a rural area may not have and increase in self-esteem if they come out, they may not have many sexual minority friends or they may not feel comfortable being open about their sexuality in such a macrosystem. A limitation to all three studies is that they recruited participants from GLBT support groups. It is unclear how entering a support group would impact an individual's self-esteem after coming out, as compared to someone who did not the concomitant support of like others.

Cohen and Savin-Williams (1996) reviewed the connection between self-esteem and being out. The researchers found mixed results, but concluded that the more important impact on self-esteem was whether or not the individual was out to him or herself, rather than others. Additionally, urban adolescents were more likely to be out than rural adolescents in this study. Therefore, if an individual has exposure to other sexual minority adolescents, he or she may be more accepting of his or her sexuality. Gay and lesbian adolescents in rural areas may not have as many opportunities to take part in sexual minority groups or activities; in addition, they may have less access to sexual minority friends due to the nature of rural environments fostering invisibility amongst this population (D'Augelli & Hart, 1987). Therefore, lower levels of self-esteem would be expected due to lack of such interaction and social support among rural adolescents.

Little research has looked at differences between rural and non-rural areas on levels of self-esteem; however one study assessed the impact of levels of self-esteem on life satisfaction among rural adolescent males (Wilson & Peterson, 1988). Specifically,

self-esteem with this population was found to be the strongest predictor of overall life satisfaction. The researchers concluded “these results suggested that individuals who accept themselves in a positive manner and believe that a similar viewpoint is shared by others will develop a more positive evaluation of their overall conditions of life” (p.88). The importance of the influence of one’s macrosystem cannot be overlooked in the face of these results. The key point in this statement is that an individual’s viewpoint is shared by others. In such an environment, a sexual minority adolescent is less likely to find viewpoints similar to his or her own, which may lead to lower levels of self-esteem.

Galliher et al. (2004) confirmed the presence of lower self-esteem in sexual minority adolescents as compared to heterosexual adolescents. However, main effects for rural and non-rural environments were not found. Differences were found between sexual attraction groups. Bisexual attraction groups were found to have the lowest levels of self-esteem, followed by the same-sex attraction group, while the heterosexual attraction group had the highest self-esteem. Females in general, and females who reported being attracted to both sexes, were found to have the lowest levels of self-esteem. Males in general were found to have higher rates of self-esteem, with those from rural environments having the highest levels overall, regardless of sexual attraction group. As previously noted, these results were based on participant’s report of attraction status, rather than a multidimensional assessment of sexuality; thus, results may differ when a more complex assessment of sexuality is used. Furthermore, lower levels of self-esteem may have been found between sexual orientation groups if an individual had self-

identified and was open about his or her sexuality, especially if they resided in a heterosexual macrosystem.

Summary. The construct of self-esteem appears to have a direct relationship with unique aspects of a sexual minority adolescent's experience. No differences have been found between rural and non-rural areas. Self-esteem has been found to be the highest predictor of life satisfaction in a study assessing rural males; therefore, the importance of this construct on the impact of rural sexual minority adolescents cannot be overlooked. Gender differences appear to be consistent, however. Most evidence supports the fact that males have higher levels of self-esteem than females. Mixed results have been found however regarding the impact of disclosing one's sexual orientation on self-esteem.

Sexual Minority Adolescents' Social Adjustment

Previously reviewed research established that rates of depression and suicidality are high, while self-esteem is low among sexual minority adolescents. As well, research was reviewed confirming that factors such as interpersonal interactions affect psychological maladjustment among this population. Sexual minority adolescents have been found to have more negative interactions with others than heterosexuals. Specifically, sexual minority adolescents experience higher rates of victimization and bullying as compared to heterosexual adolescents (Bontempo & D'Augelli, 2002; Busseri, et al., 2006; Saewyc et al., 2006). Disclosure of sexuality has been linked to experiences of victimization on college campuses nationwide (D'Augelli, 1992; Rankin, 2003; Stevens, 2004). Such experiences have lead to more negative views of campuses by sexual minority students (Brown, Clark, Gortmaker & Robinson-Keilig, 2004).

Victimization has been linked to lower levels of psychological adjustment among sexual minority adolescents (Bontempo & D'Augelli, 2002; Busseri et al., 2006; Espelage, et al., 2008; Russell & Joyner, 2001); whereas, social support has been linked to higher rates of psychological adjustment (D'Augelli, Collins & Hart, 1987; Espelage et al., 2008; Ueno, 2005). Additionally, social support has been found to ameliorate the affects of victimization (D'Augelli, 1992; Goodenow et al., 2006; Kosciw et al., 2008; Ueno, 2005).

Victimization. Being bullied or verbally or physically attacked is not unique to the sexual minority population; however, this population has been found to have higher rates of victimization than its heterosexual counterparts (Bontempo & D'Augelli, 2002; Busseri et al., 2006; Espelage et al., 2008; Saewyc et al., 2006; Swearer et al., 2008). Victimization in and of itself does not appear to be as problematic as how an individual responds to such attacks. Consistent evidence has linked sexual minority victimization to suicidality, self-harm, substance abuse, negative feelings toward school, depression, and anxiety (Bontempo & D'Augelli, 2002; Busseri et al., 2006; Espelage et al., 2008; Kosciw et al., 2008; Russell & Joyner, 2001; Swearer et al., 2008). In addition, the amount an individual is open about his or her sexuality has been linked to levels of victimization, which ultimately may lead a sexual minority youth to modify his or her behavior in public (D'Augelli et al., 2002; Pilkington & D'Augelli, 1995). Other research contradicts the direct effects of victimization on the previously stated psychological variables, but supports the mediating effects of parental support and self-acceptance on mental health and suicidality (Hershberger & D'Augelli, 1995). Little research has been

conducted on differences between victimization and community size; however, the minimal information available supports higher rates of victimization among rural sexual minority youth (Kosciw et al., 2008).

The impact of sexual minority related victimization cannot be overlooked. Such victimization impacts heterosexuals and sexual minorities in a similar manner, reported Swearer et al. (2008). They were interested in looking at the psychological impact of gay related victimization among a group of high school boys; however, the sample was not identified by sexual orientation status, but by the type of victimization experienced by the participants. Verbal victimization or bullying was classified by other students making distressing statements to the participants. For example, participants were included in the sexual minority victimization group if they were bullied by being called gay. Participants were included into the non sexual minority victimization group if they were teased for being a good student or getting good grades. Significant differences were found between the two groups. Those in the sexual minority victimization group had more negative perceptions of school, higher levels of anxiety and depression, and tended to have an external locus of control as compared to those in the non sexual minority bullying group. Additionally, those in the sexual minority victimization group had significantly more verbal and physical victimization than the other group. This study attempts to confirm the impact of sexual minority victimization, independent of an individual's sexual identity; however, since sexual identity was not assessed, it is unclear as to whether or not the sexual minority victimization group had a large number of sexual minorities, or the other group had few or no sexual minorities. Thus, stating that sexual minority

victimization is equally detrimental for heterosexual and sexual minorities alike is unwarranted; nevertheless, the study does demonstrate that sexual minority victimization does have a detrimental impact.

Rates of victimization vary among the sexual minority youth population. Pilkington and D'Augelli (1995) report that 83% of sexual minority youth surveyed reported experiencing victimization. Most victimization was found to be verbal in nature, with 36% of participants reporting at least one verbal attack was perpetuated by an immediate family member. Kosciw et al. (2008) found that 9 out of 10 sexual minority students reported verbal harassment at school; while 44% reported physical victimization in the form of pushing or shoving due to one's sexual orientation in the last year. Almost one third of sexual minority students had missed school at least one day in the past month because they felt unsafe, as compared to a national rate of 4.5%. There appears to be some variability in rates and type of victimization experienced in this research. Such variations may be due to methodological reasons, and these studies may not present an accurate picture of the victimization experienced by sexual minority adolescents. Both of these studies measured victimization in different ways, and used non validated measures, which could potentially impact the results. In fact, Kosciw et al. (2008) used single item measures as a way to assess victimization. Furthermore, the participants used in both studies were self-identified sexual minorities solicited through support groups. Kosciw et al. (2008) also attempted to branch out from recruiting participants from support groups, and solicited participants from MySpace; however, the only participants invited to complete the survey were those who indicated a GLBT status on their page. Thus, it is

unclear how rates of victimization would vary when looking at within group differences, including those who do not self-identify or those who are not out to others.

Limited research shows that variability does in fact exist within sexual minority groups on rates and reactions to victimization. Conflicting evidence has been found between genders. Males were found to experience significantly more verbal and physical victimization than females in a study conducted by D'Augelli et al. (2002). Pilkington and D'Augelli (1995) did not find that rates of victimization differed by gender, but reactions to victimization did for sexual minority adolescents. Males were more likely than females to change public behaviors as a way of avoiding further victimization; as well, males were more likely to carry a form of self-defense to protect against further victimization. Bontempo and D'Augelli (2002) found that male and female sexual minorities who experienced victimization reported high rates of substance abuse, suicide attempts, school absenteeism, and unsafe sexual experiences. Sexual minority males were at a higher risk for substance use and suicidality than sexual minority females. Espelage et al. (2008) found higher rates of victimization were reported by "questioning" youth (those who were unsure about their sexuality) as compared sexual minority or heterosexual youth. They asserted that previous studies reporting sexual minority differences may have been inflated due to the inclusion of questioning youth into the sample, without exploring within group differences. Espelage et al. (2008) reported such differences may be due to the fact that those who label oneself as a sexual minority may have access to more support through various groups and similar friends, while questioning youth lack support from sexual minority groups and like others.

Questioning youth were also excluded from a study challenging the idea that victimization directly impacts mental health and suicidality among sexual minority adolescents. Hershberger and D'Augelli (1995) asserted that the impact of victimization on mental health of sexual minority adolescents is mediated through family support and self-acceptance. For instance, if an individual reported higher rates of victimization, they were more likely to report higher rates of family support. Consequently, the more family support the individual had, the higher the rate of self-acceptance. Greater self-acceptance was then associated with better mental health. However, the same model was not supported for the impact of victimization on suicidality. Self-acceptance and family support were not mediators for suicidality, and a direct link between victimization and suicidality was not found. The results of this study are promising, but they do not come without methodological limitations. The sample consisted of 75% males, and 25% females, which has the propensity to impact the results since gender differences have been found on mental health and suicidality. In addition, the measures used to assess family support and self-acceptance were created for the study, and were not validated measures. Furthermore, the sample used in this study was recruited from support groups in metropolitan areas, which limits generalizability of these results to those from urban macrosystems, or those who belong to support groups.

Unfortunately, little research has been conducted looking at macrosystemic differences. Kosciw et al. (2008) did look at such issues, finding differences between community sizes. Students in a rural high school reported higher rates of hearing homophobic language as compared to urban and suburban students. In addition, students

from rural areas (15.2%) reported staff members in school were less likely to intervene in such instances, as compared to suburban (16.3%) and urban (21.7%) students. Sexual minority students from rural areas reported higher rates of victimization in general than those in non-rural areas. Not only were rural students found to report the highest rates of victimization due to sexual orientation, students also reported overall higher rates of sexual and relational harassment. Over 55% of sexual minority students endorsed being harassed electronically, which was defined as “harassed or threatened by students at their school via electronic mediums (e.g., text messages, emails, or postings on internet sites such as MySpace” (Kosciw et al., 2008, p.33). However, on a Likert scale ranging from zero to four, rural (2.33) sexual minority students rated higher frequency of electronic harassment compared to urban (2.08) and suburban (2.15) sexual minority students. A major limitation to this study is the lack of sophistication in the statistics used. The majority of statistics presented were percentages and frequencies. Statistically significance is not reported, thus it is possible that these results are not even significantly different.

Campus climate. Even though the college environment is often seen as a place for one to explore his or her sexual identity, it does not come without a price. University settings are a macrosystem often expected to promote understanding and liberal ways of thinking. However, such ideologies have been challenged with studies assessing campus climate for sexual minority individuals. Sexual minority students tend to experience the campus climate as negative, hostile and threatening (Brown et al., 2004; D’Augelli, 1992;

Rankin, 2003), and have expressed concerns about being harassed, discriminated against, and stereotyped by others on campus (Westefeld et al., 2001).

Sexual minority college students are warranted in having a negative view of college campuses. In a nationally representative sample consisting of 14 different universities and colleges, Rankin (2003) confirmed the existence of a negative climate for sexual minority individuals in such a macrosystem. More than one third of sexual minority undergraduate students surveyed considered themselves to be completely closeted, and 60% reported concealing their sexual identity due to feeling intimidated. Thirty-six percent of sexual minority undergraduate students reported being harassed based on their sexual identity. Furthermore, respondents identified 79% of perpetrators as other students. Individuals who reported being more open about their sexual identity reported higher rates of victimization. Additionally, almost half of the sample reported his or her institution did not sufficiently address issues of sexual minority students on campus. D'Augelli (1992) reported a larger percentage of sexual minorities experienced victimization on a college campus. Seventy-seven percent of sexual minority college students reported being verbally abused at least one time, while 25% of participants reported physical victimization. However, it must be noted that these results were based on research conducted in 1987 and 1990, while Rankin's study was conducted in 2002. Since rates of victimization dropped by approximately 40% across this 12 to 15 year period, this may confirm an overall trend towards less victimization. However, the difference may also be an artifact of the methodological differences between the two studies.

The D'Augelli (1992) study used individuals who self-identified as sexual minorities and who were open about their sexuality, while the Rankin (2003) study used a snowball technique to collect the sample, in which both self-identified "out" individuals, as well as a large proportion of "closeted" individuals were included in the sample. In fact, almost half (825) of Rankin's sample labeled themselves closeted. As previously reviewed, the more open an individual is about his or her sexuality, the more likely he or she is to be victimized (D'Augelli et al., 2002; Pilkington & D'Augelli, 1995), which may explain such high rates of victimization in the D'Augelli study. Thus, these results should be viewed cautiously.

These studies also present with one more severe limitation, they do not assess electronic victimization. It is also possible that a decrease in victimization in person may be replaced by other means, such as electronic victimization. Not only do sexual minority students have to contend with such day to day interactions with others, sexual minority students have also been found to have higher rates of on-line victimization (Finn, 2004). Approximately 30% of sexual minority students reported receiving harassing emails, as compared to only 14% of heterosexual students. Furthermore, sexual minority students were more likely to continue to receive such mails even after they asked to perpetrator to stop harassing them (37% vs. 13%).

Summary. Sexual minority based victimization has proven to have a negative psychological impact, independent of an individual's sexual identity. Rates of victimization have been found to vary among sexual minority adolescents; however, such rates are consistently higher than heterosexual youth's experiences. Within group

differences have also been found on experiences of victimization. Mixed results exist regarding gender differences, with males reacting by hiding their sexuality, using alcohol or other substances or becoming suicidal. Sexual minorities in rural environments have been found to experience higher rates of victimization as compared to urban and suburban students as well. In addition, sexual minority victimization may be changing, with evidence indicating that electronic victimization is higher among sexual minority high school students in rural areas and sexual minority college students. Therefore, it is evident that a negative interaction with one's microsystem and macrosystem has a maladaptive impact on an individual's psychosocial adjustment. If a macrosystem values heterosexist ideologies, individuals in such a system are likely to perpetuate those ideas. This can be done so passively, or overtly. When these remarks or ideas are overt, sexual minority youth may feel victimized. It is evident that sexual minority youth have experienced higher rates of victimization, which ultimately leads to lower levels of psychosocial adjustment. Therefore, sexual orientation in and of itself is not a cause for higher rates of depression, suicidality and lower rates of self-esteem, but there appears to be an interpersonal interaction which perpetuates such intrapersonal issues.

Social Support. Social support has also been found to be a contributing factor to sexual minority youth's overall psychosocial adjustment (D'Augelli et al., 1987; Espelage et al., 2008; Goodenow et al., 2006; Kosciw et al., 2008; Munoz-Plaza et al., 2002; Ueno, 2005). Additionally, social support has been identified as a buffer against the effects of victimization (Hershberger & D'Augelli, 1995; Goodenow, et al., 2006;

Kosciw, et al., 2008; Ueno, 2005). Little research exists on the impact of social support on rural sexual minority adolescents, however (Ueno, 2005).

A lack of social support, or worse being rejected by others, can have serious implications for sexual minority college students' psychological and social adjustment. Rejection from others based on sexual orientation was found to lead to isolation and invisibility among sexual minority college students (Stevens, 2004). Furthermore, Westefeld et al. (2001) found that isolation and loneliness among sexual minority college students positively correlated with levels of depression and suicidal thoughts. Sexual minority students were found to have significantly higher rates of depression, loneliness and suicidality than non heterosexual students.

Support on college campuses however, has been identified as valuable among sexual minority college students. Dietz and Dettlaff (1997) reported the importance of a social support group on college campuses. In a qualitative study, the researchers found general feelings of fear, loneliness, confusion, and a desire to be with like others among closeted individuals who joined a sexual minority support group. In fact, prior to joining such a group, closeted students were found to believe negative stereotypes about sexual minorities. Social support was also viewed as imperative in feelings of happiness and belonging on college campuses as reported by Westefeld et al., (2001). Belonging to support groups was found to be an active ingredient in helping individuals come out to others and in raising one's self-concept. Individuals reported feelings of belonging only when around other sexual minority students, while a lack of understanding from family and peers was found to negatively impact one's sense of belonging and happiness on

campus. Additionally, Stevens (2004) found that an individual's desire to isolate one's self and remain invisible on a campus lessened with an increase in perceived social support, self-assurance, and an increase in self-confidence.

Social support is not only associated with decreasing feelings of loneliness, rejection and depression, it has also been found to predict positive mental health. Ueno (2005) reported psychological distress of sexual minority youth to be higher among those who were victimized, had arguments with parents, and had negative interpersonal interactions while at school, among a sample of middle and high school sexual minority students. Lower levels of psychological distress were associated with greater attachment to parents, friends, and one's school among sexual minority youth. Furthermore, sexual minority and heterosexual friends were predictors of positive mental health. A positive relationship was found between number of heterosexual friends and psychological adjustment in general. However, having other sexual minority friends was found to significantly reduce the psychological distress associated with victimization and interpersonal issues, more than any other peer support. Such evidence emphasizes the importance of support and its affect on psychological distress; as well as, the importance of being around like others among sexual minority youth.

To further support the implications social support has on the effects of victimization, Espelage et al. (2008) 1) confirmed that homophobic teasing had a greater impact on sexual minority adolescents as compared to heterosexual peers, and 2) confirmed higher rates of substance use among sexual minority youth as a result of victimization. Furthermore, individuals with the highest rates of homophobic teasing and

the lowest rates of parental support were found to have the highest levels of substance use. Those with moderate to high levels of parental support, and moderate levels of teasing were found to have significantly less depression, suicidality and substance use. Questioning youth were found to have the highest rates of victimization, suicide, and depression, while reporting significantly less parental support than other sexual minority and heterosexual adolescents. Thus, support from family has not only been found to be important to the mental health of such youth, but may buffer the impact of victimization.

A great deal of research has looked at the importance of social support among this population; however, little research has been conducted regarding the presence of social support for rural sexual minorities. In assessing the impact of social support on sexual minority youth, Ueno (2005) found no significant differences in distress based on urbanicity. In a study conducted with rural adult lesbians involved in a support network, D'Augelli et al. (1987) found that involvement with sexual minority social groups or activities were correlated with fewer personal problems, even though only one in four participants reported having positive feelings towards the local community. The women were more likely to have friends who were lesbians, were more likely to be friends with sexual minority group members, and held the support of lesbian friends higher than any other friend or family support. Therefore, social support within the sexual minority network in rural areas was seen as a protective factor for the women.

It must be noted that adolescent sexual minorities may not have the opportunities afforded to adult sexual minorities in rural areas (D'Augelli et al., 1987). Ueno (2005) concluded that sexual minority adolescents do not typically belong to gay communities,

based on the fact that participants are often unaware of other sexual minorities in the same school. However, the researcher emphasized the importance of support from like others on psychological distress among sexual minority adolescents. Since sexual minorities in rural areas tend to be invisible, it may be more difficult for adolescents to form such support networks (Lasser & Tharinger, 2003). In addition, based on such heterosexist ideologies in the macrosystem, less support may be available in such a community. Since supportive microsystems such as friendships, parental relationships, and positive adult relationships have been found to attenuate the affects of victimization on levels of suicidality and psychological distress, the lack of such proximal influences may put sexual minority adolescents from rural environments at a higher risk than those from non-rural environments.

Summary. It is evident social support is a protective factor for sexual minority youth. Social support appears to attenuate the effects victimization has on an individual's level of psychological distress. Strong attachment to parents has been linked with overall higher rates of psychosocial adjustment. Furthermore, peer support has also been found to reduce psychological distress associated with victimization, with sexual minority peer support having the greatest impact as compared to heterosexual support. No research evidence exists looking at difference on levels of social support based on community size. However, since higher rates of victimization have been found in rural areas, assessment of such information is necessary. Support on college campuses has been identified as valuable among sexual minority college students, and belonging to support groups has also been found to be an active ingredient in helping individuals come out to

others and raising one's self-concept. Based on this information, it is evident the impact that positive microsystems have on sexual minority adolescent adjustment.

Unfortunately, due to distal influences in a heterosexist macrosystem, it is likely that such youth have less social support as compared to those from more accepting macrosystems.

Summary

Based on Bronfenbrenner's (1988, 2001) theory of development, one's macrosystem has the opportunity to either impede or promote individual development. D'Augelli (1994a) theorizes that shame and fear regarding sexual identity development is influenced by proximal and distal processes. Constructing a support network is an integral step in sexual identity development, and is expected to occur when an individual discloses his or her sexual identity to more people. An individual is expected to be less likely to develop such a support network in a rural environment, due to the presence of correlates of negative attitudes towards sexual minorities, and higher rates of victimization (Bontempo & D'Augelli, 2002; Eldridge et al., 2006; Fischer, 1975; Jones, 2003; Kosciw, et al., 2008; Lindhorst, 1997; Lyons, 2003; Rounds, 1988). Rural individuals have been found to have lower rates of self disclosure (Mathy et al., 2003; Savin-Williams, 1998; Swearer et al, 2008), and self-disclosure has been established as having a positive relationship with social support and self-esteem (Boxer et al., 1999; Rosario et al. 1996; Stevens, 2004). A negative relationship has been found between social support and levels of depression and suicide, and a positive relationship has been found between victimization and suicide (Bontempo & D'Augelli, 2002; D'Augelli et al.,

1987; Espelage et al., 2008; Goodenow et al., 2006; Kosciw et al., 2008; Munoz-Plaza et al., 2002; Ueno, 2005).

A great deal of the research conducted on sexual minority adolescents presents with methodological issues, however. One of the main problems is that participants are often recruited from GLBT support groups because they are convenient. The information gained from such studies has been invaluable; however, it may also be misleading. Rates of suicidality, self-esteem, victimization and social support may be skewed using such samples, and the results lack generalizability. Thus, it is important that a more representative sample is used when conducting research with this population.

Additionally, the way sexuality has been assessed in past studies, has likely impacted the results. By only assessing those who self-identify as a sexual minority or by using a single item characteristic, such as attraction status, a large subset of individuals are being missed, and have likely been misrepresented in the literature. Therefore, it is imperative to use a more comprehensive assessment of sexuality to gain a more accurate picture of the psychosocial adjustment of sexual minority adolescents.

Research Questions

Based on the reviewed information, the current study is aimed at answering the following questions. 1) Do differences exist between rural and non-rural sexual minority college students on levels of psychosocial adjustment after controlling for social support? 2) With prolonged exposure to a more accepting macrosystem, will there be differences between rural sexual minority students' psychosocial adjustment after controlling for social support? 3) Does the amount of time spent in a less hostile macrosystem decrease

depression and suicidality, and increase rates of self-esteem for rural sexual minority college students after controlling for social support? 4) Do rates of victimization differ between rural and non-rural sexual minority students? 5) Do gender differences exist on psychosocial adjustment after controlling for social support? 6) Does a relationship exist between victimization and psychological maladjustment?

Hypotheses

Based on the literature reviewed and Bronfenbrenner's theory, the following hypotheses will be examined:

1. Rural sexual minority male and female students will report higher rates of psychological maladjustment than non-rural sexual minority male and female students, after controlling for social support. Living in a hostile macrosystem is likely to impact an individual's self-disclosure of his or her sexuality and level of social support, which have both been found to be linked with psychological adjustment (Boxer et al., 1999; Rosario et al., 1996; Stevens, 2004). Furthermore, sexual minority adolescents from rural environments are also likely to experience higher rates of victimization, which has been linked with psychological maladjustment (Bontempo & D'Augelli, 2002; D'Augelli et al., 1987; Espelage et al., 2008; Goodenow et al., 2006; Kosciw et al., 2008; Munoz-Plaza et al., 2002; Ueno, 2005).
2. Rural sexual minority male and female students will report lower rates of victimization at college than in their home environment. Even though the college climate for sexual minority students has been found to be negative (D'Augelli,

1992; Rankin, 2003; Finn, 2004), it is expected that the college macrosystem is less detrimental to the psychological adjustment of sexual minority students than a hostile macrosystem such as a rural environment (Loftus, 2001; Rankin, 2004).

3. The amount of time spent at college for rural sexual minority male and female students will be positively correlated with psychological adjustment, after controlling for social support. Based on Bronfenbrenner's (1988, 2001) theory of proximal and distal influences, it is hypothesized that the longer an individual is present in a more accepting macrosystem, the more one's level of distress based on his or her sexuality will decrease. Thus, rural sexual minority college students who have been at school for greater than two years would be expected to be more removed from the detrimental correlates of living in rural environments, and have better psychological adjustment than those sexual minority college students who have been at school for less than two years.
4. Rural sexual minority male and female students will report higher rates of victimization overall than non-rural sexual minority male and female students. Due to being exposed to such a hostile macrosystem prior to coming to college, it is hypothesized that sexual minority students from rural environments will report overall higher rates of victimization, as compared to sexual minority students from non-rural environments (Kosciw, et al, 2008).
5. Sexual minority male and female students will differ on rates of victimization reported, and level of suicidality, depression and self-esteem, after controlling for social support.

- 5a. Regardless of home environment and time spent in the macrosystem, sexual minority males will report higher rates of victimization and lower levels of suicidality than sexual minority females, after controlling for social support. Sexual minority males have been found to have higher rates of victimization and suicidality as compared to sexual minority females (Bontempo & D'Augelli, 2002; D'Augelli et al., 2002); however, community differences have not been assessed for these variables.
- 5b. Regardless of home environment and time spent in the macrosystem, sexual minority females will report higher rates of depression and lower levels of self-esteem than sexual minority males, after controlling for social support. Sexual minority females have been found to have higher levels of depression and lower levels of self-esteem, as compared to sexual minority males (Galliher et al., 2004, Urdy & Chantala, 2002); however, community differences have not been found.
6. The amount of victimization experienced by sexual minority students will be positively correlated with psychological maladjustment (i.e., the higher the level of victimization, the higher rates of depression and suicidality, and the lower the levels of self-esteem). Higher rates of victimization have been found to be positively correlated with an increase in psychological maladjustment and overall distress (Bontempo & D'Augelli, 2002; Kosciw et al., 2008, Swearer et al., 2008).

Chapter 3

Methodology

Participants. Participants in the current sample consisted of 279 students (197 female, 82 male, 246 Caucasian, 13 African American, 13 American Indian, 4 Hispanic American, 3 Asian American, 139 from rural areas, 140 from non-rural areas). Participants ranged in age from 18 to 59 years-old. Participants' mean age was 22.5 (SD=6.46). Participants were students enrolled in a Midwestern University. Participants were over the age of 18 and self-identified as a sexual minority, or having same sex attraction, behaviors, thoughts and fantasies. Students were recruited via a recruitment email. The current sample is made up of those students subscribing to the survey option through their university email account.

Instruments. The following instruments, besides demographics, will be presented in a counterbalanced order.

Demographic questionnaire. An author-generated demographic questionnaire (see Appendix A) was used. Demographic questions assessed participant's age, gender, ethnicity, year in school, how many years the participant has been at college, zip code of home town, home town environment, and sexual orientation status. The latter two variables are further defined below.

Sexual minority questions. As a part of the demographic questionnaire, sexual orientation status was defined using a composite score of four items. Each participant was asked to identify the extent to which he or she is attracted to the same sex and the opposite sex, with item responses ranging between 1, *Not at all* to 7, *Extremely*. Participants were asked about engaging in same sex behaviors, with item responses ranging between 0, *No sexual experiences have occurred*, 1, *Only opposite-sex contacts have occurred* to 7, *Only same-sex contacts have occurred*. Participants were also asked about the extent of sexual thoughts or fantasies, with item responses ranging from 1, *Only opposite-sex fantasies or thoughts have occurred* to 7, *Only same-sex fantasies or thoughts have occurred*. Additionally, each participant was asked to self-identify his or her sexual orientation, with the option of *Heterosexual, Bisexual, Gay or Lesbian, Unlabeled or Other*.

Scores on their four items were summed. Total scores range between 3 and 28, with the higher score indicating sexual minority status. For the purpose of the current study, a minimum composite score of 16 was used to indicate sexual minority status, or gay or bisexual males and females. A score of 14 indicates that an individual has had equal amounts of same-sex and opposite sex behaviors, thoughts, fantasies or attraction. However, this total score includes a sexual experience item. If an individual indicates a score of a 0, *No sexual experiences*, then the composite of the individual's other scores will be used. In this case, the total score will range between 3 and 21. In this instance, a minimum composite score of 12 will indicate sexual minority status. However, if an

individual self-identified as gay, lesbian, or bisexual, despite his or her score, that individual was included into the study as a sexual minority.

Meyer and Wilson (2009) encouraged the use of multiple ways of defining sexual orientation. The authors asserted that an individual may not self-identify as a sexual minority even though he or she may engage in same sex behaviors or have same sex attraction. Therefore, assessing sexual minority status from multiple viewpoints is a necessity.

Home environment questions. Participants were asked to identify the name and zip code of his or her home town. Dahly and Adair (2007) discouraged the use of an urban-rural dichotomy when conducting research. The researchers contend the problem with individuals self-identifying as coming from a rural or urban environment is that no common definition of such constructs has been accepted. Therefore, Dahly and Adair proposed that a more effective way to measure an individual's environmental classification is by using more than one variable. For the purposes of the current study, a participant's zip code was used to identify the population and size of his or her home town in square miles using the United States Census Bureau's website. Using this information, population density was calculated and used to characterize rural and non-rural environments. Based on the United States Census Bureau's (2002) definition of rural, all home environments with a population density of less than 500 people per square mile were classified as rural, and all home environments with a population density of greater than 500 people per square mile were classified as non-rural.

Center for Epidemiological Studies Depression Scale. Depression was assessed using the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977; see Appendix B). The CES-D is a 20-item instrument created to measure depressive symptoms in a non clinical population. The items measure the key characteristics of depression, including mood, appetite and sleep disturbances, feelings of guilt and worthlessness, and psychomotor retardation, which have been present over the last week. Respondents answer the questions using the following prompt, “During the past week.” Respondents indicate the frequency and duration of symptoms using a four point Likert scale, which ranges from 0, *rarely or none of the time* to 3, *all of the time*. Total scores range between 0 and 60, with higher scores indicating the presences of higher rates of depressive symptomology. Examples of items assessing mood are “I felt depressed” or “I felt happy”, while an example of an item assessing sleep is “My sleep was restless.”

The CES-D has been found to be a reliable measure of depressive symptomology, with high internal consistency found among a community and outpatient population ($\alpha=.84-.90$; Orme, Reis & Herz, 1986; Radloff, 1977). Test-retest reliability was established to be moderate in nature ($r=.49-.57$) for a period of two to twelve weeks. Higher correlations were found between shorter time periods. Split-half reliability is adequate, ranging between .77 and .85, with higher correlations being found among the outpatient population. The CES-D has also been established as a valid measure of depressive symptomology, by discriminating significantly between a community and outpatient population. Average CES-D scores among the community population ranged between 7.94 and 9.25, while the average score for individuals in an inpatient psychiatric

hospital was 24.42. Additionally, convergent validity was established to be moderate in nature, with individuals who were admitted to an outpatient group for severe depression. The CES-D scores positively correlated upon intake with scores on the Hamilton Clinician's Rating scale ($r=.44$; Hamilton, 1960), a validated measure of clinician's ratings of patient's depression, and scores on the Raskin Rating scale, a validated self-report measure of depression ($r=.54$; Raskin, Schulterbrandt, Reatig & McKeon, 1969). Correlations between scores on the CES-D and the Hamilton's Clinician's Rating Scale ($r=.69$) and the Raskin Rating scale ($r=.75$) at a four week follow-up increased significantly (Radloff, 1977).

Suicidal Behavior Questionnaire-Revised. Suicidality was measured using the Suicidal Behavior Questionnaire- Revised (SBQ-R; Osman, et al., 2001; see Appendix C). The SBQ-R is a revised version of the Suicidal Behavior Questionnaire (SBQ) developed by Linehan (1981). The original version of the SBQ has a 34-item self-report measure, assessing the amount and intensity of suicidal behaviors and the history of past suicide attempts. The SBQ-R consists of four items assessing different domains: lifetime suicidal attempts and ideation, the amount of suicidal ideation in the past year, the threat of one engaging in suicidal behaviors, and the likelihood that an individual will commit suicide.

Scores range from 3 to 18, with higher scores reflecting higher rates of suicidality. Osman et al. (2001) proposes a cutoff score of a 7 for a non-clinical population and an 8 for a clinical population to indicate individuals who are at high risk for suicide. Two items use Likert responses, while the other two use weighted responses. An example of

an item using a weighted response is, "Have you ever thought about or attempted suicide?" Item responses range from *Never* (1) to *I have attempted to kill myself, and really hoped to die* (4). A Likert response is used in the question assessing frequency of suicidal thoughts, "How often have you thought about killing yourself in the last year." Responses are rated on a 5 point Likert scale, ranging from *Never* (0) to *Very Often* (5 or more times).

The development of the SBQ-R mirrors another four-item version of the SBQ, which was developed by Cotton, Peters and Range (1995). The only difference between the two measures is the use of weighted responses, and a change in the range of the Likert scales. Therefore, reliability and validity will be discussed using both sources. The SBQ-R has been found to be a reliable measure of suicidality, with internal consistency coefficient alphas ranging between .75 and .88 among a clinical and non-clinical population (Cotton, et al., 1995; Osman, et al., 2001). Test-retest reliability of the four-item SBQ has a correlation of .95 over a two week time period (Cotton et al., 1995). Convergent validity has been established with the Scale for Suicidal Ideation, which has high reliability and moderate validity in measuring severity of suicidal ideation (Beck, Kovacs & Weissman, 1979). Scores on the SBQ-R were found to be positively correlate ($r=.69$) with the Scale for Suicidal Ideation. Discriminant validity has been established using Linehan, Goodstein, Nielson and Chile's (1983) Reason for Living Inventory, an inventory which has been identified as having moderate to high reliability and discriminate validity in measuring the reasons an individual has to live. Scores on the

SBQ-R were found to negatively correlate with the Reason for Living Inventory ($r=-.34$; Cotton et al., 1995).

Rosenberg Self-esteem Scale. Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES; Rosenberg; 1989; see Appendix D). The RSES consists of 10-items designed to assess global self-esteem. Item responses are recorded on a 4-point Likert scale, with response variations ranging from *strongly agree* to *strongly disagree*. Five questions indicate high self-esteem. An example of items indicating high self-esteem is “I feel that I have a number of good qualities.” Five items also assess low self-esteem. Five items are reverse scored. A sample item is “I wish I could have more respect for myself.” Total scores range from 10 to 40, with higher scores indicating lower levels of self-esteem.

The RSES has been found to have a high internal consistency alpha ranging from .88 to .92 in a college population (Robins, Hendin & Trzesniewski, 2001; Rosenberg, 1989). Two-week test-retest reliability was high, with an alpha coefficient of .85 (Rosenberg, 1989), and even higher across four years among a college population ($\alpha=.88$; Robins, et al., 2001). Scores on the RSES also demonstrated to have moderate convergent validity with scores on the Texas Social Behavior Inventory ($r=.62$; Helmreich & Stapp, 1974; Robins et al., 2001), a valid and reliable measure assessing global self-esteem. Additionally, convergent validity was demonstrated using a single item measure of global self-esteem, with scores on the RSES having a positive correlation with scores on the single item measure ($r=.75$, Robins et al., 2001).

The Multidimensional Scale of Perceived Social Support. Social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, et al., 1988, see Appendix E). The MSPSS is a measure of subjective social support, and assesses an individual's opinion of the social support he or she receives from three sources: family, friends and significant others. The MSPSS consists of 12 items, with four items assessing each factor, family friends and significant other. Item responses are recorded on a 7 point Likert scale, ranging from 1, very *strongly disagree* to 7, very *strongly agree*. A mean score is calculated for the 12 items, and ranges between one and seven. Higher scores indicate higher levels of perceived social support. No cutoff scores for the various ranges of social support (low, moderate and high) are indicated in the research; however, Dahlem, Zimet and Walker (1991) indicated that a score of 5.58 is considered to be a high amount of perceived social support. Typical scores for a non clinical undergraduate population ranged between 5.43 and 5.80, while scores ranged between 4.31 and 5.20 for psychiatric populations (Clara, Cox., Enns, Murray & Torgrude, 2003; Dahlem, et al., 1991; Zimet et al., 1988). An example of items assessing perceived family, friend and significant other support are as follows. "I can talk about my problems with my family." "I have friends with whom I can share my joys and sorrows." "I have a special person who is a real source of comfort to me."

The MSPSS has adequate reliability and validity among a college population (Dahlem, et al., 1991; Zimet et al., 1988). Coefficient alphas for the family ($\alpha=.90$), friend ($\alpha=.94$), significant other ($\alpha=.95$) subscales and the total score ($\alpha=.91$) were found to be high (Dahlem et al., 1991). The two week test-retest reliability was: an alpha of .85

for the total score, while an alpha of .72, .85, and .75 was found for significant other, family and friend subscales. The MSPSS has been identified to have three distinct factors based on results from a confirmatory factor analysis. Those factors are family, friend and significant other support (Dahlem et al., 1991).

The MSPSS has also been demonstrated to have low to moderate construct validity. A higher rate of overall perceived social support was hypothesized to negatively correlate with depression and anxiety subscales on the Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). Scores on the MSPSS were found to negatively correlate with scores on the depression subscale ($r=-.24$) and the anxiety subscale ($r=-.18$) among college students. The MSPSS total score was also found to negatively correlate with a scores on a scale of loneliness among Turkish psychiatric patients ($r=-.63$), surgical patients ($r=-.45$), and a normal population ($r=-.52$; Eker, Arkar & Yaldiz, 2000). Scores on the subscale of significant other support was found to be higher among a sample of married medical residents as compared to single medical residents (Zimet, Powell, Farley, Werkman, & Berkoff, 1990). Construct validity was also demonstrated for the family subscale in a sample of adolescents. A positive linear relationship was found between scores on perceived social support from family, and the frequency of sharing concerns with one's mother (Zimet et al., 1990).

Victimization. A measure of sexual minority related victimization was used to assess the amount and type of victimization an individual has experienced based on his or her sexual orientation (see Appendix F). Herek and Berrill (1992) encourage assessing victimization by using a classification system based on severity of the victimization:

Attack I, Attack II, and Attack III. Item responses assess frequency of victimization, with scores ranging from 0, *never to 3, more than two times*. Respondents are asked: “How often have you experienced the following kinds of incidents because someone presumed you to be a lesbian or gay male?” Attack I is characterized as minor victimization, with verbal abuse and threats, and is assessed through questions such as “Been threatened with physical violence?” Attack II is characterized as a moderate level of victimization, with an example of an item “Been spat upon?” Attack III is characterized as severe victimization, with items such as “Been punched, hit, kicked or beaten?” Respondents were asked to rate the frequency of the victimization during the past year, and since the age of 16. Herek and Berrill (1992) encourage modification of the survey based on the needs of the research. Therefore, respondents were prompted to rate the frequency of victimization during the time they have been at college, and during the time prior to college, in their home town.

Herek and Berrill (1992) encouraged the use of items from other studies, in order to allow direct comparison of results. Other than single item measures assessing victimization, the current measure is the only other consistent measure used among the research (Elze, 2002; Hershberger & D’Augelli, 1995; Pilkington & D’Augelli, 1995). No psychometric data exists for the current measure, which poses a severe limitation to the current study.

Electronic victimization. Electronic victimization was also assessed using a format similar to the one utilized by Finn (2004) in a study assessing online harassment on a college campus (see Appendix G). The online victimization measure is comprised

of five items, in which respondents rate the frequency of victimization. Frequency is indicated by one of the following responses, *never*, *one or two times*, *three to five times*, *more than five times*. Examples of items intended to assess electronic victimization include, “Getting repeated messages from someone you don’t know or barely know that threatened, insulted, or harassed you,” and “Getting repeated messages from someone even after you told him/her to stop messaging you.” In the survey created by Finn (2004), online harassment was characterized by emailing or instant messaging. For the purposes of the current study, electronic harassment is characterized as texting, emailing, instant messaging, or leaving messages on Facebook, Myspace, or other online social websites. Electronic victimization was also assessed prior to coming to college, and after coming to college. No psychometric data exists for Finn’s survey, thus another limitation to the current study.

Procedures. Participants were recruited through an email sent to all students within the university. Three recruitment emails were sent out to Ball State University (BSU) students who subscribe to a survey option. A total of 15,583 students received the first email on January 18, 2010. A second email was sent out one week later, on January 25, 2010, and reached a total of 15,648 students. The last email was sent one week later, on February 1, 2010, and reached 15,642 students. Participants were offered an incentive for participation: they had the option of entering a drawing for an iPod Touch. Upon receiving the recruitment email, the participants were prompted with a link in the email to complete the survey on a web based survey system called InQsit. Once on the website, participants read an informed consent (see Appendix H), and were asked to

complete a demographic measure first, then a battery of the following seven instruments in a counterbalanced order: social support, depression, suicidality, self-esteem, victimization and electronic victimization. Upon completion, participants hit a submit button, which directed them to a link to enter the drawing for the incentive. All data collection on the web based survey was confidential. Participants were given the right to withdraw participation at any time. Participants also received information about how to follow up with services with the university counseling center in the informed consent, if any distress occurred during completion of the survey.

Proposed Data Analyses. A cross-sectional design will be used, assessing differences on psychological adjustment between individuals who have been on a college campus for less than two years and those who have been on a college campus for more than two years. Basic statistical analyses will be performed on the data, including descriptive statistics on age, gender, ethnicity, year in school, sexual minority status and environment (rural/non-rural). If the sample size is adequate for each condition, analysis of the data will proceed.

A correlational matrix will be created for the dependent variables of depression, suicidality and self-esteem, and the covariate of social support. Assuming correlations between the dependent variables all fall between .1 and .9, then primary analyses will be conducted. If they do not fall in that range, then the variables will be excluded from the composite variable of psychological adjustment. A 2 x 2 x 2 between-subjects multivariate analysis of covariance (MANCOVA) will be performed on three dependent variables making up psychological adjustment: depression, suicidality, and self-esteem.

Adjustments will be made for the covariate of social support. Independent variables are environment (rural and non-rural), sexual orientation (sexual minority males and females) and amount of time spent on a college campus (less than or greater than two years). Prior to running the analyses, the following assumptions will be assessed: homogeneity of covariance, normality, linearity, and outliers. If the assumptions are met, the MANCOVA will be used to assess whether there are main effects for environment, gender and amount of time spent on campus on the composite variable of psychological adjustment. Additionally, interaction effects will also be explored; specifically, an interaction between environment and years in the macrosystem will be assessed to explore the impact on psychological adjustment. If significant main effects are found, then a planned follow up discriminant function analysis will be conducted to assess the impact of each dependent variable on the independent variable.

Additional exploratory analyses will be conducted on rates of victimization using descriptive statistics, which will indicate frequency and percentage for each type of victimization, looking at the subscales of the victimization measure and the electronic victimization measure. A composite variable of victimization (total victimization prior to entering college, after entering college, and electronic victimization) will be used for further analyses. Correlational analyses will be conducted between the composite variable of victimization and the variables of depression, suicidality and self-esteem.

A 2x2 mixed factor repeated measure multiple analysis of variance (MANOVA) will be conducted looking at differences between type of victimization (type I, type II, type III, electronic) experienced before entering college, and since being at college. A

correlational matrix will be performed to assess correlations between the different types of victimization. Assuming correlations between the dependent variables fall between .1 and .9, then primary analyses will be conducted. If they do not fall in that range, then the variables will be excluded from the composite variable of psychological adjustment. If the assumptions of independence, multivariate normality and homogeneity of covariance matrices are met, the analyses will be interpreted. Main effects will be explored for environment, gender and time at college on change in amount of victimization.

Chapter 4

Results

Preliminary analyses. A total of 2009 participants responded to the survey. Of those participants, 1,796 identified as heterosexual, 70 identified as bisexual, 36 identified as gay, 24 identified as lesbian, 50 identified as unlabeled, and 34 identified as other. A composite variable was created for the sexuality score. A total of 275 individuals met the cutoff of 14 or higher. Additional participants were retained in the analyses if they self-identified as gay, lesbian or bisexual, even if they were below the cutoff score. Two individuals labeled themselves as lesbian even though their composite scores fell well below the cutoff (score of 4, and no value indicated). Additionally, 31 individuals falling below the cutoff labeled themselves as bisexual, with scores ranging between four and 13, and an average score of 10.8. Therefore, a total of 308 participants from the original 2009 respondents were retained at this step.

Hometown population density was then calculated for the participants. The U.S. Census Bureau's website was used to identify the population and land area in meters for each participant's self-reported zip code. Once this information was gained, the population density was calculated. A total of 144 participants' hometowns had a population density falling below 500 people per square mile, which indicated that they were from a rural area. One hundred and forty-three individuals' hometowns had a

population density of greater than 500, indicating they were from a non-rural area. Twelve individuals reported international zip codes, while eight individuals did not indicate a zip code; these 20 respondents were removed from the current data set, leaving a total of 287 participants for the final analyses.

Prior to analysis, the dependent variables of depression, self-esteem, suicidality, and victimization in high school and in college, along with the covariate of social support, were examined for internal consistency, missing values, and the assumptions of multivariate analysis using the Statistical Package for the Social Sciences (SPSS) version 16. Due to incomplete data, four cases were removed. One respondent did not answer any questions pertaining to depression, social support or victimization. A second person did not complete the questionnaire on self-esteem. The final two respondents were removed for not answering four questions on the self-esteem scale and not answering four questions on the depression scale.

A missing value analysis was conducted to determine if the remaining missing values were missing due to chance, or if there was a pattern. No single respondent was found to account for more than five percent of the missing data, which indicated that the missing values were random. Therefore, the Expected Maximization Method (Dempster, Laird, & Rubin, 1977) was used to create substitute scores for items on the various scales used in the final analyses.

Outliers were also assessed and removed. One case with an extremely high z score on suicidality ($z=3.55$), and two with extremely high z scores ($z=3.44, 4.76$) on victimization in college were identified as univariate outliers. An additional multivariate

outlier analysis was conducted using the Mahalanobis distance test. No cases were found to be significant, leaving 280 cases for analyses.

Internal consistency was also assessed for the dependent variables. Internal consistency was found to be high for all measures per Cohen's (1988) guidelines, and is illustrated as follows. The CESD had an alpha level of .87. The RSES had an alpha level of .90. The SBQR had an alpha level of .78. The MSPSS had an alpha level of .95. The victimization scale was broken down into two parts, victimization before entering college ($\alpha=.85$) and victimization while in college ($\alpha=.75$). Electronic victimization was also broken down into experiences before college ($\alpha=.80$) and experiences during college ($\alpha=.74$).

Descriptive statistics were conducted for gender, race/ethnicity, environment, educational status, time in college, and sexuality. These statistics are illustrated in Tables A - C.

A total of 48 participants identified as having graduate student status. In order to ensure that graduate student status did not impact the current analysis, independent sample t-tests were conducted looking for differences on the dependent variables. No significant differences were found between graduate and undergraduate students on these variables. Based on these results, it was assumed that the inclusion of graduate students in the current sample would not differentially impact the results; therefore, graduate students were retained in the sample for further analysis.

Correlational analyses (see Table D) were conducted on the independent variables of gender, environment, and time at school, the dependent variables of depression, self-

esteem, suicidality, victimization before college and since being in college, and the covariate of social support. There was a significant negative relationship between gender and victimization before college

$r = -.127$, p (one tailed) $< .05$, indicating that female gender was correlated with less victimization prior to college. There was a significant negative relationship between gender and total victimization $r = -.113$, p (one tailed) $< .05$, indicating that female gender was correlated with less victimization overall. Additionally, a significant positive relationship was found between gender and social support $r = .215$, p (one tailed) $< .001$, indicating that female gender correlated with greater amounts of support. A significant positive relationship was found between environment and depression $r = .156$, p (one tailed) $< .001$, and suicidality $r = .142$, p (one tailed) $< .001$, demonstrating that non-rural status was correlated with higher rates of depression and suicidality. There was a significant positive relationship between time in college and victimization in college $r = .283$, p (one tailed) $< .001$, indicating that the amount of time spent in college correlated with more victimization while at college.

There was a significant positive relationship between level of depression and suicidality, $r = .466$, level of self-esteem, $r = .687$, reported victimization before college, $r = .226$, reported victimization while in college, $r = .264$, and total victimization $r = .287$; a significant negative relationship was found between level of depression and social support, $r = -.308$ (all ps (one-tailed) $< .001$). A significant positive relationship was found between suicidality and self-esteem $r = .486$, reported victimization before college, $r = .347$, reported victimization in college $r = .215$, and total victimization $r = .358$; a

significant negative relationship was found between suicidality and social support $r = -.163$ all ps (one-tailed) $< .001$. A significant positive relationship was found between level of self-esteem and reported victimization before college $r = .237$, p (one-tailed) $< .001$, reported victimization in college, $r = .124$, p (one-tailed) $< .05$, and total victimization, $r = .235$, p (one-tailed) $< .001$; a significant negative relationship was found between level of self-esteem and social support, $r = -.214$, p (one-tailed) $< .001$. Reported victimization before college was significantly positively correlated with reported victimization in college, $r = .346$, p (one-tailed) $< .001$, and was significantly negatively correlated with social support, $r = .109$, p (one-tailed) $< .05$). A significant negative relationship was found between reported victimization in college and social support, $r = -.122$; while a significant negative relationship as also found between total victimization and social support, $r = -.136$ (all ps (one-tailed) $< .05$).

Means were then calculated (see Table E) for the dependent variables. Means were calculated using the scale and subscale scores. Descriptive statistics were used to explore the means and standard deviation of the dependent variables.

Psychological Adjustment. A 2x2x2 between-subjects multivariate analysis of covariance was performed on three dependent variables associated with psychological maladjustment: depression, suicidality, and self-esteem. Adjustments were made for the covariate of social support. Independent variables were gender (male and female), population density category (rural and non-rural) and time spent at school (less than two years and greater

than two years). Results of evaluation of the assumptions of homogeneity of variance, linearity, and independence were satisfactory. Mardia's test of multivariate normality was used to assess normality, and was found to be significant, $p=.035$. However, Tabachnick and Fidell (1996) noted that MANCOVAs are robust to such a violation, especially when the sample sizes are large and groups are equal, and when normality violations are due more to skewness than outliers. Since outliers were removed, the lack of normality is due to having skewed data. Even though the current study appears to be robust to the violation of multivariate normality, per Tabachnick and Fidell's standards, the authors also recommend visually inspecting the data to ensure normality. When the data were plotted using the QQ-plot functions in SPSS, the data appeared to be normally distributed (see Figures 1-4).

Initial analyses indicated that there was a significant main effect for gender; however, after further investigation, this main effect was due to the inclusion of one transgendered individual. The transgendered individual's responses were removed from the data set, and the analysis was conducted again. No main effect was found for gender after the second analysis. There was a significant effect of the covariate of social support on psychological adjustment using Pillai's trace, $F(1,247) = 9.768, p<.001$. Social support was significantly related to depression $F(1, 247) = 25.74, p<.001, d=.09$, suicidality $F(1, 247) = 16.38, p<.001, d=.06$, and self-esteem $F(1,247) = 19.35, p<.001, d= .07$. There was also a significant effect of population density on psychological adjustment using Pillai's trace, $F(1, 247) = 6.827, p=.05, d=.03$.

Table A

Descriptive Statistics: Gender, Race/Ethnicity, Environment

<u>Variable</u>	<u>N</u>	<u>%</u>
<u>Gender</u>		
Females	197	71
Males	82	29
<u>Race/Ethnicity</u>		
African American	13	5
Asian American	3	1
Caucasian	247	89
Hispanic American	4	1
American Indian/Native Alaskan	13	5
<u>Environment</u>		
Rural	139	50
Non-Rural	141	50

Table B

Descriptive Statistics: Educational Status & Time at College

<u>Variable</u>	<u>N</u>	<u>%</u>
<u>Educational Status</u>		
Freshman	71	25
Sophomore	61	22
Junior	47	17
Senior	53	19
Graduate	48	17
<u>Time at College</u>		
Less than two years	145	52
Greater than two years	111	40

Table C

Descriptive Statistics: Sexuality

<u>Variable</u>	<u>N</u>	<u>%</u>
Bisexual	62	22
Gay	32	11
Heterosexual	140	50
Lesbian	20	7
Other	7	3
Unlabeled	18	6

Table D

Intercorrelations between the Independent and Dependent Variables

<u>Variable</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
1. Gender	1.00									
2. Environment	.002	1.00								
3. Time in College	.004	-.062	1.00							
4. Depression	.032	.156**	-.026	1.00						
5. Suicidality	.036	.142**	.017	.466**	1.00					
6. Self-esteem	-.014	.075	-.081	.687**	.486**	1.00				
7. Victimization – Before	-.127*	.070	-.050	.226**	.347**	.237**	1.00			
8. Victimization –College	-.038	-.028	.283**	.264**	.215**	.124*	.346**	1.00		
9. Total Victimization	-.113*	.041	.088	.287**	.358**	.235**	.911**	.702**	1.00	
10. Social support	.215**	-.032	.004	-.308**	-.163**	-.214**	-.109*	-.122*	-.136	1.00

*=significant at .05 ($p < .05$)

**= significant at .001 ($p < .001$)

Note: Gender is coded as 1=Male, 2=Female; Environment is coded as 1=Rural, 2=Non-rural; Time in college is coded as 1=Less than two years, 2=Greater than two years.

Table E

Descriptive Statistics for the Dependent Variables

<u>Variable</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Range</u>
Depression	16.25	10.05	0.00 – 48.00
Suicidality	7.42	3.61	4.00 – 20.00
Self-Esteem	19.48	5.75	10.00 – 36.00
Social Support	5.31	1.57	1.00 – 7.00
Total Victimization	12.46	10.24	0.00 – 52.00

Follow up discriminant function analysis was used to assess differences in population density on psychological adjustment. The discriminant analysis revealed that 3.5% of the variance was accounted by psychological maladjustment, $R^2=.35$, and significantly differentiated rural from non-rural individuals, $\Lambda = .965$, $\chi^2(3) = 9.839$, $p < .05$. The function was mostly explained by depression ($r = .83$) and to a lesser extent suicidality ($r = .75$). Upon further investigation of the means, depression was found to be higher among non-rural individuals ($M = 17.82$) as compared to rural individuals ($M = 14.68$). Suicidality was also found to be higher among non-rural individuals ($M = 7.93$) as compared to rural individuals ($M = 6.91$). However, post hoc comparisons, using a Bonferroni adjustment, revealed that depression levels were significantly higher among participants from non-rural areas as compared to those from rural areas $F(1, 247) = 6.831$, $p < .05$, $d = .05$, [CI = 15.58, 19.37], while suicidality was not significant.

Victimization. Exploratory analyses were performed on the dependent variable of victimization. An independent sample t-test was conducted to explore gender differences. The assumption of normality was met. Results indicated that significant gender differences were found on victimization, with males ($M = 14.26$, $SE = 1.10$) reporting higher rates of victimization than females ($M = 11.71$, $SE = .73$, $t(277) = 1.89$, $p < .05$, $d = .11$, [CI = -.09, 5.18]).

Frequency of the different types of victimization (mild, moderate, severe and electronic), prior to entering college and after being at college was also assessed (see Table F & G). Mild victimization includes verbal assaults, threats, or having property damaged or stolen. Moderate victimization is characterized as being chased or followed,

spit on, or having objects thrown at the person. Severe victimization is described as being punched, hit, kicked, or beaten, sexually assaulted, or assaulted with a weapon. Electronic victimization is illustrated as verbal harassment via texting, emailing, instant messaging, or leaving messages on Facebook, MySpace, or other online social websites.

Experiences relating to the mildest form of victimization (i.e. verbal assaults, threats, or having property damaged or stolen) were examined first. Fifty-nine individuals (21%) indicated they had not experienced any form of mild victimization prior to attending college. Thirteen percent of participants (n=35) indicated experiencing all three types of victimization, on more than two occasions. The most frequently endorsed type of mild victimization prior to entering college was having experienced verbal assaults or threats in person (n=194, 69%). Data were then analyzed in relation to post-college experience. A greater number of participants indicated that they had not experienced any type of mild victimization after entering college (n=158, 57%). Only six individuals (2.2%) reported having experienced mild victimization in every category since entering college. The most frequently cited type of mild victimization after entering college was having experienced verbal assaults or threats in person (n=60, 21%).

The responses related to experiences of moderate victimization (i.e. being chased or followed, spit on, or having objects thrown at them) were examined next. Forty-five percent of participants (n=125) indicated they had not experienced any form of the moderate type victimization before entering college. Only four individuals (1.4%) indicated that they had experienced all three types of victimization in this category; each person experienced each of these forms of victimization at least twice. The most frequent

type of moderate victimization experienced prior to entering college was having objects thrown at the individual (n=121, 43% of the total sample). In relation to reports of moderate victimization post-college entry indicated that the majority of participants (n=226, 81%) reported not having experienced any form of moderate victimization. No respondent endorsed having experienced all types of the moderate amount of victimization on more than two occasions, which would indicate the greatest amount of victimization in this category. The most frequently reported type of moderate victimization experienced after entering college was being chased or followed (n=36, 12% of the total sample).

When looking at the pre-college experience of the most severe type of victimization (i.e., being punched, hit, kicked, or beaten, sexually assaulted, or assaulted with a weapon), 137 individuals (49%) indicated that they had not experienced any type of victimization in this category. Only six individuals (2.2%) reported experiencing a severe amount of victimization, endorsing all three forms of severe victimization, on more than three occasions. The most frequently endorsed type of severe victimization experienced prior to entering college was being punched, hit, kicked or beaten (n=111, 40%). In contrast, a majority of individuals (n=233, 84% of the total sample) denied having experienced the most severe form of victimization since entering college. No one indicated that they had experienced all three forms of victimization. The most frequently cited form of severe victimization reported after entering college was being punched, hit, kicked or beaten (n=27, 10% of the total sample).

When looking at electronic victimization (i.e. verbal harassment via texting, emailing, instant messaging, or leaving messages on Facebook, MySpace, or other online social websites), 47% (n=133) of individuals denied experiencing this type of victimization prior to entering college. No respondent reported experiencing a severe amount of electronic victimization, or endorsed having experienced all forms of electronic victimization occurring more than five times. The most frequently cited type of electronic victimization was having received repeated messages, even when asking someone to stop (n=94, 34% of the total sample). Since entering college, over half the total sample (n=153, 55%) denied having been victimized via electronic means. No one indicated experiencing a severe amount of electronic victimization, or endorsed having experienced all forms of electronic victimization occurring more than five times since entering college. The most frequently cited type of victimization was receiving repeated messages, even when asking someone to stop (n=74, 27% of the total sample).

A 2x2x2 between subjects repeated measures multivariate analysis of variance was conducted on the composite dependent variable of victimization (mild, moderate, severe, electronic victimization) occurring prior to coming to college and after coming to college. Independent variables were gender, population density and time spent at school. Assumptions were met for homogeneity of regression, normality, and sphericity. The assumption of homogeneity of variance was met for victimization prior to entering college, but was violated for victimization experienced after entering college. However, Tabachnick and Fidell (1996) note that it is not unusual to find unequal variances in large

sample sizes, and violating this assumption under such circumstances does not preclude further analysis.

Contrasts revealed that there was a significant main effect for victimization ($F(1, 248) = 123.594, p < .001, d = .34$). Post hoc results indicated that, on average, participants experienced significantly more victimization prior to coming to college ($M = 9.02, SE = .46$) than since beginning college ($M = 3.43, SE = .60, [CI = 4.70, 6.47]$). Contrasts also revealed that there was a significant interaction effect between time spent at school and experiences of victimization prior to and after entering college, ($F(1, 248) = 12.106, p = .001, d = .047$). The interaction graph revealed that amount of victimization recalled prior to entering college and after entering college was different based on the amount of time a participant had been at college. A post hoc analysis was conducted on the interaction, using a Sidak correction. This revealed that individuals who have been in college for less than two years reported significantly higher amounts of victimization before entering college ($M = 9.57, SE = .686, [CI = 8.22, 10.92]$), as compared to those at college greater than two years ($M = 8.73, SE = .792, [CI = 7.17, 10.29]$). Conversely, those at college for less than two years were found to have significantly lower rates of victimization since being at college ($M = 2.25, SE = .390, [CI = 1.48, 3.01]$) as compared to those at college greater than two years ($M = 4.90, SE = .45, [CI = 4.01, 5.78]$). These results indicate that the amount of victimization reported was an artifact of how long participants had been at college. Those at college for less than two years had higher rates of victimization prior to coming to college, and those at college for greater than two years had higher rates of victimization since being at college.

Table F

Frequency of Type of Victimization Prior to and While in College

<u>When Experienced</u>	<u>Prior to College</u>				<u>While in College</u>			
	<u>Never</u>	<u>Once</u>	<u>Twice</u>	<u>>Twice</u>	<u>Never</u>	<u>Once</u>	<u>Twice</u>	<u>>Twice</u>
<u>Victimization Type</u>								
<u>Mild</u>								
Verbal assaults/threats	85	44	34	116	193	47	14	25
Threats of violence	119	53	28	79	229	29	9	12
Property damage	132	74	29	42	203	54	11	11
<u>Moderate</u>								
Chased/followed	171	53	20	35	243	26	7	3
Spit upon	241	26	4	8	272	5	2	0
Objects thrown	158	46	27	48	249	15	8	6
<u>Severe</u>								
Punched/hit/kicked/beaten	166	41	21	49	252	15	6	6
Sexual assault	213	38	13	15	256	15	5	3
Assault with weapon	264	9	2	4	274	3	2	0

Note: Frequencies indicate the number of times respondents indicated experiencing the particular victimization type, in person: 0=Never, 1= Once, 2= Twice, 3= More than two times.

Table G

Frequency of Electronic Victimization Prior to and While in College

<u>When Experienced</u>	<u>Prior to College</u>				<u>While in College</u>			
	<u>Never</u>	<u>1 to 2</u>	<u>3 to 5</u>	<u>≥ 5</u>	<u>Never</u>	<u>1 to 2</u>	<u>3 to 5</u>	<u>≥ 5</u>
From stranger	213	41	16	9	219	43	14	3
From acquaintance/friend	204	41	21	13	225	31	14	9
From significant other	216	28	16	19	243	18	9	8
After asked to stop	185	48	21	25	205	47	10	17
Pornographic messages/pics	222	39	10	8	226	33	14	6

Note: Frequencies indicate the number of times respondents indicated experiencing the particular victimization type: 0=Never, 1=one to two times, 3=Three to five times, 4=More than five times

Chapter 5

Discussion

Bronfenbrenner's (1988, 2001) theory of ecological systems was used to explore group differences in the current study. It was expected that sexual minority youth from rural environments would be exposed to a more hostile macrosystem than those from non-rural macrosystems, which would significantly impact their psychological adjustment. In conjunction with this idea, it was expected that sexual minority youth who had been exposed to a potentially more accepting macrosystem, such as the college environment, would report less psychological maladjustment than those who had not spent as much time in this same macrosystem. Additionally, previous research on gender differences among sexual minorities, including differences on depression, suicidality, self-esteem and victimization, has been sparse; therefore, potential gender differences were examined in this study. Finally, past researchers have neglected to control for differences in social support, which could impact the results of previous studies; thus, the current study accounted for social support.

It was also important to establish whether the sampling of sexual minority populations in previous research has led to misleading results. Participants in past studies have typically been recruited through support groups for sexual minority individuals,

whose membership is only a small subset of the sexual minority population. Using this type of sample was likely to skew results, since persons who seek support from these groups may be under a greater amount of distress than the sexual minority population as a whole. The current study recruited a sample from a non-therapy, non-support group population to increase representativeness of the sample.

Previous research has typically defined a sexual minority sample through self-identification. These samples have excluded persons who do not self-identify as a sexual minority, but engage in same sex behaviors, have same sex attraction, and same sex fantasies and desires. The current study attempted to broaden its participant group by including persons who may not choose the “sexual minority” label but whose behavior would place them in the sexual minority category. It is argued that using a more inclusive process to identify potential participants resulted in a more representative sample of the sexual minority population than found in previous studies.

Hypotheses 1 and 2. It was hypothesized that rural sexual minority male and female students will report higher rates of psychological maladjustment than non-rural sexual minority male and female students, after controlling for social support. Additionally, it was expected that rural sexual minority male and female students will report lower rates of victimization at college than in their home environment. No significant differences were found on rates of psychological maladjustment, when controlling for social support, and no difference was found on rates of victimization between environments. Social support was found to be significantly related to psychological adjustment, however.

Based on Bronfenbrenner's (1988, 2001) theory, it was hypothesized that a rural macrosystem would negatively impact psychological adjustment of sexual minority youth, since such environments are negative macrosystems for sexual minority individuals (Bauman & Graf, 2003; Eldridge et al, 2006; Herek, 2002; Herek & Glunt, 1993; Loftus, 2002; Overby & Barth, 2002). However, since there were no significant differences on psychological maladjustment between environments, this could mean one of three things. First, Bronfenbrenner's theory on the interaction between macrosystems and microsystems may not be applicable to the current research question; second, rural environments may be more accepting of sexual minority youth than they have been in the past; or third, the way environment was operationally defined in the current study was not distinct enough.

The results of the current study lead to the question of the applicability of Bronfenbrenner's (1988, 2001) theory to psychological adjustment among sexual minority college students from rural and non-rural areas. Perhaps the idea of rural and non-rural environments is not supported by Bronfenbrenner's theory, because such distal mechanisms have little influence on proximal processes. However, Bronfenbrenner asserted that proximal and distal influences have the propensity to either positively or negatively impact psychological adjustment. Microsystemic processes, or social interactions (both positive and negative) are directly related to macrosystemic processes (environment or culture), and both can impact psychological adjustment. Since social support was significantly related to participant's level of psychological maladjustment, then these results are not only consistent with a great deal of research (D'Augelli et al.,

1987; Espelage et al., 2008; Goodenow et al., 2006; Kosciw et al., 2008; Munoz-Plaza et al., 2002; Ueno, 2005), but also confirm Bronfenbrenner's assertion that microsystemic influences have the ability to impact psychological adjustment. Thus, the microsystemic processes may account for the lack of difference on psychological adjustment.

Bronfenbrenner (1988, 2001) asserted that macrosystems were the most distal form of influence on microsystemic processes. Such influences are based on the ideology present in a particular culture. If a negative ideology is present in a macrosystem, then Bronfenbrenner proposed that such macrosystemic influences would indirectly impact microsystemic processes or social support, which directly impacts psychological adjustment. However, a caveat to this idea was postulated by Bronfenbrenner and Ceci (1994). They noted that even in the most negative macrosystems, microsystems or proximal processes have the ability to compensate for the negative environment, and promote positive psychological adjustment. Bronfenbrenner and Ceci proposed that proximal processes have the propensity to increase psychological functioning, because it is via proximal processes that psychological functioning becomes actualized. Furthermore, they speculated that proximal processes also have the ability to promote predisposed genetic potentials that assist in healthy development. Thus, the importance of proximal processes (or social support) may be a likely explanation as to why there are no group differences on psychological maladjustment in the current study, since the current sample reported moderate to high levels of social support ($M=5.31$ out of 7), and essentially no differences were found on levels of social support among participants from rural ($M=5.36$) and non-rural ($M=5.26$) areas.

Another plausible explanation may be that rural environments are now just as accepting as non-rural environments, and thus previous research is dated. Residents in rural environments may now have higher rates of contact with and awareness of sexual minority individuals than they did in the past, which is something that has been found to lead to more positive attitudes (Eldridge et al., 2006; Herek & Glunt, 1993; Overby & Barth, 2002). It is important to attend to all the ways in which rural individuals could have an increase in contact with sexual minority individuals. It could be that sexual minorities in these areas are more visible than they used to be. However, it is also likely that an increase in acceptance is due to an increase in positive portrayals of sexual minorities in the media, on television shows, and in the movies over the last decade or so. In addition, with the ever increasing use of the internet across the country, it is likely that there is more exposure to sexual minority issues in this manner as well.

This idea leads to the question: is it possible that technology has impacted attitudes towards sexual minorities in rural areas? Since no significant differences were found between social support and rates of victimization between rural ($M=12.04$) and non-rural ($M= 12.88$) environments in the current study, this supports the notion that rural macrosystems may have become more accepting than what has been proposed in previous research. Furthermore, since overall rates of victimization are low ($M=12.46$ out of 104) for the current sample, this directly contradicts the notion that sexual minorities experience high rates of victimization. Maybe the increased exposure to sexual minority issues has impacted both rural and non-rural environments similarly.

Another possible explanation for the overall low rates of victimization may have to do with characteristics of the current sample. Over half of the sample (n=140) self-identified as heterosexual, even though scoring within the sexual minority range (between 16 and 28) on the composite scale of sexuality. Such a large number of participants indicating heterosexual status may have directly influenced the rates of victimization and social support reported by participants. Persons who publicly identify as heterosexual may not experience victimization, as heterosexuals are rarely victimized because of sexual identity. Furthermore, such individuals may also have overall higher levels of social support, because they are more likely to be accepted than sexual minorities. An assumption could also be made that one reason those in rural environments appear to be more accepting than expected is because there may have been a disproportionate number of participants from rural environments who self-identified as heterosexual. However, upon further investigation, it was found that a similar number of individuals self-identified as heterosexual from rural (n=74) and non-rural (n=66) environments. If more individuals from rural macrosystems had identified as heterosexual, then this would have been a probable explanation for similar rates of victimization between environments. Since this is not the case, then it is likely that persons in rural macrosystems are becoming more accepting of sexual minorities than has been the case in the past. If rural and non-rural macrosystems are perceived as equally accepting, then this could explain why there were no group differences on psychological maladjustment and would also support Bronfenbrenner's (1988, 2001) theory about macrosystemic influences on psychological adjustment.

Hypotheses 3 and 4. It was hypothesized that the amount of time spent at college for rural sexual minority male and female students will be associated with psychological adjustment, after controlling for social support. In addition, it was expected that rural sexual minority male and female students will report higher rates of victimization overall than non-rural sexual minority male and female students. If rural environments are truly becoming more accepting macrosystems, then it is not surprising that there were no significant differences between the amount of time spent in the college macrosystem and rates of psychological adjustment and victimization among rural and non-rural students.

As previously noted, Bronfenbrenner (1988, 2001) never asserts what impact spending more or less time in an affirming macrosystem has on microsystemic and proximal processes; thus, such a hypothesis was speculative in nature from the beginning. However, such results could also be viewed from the perspective that a change in macrosystem has positively impacted rural students, to the point that there is no significant difference in psychological adjustment between rural and non-rural students. Perhaps it took very little exposure to a more accepting macrosystem to impact rural students' psychological adjustment in a positive manner.

The college macrosystem in the current study was a more accepting environment than participants' home environments. In fact, rates of victimization were found to be significantly lower for participants in college (43%) as compared to when they were in high school (79%). Research on victimization asserts that sexual minority high school students experience high rates of victimization (Espelage et al., 2008; Kosciw et al., 2008). Since victimization has been linked with having higher levels of anxiety and

depression, suicidality, substance abuse, and other negative behaviors (Bontempo & D'Aguelli, 2002; Swearer et al., 2008), it is conceivable that participants had experienced more psychological maladjustment in high school as compared to college. Of course there is no way to know whether this is true or not, since the current study was not longitudinal in nature. Nevertheless, Bronfenbrenner (1988, 2001) proposed that exposure to a negative macrosystem has the propensity to lead to psychological maladjustment. His theory would lead to a plausible explanation as to why minimal exposure to a more accepting macrosystem, such as the college macrosystem, could have impacted psychological adjustment in a positive manner among rural participants.

Hypothesis 5. It was expected that sexual minority male and female students will differ on rates of victimization reported, and level of suicidality, depression and self-esteem, after controlling for social support. Specifically, regardless of home environment and time spent in the macrosystem, sexual minority males will report higher rates of victimization and suicidality than sexual minority females, after controlling for social support. Furthermore, regardless of home environment and time spent in the macrosystem, sexual minority females will report higher levels of depression and lower levels of self-esteem than sexual minority males, after controlling for social support. Surprisingly, no gender differences were found for rates of depression, suicidality, and self-esteem. However, the current study found higher rates of victimization among male college students ($M = 14.26$) than female students ($M = 11.71$).

Past research has reported that females tend to report higher levels of depression and lower levels of self-esteem than males (Galliher et al., 2004; Urday & Chantala,

2002), while males report higher rates of suicidality and victimization than females (Bontempo & D'Augelli, 2002; D'Augelli et al., 2001). Unlike the results of previous research (Bontempo & D'Augelli, 2002), however, no association was found between suicidality and victimization among males in this study. In other words, though males are more likely to report being victimized than females, they were not any more likely to report being suicidal. It is possible that this sample of males perceived enough social support in their microsystems to counteract the negativity of victimizing behavior.

Past studies also recruited participants through support groups for sexual minorities. Perhaps support group members are more disposed to psychological maladjustment than non-members. The results of the current study could also be an artifact of having half the sample of participants self-identify as heterosexual. Maybe, a heterosexual identity protects against psychological maladjustment.

Hypothesis 6. Hypothesis six stated that the amount of victimization experienced by sexual minority students will be positively correlated with psychological maladjustment (i.e., the higher the level of victimization, the higher rates of depression and suicidality, and the lower the levels of self-esteem). Total victimization (mild, moderate, severe, and electronic victimization prior to college and since being at college) was found to be positively correlated with psychological maladjustment (See Table D).

This is not surprising, since amount of victimization has been found to have a positive relationship with overall levels of distress and psychological maladjustment (Bontempo & D'Augelli, 2002; Kosciw et al., 2008; Swearer et al., 2008). As will be discussed further, levels of psychological maladjustment for the current sample are, for

the most part, moderate in nature. Results indicated that this sample reports less severe rates as compared to samples from previous research, even though the correlation with victimization is consistent with past research.

Exploring Psychosocial Adjustment. The level of psychological maladjustment for the current sample appeared to be moderate in nature, indicating that there is some truth to the claims in the research that sexual minority youth have high rates of psychological maladjustment. However, previous research has indicated that psychological maladjustment is severe amongst this population. A consistent theme in the research which may account for this disparity may be due to methodological issues, such as recruitment issues and having a non representative sample.

As previously noted, a great deal of sexual minority research has been conducted on those in support groups. Conducting research on this population may have inflated rates of psychological maladjustment. Specifically, those who seek such support may do so because they are already experiencing some level of psychological distress. By only surveying those from the support group population, a large number of individuals who do not need support, because of a lack of distress, are missed. A similar situation applies to relying only on those who self-identify as a sexual minority. Those who are more recognizable as a sexual minority are likely to experience more victimization (Boxer et al., 1999; Rankin, 2003; Rosario et al., 1996), which could lead to higher rates of psychological distress. Thus, by using a non support group population, including those who do not self-identify as a sexual minority, this may explain the moderate levels of psychological maladjustment found in the current study.

Depression. The mean level of depression of participants in the current study, as indicated on the Center for Epidemiological Studies of Depression (CES-D), was 16.25 out of 60. Average scores for depression among a community population range between 7.94 and 9.25; whereas, average scores for a psychiatric population is 24.42 (Radloff, 1977). Scores above 16 on the CES-D indicate that the respondent is depressed (Ensel, 1986; Zich, et al., 1990); thus, this samples' mean score would indicate that the participants, on average, are mildly depressed. However, having a mean score of 16.25 also signifies that depression scores may be evenly distributed amongst the sample, which would indicate that half of the participants are not depressed. In fact, 154 participants indicated they were not depressed, while seventy-seven participants indicated being mildly depressed, and 48 participants indicated being severely depressed (see Table H). Nevertheless, the current results still contradict previous research, which promotes the idea that sexual minority youth have severe levels of depression (Biernbaum & Ruscio, 2004; Safren & Heimberg, 1999).

Unfortunately, there are many limitations to comparing these results with past studies on sexual minority youth, since none used the whole CES-D scale, or they used a different assessment of depression all together, used a single item measures to assess depression, or did not indicate mean scores for rates of depression. Two studies reported mean scores when using the Brief Symptom Inventory (Biernbaum & Ruscio, 2004) and the Beck Depression Inventory (Safren & Heimberg, 1999). Biernbaum and Ruscio indicated that sexual minority participants had severe levels of depression, with a mean score of 54.9 out of 64. However, the sample used in the study was relatively small

(n=56), and consisted of those who self-identified as a sexual minority, which may have negatively impacted the results. In addition, Safren and Heimberg indicated that sexual minority participants had moderate levels of depression, with a mean score of 15.04 on the Beck Depression Inventory. Once again, methodological issues may have played a role in level of depression. The sample size of sexual minorities in this study was also considerably small (n=56), and all participants were recruited through an after school support program for sexual minority youth. It is possible that these participants had a high level of depression and thus sought out the support group, compared to the more inclusive sampling used in the current study. Based on this information, it appears that the current sample reported lower severity of depression as compared to these two studies.

Contrary to one of the hypotheses for the current study, that rural sexual minorities would have higher rates of depression than sexual minorities from non-rural areas, non-rural participants were found to have significantly higher rates of depression as compared to those from rural areas. As noted in the literature review, conflicting evidence exists on differences in rates of depression for persons in rural and non-rural areas. The literature contends that rates of depression are either higher for those in urban areas as compared to those in rural areas (c.f. Patten et al., 2003), or there is no difference between the two areas on rates of depression when taking into account personal factors and life events (c.f. Kovess-Masfety et al., 2005; Wang, 2004). However, that research never looked specifically at sexual minorities. Based on Bronfenbrenner's (1988, 2001) theory, it was hypothesized that due to being a sexual minority in a hostile macrosystem,

such as a rural environment, and having less access to healthcare, this population would have higher rates of depression. One reason the current findings may support the notion that sexual minorities from non-rural areas have higher rates of depression, could be due to controlling for social support. Social support was only one personal factor taken into account in the current study; however, if other personal factors or life events were taken into account (Kovess-Masfety et al., 2005; Wang, 2004) no differences may have been found. Nevertheless, these results lend support to the assertion made by Patten et al. (2003) that rates of depression are higher among persons in non-rural environments as compared to persons in rural environments.

Suicidality. When looking at levels of suicidality, the mean score for the current sample of a 7.42 on the Suicidal Behaviors Questionnaire-Revised (SBQ-R) falls just above the cutoff of seven. Scores on the SBQ-R range from 3 to 18, and a score of 7 indicates that a non clinical population is at a high risk for committing suicide (Osman et al., 2001). Thus, this sample, on average, was at a high risk for attempting suicide; however, since the sample falls close to the cutoff of 7, a score of a 7.42 also indicates that approximately half of the participants are not at high risk for suicide. Specifically, 155 participants reported scores that fell below the cutoff of seven, meaning they were not suicidal, while 124 participants reported scores that fell above the cutoff of seven, indicating that they were at risk for suicide (see Table H). In addition, only nine percent of participants in the current study admitted to attempting suicide in the past.

This is a stark difference to the majority of studies assessing suicidality in sexual minority adolescents. Safren and Heimberg (1999) reported that 30% of individuals in

their study reported past suicide attempts. Additionally, 20% of their participants indicated that they had thought about suicide either often or very often in the past year, as compared to 8.6% of participants in the current study. D'Augelli et al. (2001) reported that 35% of participants recruited through community based programs reported a past suicide attempt. Furthermore, Urdy and Chantala (2002) indicated that 31% of seventh through twelfth graders who self-identified as sexual minorities had thought of suicide in the last year. It is difficult to directly compare the findings of the current study to those of other studies. Most previous studies assessed suicidality using a single item; the few studies that used the SBQ-R did not report mean scores for the scale.

The results of the current study are consistent with a study conducted by Savin-Williams and Ream (2003b). That study indicated that only nine percent of an internet sample of sexual minorities admitted to past suicide attempts as compared to support group members ($M=25\% - 39\%$). Therefore, the results from the current study support the claim that suicide rates are much lower among the sexual minority population as a whole, when a more representative sample is generated, and when the variable of suicidality is assessed properly (Savin-Williams, 2001; Savin-Williams & Ream, 2003b). Specifically, a single item measure was not used in the current sample, and a composite score was calculated for suicidality, including past suicidal ideation attempts and the likelihood of a future attempt. In addition, since a non-clinical, non-support group sample was used, and individuals who did not self-identify as sexual minorities were also included in the current sample, the rate of suicidality is likely to be more accurate of the sexual minority population than has been previously proposed.

Table H.

Descriptive Statistics of Depression and Suicidality by Severity Level

	<u>N</u>	<u>%</u>
<u>CES-D</u>		
Not depressed	154	56
Mildly depressed	77	28
Majorly depressed	48	17
<u>SBQ-R</u>		
Not suicidal	155	56
Suicidal	124	44

Note. On the CES-D, a score below 16 indicates no depression, a score of 16-26 indicates mild depression, and a score of 27 or above indicates major depression. On the SBQ-R, a score below 7 indicates an individual is not suicidal, while a score of 7 or above indicates the individual is suicidal (in a non clinical sample).

Self-esteem. When looking at self-esteem, it is difficult to compare this construct among studies, due to similar methodological issues as was with depression and suicide. However, overall, participants in the current study indicate having an average amount of self-esteem ($M=19.48$; Rosenberg Self-Esteem Scale; RSES, Rosenberg, 1988). In a study conducted by Rosario et al. (2001), results indicated that participants had high levels of self-esteem ($M=33$) using the RSES, as compared to the current results. Such differences may be due to sampling issues, whereas individuals in the Rosario et al. study were recruited through community support groups for sexual minorities. Thus, self-esteem may be impacted in a positive manner by those who have support of like others.

Galliher et al. (2004) also looked at self esteem, finding that among those who identified as sexual minorities self-esteem levels were fairly high, ranging between 3.77 and 4.26 out of five. The sample used in the Galliher et al. study was considered to be more representative than previous sexual minority research studies, because participants were recruited from high schools all over the country. It is difficult to compare the results of this study to the current study, however, because individuals were categorized based only on sexual attraction status. It is unclear as to how many of these individuals identify as sexual minorities. Nevertheless, it appears that levels of self-esteem in the current study are still lower than what would be expected.

D'Augelli's (1994a) Model of Sexual Identity Development may explain the differing levels of self-esteem in the current study, as compared to previous studies. D'Augelli theorizes that the beginning stages of sexual identity development have to do more with self-exploration. Prior to coming out to others, or exiting heterosexual identity

and developing a LGB personal identity status, a person must begin to challenge internalized heterosexist messages that have developed due to the influence of distal processes. Therefore, since more than half of the sample identified as heterosexual and can be viewed as falling into the earlier stages of identity development, as indicated by D'Augelli, then it is understandable that the internalized heterosexist message could potentially impact overall levels of self-esteem.

Approximately half of the current sample labeled themselves as heterosexual. It could be argued that these individuals are considered “closeted” and are not “out” about their sexuality. If this is the case, then the current results are consistent with the assertion made by Boxer et al. (1999). Based on results from a qualitative study, Boxer et al. claimed that an individual’s self-esteem is likely to be lower prior to coming out about his or her sexuality. This could also explain the disparity in levels of self-esteem between the current study and the Rosario et al. (1996) study. Participants in that study also all self-identified as sexual minorities. It could be that participants in both of these studies were more comfortable with their sexuality and at a higher level of their sexual identity development, as compared to the current study. With such a large number of individuals in the current study who labeled themselves as heterosexual, it is conceivable that such individuals are at a lower level of sexual identity development (D'Augelli, 1994a). Therefore, it is probable that this negatively impacted overall scores of self-esteem.

Social Support. Social support was controlled for in this study on the assumption that it could differentially impact psychological adjustment between the groups. Since social support was adjusted for, and it had a significant impact on psychological

adjustment, it is likely that this could contribute to a lack of significant differences between environments, amount of time spent in college, and gender. Previous research does not take into account the impact of social support, when looking at psychological adjustment of sexual minority youth.

It is essentially impossible to compare current with past results regarding the construct of social support. No studies looking at sexual minority issues have used the MSPSS. The few studies that looked at social support as a variable of interest assessed such issues as the number of friends and family members to talk to (D'Augelli et al., 1987), degree of attachment to family and friends (Ueno, 2005), or amount of connectedness to family and friends (Eisenberg & Resnick, 2006) and labeled these variables as social support. Therefore, comparisons to previous research will not be made.

That being said, it is important to discuss the impact of social support on psychological adjustment and how it pertains to the current study. Social support has been found to be associated with lower feelings of depression, loneliness, level of psychological adjustment, feelings of belonging, an increase in self-esteem (Dietz & Dettlaff, 1997; Ueno, 2005), and has also been found to act as a buffer against victimization (Espelage et al., 2008). The participants in the current study reported having a mean social support score of 5.31. Previous research indicates that a score of 5.58 is considered to be a high amount of social support (Dahlem, et al., 1991); thus, the current sample indicated moderate to high amounts of social support. Having such a high

amount of social support, it is likely that this may be associated with the moderate levels of psychological maladjustment for the current sample.

Assuming support groups are a sense of social support for sexual minority youth, it could be argued that previous research recruiting participants from support groups should have reported lower rates of psychological maladjustment. However, it is difficult to say whether or not such individuals' baseline of psychological maladjustment is much higher than those who do not seek out support. Due to such a disparity, the differences in results between the current and previous research may truly have to do with the use of a more normative, non-support group and non-clinical population.

Victimization. Lower levels of victimization found in the current study may also contribute to the moderate levels of psychological maladjustment amongst the current sample, and explain the differences between the current results and previous research. Accounts of victimization in past studies conducted by D'Augelli (1995) and Kosciw et al. (2008) indicated that 83% and 90%, respectively, of participants reported having experienced victimization. Similarly, in the current study, 79% of participants indicated that they experienced at least verbal victimization while in high school. Conversely, only 43% indicated experiencing at least verbal victimization in college. However, these results should be viewed with caution. An interaction was found between amount of time an individual had been at college and accounts of victimization while in high school and while at college.

Based on this discovery, it was found that participants who had been at college for less than two years indicated having higher rates of victimization while in high school

($M=9.57$) as compared to those who had been at college for greater than two years ($M=8.73$). These results may suggest several things. It could indicate that the longer someone is away from their home environment, the less likely they accurately remember the victimization they experienced. In addition, the results could mean that participants at college for a longer period of time truly did not experience as much victimization as compared to participants at college for a shorter period of time. Conversely, participants at college for a longer amount of time could also view experiences of victimization in the past differently than those at college for a shorter amount of time. For example, participants at college for greater than two years may have a different schema for victimization in childhood as compared to participants at college for less than two years, and may define victimization differently due to maturity. These results could also easily be explained by the recency effect. It is likely experiences of victimization in high school are more salient to participants who have been in college for less than two years as compared to those in college for greater than two years.

Differences were also found for length of time at college on accounts of victimization while at college. Individuals who had been at college for greater than two years indicated that they had experienced higher rates of victimization at college ($M=4.90$) as compared to those at college for less than two years ($M=2.25$). Perhaps the difference in rates of victimization in this instance is because the longer an individual has exposure to the college macrosystem, the more chance they have to be victimized. Additionally, it could be that those with less exposure to the college environment are still

in a “honeymoon period” of sorts, which could lead to viewing the high school environment as more hostile than the college environment.

The college campus has been found to be negative for many sexual minority students (Brown et al., 2004; D’Augelli, 1992; Rankin, 2003). In fact, it appears that the campus where these data were collected has a more negative campus climate as compared to a nationally representative sample. Rankin found that only 36% of sexual minority individuals (both out and closeted) in an internet survey reported having experiencing some sort of victimization on campus. In comparison, 43% of participants in the current study indicated experiencing at least one instance of victimization while at college. As previously noted, reported rates of victimization in the current sample were lower for those at college for less than two years. These results may be due to participants having less exposure to the negative college macrosystem as compared to those who have been on campus for greater than two years.

As compared to in person victimization, participants in the current study reported lower rates of electronic victimization. Furthermore, it appears that rates of electronic victimization are lower than those reported in previous research. In the study conducted by Finn (2004), approximately 30% of participants had indicated that they had received harassing emails or messages as compared to only 22% of participants in the current study. Additionally, 37% of participants in the Finn study reported having received harassing emails and messages after asking the perpetrator to stop; whereas, only 27% of participants in the current study indicated having experienced this type of continued victimization. Conversely, when looking at current participants’ self-account of

electronic victimization prior to entering college, 53% of individuals reported experiencing some sort of electronic victimization. Kosciw et al. (2008) found that over 55% of high school students indicated experiencing electronic harassment. These results could indicate one of two things. One possibility is that rates of electronic victimization are higher in high school as compared to college. Another possibility is that overall rates of electronic victimization have decreased in general. Since the Kosciw et al. study may have assessed victimization at the same time when the majority of the current sample was in high school, this may allude to the idea that, five years ago (i.e. 2005), rates of electronic victimization were higher. It is likely that since electronic victimization and its consequences have been prevalent in the media, and laws have been created to combat this very issue, overall rates of electronic victimization have actually begun to decrease.

As previously noted, accounts of in person victimization in the current study are lower than previous research has indicated. However, such differences may be due to methodological and sampling issues. For instance, the Kosciw et al. (2008) study was made up of participants in high school, and as has been demonstrated, it is possible that rates of victimization are high in high school. Additionally, the D'Augelli (1992) study was conducted on a college sample with participants who all self-identified as a sexual minority in the late 1980's to early 1990's. Being out about one's sexuality, especially two decades ago, may have led to higher rates of victimization than reported in the current study. Furthermore, using a retrospective method to assess victimization in high school may have impacted the results of the current study in some way, especially for

those who have been at college for greater than two years; therefore, the actual level of victimization could have been higher or even lower than 79%.

Possibly one of the more concerning results of the current study is that the campus climate in general is found to be more negative than a nationally representative sample (Rankin, 2003). However, it must be noted that even though almost half of the participants endorsed having experienced some sort of victimization since being at college, the frequency of the victimizing experiences appears to be low. Having a mean of approximately three and a half can indicate different things. It could signify that participants have experienced the same type of victimization (e.g., being verbally harassed) on about three or more occasions. It could also indicate that they have experienced three different types of victimization (e.g., being verbally harassed, spit upon, or sexually assaulted) on one occasion each, or any combination of the two (e.g., being verbally harassed on two occasions, and being sexually assaulted on one occasion). Therefore, when putting the amount of victimization experienced by participants while at college into perspective, the amount is relatively minimal. It is possible that the frequency may be low due to the large number of participants who identify as heterosexual. As reported in the Rankin (2003) study, sexual minority youth who are open about their sexuality report higher rates of victimization as compared to those who are not open about their sexuality. Identifying as a heterosexual, therefore, is likely to protect an individual from being victimized. Conversely, the low frequency counts could be an indication that the college macrosystem is accepting, or at least not actively rejecting, of sexual identity diversity. It is difficult to say.

Even though the frequency of victimization reported in the current study may be low, it looks as if the college campus may still be somewhat of a hostile macrosystem. It is likely that being in a hostile macrosystem may impact psychological maladjustment among the current population (Bronfenbrenner, 1988, 2001). However, as Bronfenbrenner and Ceci (1994) noted, supportive microsystemic processes may make up for a negative macrosystem. Since social support has been found to buffer against victimization (D'Augelli, 1995; Goodenow et al., 2006; Kosciw et al., 2008; Ueno, 2005), and moderate to high amounts of social support were reported in the current sample, positive microsystemic processes may be what is contributing to the moderate levels of psychological maladjustment among the current sample.

Conclusion. The results from the current study have illuminated many flaws in previous research. Specifically, methodological issues regarding recruitment of participants and sampling only individuals who label themselves as a sexual minority may have painted an overly- grim picture of this population. Results indicated that overall, individuals in the current study have moderate levels of psychological maladjustment, as compared to high rates of depression and suicidality in previous studies. However, rates of self-esteem were lower than those reported in previous studies. This may be explained by the inclusion of individuals who do not self-identify as sexual minorities. It has been noted in the past that individuals' self-esteem rises once they are out about their sexuality (Boxer et al., 1999; Rosario et al., 1996). Additionally, when looking at the sexual identity development model proposed by D'Augelli (1994a;

1994b), individuals who have not come out about their sexual orientation are more likely to have internalized heterosexist views, which may ultimately impact self-esteem.

Since having a large number of individuals who label themselves as heterosexual could account for lower levels of self-esteem, it cannot be ignored that levels of depression, suicidality and victimization may also be impacted in the same manner. This leads to the question as to whether or not labeling oneself as heterosexual is protective in nature. It could be that by labeling oneself as heterosexual, such individuals are less likely to experience hostile distal and proximal processes. And since more than half of the current sample labeled themselves as such, this may have positively impacted the results of depression and suicidality. It must be noted that the levels of depression and suicidality are still concerning however, with participants meeting the cutoffs for minor depression and for being at high risk for suicide. Conversely, amount of social support was found to be moderate to high in nature, which may account for the overall moderate levels of psychological maladjustment for participants. Furthermore, social support may act to protect against participants attempting suicide, especially since the sample was found to be at a high risk for suicide, but reported low rates of past attempts. The moderate to high rates of social support become even more important when rates of victimization are introduced into the picture. Victimization was found to be higher on average prior to individuals entering college as compared to while in college. Nevertheless, experiences of victimization while at college were found to be higher than a representative national sample.

Strengths and Limitations of the Current Study. Many strengths are present in the current study. First, soliciting research participation via a campus wide email reached many individuals who would not have been reached through the usual channels, e.g., psychology department research pools or members of the LGBT student group. In soliciting participants in this manner, there is an excellent chance the invitation to participate reached the most diverse population possible. Additionally, in receiving an email, individuals did not have to feel self-conscious signing up for such a study. The participants had the opportunity to participate in the study in private, without concern about stigmatization, which individuals may feel when signing up for a study regarding sexuality.

Another strength of the current study was the use of a multifaceted approach to determining sexual minority status. Often, studies use self-identification as a sexual minority as the sole inclusion criteria. Doing so, however, omits a large population of individuals who are not comfortable identifying as such, or who choose not to use a label of “gay” or “lesbian.”

Similarly, objectively determining rural vs. non-rural hometown status instead of relying on subjective definitions was another strength. In doing this, the variable became a more objective measure of environment. In the research reviewed on rural issues, no studies identified environment status in this manner. Furthermore, very few quantitative studies have looked at rural and non-rural experiences of sexual minority youth, and of those that have explored such environmental issues, the way sexual minority status has been defined (e.g. using only those who self-identify, or using sexual attraction status to

label an individual a sexual minority) has likely skewed the results. By using a comprehensive measure of sexuality among individuals from rural and non-rural areas (which was objectively defined), the current study highlights that there really are more similarities than differences between those from rural and non-rural areas.

The strength of the proposed analyses was grouping the dependent variables into one category of psychological adjustment. Rather than looking at each variable independently, creating a composite variable decreased the chance of a type 1 error. Additionally, looking at group differences using the MANCOVA helped to answer the question of whether or not there truly are differences in adjustment between rural and non-rural sexual minorities.

Of course, no study is perfect, or without methodological weaknesses. Foremost, even though the sampling method was listed as a strength, it can also be considered a weakness. The participants answering the questions needed to have access to the internet. Thus, a population of individuals without such access could be missed. Furthermore, the sample was not a random sample, since only those who subscribe to the survey option at BSU, or who chose to participate in the study, were included in the analysis. In addition, the current study is descriptive in nature, thus there was no experimental condition. This impacted the amount of control and internal validity within the present study. The use of non standardized and validated measures of victimization and sexual orientation was also a weakness. Using such measures may not have accurately reflected the measured constructs. Furthermore, using a retrospective account of victimization prior to college could bias the results.

Another limitation to the current study is that it is unknown when individuals began engaging in same sex behaviors, fantasies, thoughts, and began having same sex attraction. It cannot be assumed that this occurred prior to coming to college, even though a majority of the research indicates that individuals are likely to have physical and mental attraction to the same sex for some time prior to coming out. By not knowing when individuals began exploring such things, it is unclear if this had any impact on the results. If participants only began having sexual and mental attraction toward, and engaging in sexual behaviors with, members of the same sex since coming to college, this may have skewed the information gained about victimization prior to college. Such participants' experiences of victimization could have been lower, as compared to those who had sexual and mental attraction, and engaged in sexual behaviors before coming to college. Therefore, a limitation to the current study is that this information was not assessed. If this information had been asked, it may support or even challenge the results regarding rates of victimization prior to college.

The current study is also limited in its generalizability. Since over half of the sample included those who self-identify as heterosexual, this limits who the results can be applied to. Even though the current sample is seen as more representative of the sexual minority population as a whole, it is possible that those who self-identify as a sexual minority could have higher rates of psychosocial maladjustment than those who identify as heterosexual.

Implications for Future Research. Little research has been conducted looking at the differences between sexual minorities from rural and non-rural environments. The

current study suggests that there really may be few differences between these macrosystems for sexual minorities. However, this may not actually be the case. By using a retrospective account of victimization in the current study, this may not have given an accurate account of the rural macrosystem. Assessing victimization when it was occurring in the different environments may have yielded different results. In addition, only experiences of victimization were assessed, attitudes about sexual minorities of those in rural and non-rural areas were not explored. Attitudes about sexual minorities could be more negative in rural as compared to non-rural macrosystems, and such attitudes may impact sexual minority youth from these areas differently. Additionally, the current study focused on adolescents and young adults, and did not look at older individuals. In doing this, generational influences may have impacted the results. It is probable that the current generation is less negative and hostile towards sexual minorities than older generations. Thus, saying that there are little differences between macrosystems can only be applied to the population used in the current study, and when looking at the issue of victimization. In addition, rates of social support may have been positively influenced by being at college. Specifically, participants' social support network could have increased when coming to college. Since it was not assessed, it is impossible to know if levels of social support of participants from rural environments increased after coming to college. However, since social support likely protects against the impact of victimization, this may also account for the lack of difference between macrosystems.

Future research should attempt try to replicate the current study, but additional variables other than victimization (such as attitudes) should be included to assess differences in macrosystems. However, the best way to tell if there are true differences between rural and non-rural environments may be to sample the population actually living in the different environments, without exposure to a new macrosystem such as college and the extra support that may be available at college. In addition, a longitudinal study looking at psychological adjustment, social support, and victimization of sexual minorities living in these two types of environments may help to clarify whether there really are higher rates of victimization in high school, lower levels of social support, and whether or not there really is an association between psychological maladjustment and victimization.

It is also imperative that future research assesses sexuality in a similar method as the current study, by using a composite variable. By solely relying on sexual attraction ratings or self-identity, previous results have been skewed. Even though it is being argued that the current way of assessing sexuality is a more comprehensive and inclusive approach, this may also not be the case. Future studies should look at the very issue of defining sexuality. Many have written conceptual papers about the issue, but few, if any have actually assessed the best way to operationalized sexuality.

A limitation to previous research and the current study is the use of a measure of victimization that lacks validation. Future research should be geared towards developing a validated measure of victimization, where a victimization score clearly indicates severity of victimization. The victimization scale in the current study had a dual meaning.

Scores indicated frequency and severity of victimization. Since a score could mean one of two things, having experienced multiple instances of one type of victimization, or having experienced multiple types of victimization on one occasion, interpreting the results led to a great deal of confusion. A more comprehensive measure of victimization, which weights the more severe types of victimization, is necessary.

Implications for Practice. The results of the current study also impact professionals who work with sexual minority youth in college. Foremost, the characteristics of this sample show how important it is to get an accurate picture of a client's sexuality. By just relying on an individual's self-identification as heterosexual, the broader scope of a client's sexual experiences may be missed. Thus, it is imperative to explore sexual behaviors, attraction, thoughts and fantasies of clients. By assessing these variables, along with the client's label of his or her sexuality, a better picture of the client can be gained. Additionally, if a disparity is identified (i.e. labeling oneself as heterosexual while engaging in same sex behaviors, attraction and fantasies) it can lead to a discussion about reasons why the client chooses to identify as heterosexual. Through these discussions, the client can gain insight into internalized heterosexist messages, and may begin to fight these messages. It would also be important to assess such clients' levels of self-esteem, and explore the impact that his or her sexuality has on this variable.

In addition to the way sexuality is assessed when working with these individuals, it is also necessary to explore the amount of social support available. Since social support was associated with psychological maladjustment, then it is essential to promote the development of a strong support system among this population. Furthermore, it is

even more important to promote a strong support network for sexual minority college students, since the college macrosystem was found to be negative for these students.

Since the college macrosystem is still not as accepting of sexual minority students as would be hoped, it is crucial that experiences of victimization be assessed by those who work with this population. Victimization was found to correlate with psychological maladjustment, thus it is likely that those in distress presenting for counseling may have experienced victimization. Not only should counselors assess in person victimization, but the current results support that electronic victimization should also be assessed. It is also likely that male clients will present with higher rates of victimization than female clients. Thus, when working with male sexual minorities, it is especially important to explore the amount and impact of victimization on their adjustment.

Not only do the current results have implications for practice, but they also have social justice implications. Being an affirmative therapist for the sexual minority population does not limit counselors' work to individual treatment. Since the college macrosystem is likely to be a negative environment for this population, the counselor can work to promote a more accepting environment. College counseling centers are in the position of promoting acceptance, via outreach programs aimed at changing attitudes towards sexual minorities, and by influencing the University administration. Through such efforts, it is hoped that the college macrosystem can become a more positive place for sexual minority students. Counselors are in a position to bring about change by acting as a social justice agent on the college campus. By engaging the university administration in a dialogue about sexual minorities' experiences of victimization on campus, the

administration can have an increase in awareness. Through this increased awareness, efforts can be made to make the college campus more inclusive, and the administration can create penalties that could be enforced to those found engaging in violence towards sexual minorities.

Summary. Based on the results of the current study, Bronfenbrenner's (1988, 2001) theory of ecological development is partially supported. The current study only looked at macrosystemic and microsystemic processes, and did not look at the impact of mesosystems and exosystems on sexual minority youth. Since differences were not found between macrosystems, then the current study really just supports Bronfenbrenner's notion that microsystemic processes positively impact psychological adjustment. Group differences were not found on psychological maladjustment between persons from rural and non-rural environments, males and females, and between those who have been at college less than two years and greater than two years. Differences were found between rural and non-rural participants on rates of depression, with participants from non-rural areas having higher rates of depression. Rates of victimization were found to be higher for participants prior to entering college, as compared to when in college. Even though the main hypotheses for the current study were not supported, the results are still important. Overall, the rate of psychosocial maladjustment in the current study appears to be lower than previous studies, with the exception of level of self-esteem. These results may be due moderate to high levels of social support or to using a sample that is more representative of the sexual minority population, including those who are and are not open about their sexuality.

Initially, Bronfenbrenner's (1988, 2001) theory was in question when there were no significant differences on psychological adjustment between rural and non-rural participants. However, this lack of difference may be due to a more accepting macrosystem in rural environments than the previous research has accounted, or because participants' psychological adjustment was not assessed while in the participants' home environments. When taking the current results into account, the college macrosystem would be considered to be non-affirming to sexual minority students, which should negatively impact psychological adjustment. Perhaps having moderate levels of psychological maladjustment is a direct result of the frequency of victimization experienced by this population. However, Bronfenbrenner's theory would contend that the high levels of social support (microsystem processes) reported by the current population may compensate for such a negative macrosystem, and lead to better psychological adjustment, than if there were no positive proximal processes present.

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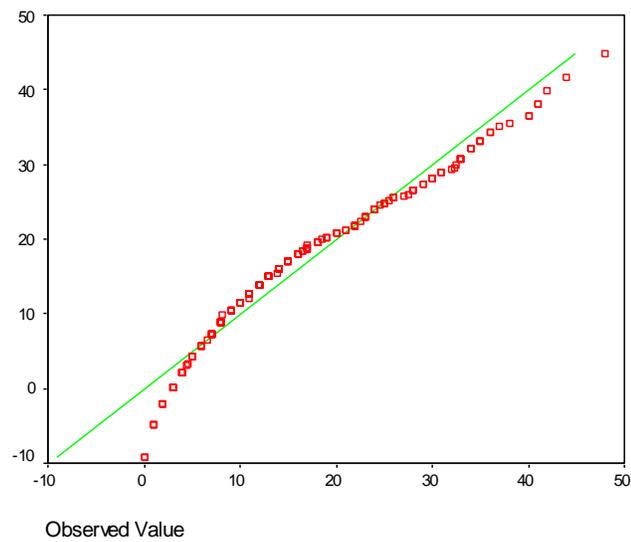


Figure 1. Normal Q-Q plot of CES-D data

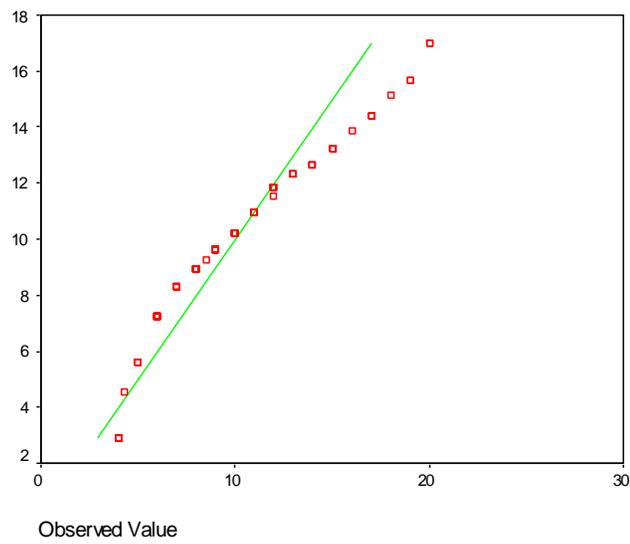


Figure 2. Normal Q-Q plot of SBQ-R data

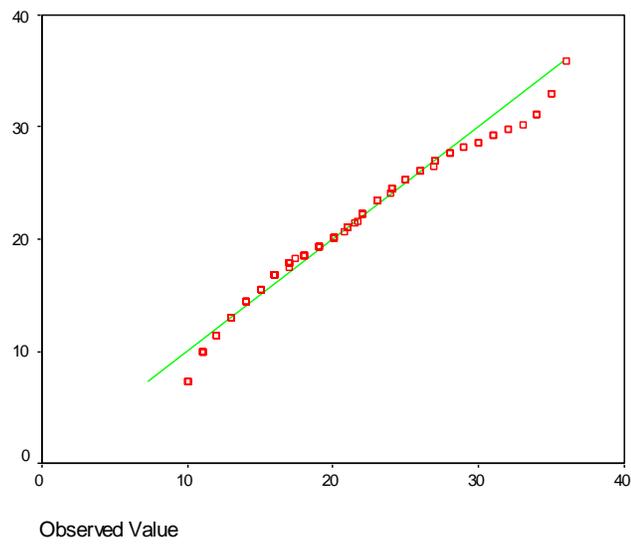


Figure 3. Normal Q-Q plot of RSES data

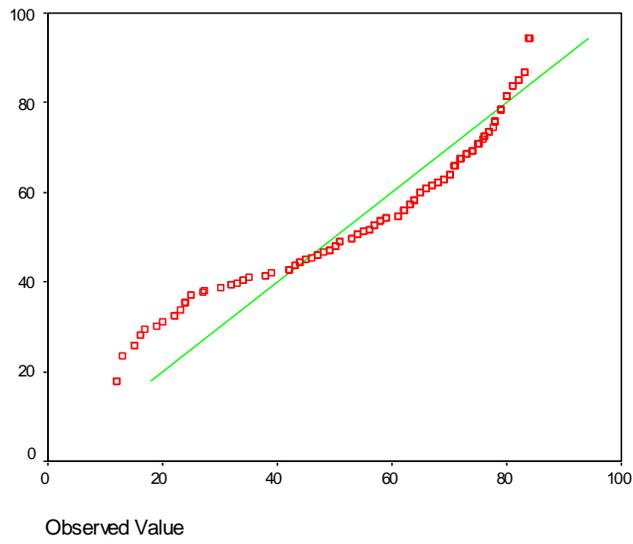


Figure 4. Normal Q-Q plot of MSPSS data

APPENDICES

Appendix A
Demographic Sheet

Please answer the following questions.

1. Age: _____

2. Gender: _____ Male
 _____ Female
 _____ Transgendered

3. How many years have you been at Ball State University? _____

4. What is your year in school?
 _____ Freshman
 _____ Sophomore
 _____ Junior
 _____ Senior
 _____ Graduate Student

5. What is your race/ethnicity?
 ___ African American, Black, Non Hispanic
 ___ Asian American, Pacific Islander
 ___ Caucasian, Non Hispanic
 ___ Hispanic, Latino, Latina
 ___ Native American
 ___ Other

6. Did you grow up primarily in an area that is Urban _____ Suburban _____
Rural _____

7. What is the name of your hometown? _____

8. What is the zip code of your hometown? _____

9. Please identify the extent to which you are attracted to persons of the opposite sex from *Not at all* to *Extremely*, on a scale from 1 to 7.

Not at all-----Extremely
 1 2 3 4 5 6 7

10. Please identify the extent to which you are attracted to persons of the same sex from *Not at all* to *Extremely*, on a scale from 1 to 7.

Not at all-----Extremely
 1 2 3 4 5 6 7

11. Please indicate the type of sexual behaviors (i.e., kissing, fondling, oral sex, anal sex, vaginal intercourse) you have engaged in. Please indicate the extent to which you have engaged in only opposite sex experiences to only same sex experiences, or no sexual behaviors.

I have not engaged in sexual beh.	Only opposite sex experiences	Only same sex experiences
0	1	2
	3	4
	5	6
	7	

12. Please indicate type of sexual thoughts, fantasies or desires you have from *only opposite sex fantasies, thoughts and desires*, to *only same sex fantasies, thoughts and desires*, on a scale from 1 to 7.

Only opposite sex fantasies, thoughts, desires _____ Only same sex fantasies, thoughts, desires
 1 2 3 4 5 6 7

13. Please identify your sexual orientation:

- _____ Heterosexual
- _____ Bisexual
- _____ Gay
- _____ Lesbian
- _____ Unlabeled
- _____ Other; Please Specify _____

Appendix B

Center for Epidemiological Studies Depression Scale

Center for Epidemiological Studies Depression Scale

Instructions: Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way during the past week.

1. I was bothered by things that usually don't bother me.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

2. I did not feel like eating; my appetite was poor.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

3. I felt that I could not shake off the blues even with help from my family or friends.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

4. I felt that I was just as good as other people.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

5. I had trouble keeping my mind on what I was doing.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

6. I felt depressed.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

7. I felt that everything I did was an effort.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

8. I felt hopeful about the future.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

9. I thought my life had been a failure.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

10. I felt fearful.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

11. My sleep was restless.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

12. I was happy.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

13. I talked less than usual.
 0. Rarely or None of the time (Less than 1 Day)
 1. Some or a little of the time (1-2 Days)
 2. Occasionally or a Moderate Amount of Time (3-4 Days)
 3. Most or All of the Time (5-7 Days)

14. I felt lonely.

0. Rarely or None of the time (Less than 1 Day)
1. Some or a little of the time (1-2 Days)
2. Occasionally or a Moderate Amount of Time (3-4 Days)
3. Most or All of the Time (5-7 Days)

15. People were unfriendly.

0. Rarely or None of the time (Less than 1 Day)
1. Some or a little of the time (1-2 Days)
2. Occasionally or a Moderate Amount of Time (3-4 Days)
3. Most or All of the Time (5-7 Days)

16. I enjoyed life.

0. Rarely or None of the time (Less than 1 Day)
1. Some or a little of the time (1-2 Days)
2. Occasionally or a Moderate Amount of Time (3-4 Days)
3. Most or All of the Time (5-7 Days)

17. I had crying spells.

0. Rarely or None of the time (Less than 1 Day)
1. Some or a little of the time (1-2 Days)
2. Occasionally or a Moderate Amount of Time (3-4 Days)
3. Most or All of the Time (5-7 Days)

18. I felt sad.

0. Rarely or None of the time (Less than 1 Day)
1. Some or a little of the time (1-2 Days)
2. Occasionally or a Moderate Amount of Time (3-4 Days)
3. Most or All of the Time (5-7 Days)

19. I felt that people dislike me.

0. Rarely or None of the time (Less than 1 Day)
1. Some or a little of the time (1-2 Days)
2. Occasionally or a Moderate Amount of Time (3-4 Days)
3. Most or All of the Time (5-7 Days)

20. I could not get "going."

0. Rarely or None of the time (Less than 1 Day)
1. Some or a little of the time (1-2 Days)
2. Occasionally or a Moderate Amount of Time (3-4 Days)
3. Most or All of the Time (5-7 Days)

Appendix C

Suicidal Behavior Questionnaire- Revised

Suicidal Behavior Questionnaire- Revised

Instructions: Please check the number beside the statement or phrase that best applies to you.

1. Have you ever thought about or attempted to kill yourself? (Check only one)

- 1. Never
- 2. It was just a brief passing thought
- 3a. I have had a plan at least once to kill myself but did not try to do it
- 3b. I have had a plan at least once to kill myself and really wanted to die
- 4a. I have attempted to kill myself, but did not want to die
- 4b. I have attempted to kill myself, and really hoped to die

2. How often have you thought about killing yourself in the past year? (Check only one)

- 1. Never
- 2. Rarely (1 time)
- 3. Sometimes (2 times)
- 4. Often (3-4 times)
- 5. Very often (5 or more times)

3. Have you ever told someone that you were going to commit suicide, or that you might do it.? (Check only one)

- 1. No
- 2a. Yes, at one time, but did not really want to die
- 2b. Yes, at one time, and really wanted to die
- 3a. Yes, more than once, but did not want to do it
- 3b. Yes, more than once, and really wanted to do it

4. How likely is it that you will attempt suicide one day? (Check only one)

- 0. Never
- 1. No chance at all
- 2. Rather unlikely
- 3. Unlikely
- 4. Likely
- 5. Rather likely
- 6. Very likely

Appendix D

Rosenberg Self-Esteem Scale

Rosenberg Self-Esteem Scale

Instructions: Below is a list of statements dealing with your general feelings about yourself. Indicate whether you *strongly agree*, *agree*, *disagree*, or *strongly disagree* with the statement.

1. On the whole, I am satisfied with myself.

Strongly Agree	Agree	Disagree	Strongly Disagree
1-----	2-----	3-----	4-----

2. At times, I am no good at all.

Strongly Agree	Agree	Disagree	Strongly Disagree
1-----	2-----	3-----	4-----

3. I feel that I have a number of good qualities.

Strongly Agree	Agree	Disagree	Strongly Disagree
1-----	2-----	3-----	4-----

4. I am able to do thing as well as most other people.

Strongly Agree	Agree	Disagree	Strongly Disagree
1-----	2-----	3-----	4-----

5. I feel I do not have much to be proud of.

Strongly Agree	Agree	Disagree	Strongly Disagree
1-----	2-----	3-----	4-----

6. I certainly feel useless at times.

Strongly Agree	Agree	Disagree	Strongly Disagree
1-----	2-----	3-----	4-----

7. I fell that I'm a person of worth, at least on an equal plane with others.

Strongly Agree Agree Disagree Strongly Disagree
 1-----2 ----- 3 ----- 4

8. I wish I could have more respect for myself.

Strongly Agree Agree Disagree Strongly Disagree
 1-----2 ----- 3 ----- 4

9. All in all, I am inclined to feel that I am a failure.

Strongly Agree Agree Disagree Strongly Disagree
 1-----2 ----- 3 ----- 4

10. I take a positive attitude toward myself.

Strongly Agree Agree Disagree Strongly Disagree
 1-----2 ----- 3 ----- 4

Appendix E

The Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support

Instructions: Please answer the following questions regarding the amount of social support you receive. Please indicate the extent you *strongly disagree* to *strongly agree* with the statement, on a scale from 1 to 7.

1. There is a special person who is around when I am in need.
 Very Strongly Disagree -----Very Strongly Agree
 1 2 3 4 5 6 7

2. There is a special person with whom I can share my joys and sorrows.
 Very Strongly Disagree -----Very Strongly Agree
 1 2 3 4 5 6 7

3. My family really tries to help me.
 Very Strongly Disagree -----Very Strongly Agree
 1 2 3 4 5 6 7

4. I get the emotional help and support I need from my family.
 Very Strongly Disagree -----Very Strongly Agree
 1 2 3 4 5 6 7

5. I have a special person who is a real source of comfort to me.
 Very Strongly Disagree -----Very Strongly Agree
 1 2 3 4 5 6 7

6. My friends really try to help me.
 Very Strongly Disagree -----Very Strongly Agree
 1 2 3 4 5 6 7

7. I can count on my friends when things go wrong.
 Very Strongly Disagree -----Very Strongly Agree
 1 2 3 4 5 6 7

8. I can talk about my problems with my family.
 Very Strongly Disagree -----Very Strongly Agree
 1 2 3 4 5 6 7

9. I have friends with whom I can share my joys and sorrows.

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

10. There is a special person in my life who cares about my feelings.

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

11. My family is willing to help me make decisions.

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

12. I can talk about my problems with my friends.

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

Appendix F

Victimization Questionnaire

Please answer all the following questions even if you have not experienced the incident described.

How often have you experienced the following kinds of incidents because someone presumed you to be a lesbian, gay, bisexual or questioning individual?

Please indicate how often you have experienced each incident *prior to coming into college*, and *since you have been at college*, with the following numbers: 0= *Never*, 1= *Once*, 2= *Twice*, 3= *More than two times*

	Before College	Since at College
1. Verbal assaults or threats in person	_____	_____
2. Threats of physical violence	_____	_____
3. Having your personal property damaged or destroyed	_____	_____
4. Being chased or followed	_____	_____
5. Being spit on	_____	_____
6. Having objects thrown at you	_____	_____
7. Being punched, hit, kicked, or beaten	_____	_____
8. Sexual assault	_____	_____
9. Assault with a weapon	_____	_____

Appendix G

Electronic Victimization Questionnaire

Please answer all the following questions even if you have not experienced the incident described.

How often have you experienced the following types of electronic harassment because someone presumed you to be a lesbian, gay, bisexual or a questioning individual? Electronic harassment is characterized as any harassment that occurs via texting, emailing, instant messaging, or leaving messages on Facebook, Myspace, or other online social websites?

Please indicate how often you have experienced each incident *prior to coming into college*, and *since you have been at college*, with the following numbers: 0= *Never*, 1= *one to two times*, 3=*three to five times*, 4= *More than five times*.

	Before College	Since at College
1. Getting repeated messages from someone you don't know or barely know that threatened, insulted, or harassed you.	_____	_____
2. Getting repeated messages from an acquaintance or friend that threatened, insulted, or harassed you.	_____	_____
3. Getting repeated messages from a "significant other" (Boy/girlfriend, spouse, etc.) that threatened, insulted, or harassed you.	_____	_____
4. Getting repeated messages from someone even after you told him/her to stop.	_____	_____
5. Getting unwanted pornographic messages or pictures.	_____	_____

Appendix H
Informed Consents

Environment and Sexuality Survey

Dear Participant,

The purpose of this study is to examine the impact the environment has on an individual's psychological adjustment. For this project, you will be asked to complete a series of surveys involving basic background information, questions about your sexuality, social support, victimization, and your mental health. It will take approximately 20 minutes to complete, and upon completion, you will be directed to a separate link to enter into a drawing to win an Ipod Touch.

Your participation in this study is completely voluntary and your answers will be confidential. You are free to withdraw from the study at any time for any reason without penalty or prejudice from the researcher. Please feel free to ask any questions of the investigator by emailing her at knbaugher@bsu.edu before beginning the study or at any time during the study.

All data will be stored in an electronic database accessed by a password known only to the primary researcher.

The foreseeable risks or ill effects from participating in this study are minimal. Some of the questions on the survey ask about you being victimized and suicidality. There is a small chance that answering some of the questions may evoke some feelings of sadness or anxiety. If answering any of the questions brings up uncomfortable feelings for you, counseling services are available to you free of cost through the Counseling Center at Ball State University, 285-1736.

One possible benefit from participating in this study is gaining a better understanding of how the environment impacts an individual's sexual identity development and mental health.

For one's rights as a research subject, the following person may be contacted: Coordinator of Research Compliance, Sponsored Programs Office, Ball State University, Muncie, IN 47306, (765) 285-5070. This study has been approved by the Ball State University Institutional Review Board.

To begin the study, please indicate that you agree to take the study after reading this information by clicking the "I Accept" button. Once you have accepted the terms of the study, then you will begin the survey. If you do not agree with what you have read, you can decline taking the study, by clicking the "I Decline" button. If you decline the informed consent, you will not need to take the survey.

Please cut and paste this link to begin:

<http://inquisitor.bsu.edu/inqsit/inqsit.cgi/baugher?Sexuality+Survey>

Thank you for your help and participation!

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