

Identity Development and Acculturation Processes in Gay, Lesbian,  
and Bisexual Youth: Associations with Depressive and Suicidal Symptoms

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(ABSTRACT)

Previous studies have suggested that gay, lesbian, and bisexual individuals may be at increased risk for symptoms of depression and suicidality, but little empirical investigation to date has attempted to make clearer the stressors or factors that are associated with the development of symptoms. This study explores the roles of identity development as a sexual minority individual and the acculturative process in terms of the impact of interaction with heterosexual culture as predictors of depressive and suicidal symptoms. In addition, other psychosocial variables that have been previously associated with suicidality in other minority groups were tested as mediators between gay cultural identity and depressive and suicidal symptoms. Gay, lesbian, and bisexual college students were recruited for participation through social groups specific to this population.

Results indicated that gay cultural identity was associated with depressive and suicidal symptoms. Furthermore, social support was shown to mediate the relationship between gay cultural identity and symptoms. Both frequency of social contact and interpersonal quality of social support were included in the analyses, with the latter showing a stronger relationship to the outcome variables. These findings emphasize the importance of research investigating points of intervention and organized efforts to provide social support to gay, lesbian, and bisexual youth that may be most effective in the prevention of depressive and suicidal symptoms.

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## Identity Development and Acculturation Processes in Gay, Lesbian, and Bisexual Youth: Associations with Depressive and Suicidal Symptoms

The experiences of gay, lesbian, and bisexual adolescents are popularly thought to be fraught with ridicule and shame. So much so, in fact, as to produce the staggering rates of suicide attempt that are popularly quoted in the media. While some studies do suggest that gay, lesbian, and bisexual individuals may be at increased risk for symptoms of depression and suicidality, little empirical investigation has attempted to make clearer the stressors or factors that are associated with the development of symptoms. A Research Design Workgroup specifically studying the link between homosexuality and suicidal behavior in youth has made recommendations for future research including such questions as whether the risk factors for suicide vary according to sexual orientation and how the development of identity is related to the onset of suicidality (Working Groups, 1995). These are two of the questions that will be addressed in this study. Greater understanding of the circumstances and processes that lead up to symptoms of depression and suicidal behavior may be gained more efficiently through efforts aimed at individuals deemed at high risk for attempting or completing suicide.

The idea that the period of identity development may be crucial with respect to the development of symptoms of depression and suicidality in gay, lesbian, and bisexual adolescents suggests that exploring the identity formation processes of other groups may be helpful. The primary aim of this study is to explore the viability of a model of identity development and acculturative processes, traditionally applied only to ethnic minority groups, in the gay/lesbian/bisexual population. A second aim of the study is to investigate the relationship between these identity formation processes and symptoms of

depression and suicidality in this population. Similarities and differences of the experiences of members of the gay/lesbian/bisexual population as they compare to those of other minority groups will be discussed.

### *Risk factors for suicidality*

The acute nature and extreme potential consequences of suicidal behavior amplify the significance of research in this field. Epidemiological data collected by the National Center for Injury Prevention and Control indicate that in 2000, the suicide death rate for adolescents ages 15 to 17 years was 6.62 per 100,000 (Centers for Disease Control, 2003). For young adults ages 18 to 24 years, the rate doubled to 12.17 per 100,000. Suicide is reported as the third leading cause of death for individuals ages 15 to 24 (Centers for Disease Control, 2002). Furthermore, from 1952-1995, the incidence of suicide among adolescents and young adults nearly tripled. The Centers for Disease Control (1992) report that 7% of adolescents participating in a national survey had attempted suicide and 2% of those individuals had received medical attention for injuries or poisoning sustained due to an attempt. These figures are consistent with attempt rates in other research that has primarily assessed student populations. Previous research has recorded lifetime prevalence rates of suicide attempt, assessed via self-report, of 8.7% (Friedman, Asnis, Boeck, & DiFore, 1987) and 7.1% (Andrews and Lewinsohn, 1992).

The low base rate of completed suicide among adolescents makes screening efforts difficult, increasing the possibility of identifying false-positive assessments. Researchers have therefore focused their efforts on identifying factors associated with suicidal behaviors with the goal of identifying individuals who may be at

risk for suicide completion. (Garrison, Lewinsohn, Martseller, & Laughinrichsen, 1991). The identification of groups who may be at high risk may help focus prevention efforts more efficiently. A brief review of the literature as is pertains risk factors among adolescents and young adults follows.

A study including both a group of adolescents who reported suicidal ideation without having attempted suicide and a group who had attempted assessed both groups for a variety of psychological disorders (de Wilde, Kienhorst, Diekstra, & Wolters, 1992). Results indicated that both groups differed from nonsuicidal adolescents in prevalence rates of psychological disorder (76.2% of suicide attempters, 70.1% of suicidal ideators, and 29.2% of nonsuicidal youth met criteria for any one disorder). Substance abuse/dependence and separation anxiety were the only disorders that distinguished those exhibiting suicidal ideation from those who had attempted suicide. The risk of attempt was very high for those who met criteria for two or more diagnoses in two different categories of disorders (e.g., mood disorder and anxiety disorder). Gender differences were also found such that mood and anxiety disorders were found to be significantly associated with increased risk of attempt in girls, and for boys, these two categories of disorders as well as substance abuse/dependence were associated with greater risk of attempt.

In the Andrews and Lewinsohn (1992) study, previous psychiatric diagnosis as well as previous suicide attempt were significant predictors of attempt between the first and second assessments, which were one year apart. Eighty percent of those teenagers who reported ever having made an attempt had also met criteria for a psychiatric disorder at some point in life. Significantly more diagnoses of major depressive disorder, alcohol

and drug abuse dependence, and disruptive behavior disorders were given for those who had attempted than for those who had not. In addition, those who had attempted before the first assessment were twenty times more likely to attempt between the first and second assessments. Suicidal ideation before the first assessment was also found to increase the relative risk for subsequent attempt. Those teenagers who reported thinking about suicide before the first assessment were 4.4 times more likely to attempt between the first and second assessments than those who were not thinking about suicide before the first assessment. These findings are consistent with those of Kupfer (1989), who also described psychiatric disorders as being associated with high risk for suicide among adolescents.

Using the psychological autopsy method of study, investigators gather as much information as possible about an individual who has completed suicide through interviews with friends and family members in order to reconstruct a psychological profile of the individual. Risk factors that have been identified through studies using psychological autopsy include drug and alcohol abuse, antisocial or aggressive behavior, family history of suicidal behavior, mood disorders, and prior suicide attempt (Garland & Zigler, 1993).

Taken together, research suggests that diagnosis of a psychiatric disorder and past suicide attempt are the variables that have been found, across studies, to be most consistently associated with suicide attempt in adolescents (Andrews & Lewinsohn, 1992; de Wilde et al., 1992; Kupfer, 1989). While other previously mentioned variables have been shown to predict suicide attempt, those relationships have not been replicated across samples.

*Suicidality and depression in gay, lesbian, and bisexual youth*

Many studies have attempted to determine the prevalence of suicidal behavior in gay and lesbian youth, as popular media purport that gay and lesbian youth exhibit wildly elevated rates of suicide attempt. Some studies have concluded that gay male adolescents are at risk for suicidal behavior. Research findings with lesbian adolescents, however, are less clear. A brief review of the literature follows.

In a sample of self-identified gay or bisexual males recruited through various sources, including advertisements in gay publications, support groups for gay and lesbian youth, and referrals from peers, suicidal behavior was assessed through structured interviews (Remafedi, 1987b). The lifetime prevalence rate for reported suicide attempt in this group was 30%. Eighteen of the 41 attempters reported more than one attempt. One third of the attempters attributed attempts to problems associated with their sexual orientation. Of the 61 total attempts reported, 50 did not receive any medical treatment. Thirty-seven attempts were categorized as "moderate to high" on lethality. Those who had attempted had self-labeled (described themselves as gay or lesbian), disclosed sexual orientation to others, and were sexually active at earlier ages than those who had not attempted.

Another study recruited both female and male adolescents from lesbian and gay community centers in 14 sites across the United States and found that 42% of the participants reported having attempted suicide (D'Augelli & Hershberger, 1993). No sex differences were found. Consistent with Remafedi's (1987b) work, attempters in this study were aware of their homosexual feelings at an earlier age than nonattempters.

However, attempters in this study also waited longer after they were aware of their feeling to label their feelings or to disclose them to another person. In addition, male attempters had significantly lower self-esteem than males who did not attempt, though this was not the case for females.

One study using a population recruited through a community center for gay and lesbian youth assessed primarily Black and Hispanic gay and bisexual male adolescents for suicidal behavior as well as for life stressors (Rotheram-Borus, Hunter, & Rosario, 1994). Of 131 participants, 51 had attempted suicide, and one-half of those who had attempted had done so more than once. Furthermore, attempters reported significantly more gay-related stressors than nonattempters. In another study involving adolescents from the same community agency, gay male adolescents were interviewed prior to receiving services (Rotheram-Borus, Rosario, Van Rossem, Reid, & Gillis, 1995). They were asked if they had attempted suicide during the past three months. Eleven percent responded positively.

Schneider, Farberow, and Kruks (1989) assessed suicidality and family dysfunction in gay adolescent and young adult males. Twenty-two of the 108 participants reported that they had attempted suicide. Ten of the twenty-two attempters reported more than one attempt. Eleven attempters received no medical treatment for their first attempt. The only family variable on which attempters differed from nonattempters was familial alcoholism. Attempters reported that their fathers were alcoholics more often than did nonattempters.

One noteworthy study used a large anonymous sample of high school students in order to try and survey a more representative sample of adolescents (Lock & Steiner,

1999). This study is also significant in that it included adolescents who identified as bisexual in the analyses, whereas most previous studies had chosen not to do so. Within this sample, six percent identified themselves as gay, lesbian, or bisexual (n=106). These students reported significantly greater levels of mental health problems. Unfortunately, the study did not separate various types of symptoms and included symptoms of depression, suicidality, anxiety, and behavioral problems within the same factor.

Only one case-control study to date has investigated suicidal behavior in representative samples of homosexual and heterosexual adolescents. Remafedi et al. (1998) surveyed middle and high school throughout the state of Minnesota. Students were asked to rate themselves on a continuum with respect to their sexual orientation. The comparison groups were 213 males and 182 females who described themselves as bisexual or "mostly/100% homosexual" and 184 males and 152 females who described themselves as "mostly/100% heterosexual." Suicide attempts, as well as the intent to commit suicide, were assessed. While both gay male and lesbian adolescents reported similarly high rates of attempts and intent, a significant difference was found between homosexual and heterosexual youth in terms of the attempts and intent for males but not for females. Twenty-eight percent of homosexual adolescent males reported suicide attempts. This figure corresponds with previously collected data. Those males who reported suicidal intent were 3.61 times more likely to be bisexual/homosexual than heterosexual, and those males who reported suicide attempts were 7.10 times more likely to be bisexual/homosexual than heterosexual. Overall, gay males were found to be at increased risk for suicide attempt when compared to heterosexual males, but lesbians were not found to be at increased risk when compared to heterosexual females.

Savin-Williams (2001) has attempted to address sampling and methodological issues that have limited the findings of previous research findings. He attempted to recruit a more diverse population of gay/lesbian/bisexual and heterosexual college student participants. Participants were able to self-identify their sexual orientation through an open-ended question format. He also attempted to more accurately evaluate suicide attempt by assessing not only report of attempt, but also reports of injuries or medical attention received due to an attempt. Using more specific questioning, Savin-Williams found that 17% of young women who identified themselves as nonheterosexual had made a true suicide attempt. Five percent of the sample had made a life-threatening suicide attempt. When another sample was surveyed that included both male and female participants of all sexual orientations and, unlike the previous study, was anonymous in nature, results indicated that heterosexual men were significantly less likely to report suicide attempt than homosexual/bisexual men, homosexual/bisexual women, or heterosexual women. When false attempts were excluded through more extensive questioning, there were no differences among any of the four groups in suicide attempts.

Studies including samples with larger age ranges also report elevated rates of suicide attempt and depressive symptoms. In a national survey study of social and psychological predictors of psychological health (Cochran, Sullivan, & Mays, 2003), participants were asked to identify themselves as heterosexual (97.5%), homosexual (1.4%), or bisexual (1.1%). Results indicated that gay and bisexual men were three times as likely to meet criteria for Major Depressive Disorder than were heterosexual men. This finding did not hold true for bisexual and homosexual women. Both men and women were more likely than their heterosexual counterparts to be comorbid for two of

the five psychological disorders (Major Depressive Disorder, Panic Disorder, Generalized Anxiety Disorder, Alcohol Dependency, Substance Dependency) assessed in the study.

Another national survey completed by telephone, the National Health and Nutrition Examination Survey, divided participants into groups of heterosexual and homosexual/bisexual men (2.2% of the sample) according to the gender of previous and current sexual partners (Cochran & Mays, 2000). Results of this study showed that 19% of homosexual/bisexual men surveyed reported at least one suicide attempt in their lifetimes. Ninety-eight percent of those reporting a previous suicide attempt were between the ages of 17 and 29 years. Overall, when all men were considered together, 6.4% met criteria for at least one episode of major depression in their lifetimes. While the difference in the prevalence rate was not statistically significant once demographic variables were taken into consideration, homosexual/bisexual men were significantly younger when they first experienced symptoms of depression (mean of 14.8 years for homosexual/bisexual men vs. mean of 20.4 years for heterosexual men). Fifteen percent of homosexual/bisexual men in this study met criteria for major depression at some point in their lives, and they were five times as likely as heterosexual men to report a suicide attempt.

A third epidemiological study, the National Comorbidity Study, found that 2.1% of men and 1.5% of women reported one or more same-sex sexual partners in the past five years (Gilman et al., 2001). Participants were divided into groups for analysis on this basis. In this sample, homosexual/bisexual women were had significantly higher twelve-month prevalence rates of major depression, simple phobia, and posttraumatic

stress disorder than heterosexual women. No differences were found for men on any single diagnosis. Furthermore, no statistically significant differences were found between homosexual/bisexual and heterosexual groups of either men or women for reports of suicidal thoughts, plans, or attempts.

Taken together, these data are very difficult to interpret. Reports of suicide attempt vary widely depending on the type of sample used and the methods used to assess suicidality and depression. The participants, in many studies, are adolescents and young adults who have sought services from community centers or social service agencies. Well-adjusted gay and lesbian adolescents may be underrepresented in these samples, as they may not seek out this type of assistance. Conversely, the adolescents represented in these studies are those who have achieved some level of comfort with their sexual identities, as demonstrated by their willingness to “out” themselves to seek support and help from a public agency. It is possible, therefore that the converse is true. The subgroup of gay and lesbian adolescents who are having the most difficulties in dealing with their feelings and attractions may also not be represented in these samples, as that subgroup may not be comfortable enough with their sexuality to talk with anyone about the subject. Thus, it is difficult to know exactly who is being surveyed and how the risk of suicidal behavior in these samples might differ from the risk of other gay, lesbian, and bisexual who are not readily available.

Even findings using samples intended to be more widely representative of the gay and lesbian population (Cochran & Mays, 2000; Cochran et al., 2003; Gilman et al., 2001) are difficult to interpret with reference to the larger populace. The low percentages of individuals who report same-sex sexual relationships or who identify themselves as

gay, lesbian, or bisexual (most in the range of 1-3% of a randomly selected sample) in these studies suggest that many individuals may be reluctant to reveal a nonheterosexual orientation in a survey context (perhaps due to societal stressors previously discussed). Furthermore, each of these studies used different criteria in defining who is included in the group of homosexual or bisexual individuals. For instance, in the study by Gilman and colleagues (2001), participants are grouped according to the sex of their sexual partners in the previous five years. Those who had no sexual partners in that time are categorized together into a separate group for analyses, with no regard for how they themselves might identify themselves in terms of sexual orientation. Another study asked participants to choose a self-descriptor (Cochran et al., 2003), while a third used lifetime history of same-sex sexual partner to define sexual orientation (Cochran & Mays, 2000). Using such varied procedures compromises the validity of comparisons of findings across studies.

The vague fashion in which a suicide attempt has been defined is also problematic. Most studies of gay and lesbian adolescents have not attempted to clarify the intent or the lethality of suicide attempts. With the data gathered thus far, little is known about the extent to which gay and lesbian individuals are at increased risk for serious injury or death as a result of their suicidal behaviors. Obtaining accurate information post-mortem may be next to impossible, due to many individuals' reluctance to disclose their sexual orientation (D'Augelli, 1991).

*Stressors of Gay, Lesbian, and Bisexual Youth*

Many researchers have attempted to logically or anecdotally explain why homosexuality may be a risk factor for depression and suicidal behavior, though the empirical study of many of these proposed explanations have not been completed. Unique stressors such as societal discrimination, "coming out" process, nonconformity to gender roles, low self-esteem, substance abuse, running away from home, and involvement in prostitution have been cited as potential variables that may increase rates of suicidal behavior among gay and lesbian adolescents (Gibson, 1989; Remafedi, Farrow, & Deisher, 1991).

In addition, victimization is a problem faced by many gay, lesbian, and bisexual individuals. It is believed that gay, lesbian, and bisexual youth experience more physical and sexual violence than their heterosexual counterparts. In a survey of one sample of gay and lesbian youths who were involved in services at a community agency specifically serving this population in New York City, 18% indicated that they had experienced physical violence related to their homosexuality (Hunter, 1990). Sixty-one percent of gay-related violence in this study reportedly occurred within the family. Other types of victimization are prevalent among gay and lesbian youth as well. In a survey of 194 gay and lesbian adolescents, 83% reported that they had experienced at least one incident of victimization related to their homosexuality (Pilkington & D'Augelli, 1995). Seventy-three percent reported more than one incident. These experiences ranged from verbal attacks to physical or sexual assaults. Thirty-eight percent of the incidents reportedly occurred within the family. Qualitative studies suggest that threat of physical harm may also lead to further negative consequences that may put youth at risk for suicidal behavior

such as truancy, dropping out of school, or running away or being thrown out of the home (Hunter & Schaefer, 1990; Martin & Hetrick, 1988; Orion Center, 1986; Remafedi, 1987a).

Lack of social and family support has also been examined as a stressor that is unique to gay, lesbian, and bisexual individuals. Gay, lesbian, and bisexual youth begin to label their sexual orientation for themselves at around age fourteen and fifteen (D'Augelli & Hershberger, 1993; Remafedi, 1987b). Because they are just beginning to identify themselves as such in adolescence, there is typically no existing local group identity with which to identify (Rotheram-Borus & Fernandez, 1995). Additionally, gay adolescents can choose to hide their sexual orientation, and therefore they may be unable to locate other homosexual youth. As a result, social isolation has long been recognized as a particular difficulty for gay, lesbian, and bisexual youth (Martin & Hetrick, 1988; Waldo, Hesson-McGinnis, & D'Augelli, 1998).

Gay, lesbian, and bisexual youth may not have adult support to help advise them or to serve as positive role models. Traditionally, there have not been role models in popular culture or the media to whom they could turn for positive representation (Rotheram-Borus & Fernandez, 1995). In addition, other potential role models such as teachers, due to their own biases, fears, or uncertainties, may fail not only to explicitly support gay and lesbian youth, but also to stop harassment or violence they may witness from peers against these teens (Savin-Williams, 1994).

Additionally, adolescents may be unable or unwilling to approach even close friends or family members about their feelings, for fear of repercussions (Boxer, Cook, & Herdt, 1991; Gibson, 1989; Rotheram-Borus & Fernandez, 1995). Research indicates

that first disclosures are usually not to parents, most likely for reasons such as fear of rejection and and/or victimization. Across studies, fewer than 10% of gay and lesbian adolescents first disclosed their sexual orientation a parent, and in these cases it was almost always the mother (D'Augelli & Hershberger, 1993; Herdt & Boxer, 1993; Savin-Williams, 1998). In a survey of college men identifying themselves as gay, only 27% had told their families about their sexual orientation (D'Augelli, 1991). The participants rated their family members' reactions to their homosexuality. Fathers were described as significantly more intolerant and rejecting than mothers. Seventy-four percent of mothers were described as tolerant, 17% were intolerant, and 9% were overtly rejecting. With reference to fathers, 43% were described as tolerant, 35% were intolerant, and 22% were overtly rejecting. Almost all the men in this study had identified themselves as gay during their teenage years; however, most waited until they were in college to tell another person about their sexual orientation. In a similar study involving both gay male and lesbian adolescents (D'Augelli & Hershberger, 1993), 55% of mothers who were aware of their child's sexual orientation were seen by their children as accepting, 25% as tolerant, 8% as intolerant, and 12% as rejecting. With regard to fathers, 37% were perceived as accepting, 36% as tolerant, 10% as intolerant, and 18% as rejecting. Nearly half of these adolescents in this study and three fourths of the participants in the previously mentioned study (D'Augelli, 1991) described telling their parents as "extremely troubling." Remafedi (1987b) found that 41% of a gay male sample reported that they had lost one friend because of issues concerning their sexual orientation. These results suggest that the apprehension adolescents and young adults feel concerning disclosure is justified in many cases. Choosing not to disclose to others, however, may

serve to increase feelings of social isolation and limit social interaction, potentially putting individuals at risk for depressive symptoms.

Certain variables may function to attenuate the effects of stressors on adjustment in the general adolescent population. These include social supports, relationships with peers and family members, and treatment received or not for psychiatric disorders (Blumenthal, 1991; Safren, 1998). As described above, gay and lesbian youth generally do not have adequate social support, are not accepted by peers or, many times, by family members, and may experience a greater number of stressors than their heterosexual counterparts. Some suggest that it is very difficult for homosexual youth to find support in the form of counseling or psychotherapy (Snelling, 1991). Martin and Hetrick (1988) point out that sexual orientation is often ignored or considered irrelevant to the therapy process and may therefore not be addressed at all. Therapists may assume the heterosexuality of all their clients, and gay and lesbian adolescents may be afraid to disclose their sexual identity to a therapist. Thus, the stressors faced by gay and lesbian youth may put them at increased risk for depression and suicidal behavior.

In some ways, the stressors faced by gay, lesbian, and bisexual youth may be similar to those experienced by ethnic minority group members (Martin & Hetrick, 1988). Experiences of discrimination and victimization, for instance, are thought to be common to both groups. Furthermore, as gay, lesbian, and bisexual youth begin the process of identifying themselves as different from the majority group, they may experience some of the same processes as youths who are learning to effectively function both within the culture of an ethnic minority group as well as within the larger “majority” culture. The next section discusses the extent to which this comparison is useful,

particularly as it may help understand the risk of depression and suicidal behavior in gay, lesbian, and bisexual youth.

### *Identity Development in Gay, Lesbian, and Bisexual Youth*

The formation of identity has long been considered the primary developmental task of adolescence (Erikson, 1968). Until recently, however, little attention has been paid to the task of identity formation for members of ethnic minority groups and how this undertaking influences their attitudes and feelings toward their own minority group (Phinney, 1993). Over the past decade, Phinney has developed a model describing the process of ethnic identity development in adolescents, based on previous theoretical models (Atkinson, Morten, & Sue, 1983; Cross, 1978; Helms, 1990; Marcia, 1980). Unlike previous models, which were specific to a single group, Phinney has tested her model across ethnic minority groups, using information gleaned through extensive interviews with adolescents to describe identity development as a progression through three stages: Unexamined Ethnic Identity, Ethnic Identity Search, and Ethnic Identity Achievement (Phinney, 1993).

The first stage, Unexamined Ethnic Identity, could be characterized as a latency stage. Individuals in this stage accept the attitudes and values of the majority culture and are largely uninterested in considering themselves as different from that culture. At times, individuals in this stage may even subscribe to the negative beliefs held by the majority culture about their own ethnic group. The key feature of this stage is that the adolescent has not considered the meaning of membership to the specific ethnic group for him- or herself (Phinney, 1993).

In interviews conducted with adolescents by Phinney's group (Phinney, 1989; Phinney & Tarver, 1988), most reported a gradual realization that the values of the majority group did not necessarily consider the best interests of ethnic minorities. In this second stage, Ethnic Identity Search, Phinney found that adolescents in this stage reported that they involved themselves in activities to learn more about their heritages, such as reading books and asking family and friends about issues related to ethnicity. In addition, they spoke of prejudice within society and how prejudice would affect the opportunities available to them in the future. Individuals in this stage experience a growing realization of themselves as members of a group other than the majority group and are questioning what this means on a personal level.

The third stage in the model, Ethnic Identity Achievement, is put forth as the end point, the eventual goal, in the model. In this stage, adolescents have become comfortable with membership in the ethnic minority group. Self-esteem is positive, and adolescents at this stage have resolved confusion regarding their identities (Marcia, 1980; Phinney, 1993).

Research has investigated the relationship between the stages of ethnic identity development and adjustment in adolescents. Ethnic identity achievement was positively and significantly related to self-esteem in survey of African-American, and Mexican-American college students; however, the two constructs were not related in Asian-American students (Phinney & Alipuria, 1990). Another study indicated that higher stages of ethnic identity were related to more positive peer and family relationships as well as a greater sense of personal competence (Phinney, 1989).

If gay and lesbian adolescents can be conceptualized as realizing that they are minorities within a majority culture that is different from them, then the process that they experience as they develop a gay or lesbian identity may be likened to that of ethnic minority adolescents (Rotheram-Borus, 1989; Rotheram-Borus & Fernandez, 1995). Proposed models of gay and lesbian identity development have included stages similar to those discussed with reference to ethnic identity formation (Cass, 1979; Phinney, 1993; Troiden, 1989). One such model has been described by Rotheram-Borus and Fernandez (1995). This model includes the stages mentioned above, with one distinct addition.

Adolescents enter into the first stage as they realize that they are attracted to members of the same sex and may begin to identify themselves as gay, lesbian, or bisexual. Various coping strategies are engaged as adolescents try to deal with the conflict with which they are faced as they try to reconcile their images of themselves with the pervasive negative perception of homosexuality within the larger culture. In the second stage of identity development, individuals seek out information and resources related to their sexuality, activities that also characterize the Ethnic Identity Search stage of Phinney's (1993) model. It may be in this stage that adolescents seek out resources from gay-friendly or gay-specific social service agencies.

The third stage consists of disclosing one's sexuality to others (Rotheram-Borus & Fernandez, 1995), a task that is not necessary in models of ethnic identity development. Due to the previously discussed difficulties faced by many gay and lesbian individuals, including physical and verbal victimization and rejection from family and friends, the decisions that one makes concerning who to tell about his or her sexual orientation and when to do so are very important. These are unique challenges that are

not faced by most ethnic minority youths, as they are immediately recognizable by members of the majority culture. There is no opportunity, among most ethnic minority group members, to avoid recognition. Furthermore, ethnic minority youths do not face rejection from their families due to their minority status. On the contrary, family support may be a particularly strong resource for ethnic minority youth during this period of identity development.

The fourth stage in the Rotheram-Borus and Fernandez (1995) model is similar to Phinney's model (1993) in that it includes the acceptance of one's identity as a gay or lesbian individual. This model has not been empirically tested; however, it provides a framework for the consideration of lesbian and gay cultural identity development within adolescents. Furthermore, it provides a parallel comparison to the model developed by Phinney.

While the ethnic minority or sexual minority group member goes through a process to develop personal identity within the minority culture, at the same time, each individual operates as a member of a minority group within the larger context of a majority culture. This experience of functioning in dual roles is known as acculturation. Acculturation does not have a single endpoint or goal; instead, it is a multilinear process with a number of alternative possibilities (Berry, 1995). This idea has heretofore been used to describe the experience of ethnic minority individuals. In this study, the viability of this construct with reference to gay, lesbian, and bisexual individuals will be considered.

*Acculturation Processes in Gay, Lesbian, and Bisexual Individuals*

Acculturation refers to the process that occurs when two cultures come into contact with each other (Berry, 1990; Redfield, Linton, & Herskovits, 1936). The development of ethnic identity is one part of the acculturation process, but there is another aspect still to be considered: the relationship of the ethnic minority group member with the majority culture. Both the majority and the minority cultures influence the adjustment of the individual. The two cultures induces changes in each other, and those individuals who attempt to function within both cultures experience pressure from each to conform. These changes may be economic, political, social, or cultural in nature, and each uniquely impacts the minority group members (Berry, 1990; Berry, 1993).

Berry described four response possibilities in this two-dimensional model: integration, assimilation, separation, and marginalization. In the integration response, the individual identifies and functions both within the majority and the minority culture. In the assimilation response, the individual identifies with the majority culture but does not maintain ties with the minority culture. The separation response involves the development of ethnic identity within the minority culture and the rejection of the majority culture. Finally, in the marginalization response the person neither identifies with the majority nor with the minority culture. Berry and Kim (1988) posit that the integration response will be associated with better adjustment. Conversely, marginalization is thought to predict poor adjustment. Indeed, empirical evidence has provided some support for these assertions (de Domanico, Crawford, & De Wolfe, 1994; Sam & Berry, 1995; Verkuyten & Kwa, 1994). Some studies have failed to replicate these relationships, however, and the impact of the assimilation and separation responses

remains unclear. Phinney and Devich-Nevarro (1997) found no differences in self-reports of anxiety or self-concept based on patterns of cultural identification. In another study, attitudes toward acculturation and their associations with self-esteem were investigated in ethnic minority high school and college students (Phinney, Chavira, & Williamson, 1992). Endorsement of integration attitudes was positively correlated with self-esteem, while endorsement of assimilation attitudes was negatively associated with self-esteem. Notably, marginalization was not assessed in this study. The positive relationship between the integration response and self-esteem was also demonstrated in a sample of Chinese immigrants to New Zealand (Eyou, Adair, & Dixon, 2000). However, this study failed to replicate the negative relationship posited between self-esteem and the assimilation response and found no differences in depressive symptoms based on acculturation responses.

Just as gay, lesbian, and bisexual youth experience a process of identity development similar to that of ethnic minority youth, they also experience the second dimension involved in the acculturation process: the relationship with the majority culture. Individuals who identify as gay, lesbian, or bisexual, function within a heterosexual culture. It may be reasonable to assume that the potential responses described by Berry (1990) would apply to this minority group just as they would apply to other ethnic minority groups (Spencer & Markstrom-Adams, 1990). Meyer (1995) even refers to the interactions with the majority culture that negatively impact the mental health of gay, lesbian, and bisexual individuals as “minority stress”, recognizing the experiences of prejudice faced by gay, lesbian, and bisexual people as similar to those of ethnic minorities.

In the discussion of acculturation, however, it is important to recognize the unique perspectives of gay, lesbian, and bisexual youth. Berry's model is incomplete without considering the impact of disclosure of one's sexual orientation. Ethnic minority group members are immediately recognizable to the majority culture. Gay, lesbian, and bisexual youth are largely not identified by the majority culture until they have identified themselves and disclosed to others. Thus, they may not respond to the majority culture the same manner as members of ethnic minority groups. In identifying themselves as gay, lesbian, or bisexual, individuals may then experience a period in which they consider this new self-knowledge with respect to the knowledge they hold about the attitudes and beliefs of the majority culture. Then, when the person discloses to another person, he or she begins to experience the reaction of the majority culture. This sequence is in contrast to the acculturation process of the ethnic minority group members, who may experience the reaction of the majority culture before they have had the chance to consider themselves as members of the minority group. This variation suggests that additional variables, such as disclosure to others, may be important to consider in examining the relationship between acculturation and adjustment in gay, lesbian, and bisexual individuals.

Acculturative stress, or stress that has the acculturative process as its source, is posited to be the mechanism through which the two-dimensional model of acculturation impacts adjustment. It must be noted that the level of stress may vary in a probabilistic way depending on a number of factors that function as intermediaries between the acculturation and adjustment (Berry, 1995; Berry & Annis, 1974; Williams & Berry, 1991). These variables may include, but are not limited to, the response of the individual

and the attitudes of the individual to the experience, the degree of pressure exerted by the majority culture to conform, the acceptability and status of the minority group within the majority, and other individual variables such as social support, motives for acculturation, expectations of the process, and coping strategies utilized. Hovey and King (1997) go on to posit that high levels of acculturative stress may result in psychological consequences of psychosomatic symptoms, depression, and anxiety, as well as feelings of alienation and identity confusion.

Hovey & King (1996, 1997) have considered the consequences of acculturative stress based on the Berry and Kim (1988) model and have suggested that depression and suicidal ideation may be one result. In a study of acculturation and suicidality among Latino-American adolescents, they found that perceived family dysfunction and nonpositive expectations for the future were significant predictors of acculturative stress. In addition, three variables—perceived family dysfunction, nonpositive expectations for the future, and acculturative stress—were significant predictors of depression and suicidal ideation, thus providing some support for their proposed model. This study will employ a model developed based on their findings as well as further conceptualization to investigate the impact of processes of identity development and acculturation on acculturative stress and depressive and suicidal symptoms in gay, lesbian, and bisexual youth (see Figure 1).

#### *Other Factors Associated with Risk for Suicide in Ethnic Minority Populations*

Further comparison of the experiences of gay, lesbian, and bisexual individuals with the experiences of ethnic minority individuals suggests other variables that may be

relevant in the investigation of acculturative processes and their impact on depression and suicidality. Examination of the research literature suggests two variables in particular that are associated with depression and suicidality across cultures: religious involvement and support from family and friends (Early & Akers, 1992).

*Religious involvement.* Religion or spirituality has traditionally held a prominent place in the community of many ethnic minority groups, providing not only religious instruction but also social support and organization. The church has been described as conveying not only the moral, but also the ethical and cultural traditions of the community (Wilmore, 1983). For many ethnic minority groups, these traditions include a denouncement of suicide as sinful or shameful, as in many African-American churches (Early, 1992). Suicide may be seen as acting against the wishes of God, as in the case of the Catholic church, to which many Mexican-Americans belong (Hovey & King, 1997; Mirowsky & Ross, 1984). The major religions practiced by Asian-American populations, Confucianism, Buddhism, and Taoism, all emphasize the interdependence and interests of the family or the group as opposed to those of the individual. Under most circumstances, suicide, from this perspective, would be viewed as damaging to the group and the relationships within it (Shiang et al., 1997). In all these cases, religious involvement might be seen as having a protective influence on suicide rates in the community. Within the gay/lesbian/bisexual community, however, religious involvement might be thought to influence suicidality in a different direction.

The United States is a predominantly Christian culture in which many adolescents are taught that they cannot be Christian and be homosexual. The traditional denominations have continued to devalue and discriminate against homosexuals. The

vast majority of denominations does not allow gay man and lesbians into the clergy and, though they may concede that homosexuality is not a matter of choice, still insist that any homosexual act is a sin. Such a stance devalues the relationships between same sex partners and discourages individuals from disclosing their sexuality (Comstock, 1987; Fortunato, 1987). When confronted with these conflicts between personal experience and society's views, individuals may begin to turn society's judgments on themselves. Self-esteem may falter and sense of isolation may increase. Feelings of guilt and worthlessness, symptoms highly correlated with suicidal behavior, may also emerge (Gibson, 1989). The efforts of some specific sects to provide support for and to include gay, lesbian, and bisexual individuals as members and leaders within the church indicates that making a general statement that all religion is rejecting of homosexuality would be inaccurate. The impact of religious involvement in the gay/lesbian/bisexual population has not been empirically tested. This study will examine the relationships among religious involvement, acculturative stress, and symptoms of depression and suicidality within this population.

In addition, the teachings of the church also serve to affect family members' relationships with the gay or lesbian individual. Finding out that a child is gay can be a very shocking and shameful event for many parents, and parents may believe that they must choose between church doctrine and a homosexual child. They may use the teachings of the church to confront the child in hopes of changing his or her sexual orientation. Thus, religion can become a source of conflict within families (Clark, Brown, & Lochstein, 1989). Family religiosity will also be included in this study as a

variable that may influence acculturative stress and symptoms of depression and suicidality.

*Support from family and friends.* Support from family and friends has also been found to be negatively associated with suicidality in ethnic minority populations. Individuals within ethnic minority groups are more likely to live within extended family households than individuals of the ethnic majority (Stack, 1996; Sue, Ivey, & Pederson, 1996; Taylor, Chatters, Tucker, & Lewis, 1990). Such living arrangements may afford their members more active and emotionally supportive social bonds due to their increased proximity and degree of interaction (Stack, 1996). Particularly in rural areas where organized social agencies have not provided resources for many families in need, individuals have had to depend not only on their immediate family, but also on their extended family, friends, and communities to fulfill many material and emotional needs (Billingsley, 1992; Sue et al., 1996). Through the fulfillment of these needs, social support within the ethnic minority families and communities may serve to protect or insulate against suicidal behavior (Gibbs, 1997). Within the gay/lesbian/bisexual community, however, the social supports that may protect against suicidal behavior may not be available.

It is clear that gay, lesbian, and bisexual youth do not, as a rule, have the relationships to other people that might provide buffers against the effects of acculturative stress. As discussed previously, gay and lesbian adolescents often do not receive social support from their peers, community, or even family. Unlike adolescents from most other minority groups who at least have immediate family members with them at home to help them navigate through the world of the majority culture, gay, lesbian, and

bisexual youth rarely have this type of assistance available to them. They oftentimes do not disclose their sexuality to their friends and families for fear of rejection, a fear that is often warranted (Gibson, 1989; Boxer et al., 1991; Rotheram-Borus & Fernandez, 1995). They traditionally have difficulty finding support from adults and peers (Savin-Williams, 1994) and are often the targets of verbal and physical victimization (Hunter, 1990). They report often feeling isolated which may be associated with symptoms of depression and suicidal behavior (Martin & Hetrick, 1988). Therefore family interactions as well as perceived social support will also be included in this study as variables that may impact acculturative stress and symptoms of depression and suicidality.

As mentioned previously, this paper will examine the concepts of identity development and acculturation as they apply to a sample of gay, lesbian, and bisexual youth. In addition, other variables thought to interact in unique ways with the outcome variables, symptoms of depression and suicidality, will be considered as well. These include disclosure to family and friends, support from family and friends, and religious involvement. The model guiding this investigation that includes the variables investigated in the present study is presented in Figure 1.

### Hypotheses

The hypotheses, and subsequently, the description of the data analyses and results are presented with respect to the position of the variables in the context of the larger model, shown in Figure 1, from left to right.

*Hypotheses Assessing the Relationships Between Gay cultural identity (Group B)*

*and Potential Mediating (Group C) Variables*

1. Higher levels of identification with gay minority culture (gay cultural identity) will be positively associated with greater levels of social support.
2. Higher levels of gay cultural identity will be positively related to greater existential, but not religious, well-being.
3. Higher levels of gay cultural identity will be negatively related to religious involvement.
4. The longer the participant has been active in a social group specifically for gay and lesbian individuals, the more likely they will be to have disclosed to their parents.
5. Higher levels of gay cultural identity will be negatively associated to acculturative stress and to depressive and suicidal symptoms.
6. Mode of acculturation will be related to depressive and suicidal symptoms inasmuch as those who endorse the marginalization mode of acculturation will experience significantly more symptoms than those who endorse the integration mode of acculturation.

*Hypothesis Examining Relationships Within Group C Variables*

7. The greater the degree of family religiosity endorsed by the participant, the less likely the participant will report having disclosed his or her sexual orientation to parents. For those who have disclosed to parents, family religiosity will be negatively associated with the participants' ratings of parental support.

*Hypotheses Examining Relationships Between Group C Variables  
and Outcome Variables (Groups D and E)*

8. Social support will be negatively related to acculturative stress as well as to reports of depressive and suicidal symptoms.
9. Both existential well-being and religious well-being will be negatively associated with depressive and suicidal symptoms, but, of the two, existential well-being will show the stronger relationship.
10. Greater levels of religious involvement will be positively associated with acculturative stress.
11. Greater degrees of family religiosity will be positively associated with acculturative stress as well as past suicidal behavior.
12. Family adaptability and cohesion will be negatively related to depressive and suicidal symptoms for those individuals who have disclosed their sexual orientation to their parents. However, this relationship will not prove true for those who have not disclosed. Thus, an interaction is predicted.
13. Religious involvement, family adaptability, family cohesion, and social support will act as partial mediators between gay cultural identity and acculturative stress.

*Hypothesis Examining Relationship Between Outcome Variables (Groups D and E)*

14. Heightened levels of acculturative stress will predict depressive and suicidal symptoms. The relationship between acculturative stress and symptoms will prove stronger at higher levels of stress, such that once participants reach a particular level of stress, they will experience significantly more symptoms than those individuals experiencing stress at lower levels.

## METHODS

### Participants

The sample consisted of 33 males and 19 females ranging in age from 18 to 35 years old with a mean age of 21.37. The racial distribution of the sample (as indicated through open-ended self-report) is as follows: 46 participants (88.5%) were Caucasian, 1 participant (1.9%) was Asian, 1 participant (1.9%) was biracial of Caucasian and Native American descent, and 3 participants (5.8%) were biracial of Caucasian and Asian descent. One participant did not indicate race. The individuals in this sample had been associated with the social groups from which they were recruited for an average length of 1.87 years, with lengths ranging from 0 years (someone who had been to only one or two group meetings) to 10 years.

Participants designated their identification in terms of sexual orientation on a continuum from 1 to 7 with 1 indicating exclusive homosexuality, 7 indicating exclusive heterosexuality, and 4 indicating bisexuality, equal attraction to members of both sexes. In this sample, 14 participants (26.9%) rated themselves as 1, exclusively homosexual. Twenty-three participants (44.2%) rated themselves as 2, 5 participants (9.6%) as 3, 6

participants (11.5%) as 4 (equally attracted to members of both sexes), and 4 participants (7.7%) rated themselves as 5. In addition, one participant identified herself as transgender. Participants were also asked the ages at which they had disclosed their sexual orientations to others as a way to obtain a rough estimate of when they identified their sexual orientation for themselves. In this sample, participants disclosed to another at an average age of 17.69 years. The age range of disclosure, however, was quite wide, ranging from 11 to 24 years.

### Procedures

College students were recruited through social groups specifically for lesbian, gay, bisexual, and transgender students at universities in Indiana, Kentucky, and Virginia. Students were informed about the study during meetings of such groups, those who wished to do so consented to participate at that time and took a survey packet home to complete. The measures took approximately 45 minutes to one hour to complete. Once a participant had completed the packet, he or she returned it to the investigator via the included addressed, stamped envelope. One hundred forty-seven packets were distributed. Fifty-five completed packets were returned to the investigator. Three packets were excluded from the data set because the individuals did not meet inclusion requirements. These were that the individual identify him- or herself as nonheterosexual and be between the ages of 18 and 35 years. One packet was excluded because the respondent indicated that she was heterosexual, the second because the respondent was a minor of 16 years of age, and the third because the respondent was 61 years of age, almost twice the age of the next oldest respondent.

## Measures

*Multigroup Ethnic Identity Measure* (MEIM; Phinney, 1992). The MEIM is a 20-item measure of acculturation to be used with adolescents and young adults from all ethnic groups. The items are rated on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). It includes 14 items that assess three components of ethnic identity: 1) sense of belonging to, and attitudes toward, one's ethnic group (5 items); 2) ethnic identity achievement, based on exploration and commitment (7 items); and 3) ethnic behaviors and customs (2 items). Overall reliability coefficients were .81 for a high school sample and .90 for a college sample (Phinney, 1992). For the Affirmation/Belonging subscale, reliability coefficients were .75 and .86 for high school and college samples, respectively. For the Ethnic Identity Achievement subscale, reliabilities were .69 and .80, respectively. Also included in this measure are 6 items for other group orientation. Reliability coefficients for this subscale were .71 for high school students and .74 for college students. Attitudes and orientation toward other groups are conceptually distinct from ethnic identity, but are included because they may interact with ethnic identity as aspects of one's social identity in the larger society. These items make up the second factor of acculturation as outlined in Berry's (1990) two-dimensional model of acculturation.

The two-dimensional model of acculturation was examined by dividing the sample into four groups based on their responses on the ethnic identity and other group orientation factors. A high score on the 14 ethnic identity items indicates a strong identification with one's ethnic group and a high score on the 6 other group orientation

items indicates strong identity with other groups. For ethnic minorities, a high score on both the ethnic identity factor and the other group orientation factor would be consistent with an integrated acculturation response. A high score on the ethnic identity factor together with a low score on the other group orientation factor is consistent with a separation response. Conversely, low score on the ethnic identity factor together with a high score on the other group orientation factor is consistent with an assimilation response. Low scores on both dimensions would be consistent with a marginalization response.

For the purposes of this study, the scale was reworded to reflect sexual orientation as opposed to ethnicity as the variable that defines the minority and the majority cultures. Therefore instead of “ethnic identity”, the variable that reflects identification with the minority culture in this case is heretofore referred to as “gay cultural identity.” Reliability coefficients for this studies are as follows: .84 for the Gay (formerly Ethnic) Cultural Identity factor, .77 for the Affirmation and Belonging factor, .69 for the Gay (formerly Ethnic) Identity Achievement factor, -.14 for the Ethnic Behavior factor, and .73 for the Other Group Orientation factor.

*Spiritual Well-being Scale* (Ellison, 1983). This 20-item self-report measure asks participants to assess the extent to which they agree with each of the statements according to a 6-point Likert scale, with responses ranging from “Strongly agree” to “Strongly disagree.” Ten of the items assess Religious Well-Being, and ten assess Existential Well-Being. Scores for the two subscales are summed to yield an overall measure of spiritual well-being. Reliability coefficients in a college student population were .89 for overall

spiritual well-being, .96 for religious well-being, and .78 for existential well-being, and factor analysis supported the two-factor structure of the measure. Spiritual well-being has been significantly correlated with the number of church services attended each month as well as the amount of time spent engaged in daily devotionals and the practices which encourage an intimate personal relationship with God. In this study, the reliability coefficient for the Religious Well-Being factor was .95, and the reliability coefficient for the Existential Well-Being was .92.

In addition to the items on the Spiritual Well-Being Scale, personal and familial religiosity will be assessed through additional items added for the purpose of this study. These items have been used in a previous study to assess the relationship between religiosity and attitudes toward suicide (Neeleman, Wessely, & Lewis, 1998). They are intended to assess the respondent's religious involvement. Additional questions assessed the religiosity of the participant's immediate family. The reliability coefficient for the Religious Involvement variable was .80, and the coefficient for the Family Religiosity variable was .91.

*Interpersonal Support Evaluation List* (ISEL; Cohen & Hoberman, 1983). The college version of the ISEL consists of 48 items, with four response options ranging from definitely true to definitely false. The measure is designed to assess the perceived availability of support in four domains: tangible support (material assistance), appraisal support (someone with whom one can discuss important life issues), self-esteem support (availability of others with whom one feels equivalent), and belonging support (availability of a group with which one can identify and socialize). Each subscale

contains twelve items, six of which are phrased positively and six of which are phrased negatively. For each subscale and for the overall total, the measure is scored such that higher scores indicate greater perceived availability of support. Reliability coefficients as measured by the Kuder Richardson 20 were reported as follows: .69 for the tangible subscale, .83 for appraisal, .64 for self-esteem, .61 for belonging, and .86 for the total score. In this study, reliability coefficients (alpha) for the four factors were .81 for tangible support, .80 for belonging support, .93 for appraisal support, .77 for self-esteem support, and .94 for total support. In sum, the purpose of this measure is to assess the quality of an individual's social relationships.

*Social Network Index* (Cohen, 1991). The Social Network Index is a self-report assessment of twelve areas of social relationships, including with a spouse or partner, parents, children, other close family members, friends, workmates, schoolmates, members of social or volunteer groups, and members of groups with religious affiliation. One point is assigned for each type of relationship endorsed by the participant as active within the past two weeks. This factor, assessing the different roles within which the individual has contact with others, is called Network Diversity. In addition, the total number of people to whom the individual speaks within each of those roles within a two-week period is also counted, and this factor is known as Number of High Contact People. This measure assesses only the number of people with whom the individual has contact and the different environments within which the individual has that contact. It does not assess the quality of those relationships or different types of support the individual may be receiving from others.

*Family Adaptability and Cohesion Evaluation Scale-III* (FACES-III; Olson, 1986). This 20-item self-report measure asks participants to assess the extent to which they agree with each of the statements according to a 5-point Likert scale, with responses ranging from “Almost never” to “Almost always.” Ten of the items assess Adaptability, or change, and ten assess Cohesion. Reliability coefficients in a previous study (Olson, 1986) were .62 for Adaptability and .77 for Cohesion. Test-retest reliabilities over a one-month interval were .80 for Adaptability and .83 for Cohesion. In a national survey of 1,000 “normal” families (not clinic-referred), both factors were shown to exhibit a linear and positive relationship with family functioning (Olson et al., 1983). Therefore these factors were used as two separate variables in this study. Reliability coefficients in the present study were .75 for Adaptability and .89 for Cohesion.

*Acculturative Stress Scale for Gay and Lesbian Youth* (adapted from Sandhu & Asrabadi, 1994). This scale was adapted from an acculturative stress scale originally developed for international college students. The original scale has 33 items targeting six different factors: perceived discrimination, homesickness, perceived hate/rejection, fear, culture shock/stress due to change, and guilt. These subscales were identified after a process of interviewing international students about their experiences in the United States, as well as through a review of the research literature describing factors associated with adjustment difficulties in international students. Factor analysis yielded the six factors mentioned above plus an additional subscale of items that did not clearly map on to any other factor yet contributed significantly to the explanation of the variance in responses. This factor

was simply called “miscellaneous.” The response format of the measure is a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) with 3 indicating “not sure”.

For the purposes of this study, items that were not applicable to the gay and lesbian population were removed (e.g. “I feel uncomfortable to adjust to new foods.”) and the remaining items were reworded if necessary to reflect to population of interest. In altering the scale, the items comprising the subscales of homesickness, stress due to change/culture shock, and guilt (e.g., “I feel guilty to leave my family and friends behind.”) were omitted. Thus the final version of the measure for the purposes of this study includes the items comprising the following subscales: perceived discrimination, perceived hate, fear, and miscellaneous. The modified scale has 25 items. In this study, reliability coefficients for the four factors and the total were as follows: .87 for Perceived Discrimination, .84 for Perceived Hate, .76 for Fear, .72 for Miscellaneous, and .93 for the Total score.

*Beck Depression Inventory-II* (BDI-II; Beck, Steer, & Brown, 1996). The BDI-II, a revised version of the 21-item Beck Depression Inventory (Beck & Steer, 1993), is a self-report measure used to assess the severity of depressive symptoms in adults. Responses are rated on a four-point scale, and the ratings are summed for a total score of depressive symptoms. Factor analysis has repeatedly yielded a two-factor structure for the measure, one assessing cognitive-affective factor and the other assessing a somatic factor (Beck et al., 1996; Steer, Ball, Ranieri, & Beck, 1999). The internal consistency was reported as .94 in a study of primary care patients (Arnau, Meagher, Norris, & Bramson, 2001) and .93 in a study assessing college students (Whisman, Perez, & Ramel, 2000). In this

study, the reliability coefficients were .94 for the cognitive-affective factor, .83 for the somatic factor, and .95 for the total score.

*Modified Scale for Suicidal Ideation* (MSSI; Miller, Norman, Bishop, & Dow, 1986).

The MSSI was developed from the Scale for Suicidal Ideation (SSI), a 19-item scale designed to be scored by a clinician following a clinical interview. To increase the utility of the scale, Miller et al. (1986) altered the original measure, converting it into a self-report format. The final version of the instrument consists of 18 items, 13 of which were taken from the original measure, and 5 that are unique to this measure. The reliability coefficient for the total score was .94 when the measure was administered to 50 consecutive inpatient admissions. In addition, the self-report measure was found to be significantly associated with the clinician's ratings following a clinical interview. In a follow-up study that assessed college students exhibiting suicidal ideation, Cronbach's alpha was reported at .87 (Clum & Yang, 1995). In addition, Clum and Yang (1995) found that the correlation between the MSSI and the SSI was significant at .74, providing support for the concurrent validity of the measure. Factor analysis yielded three factors: Suicidal Desire, Preparation for Attempt, and Perceived Capability of Making an Attempt. The reliability coefficients for each of these factors in that study were found to be .88, .67, and .56, respectively. In the present study, the reliability coefficient for the total score measure was .95. Seven questions were also added following this measure for the purpose of assessing past suicidal behavior in this sample.

## Data Analyses

Descriptive analyses were performed for the purpose of examining the distribution of the sample with respect to depression and suicidality, the indicators of psychological symptoms used in this study, as well as disclosure to family and friends, a variable that has been measured infrequently in this population. The afore-mentioned hypotheses were then tested through the following regression analyses:

### *Hypotheses Assessing the Relationships Between Gay cultural identity (Group B) and Potential Mediating (Group C) Variables*

1. The relationship between gay cultural identity and social support was examined in three regression equations with different aspects of social support as the dependent variables. In the first, network diversity, or the number of different spheres (i.e., family, friends, workplace, school, etc., as measured by the Social Network Index or SNI) in which an individual has contact with others was the dependent variable. In the second, the dependent variable is the number of people with whom an individual converses within a two-week period (known as “number of high contact people” as measured by the Social Network Index). In the third, the quality of social support as measured by the ISEL was named as the dependent variable. Each equation included demographic variables, time associated with the social group (in order to assess the impact of gay cultural identity independent of the impact of time affiliated with a group specifically for gay students), and gay cultural identity entered as independent variables in a stepwise fashion.

2. The relationship between identification with gay minority culture (gay cultural identity) and religious and existential well-being was examined through two regression analyses, one with religious well-being and one with existential well-being as the dependent variable. Demographic variables were controlled for in the first step of the equation, and gay cultural identity was entered in the second step of the equation for each of the two analyses.
3. The relationship between gay cultural identity and religious involvement was examined through a regression analysis that included demographic variables in the first step of the equation and gay cultural identity entered in the second step of the equation.
4. The relationship between length of association with a social group specifically for GLBT students and disclosure of sexual orientation to parents was tested in a regression equation with disclosure to parents as the dependent variable, demographic variables entered as independent variables in the first step, and length of association with the group entered in the second step. A third step was added, entering the interaction between age and length of association with the group in order to ensure that the relationship between group affiliation and disclosure to parents was, indeed, independent of age.
5. This hypothesis investigated the relationships between gay cultural identity and two dependent variables: acculturative stress and depressive and suicidal

- symptoms. Two sets of analyses were run that included demographic variables as the independent variables in the first step and gay cultural identity in the second step. Acculturative stress was the dependent variable in the first set of analyses and depressive and suicidal symptoms was the dependent variable in the second set.
6. To extend the application of Berry's (1990) proposed four modes of acculturation to this population and to investigate the relationship between the four modes and symptoms of depression and suicidality, the individual cases were divided into four groups representing the modes of acculturation based on their scores on Gay cultural identity Total (as measured by the MEIM) and on Other Group Orientation (also measured by the MEIM). In order to look more closely at the two modes that were specifically hypothesized to be related to depressive and suicidal symptoms, integration and marginalization, an independent samples t-test was run to investigate any potential differences in depressive and suicidal symptoms based on these identified groupings.

*Hypothesis Examining Relationships Within Group C Variables*

7. The relationship between family religiosity and disclosure of sexual orientation was examined through a regression analysis in which disclosure to parents was entered as the dependent variable. Demographic variables were entered in the first step and family religiosity was entered as the second step of the analysis. Two other regression analyses were run, including ratings of support by mothers

and rating of support by fathers, respectively, as the dependent variables. The independent variables were entered exactly as in the analysis above.

*Hypotheses Examining Relationships Between Group C Variables  
and Outcome Variables (Groups D and E)*

8. This hypothesis investigated the relationships between social support and two dependent variables: acculturative stress and depressive and suicidal symptoms. Two sets of regression analyses were run that included demographic variables as the independent variables in the first step and the three social support measures (SNI network diversity, SNI number of high contact people, and ISEL Total), in turn, in the second steps. One set of analyses included acculturative stress as the dependent variable and the other included depressive and suicidal symptoms as the dependent variable.
  
9. The relationships between the two factors of the Spiritual Well-Being Scale (existential well-being and religious well-being) and depressive and suicidal symptoms were examined in two analyses. Demographic variables were entered in the first step for both analyses. In the first, existential well-being was entered in the second step, while in the second religious well-being was entered in the second step. The standardized Beta coefficients of the two target variables compared to determine which of the two was more strongly associated with depressive and suicidal symptoms.

10. A regression analysis tested the relationship between reported involvement in religious practices and acculturative stress. Demographic variables were entered as the first step of the equation, and religious involvement was entered as the second.
  
11. In order to test the hypothesis that greater levels of family religiosity are positively associated with acculturative stress, and past suicidal behavior, two sets of regression analyses were run that included demographic variables in the first step and family religiosity in the second step. The two sets of analyses included as the dependent variables, acculturative stress and past suicidal behavior, respectively.
  
12. The interaction effect of family variables and disclosure on depression and suicidality was examined in two regression equations in which the dependent variable for each was the depressive and suicidal symptoms composite. The independent variables for the first were demographic variables, disclosure to parents, family adaptability (as measured by the FACES-III), and the interaction of family adaptability and disclosure. The independent variables for the second were demographic variables, disclosure, family cohesion (as measured by the FACES-III), and the interaction of family cohesion and disclosure.
  
13. In order to test religious involvement, family adaptability and cohesion (factors of the FACES-III), and social support (ISEL Total) as mediators between gay

cultural identity and acculturative stress, the significant relationship between gay cultural identity and acculturative stress must be established. As shown in the Results section, this relationship was not a statistically significant one. Thus, no further analyses were undertaken.

*Hypothesis Examining Relationship Between Outcome Variables (Groups D and E)*

14. The relationship between acculturative stress and symptoms of depression and suicidality was examined through regression analyses with depressive and suicidal symptoms as the dependent variable. Demographic variables were entered in the first step. Acculturative stress was then entered as a second step in order to ascertain the independent contribution of acculturative stress in the explanation of depressive and suicidal symptoms. To examine the proposed “threshold” effect of acculturative stress, the sample was divided by a median split on acculturative stress and a t-test was run to test the significance of the difference of the means of the two groups.

## RESULTS

Means and standard deviations for the measures are shown in Table 1. Zero-order correlations for the variables used in the proposed analyses are shown in Table 2.

*Depressive and suicidal symptoms.* Notably, the mean score on the BDI-II (Beck, Steer, & Brown, 1996) for this sample was 12.54 (SD=12.24), while the mean previously found in a sample of college students was 8.36 (SD=7.16; Whisman, Perez, & Ramel, 2000). The two samples also differed with respect to the distribution of scores. In the

previously mentioned sample, 80.2% of the participants scored in the “minimal” range (0-13), 12.5% scored in the “mild” range (14-19), 5.7% scored in the “moderate” range (20-28), and 1.6% scored in the “severe” range (29-63). In this sample, however, 67.3% scored in the “minimal” range, 11.5% in the “mild” range, 9.7% on the “moderate” range, and 11.5% in the “severe” range. A study in which the BDI-II was used to assess primary care patients found a mean score of 8.74 (SD=9.7; Arnau, Meagher, Norris, & Bramson, 2001), similar to that of the college sample reported by Whisman and colleagues (2000). Overall, participants in this study report higher levels of depression than those in previously assessed samples.

On the measure of suicidal symptoms included in this study, the MSSSI (Miller, Norman, Bishop, & Dow, 1986), the mean score for this sample was 6.60 (SD=9.22). This score is much lower than that reported in a previous study in which the mean score was 21.40 (SD=8.46; Clum & Yang, 1995); however, this difference is to be expected due to the fact that the previously mentioned study specifically recruited college students who were interested in seeking help for symptoms of depression and suicidality. The mean in this sample was higher might be expected, given that these individual were not clinic referred (Joiner, Rudd, & Hasan, 1997).

The primary focus of the present study was to understand the development of depression and suicidality in this population as it is related to the process of acculturation. The measures of depressive symptoms (BDI-II) and suicidality (MSSSI) were very highly correlated in this sample ( $r=.740, p<.001$ ). Furthermore, on both measure, the sample reported more symptoms than would be expected based on the reports of other samples. When the zero-order correlations were examined, these two measures were significantly

correlated with the same independent variables. Given these conditions, the scores for these measures were combined into one composite measure heretofore referred to as “depressive and suicidal symptoms.”

*Suicidal Behavior.* In addition to current symptoms of depression and suicidality, participants were asked about past suicidal and self-injurious behavior. Nineteen (36.5%) participants indicated that they had attempted suicide in the past, with number of attempts ranging from 1 (9 participants, 17.3%) to 5 (1 participant, 1.9%). The age of first suicide attempt ranged from 11 to 24 years of age with an average of 15.68 years ( $SD = 3.42$ ) and a modal age of 14 years. Six participants (11.5%) reported that they had received medical treatment as a result of a suicide attempt.

*Disclosure to Family and Friends.* Eighteen (34.6%) participants reported they had disclosed to neither parent, 8 (15.4%) participants had disclosed to one parent, and 26 (50%) participants reported they had disclosed to both parents. Disclosure of sexual orientation to mothers was reported by 34 of 52 participants (65.4%). The average age of disclosure to mothers was 17.79 years ( $SD = 2.5$ ) and ranged from the ages of 12 to 23 years. In this sample, the mean support rating on a scale from 1 to 7 (1=very unsupportive/rejecting and 7=very supportive) for mothers was 4.88 ( $SD = 2.13$ ). With respect to fathers, 26 (51%) participants reported they had disclosed their sexual orientation, and 25 (49%) reported they had not. The average age of disclosure to fathers was slightly higher than for mothers, at 18.08 years ( $SD = 2.86$ ), and ranged from 12 to 24 years. Fathers were given a mean support rating of 4.32 ( $SD = 1.86$ ).

Participants were also asked about disclosure to siblings. Ten participants reported they had no siblings and three did not respond to this question. Of the remaining

39 participants, 11 (28.2%) had not disclosed their sexual orientation to a sibling and 28 (71.8%) had disclosed to at least one sibling. The average age of disclosure to a sibling was 18.21 (SD = 1.98) with a range of ages from 15 to 23 years. Siblings received an average support rating of 5.66 (SD = 1.05).

All participants reported they had disclosed their sexual orientation to friends. The average number of friends participants had told was 42.17 (SD = 47.56), with write-in estimates ranging from 3 to 285. The average age of disclosure to a friend was 17.19 (SD = 2.53), with ages ranging from 11 to 22 years. Friends received higher support ratings than did family members, with an average rating of 6.30 (SD = .90). Participants were also asked if they had lost any friends as a result of disclosure. Twenty (38.5%) participants indicated that they had lost a friend, while the majority, 32 (61.5%) participants reported that they had not. Those who reported they had, reported an average loss of 1.81 (SD = 7.00) friends, with write-in estimates ranging from 1 to 50.

### *Hypotheses Assessing the Relationships Between*

#### *Gay Cultural Identity (Group B) and Group C Variables*

##### *Hypothesis 1: Gay Cultural Identity as a Predictor of Social Support*

Each of the three social support variables was assessed in a separate analysis. In the first analysis, examining the relationship between gay cultural identity and social network diversity (as measured by the SNI), the demographic variables entered in the first step did not account for a significant portion of the variance in network diversity ( $R^2=.040$ ;  $F(3,48)=.675$ ,  $p=.572$ ). Neither did years of affiliation with the GBLT social group add to the predictive power of the model when it was entered in the second step

( $R^2$  change=.009;  $F$  change(1,47)=.433,  $p$ =.514). Finally, gay cultural identity was added in the third step, and results indicated that this variable accounted for a significant 10.4% of the variance in network diversity ( $R^2$  change=.104;  $F$  change(1,46)=5.669,  $p$ =.021; see Table 3). The model including all steps was not significant ( $R^2$ =.154;  $F$ (5,46)=1.669,  $p$ =.161).

In the second analysis, using number of high contact people (as measured by the SNI) as the dependent variable, the first step, which included demographic variables, did not account for a significant portion of the variance ( $R^2$ =.018;  $F$ (3,48)=.292,  $p$ =.831). Neither did the model including years of group affiliation, added in the second step ( $R^2$  change=.022;  $F$  change(1,47)=1.067,  $p$ =.307). When gay cultural identity was added in the third step, however, it did account for a significant 12.9% of the variance in number of high contact people ( $R^2$  change=.089;  $F$  change(1,46)=4.703,  $p$ =.035; see Table 4). The model including all steps was not significant ( $R^2$ =.129;  $F$ (5,46)=1.360,  $p$ =.257).

In the third analysis, in which the quality of social support (ISEL Total) was named as the dependent variable, neither the first step including demographic variables nor the second step in which years of group affiliation was added as a variable, accounted for a significant portion of the variance ( $R^2$  for the first step=.025;  $F$ (3,48)=.418,  $p$ =.741;  $R^2$  change for the second step=.023;  $F$  change(1,47)=1.131,  $p$ =.293). In the third step, in which the independent contribution of gay cultural identity was examined, gay cultural identity did not serve as a statistically significant predictor of social support as measured by the ISEL ( $R^2$  change=.030;  $F$  change(1,46)=1.502,  $p$ =.227; see Table 5). The model including all steps was not significant ( $R^2$ =.078;  $F$ (5,46)=.783,  $p$ =.567).

Thus, it appears that gay cultural identity is differentially associated with various aspects of social support, in that it impacts the number and diversity of the people with whom one interacts, but not the quality of social relationships.

*Hypothesis 2: Gay cultural identity as a Predictor of Existential Well-Being*

To investigate the hypothesis that stronger identification with gay minority culture will be positively associated with existential, but not religious, well-being, two regression equations were run. In the first equation, the results of the first step indicated that none of the demographic variables accounted for a significant portion of the variance in existential well-being ( $R^2=.016$ ;  $F(3,48)=.261$ ,  $p=.853$ ; see Table 6). When gay cultural identity was added in the second step, the results indicated that this variable showed a trend toward statistical significance as a predictor of existential well-being ( $R^2$  change $=.076$ ;  $F$  change(1, 47) $=3.949$ ,  $p=.053$ ). The entire model including both steps was not statistically significant ( $R^2=.092$ ;  $F(4,47)=1.197$ ,  $p=.326$ ).

In the second equation, as in the first, the demographic variables included in the first step were not statistically significant predictors of religious well-being ( $R^2=.032$ ;  $F(3,48)=.536$ ,  $p=.660$ ; see Table 7). When the contribution of gay cultural identity was examined in the second step, results indicated that this variable did not account for additional variance in the explanation of religious well-being ( $R^2$  change $=.009$ ;  $F$  change(1,47) $=.453$ ,  $p=.504$ ). Furthermore, the complete model including both steps did not account for a significant portion of the variance in religious well-being ( $R^2=.042$ ;  $F(4,47)=.551$ ,  $p=.728$ ).

*Hypothesis 3: Gay cultural identity as a Predictor of Religious Involvement*

To examine the hypothesis that gay cultural identity would be negatively related to religious involvement, a regression analysis was run including demographic variables in the first step and gay cultural identity in the second. As shown in Table 8, demographic variables were not significant predictors of religious involvement ( $R^2=.130$ ,  $F(3,48)=2.400$ ,  $p=.079$ ). When gay cultural identity was added in the second step, it did not add significantly to the variance accounted for in religious involvement ( $R^2$  change $=.006$ ,  $F$  change $(1,47)=.333$ ,  $p=.567$ ). The complete model including both steps did not account for a significant portion of the variance in religious involvement ( $R^2=.137$ ,  $F(4,47)=1.858$ ,  $p=.134$ ).

*Hypothesis 4: Association With a Social Group as a Predictor of Disclosure to Parents*

To examine the contribution of length of affiliation with a social group formed specifically for GBLT students to the prediction of number of parents to which students had disclosed, a regression equation was run that included sex, age, and sexual orientation as independent variables entered in the first step, years of group affiliation added in the second step, and the interaction between age and years of affiliation in the third step. In the first step, sexual orientation served as a significant predictor of disclosure, as previously shown in Hypothesis 4 ( $R^2=.142$ ;  $F(3,48)=2.647$ ,  $p=.060$ ; see Table 9). When years of association with the group was added in the second step, however, sexual orientation was no longer a significant predictor of disclosure to parents, and years of affiliation accounted for a significant 9.3% of the variance in disclosure ( $R^2$  change $=.093$ ;  $F$  change $(1,47)=5.694$ ,  $p=.021$ ). Results from the third step showed that

the interaction term was not a significant predictor of disclosure to parents ( $R^2$  change=.006;  $F$  change(1,47)=.356,  $p$ =.553). The final model including the first two steps accounted for a statistically significant 23.5% of the variance in disclosure to parents ( $R^2$  =.235;  $F$ (4,47)=3.603,  $p$ =.012).

*Hypothesis 5: Gay cultural identity as a Predictor of Acculturative Stress and Depressive and Suicidal Symptoms*

To examine the hypothesis that gay cultural identity would be negatively related to acculturative stress and depressive and suicidal symptoms, two analyses were run including demographic variables in the first step and gay cultural identity in the second. In the first, with acculturative stress as the dependent variable, sexual orientation was shown to be a significant predictor in the first step ( $R^2$ =.173,  $F$ (3,48)=3.340,  $p$ =.027; see Table 10). When gay cultural identity was added in the second step, this variable was not a significant predictor of acculturative stress ( $R^2$  change=.007,  $F$  change(1,47)=.410,  $p$ =.525). The complete model including both steps accounted for a significant 18% of the variance in acculturative stress ( $R^2$ =.180,  $F$ (4,47)=2.576,  $p$ =.050).

When the depressive and suicidal symptoms composite was included as the dependent variable, the demographic variables were not significant predictors ( $R^2$ =.058,  $F$ (3,48)=.978,  $p$ =.411; see Table 11). When gay cultural identity was added in the second step, it showed a trend toward significance as a predictor of depressive and suicidal symptoms ( $R^2$  change=.071,  $F$  change(1,47)=.3.840,  $p$ =.056). The complete model including both steps did not account for a significant portion of the variance in depressive and suicidal symptoms ( $R^2$ =.129,  $F$ (4,47)=1.737,  $p$ =.158).

*Hypothesis 6: Differences in Reported Symptoms of Depression and Suicidality Based on Modes of Acculturation*

To further investigate Berry's (1990) model describing modes of acculturation, the individual participants were divided into four groups representing the modes of acculturation. The means and standard deviations of depressive and suicidal symptoms for each group are shown in Table 12. Results of an independent samples t-test indicated that the difference in symptoms between the two previously identified groups, integration and marginalization, approached statistical significance,  $t(18.351)=1.942$ ,  $p=.068$ .

*Hypothesis Examining Relationships Within Group C Variables*

*Hypothesis 7: Family Religiosity as a Predictor of Disclosure to and Support of Parents*

In the first equation, demographic variables were entered as independent variables in the first step and family religiosity was then added in the second step. The dependent variable was defined as the number of parents to whom the participant had disclosed (0, 1, or 2). The first step including all demographic variables was not statistically significant ( $R^2=.142$ ;  $F(3,48)=2.647$ ,  $p=.060$ ), but when the contributions of the individual variables were examined, results indicated that sexual orientation was a significant predictor of disclosure to parents (see Table 13). In the second step, sexual orientation remained a statistically significant predictor, but family religiosity did not account for a significant portion of the variance in the number of parents to whom the individual had disclosed,  $R^2$  change=.011;  $F$  change(1,47)=.615,  $p=.437$ ). The complete

model including both steps did not account for a significant portion of the variance in disclosure to parents ( $R^2=.153$ ;  $F(4,47)=2.123$ ,  $p=.093$ ).

In order to examine the impact of family religiosity on parental support, two additional regression equations were run that included the same independent variables entered in two steps as described above. None of the demographic variables acted as predictors of maternal support ratings ( $R^2=.129$ ;  $F(3,30)=1.477$ ,  $p=.241$ ; see Table 14). Furthermore, family religiosity, added in the second step, was not shown to be a significant predictor of maternal support ratings ( $R^2$  change=.129;  $F$  change(1,29)=.369,  $p=.548$ ). Results for the entire model including both steps were not significant ( $R^2=.140$ ;  $F(4,29)=1.176$ ,  $p=.342$ ). Similar results were obtained when these variables were tested as predictors of paternal support. Neither the demographic variables entered in the first step ( $R^2=.061$ ;  $F(3,22)=.478$ ,  $p=.701$ ) nor family religiosity, added in the second step ( $R^2$  change=.024;  $F$  change(1,21)=.555,  $p=.464$ ) accounted for a significant portion of the variance in paternal support (see Table 15). As in the previous analysis, results for the entire model including both steps were not significant ( $R^2=.085$ ;  $F(4,21)=.490$ ,  $p=.743$ ).

#### *Hypotheses Examining Relationships Between Group C Variables*

##### *and Outcome Variables (Groups D and E)*

#### *Hypothesis 8: Social Support Variables as Predictors of Acculturative Stress*

##### *and Depressive and Suicidal Symptoms*

Two sets of regression analyses were run that included demographic variables as the independent variables in the first step and the three social support measures (SNI network diversity, SNI number of high contact people, and ISEL Total),

in turn, in the second steps. In the first set of analyses, acculturative stress was included as the dependent variable. The first step of these analyses was identical and included the demographic variables. In the first step, results indicated that sexual orientation was a statistically significant predictor of acculturative stress ( $R^2=.173$ ,  $F(3,48)=3.340$ ,  $p=.027$ ; see Table 16). The second step differed for each analysis. When network diversity (as measured by the SNI) was added as the second step, results indicated that this variable did not add to the prediction of acculturative stress ( $R^2$  change $=.003$ ;  $F$  change $(1,47)=.184$ ,  $p=.670$ ; see Table 16). This model including both steps showed a trend toward significance ( $R^2=.176$ ,  $F(4,47)=2.508$ ,  $p=.054$ ). Similarly, when number of high contact people (as measured by the SNI) was added, sexual orientation remained a significant predictor, but this social support variable did not contribute significantly to the prediction of acculturative stress ( $R^2$  change $=.005$ ;  $F$  change $(1,47)=.264$ ,  $p=.610$ ; see Table 17). This model including both steps showed a trend toward significance ( $R^2=.177$ ,  $F(4,47)=2.532$ ,  $p=.053$ ). However, when the ISEL Total score was added as the second step, results showed that sexual orientation remained a significant predictor and that the added social support variable did account for a significant 12.4% of the variance in acculturative stress ( $R^2$  change $=.124$ ;  $F$  change $(1,47)=8.249$ ,  $p=.006$ ; Table 18). This model including both steps accounted for a significant portion of the variance in acculturative stress ( $R^2=.296$ ,  $F(4,47)=4.945$ ,  $p=.002$ ).

The second part of the hypothesis suggested that social support was negatively associated with depressive and suicidal symptoms. As in the previous set of analyses, the first step was identical in this set. The first step included demographic variables, and the second step, as in the set of analyses above, changed, including, in turn, network diversity

(SNI), number of high contact people (SNI), and ISEL Total score. When the first step was examined, results showed that none of the individual demographic variables contributed significantly to the prediction of depressive and suicidal symptoms ( $R^2=.058$ ;  $F(3,48)=.978$ ,  $p=.411$ ; see Table 19). When network diversity was added in the second step, results indicated that it was a statistically significant predictor of depressive and suicidal symptoms, contributing to the explanation of a significant 8.7% of the variance ( $R^2$  change=.087;  $F$  change(1,47)=4.810,  $p=.033$ ; see Table 19). This model including both steps was not significant ( $R^2=.145$ ,  $F(4,47)=1.994$ ,  $p=.111$ ). When the number of high contact people was added in the third step, it showed a trend toward significance as a predictor of depressive and suicidal symptoms ( $R^2$  change=.070;  $F$  change(1,47)=3.746,  $p=.059$ ; see Table 20). This model including both steps was not significant ( $R^2=.127$ ,  $F(4,47)=1.712$ ,  $p=.163$ ). Finally, when the ISEL Total score was added as the final step, as in the previous set of analyses, this variable accounted for a significant portion of the variance in the depressive and suicidal symptoms ( $R^2$  change=.260;  $F$  change(1,47)=17.913,  $p=.000$ ; see Table 21). The model including both steps accounted for a significant portion of the variance in depressive and suicidal symptoms ( $R^2=.318$ ,  $F(4,47)=5.470$ ,  $p=.001$ ).

*Hypothesis 9: Existential and Religious Well-being as Predictors of Depressive and Suicidal Symptoms*

To investigate the proposed negative relationships between 1) existential well-being and depressive and suicidal symptoms and 2) religious well-being and depressive and suicidal symptoms, two sets of analyses were completed. When the demographic

variables were examined in the first step, results indicated that they were not significant predictors of depressive and suicidal symptoms, as shown in the previous analyses.

When existential well-being was added in the second step, this variable added significantly to the prediction of depressive and suicidal symptoms ( $R^2$  change=.630;  $F$  change(1,47)=94.671,  $p$ =.000). In addition, as shown in Table 22, results indicated that when all variables were included, sex was a significant predictor of depressive and suicidal symptoms. This model including both steps accounted for a significant portion of the variance in depressive and suicidal symptoms ( $R^2$  =.687;  $F$  (4,47)=25.832,  $p$ =.000). When the analysis included religious well-being in the second step, results indicated that this variable was not a significant predictor ( $R^2$  change=.026;  $F$  change(1,47)=1.340,  $p$ =.253; see Table 23). In this case, the model including both steps was not significant ( $R^2$  =.084;  $F$  (4,47)=1.073,  $p$ =.380). Therefore existential well-being showed a stronger relationship with depressive and suicidal symptoms, as predicted.

#### *Hypothesis 10: Religious Involvement as a Predictor of Acculturative Stress*

To examine the contribution of religious involvement to the prediction of acculturative stress, a regression equation was run that included sex, age, and self-ratings of sexual orientation as the independent variables entered in the first step and religious involvement entered in the second step. In the first step, ratings of sexual orientation accounted for a significant portion of the variance in acculturative stress ( $R^2$ =.173;  $F$ (3,48)=3.340,  $p$ =.027; see Table 24). In the second step, ratings of sexual orientation remained a statistically significant predictor, and the added variable of religious involvement showed a trend but did not reach statistical significance as a predictor of

acculturative stress ( $R^2$  change=.059;  $F$  change(1,47)=3.584,  $p$ .064). The complete model including both steps accounted for a statistically significant 23.1% of the variance in acculturative stress ( $R^2$ =.231;  $F$ (4,47)=3.526,  $p$ =.013).

*Hypothesis 11: Family Religiosity as a Predictor of Past Suicidal Behavior and Acculturative Stress*

A regression was run that included demographic variables in the first step and added family religiosity in the second step, and results indicated that none of the included variables were statistically significant predictors of past suicide attempt ( $R^2$  for the first step=.050;  $F$ (3,48)=.844,  $p$ =.477;  $R^2$  change for the second step=.007;  $F$  change (1,47)=.340,  $p$ =.563; see Table 25). The model including both steps did not account for a significant portion of the variance in past suicide attempt ( $R^2$  =.057;  $F$ (4,47)=.709,  $p$ =.590).

A second analysis examined the relationship between the previously named independent variables and acculturative stress. Demographic variables included in the first step showed that sexual orientation was a significant predictor of acculturative stress ( $R^2$ =.173;  $F$ (3,48)=3.340,  $p$ =.027; see Table 26). When family religiosity was added in the second step, results showed that while sexual orientation remained a significant predictor, family religiosity did not add to the variance accounted for in acculturative stress ( $R^2$  change=.007;  $F$  change(1,47)=.391,  $p$ =.535). The model including both steps accounted for a significant 18% of the variance in acculturative stress ( $R^2$ =.180;  $F$ (4,47)=2.571,  $p$ =.050).

*Hypothesis 12: The Interaction of Family Variables in the Prediction of Depressive and Suicidal Symptoms*

In the first analysis, examining the interaction of family adaptability and disclosure to parents on depressive and suicidal symptoms, the first step, including demographic variables, did not account for a significant portion of the variance in depressive and suicidal symptoms ( $R^2=.058$ ;  $F(3,48)=.978$ ,  $p=.411$ ; see Table 27). In the second step, disclosure to parents and family adaptability were added; however, the model did not predict depressive and suicidal symptoms ( $R^2$  change $=.008$ ;  $F$  change $(2,46)=.196$ ,  $p=.823$ ). Finally, the interaction term was added in the third step, but results indicated that this term did not serve as a significant predictor of depressive and suicidal symptoms ( $R^2$  change $=.005$ ;  $F$  change $(1,45)=.252$ ,  $p=.618$ ). The model including all steps did not account for a significant portion of the variance in depressive and suicidal symptoms ( $R^2=.071$ ;  $F(6,45)=.571$ ,  $p=.751$ ).

In the second analysis, examining the interaction of family cohesion and disclosure to parents of depressive and suicidal symptoms, the first step, including demographic variables, did not account for a significant portion of the variance in depressive and suicidal symptoms ( $R^2=.058$ ;  $F$  change $(3,48)=.978$ ,  $p=.411$ ; see Table 28). In the second step, disclosure to parents and family cohesion were added to the model, but these variables did not add significantly to the prediction of depressive and suicidal symptoms ( $R^2$  change $=.032$ ;  $F$  change $(2,46)=.802$ ,  $p=.454$ ). Finally the interaction term was added in the third step, but results indicated that this term did not account for a significant portion of the variance in depressive and suicidal symptoms ( $R^2$  change $=.009$ ;  $F$  change $(1,45)=.469$ ,  $p=.497$ ). The model including all steps did not account for a

significant portion of the variance in depressive and suicidal symptoms ( $R^2 = .099$ ;  $F(6,45) = .822$ ,  $p = .599$ ). Therefore, neither family adaptability nor family cohesion contributed to the prediction of depressive and suicidal symptoms in this sample.

*Hypothesis 13: Religious Involvement, Family Cohesion and Adaptability, and Social Support as Mediators Between Gay Cultural Identity and Acculturative Stress*

In order to investigate the proposed variables as mediators between gay cultural identity and acculturative stress, the relationship between gay cultural identity and acculturative stress must be established. As previously shown in the analysis testing this relationship, shown under Hypothesis 5, this relationship was not statistically significant. Because these variables were not related, no further investigation of mediating variables was undertaken.

*Hypothesis Examining Relationship Between Outcome Variables (Groups D and E)*

*Hypothesis 14: Acculturative Stress as a Predictor of Depressive and Suicidal Symptoms*

To examine the contribution of acculturative stress as it predicts symptoms of depression and suicidality, a regression equation was run that incorporated independent variables entered in two steps, the first including demographic variables that may differentially predict depressive and suicidal symptoms, and the second including acculturative stress (see Table 29). Results indicated that none of the three demographic variables accounted for a significant portion of the variance in depressive and suicidal symptoms when they were entered in the first step ( $R^2 = .058$ ;  $F(3,48) = .978$ ,  $p = .411$ ). Acculturative stress, however, was a statistically significant predictor, accounting for an

additional 10.3% of the variance in depressive and suicidal symptoms ( $R^2$  change=.103;  $F$  change (1,47)=5.756,  $p$ =.020). The entire model including both steps did not account for a statistically significant portion of the variance in depressive and suicidal symptoms ( $R^2$ =.160;  $F(4,47)$ =2.245,  $p$ =.078).

To investigate the hypothesis that the relationship between acculturative stress and symptoms would become stronger at higher levels of stress, the sample was divided through a median split based on acculturative stress scores. Results of an independent samples  $t$ -test indicated that those participants who reported high levels of acculturative stress also reported significantly higher levels of depressive and suicidal symptoms than those in the low acculturative stress group ( $M=10.63$ ,  $SD=9.41$  for low acculturative stress group and  $M=28.32$ ,  $SD=24.27$  for high acculturative stress group),  $t(30.593)=-3.415$ ,  $p$ =.002. In addition, a test of equal variances indicated that the two groups have significantly different variances on acculturative stress,  $F(1,50)=17.388$ ,  $p$ =.000. When the data is plotted on a graph, the nature of the relationship between acculturative stress and depressive and suicidal symptoms can be clearly observed (see Figure 2). Those who score in the low to middle range on acculturative stress also report relatively uniform levels of depressive and suicidal symptoms. Those individuals who report higher levels of acculturative stress report a much wider variance (note the differences in standard deviations for each group stated above) in depressive and suicidal symptoms. When the means for each quartile are plotted (see Figure 3), the data show a curvilinear relationship between acculturative stress and depressive and suicidal symptoms in which relatively low levels of depressive and suicidal symptoms are exhibited when acculturative stress

scores are lower and a sudden increase in depressive and suicidal symptoms is observed when higher levels of acculturative stress are reported.

#### *Post-hoc analyses*

Because gay cultural identity was not related to acculturative stress, as predicted in hypothesis 5, the mediational model proposed in hypothesis 13 was not supported. This led to a proposed revision of the model that excludes acculturative stress, shown in Figure 4. This simpler model suggests that Group C variables would be directly related to depressive and suicidal symptoms without the intervening variable of acculturative stress. The variables that were proposed to mediate the relationship between gay cultural identity and acculturative stress, according to the revised model are proposed to mediate between gay cultural identity and depressive and suicidal symptoms. These analyses were run exactly as proposed to test hypothesis 13, only including depressive and suicidal symptoms as the dependent variable. Results indicated that in the first step, gay cultural identity was a statistically significant predictor of depressive and suicidal symptoms ( $R^2 = .093$ ;  $F(1,50)=5.126$ ,  $p=.028$ ). The second step differed for each analysis. Each of the proposed mediating variables was substituted, in turn. Results indicated that 1) religious involvement did not predict depressive and suicidal symptoms ( $R^2$  change=.010;  $F$  change(1,49)=.554,  $p=.460$ ); 2) family cohesion did not predict symptoms ( $R^2$  change=.014;  $F$  change(1,49)=.766,  $p=.386$ ); 3) family adaptability did not predict symptoms ( $R^2$  change=.007;  $F$  change(1,49)=.406,  $p=.527$ ); 4) SNI Network Diversity did not predict symptoms ( $R^2$  change=.037;  $F$  change(1,49)=2.090,  $p=.155$ ); and 5) SNI

Number of high contact people did not predict symptoms ( $R^2$  change=.035;  $F$  change(1,49)=1.993,  $p$ =.164).

When social support as measured by the ISEL was added in the second step, however, this variable added significantly to the explanation of the variance in depressive and suicidal symptoms ( $R^2$  change=.208;  $F$  change(1,49)=14.603,  $p$ =.000; see Table 30). This set of analyses establishes two of the three relationships necessary to confirm a mediational relationship. The third relationship that must be demonstrated is that between the ISEL Total score and the dependent variable, depressive and suicidal symptoms. A one-tailed correlational analysis indicates that these two variables are related ( $r$  =.231,  $p$  =.050). Further evidence of the mediational relationship is shown in Table 30, inasmuch as gay cultural identity is no longer a statistically significant predictor of depressive and suicidal symptoms after social support as measured by the ISEL is entered in the second step. To further explore the nature of this relationship, each of the four factors of the ISEL were entered in separate analyses to test each factor as a mediator. When each factor was entered individually, results indicated that Belonging support, Appraisal support, and Self-esteem support acted as mediators between gay cultural identity and symptoms, while Tangible support did not. These results are shown in Tables 31 through 34.

## DISCUSSION

The primary purpose of this study was to explore the concepts of identity development and acculturation as they apply to the gay/lesbian/bisexual population.

These concepts were hypothesized to play an important role in the explanation of depressive and suicidal symptoms. Gay, lesbian, and bisexual youth have been thought to be at risk for symptoms of depression and suicidality, though research findings to date have shown mixed results. This discussion will attempt to explain the findings of the study with respect to these and other variables that have been proposed to play a role in the development of symptoms in gay, lesbian, and bisexual youth.

In order to put the findings into context, the data regarding depression and suicidality will be considered first. This sample may have been presumed to be a particularly high-functioning and psychologically healthy one, given that it consisted of college students who were comfortable enough with their sexual orientation to seek out companionship from similar others in a public setting. However, a closer look at the data indicates otherwise. For example, 36.5% of participants in this study reported a past suicide attempt. This figure is well above the reported rates of suicide attempt in the population at large, but is within the wide range of prevalence rates reported in previous studies of gay and lesbian populations. Savin-Williams (2001) emphasized the importance of gathering more information about attempts in order to distinguish false or exaggerated reports of attempts from what he called “true” attempts. When the data in this sample were examined further for reports of medical intervention as the result of an attempt, the rate appears to be more consistent with those reported in the general population. This rate was also consistent with that reported by Savin-Williams in his study, which separated heterosexual respondents from those who identified themselves as homosexual or bisexual. Thus, in terms of suicide attempt, this sample appears to be similar to others assessed in previous studies.

This sample could also be compared to other samples that were assessed using the same measures of depression and suicidality. This sample reported fewer symptoms of suicidality when compared to another sample of college students that was recruited specifically for help with such symptoms (Clum & Yang, 1995). However, when compared to another sample of college students in which depressive symptoms were measured using the BDI-II (Whisman et al., 2000), it appears that the current sample reported more symptoms overall and showed a distribution that included three times the percentage of participants in the moderate to severe range of symptoms than the previous sample. Overall, participants in this sample reported considerable distress in terms of depressive symptoms, consistent with data reporting higher rates of major depression among homosexual samples in previous studies.

The sample should also be discussed with respect to disclosure. This variable has been largely ignored in investigations of symptoms in gay/lesbian/bisexual populations. This study attempted to obtain information regarding to whom participants had disclosed and how supportive those individuals had been. All the participants in this study indicated they had disclosed to friends, and friends received very high ratings of support. However, 38.5% of the sample reported they had lost at least one friend as a result of disclosure. This rate is very similar to that reported by Remafedi (1987b), who found that 41% of a gay male sample reported that they had lost one friend because of issues concerning their sexual orientation. These findings suggest that concern about to whom to disclose and when is justified in many cases.

The data indicate that 65.4% of participants had disclosed to mothers and 51% had disclosed to fathers. These figures are higher than has been previously reported in a

sample of gay and lesbian college students (D'Augelli, 1991). In this study, parents were found to be largely supportive of their children who had disclosed their sexual orientation, more so than may have been expected based on the results of previous studies (D'Augelli, 1991; D'Augelli & Hershberger, 1993). In fact, 12% of fathers and 41% of mothers were given rating of 7 on a scale ranging from 1 to 7, indicating that they are perceived as being very supportive of their children. As society's views toward homosexuality continue to evolve, it is reasonable to assume that individuals will become increasingly willing to disclose to family and friends. Not only has the majority culture become increasingly accepting of homosexuality, but gay, lesbian, and bisexual individuals have also been increasingly able to access community resources specifically targeted to support them. They have had increasing access to community-based resources, social groups and internet resources through which they can make connections with other gay, lesbian, and bisexual individuals. More public exposure and dialogue surrounding homosexuality increases the likelihood that the subject will also be talked about within individual families.

The main focus of the study examined relationships among variables in a model proposed to explain the development of depressive and suicidal symptoms in gay, lesbian, and bisexual youth. These associations were tested through a series of regression analyses, the results of which are discussed below, organized by hypothesis.

*Hypotheses Assessing the Relationships Between  
Gay Cultural Identity (Group B) and Group C Variables*

1. The first hypothesis proposed that higher levels of gay cultural identity would predict greater levels of perceived social support. This hypothesis was partially supported. In this study, three different measures of social support, each targeting a different aspect of the construct, were used. Results indicated that gay cultural identity predicted quantity of social contacts, but not the quality of social relationships. The Social Network Index assessed both a count of the number of individuals with whom one has verbal contact in a given period as well as the number of settings in which an individual has contact with others. Increasing identification with gay culture, for individuals who have labeled themselves as gay or bisexual, could contribute to a sense of comfort with one's identity. As the gay or lesbian person first identifies him- or herself as homosexual, the acculturation process might be thought to begin with an internal conflict between the beliefs and assumptions of the heterosexual culture and those of the individual homosexual person. For the gay/lesbian/bisexual person, higher levels of identification with gay minority culture may serve to reduce that internal conflict. When one's self-identification and identification with the minority group are compatible, as indicated by higher levels of gay cultural identity, it is likely that one will feel more comfortable interacting with others and may initiate more frequent contact with others.

2. The second hypothesis posited that higher levels of gay cultural identity would be associated with higher levels of existential well-being but not religious well-being. This

hypothesis was hesitantly supported, with gay cultural identity approaching statistical significance as a predictor of existential well-being but showing no relationship to religious well-being. As in the previous hypothesis, it seems that increased consistency between one's internal identification and identification with the minority culture may result in a more positive worldview and increased confidence in one's abilities to effect change in the environment. It appears, however, that an individual's ideas about a specific higher power are not related to the increased personal consistency that results from higher identification with the minority group. Due to the negative views of most prominent religious factions, gay, lesbian, and bisexual individuals may have felt they had to reframe for themselves or discount their relationships with God in order to reduce internal conflict about their homosexuality. Therefore, identification with gay minority culture may be less strongly related to religious than existential well-being

3. The third hypothesis predicted that gay cultural identity would be negatively related to religious involvement. This hypothesis was not supported. As stated above, it appears that participants' relationships with God or a higher power, and by extension, their degree of religious involvement, are not dependent on identification with minority culture. This could be because some individuals resolve this discrepancy between the beliefs of the church and their self-identification as gay, lesbian, or bisexual before they become highly identified with gay culture. Others may abandon their beliefs about God or the teachings of the church in order to resolve internal conflict. Individuals' responses may vary widely and may depend on a variety of other factors that were not represented in this study.

4. The next hypothesis posited that the length of time that an individual has been associated with the college social group specifically targeting gay, lesbian, and bisexual students, the more likely the individual will be to have disclosed to parents. This hypothesis was supported. Years of affiliation with the group might be thought of as another indicator of identification with gay culture. With increased comfort with group identification and increased feelings of security that support from the group will be available in the case of rejection, these students may be more willing to take the risk of disclosing to parents.

5. The fifth hypothesis proposed that gay cultural identity would be negatively associated with both acculturative stress as well as depressive and suicidal symptoms. Results indicated that gay cultural identity was not related to acculturative stress. When these measures are examined for their item content, it appears likely that they are measuring orthogonal constructs. The items of the MEIM, assessing gay cultural identity, ask questions concerning personal views toward homosexuality and involvement in affirming activities and relationships. The items of the Acculturative Stress Scale, on the other hand, ask about others' reactions to the respondent and the larger society's views toward homosexuality. It is possible that an individual could be highly identified with gay culture and also respond positively to such items as "I feel that GLB individuals are discriminated against" or "I feel that some people don't associate with me because of my sexual orientation," items on the Acculturative Stress Scale. An individual could just as easily give a valid response in the reverse pattern. It is logical that responses on one would not necessarily predict responses on the other.

Results indicated that gay cultural identity showed a trend toward significance as a predictor of depressive and suicidal symptoms. As discussed previously, lower levels of identification with gay culture may be thought to represent a discrepancy within the individual between their self-identification and group identification. It is logical that this conflict may produce feelings of dysphoria and confusion. If this conflict continues over a long period of time without resolution, the individual may be at risk for depression.

6. The sixth hypothesis examined the impact of an individual's acculturation response, predicting that depressive and suicidal symptoms would differ based on this response. Results indicated a trend toward significance, with those participants endorsing an integration response reporting fewer symptoms than those who reported a marginalization response. These results lend some support to the application of Berry's (1990) model of acculturation in the gay/lesbian/bisexual population. It is possible that this effect may be stronger in samples recruited in other ways. These participants were all involved in a social group for gay/lesbian/bisexual students; therefore the extent to which any participant felt that he or she was neither a part of the majority or the minority culture is questionable. It is likely that recruitment of large-scale samples, for instance, may better be able to assess individuals who feel more alienated from both majority and minority culture. Further investigation of this model is necessary to confirm its utility in this population.

*Hypothesis Examining Relationships Within Group C Variables*

7. This hypothesis proposed that family religiosity would be negatively associated with disclosure to parents and ratings of parental support for those who had disclosed. This hypothesis was not supported. It may be that identification with the minority culture and the accessible support and belonging one feels the longer that he or she is active in the gay/lesbian/bisexual social group, the more willing one may be to take the risk of disclosing to parents, regardless of the family's religious beliefs. The impact of potential rejection may not seem as great if one has an affirming support system or available resources.

Other factors may also play a role. For instance, no information was gathered about the particular religious denominations to which participants' families belong or the specific views on homosexuality of those denominations. It is possible that families of these participants belong to accepting congregations in greater proportions than the general population, or that the individual experience of having a gay or lesbian child changes one's personal attitudes toward the acceptability of homosexuality without affecting variables such church attendance or involvement.

*Hypotheses Examining Relationships Between Group C Variables  
and Outcome Variables (Groups D and E)*

8. Moving from left to right on the pictorial representation of the proposed model, shown in Figure 1, the next hypothesis posited that social support would be negatively associated with acculturative stress and depressive and suicidal symptoms. This hypothesis was generally supported, with some qualifications in the prediction of

acculturative stress. Results indicated that social support as measured by the ISEL was a predictor of acculturative stress, while the two factors of the SNI were not. The ISEL assesses an individual's quality of social support by assessing different types of support the individual perceives are available to him or her. In contrast, the SNI assesses frequency of social contact within various spheres of functioning. It appears that the more personally meaningful construct of availability of different types of social support (measured by the ISEL) may help to lessen the experience of acculturative stress. Furthermore, individuals who experience greater social support are likely to have available others with whom they can share their experiences concerning their identity as a gay, lesbian, or bisexual individual within the majority culture. Having others with whom to share these experiences and who are affirming may help to lessen the impact of any negative interaction with the majority culture. In contrast, simply assessing the number of contacts an individual has within a specified period of time (measured by the SNI) does not assess the quality or emotional valence of these interactions. It is possible that some of these contacts are negative ones that may be related to the individual's minority status within the majority culture. Without accounting for the type of interactions they are, it is impossible to tell whether they may be reducing the experience of acculturative stress or contributing to it.

This hypothesis also investigated the relationship between social support and depressive and suicidal symptoms. Both measures of social support, the SNI and the ISEL, explained significant portions of the variance in symptoms. It is likely that in the case of this dependent variable, as opposed to acculturative stress, the number of people with whom the individual has contact on a regular basis becomes more important simply

because social withdrawal is a symptom of depression. Therefore by definition of the syndrome, frequency of social contact should be related to symptoms. Indeed, this proved to be the case in the present sample.

9. The ninth hypothesis proposed that both existential and religious well-being would be negatively related to depressive and suicidal symptoms, but that existential well-being would show the stronger relationship of the two. This hypothesis was generally supported. Existential well-being was strongly related to depressive and suicidal symptoms. Religious well-being, in contrast, was not related to symptoms at all. It is important to reiterate in interpreting these results that the existential well-being variable and the depressive and suicidal symptoms variable were very highly correlated ( $r = -.788, p=.000$ ). These measures appear to be assessing the same construct, to a large extent, one from a negative viewpoint and the other from its positive inverse. As posited in the models of identity development (Phinney, 1993) and acculturation (Berry, 1990), the more conflict individuals feel regarding their own identity as it related to their identification as a group, the more likely they are to feel subjective distress and unhappiness, symptoms of depression. Individuals who feel the largest discrepancies between their own self-labels and their identities as part of a minority group would be expected to feel the highest levels of depressive symptoms and suicidality. From the perspective of existential well-being, those who experience consistency between their own self-labels and their identities as part of a minority group would be expected to hold the most positive views of themselves and the world—ideas that represent the inverse of depressive symptoms.

10. In this hypothesis, it was predicted that religious involvement would be positively related to acculturative stress. This hypothesis was not supported, presumably due to some of the same considerations discussed in hypothesis 3. It is possible that those individuals who feel comfortable enough with organized religion to continue their involvement on a regular basis have resolved any internal conflict regarding the teachings of the church that might contribute to feelings of discord between the majority culture and gay minority culture. It could also be that those individuals who endorsed high levels of religious involvement attend churches that are welcoming to gay/lesbian/bisexual individuals and therefore may experience the impact of religious involvement on acculturative stress in the opposite direction. Continued refinement of the measurement of the role in religion in the experience of acculturative stress is needed before it can be ruled out as a contributing factor.

11. This hypothesis proposed that family religiosity would be positively related to acculturative stress and past suicidal behavior. This hypothesis was not supported. It may be that this factor is simply too distal to play a strong role in acculturative stress or past suicidal behavior. As previously discussed in hypothesis 7, other factors associated with family religiosity that were not assessed in this study may play a role in the prediction of these variables. For instance, these variables might include the particular religious denomination to which the family belongs or family members' individual agreement with official policies and teachings of that denomination. More detailed measurement may help to more clearly explicate the role of family religiosity in the explanation of acculturative stress or symptoms.

12. An interaction was predicted such that family cohesion and family adaptability would be negatively associated with depressive and suicidal symptoms, but only for those individuals who had disclosed to their parents. It was predicted that the relationship would not hold for those who had not disclosed. This hypothesis was not supported. It may be that the measure used to assess family variables, the FACES-III, did not assess the aspects of family interactions that would impact symptoms as predicted. Perhaps family support as specifically related to the family's expectations for the child or as a current participant in the child's life may better represent the types of interactions that would be thought to interact with disclosure to explain a portion of the variance in depressive and suicidal symptoms.

13. As explained under hypothesis 5, there was no evidence of a relationship between gay cultural identity and acculturative stress, thus precluding any further analysis of a mediational model. Post hoc analyses, as discussed below, were run based on a revised model.

*Hypothesis Examining Relationship Between Outcome Variables (Groups D and E)*

14. The last hypothesis proposed that acculturative stress would predict depressive and suicidal symptoms in a curvilinear relationship. This hypothesis was supported. Given the results of other analyses, however, this finding was explored further. Because of the cross-sectional nature of this study, it is impossible to determine with any certainty which variables act in a causal fashion to promote or inhibit the development of other variables. Conceptually, it has been proposed by previous researchers (Hovey & King,

1997; Sam & Berry, 1995) that acculturative stress is the mechanism through which acculturative processes influence adjustment. However, the mediational model that was revised to omit acculturative stress leads to questions regarding the validity of the previous model. It is possible that individuals who experience symptoms of depression and suicidality may be more likely to respond to the Acculturative Stress Scale in a manner that reflects those symptoms. When the items on the Acculturative Stress Scale are examined, this alternative explanation does seem plausible. The items are fairly global statements that largely ask respondents about others' perceptions of them. The items do not ask the respondent to remember specific examples of the statements and are all negative in emotional valence. Individuals who are experiencing subjective feelings of sadness, helplessness and dissatisfaction with life circumstances may be prone to respond to items like these in a way that would indicate that they are experiencing a great deal of acculturative stress. Instead, the measure could be tapping into symptoms of depression and negative attributions that have been shown to accompany those symptoms.

#### *Post hoc analyses*

The mediational model was revised to omit the acculturative stress variable, due to the considerations described above. When the proposed mediators were tested, results indicated that social support as measured by the ISEL does act as a mediator between gay cultural identity and depressive and suicidal symptoms. It appears that, although gay cultural identity does show a negative association with depressive and suicidal symptoms, that when the variance accounted for by social support is taken into consideration, gay

cultural identity no longer predicts depressive and suicidal symptoms. Results for the individual factors further emphasize the importance of the interpersonal aspects of social support. The material support that an individual may have available to him or her did not serve as a mediator between gay cultural identity and social support, while those that represent the more qualitative nature of support did act as mediators.

### Conclusions

Taken together, these findings suggest a simplification of the proposed model, as shown in Figure 5. The results of this study provide some evidence of the applicability of the constructs of gay cultural identity and acculturation in this population. Further research is needed to explicate further the process of identity development and individuals' patterns of psychological adjustment throughout this process. In addition, further knowledge about attitudes toward and relationships with members of the majority culture in this population may prove valuable to the understanding of adjustment from youth into adulthood and the development of ally relationships. The extent to which the process of identity development is influenced for the positive or the negative by the timing of disclosure and choice of individuals to whom one discloses may also prove to account for variation in adjustment.

While the construct of acculturative stress did not appear to impact depressive and suicidal symptoms in the predicted direction, as previously discussed, issues concerning the measurement of this construct may have negatively impacted the findings. Additional research is needed in order to assess the viability of this construct as the mechanism

through which other variables act to contribute to the development of depressive and suicidal symptoms.

The significant role of social support in the model underscores the need for increased attention to this variable as a predictor of symptomatology in gay, lesbian, and bisexual youth. Lack of social support that has been commonly cited as a stressor that is particularly salient in this population (Martin & Hetrick, 1988). Because gay or lesbian adolescents can choose to hide their sexual orientation, they may be unable to locate other homosexual youth. The inability to find a peer group may leave the gay or lesbian adolescent feeling extremely isolated. This factor has been cited lowering risk of suicidal behavior in some ethnic minority populations (Gibbs, 1997; Sue et al., 1996), and the findings of this study with respect to social support bolster those assertions. Fortunately, gay, lesbian, and bisexual youth have increasing access to support and resources with each passing year. Although major metropolitan areas have had community centers for many years, rural areas remain deficient in their offerings to gay, lesbian, and bisexual youth. These young people have availed themselves in increasing numbers to the opportunities for education and interaction now available on the internet. With increased recognition and advocacy efforts, gay, lesbian, and bisexual youth will be better able to access support, which in turn, should predict better adjustment with respect to symptoms of depression and suicidality.

#### *Limitations of the study*

The primary limitation of this study is that of difficulties in the measurement of some constructs. Further research and validation studies are needed to develop specific

measures of religious involvement and family religiosity, particularly with this population. Because of the history of conflict with the church, gay, lesbian, and bisexual individuals appeared to respond somewhat defensively to questions regarding religion. In this study, many individuals wrote in comments indicating their distaste for or confusion about these measures. Continued sampling is necessary to establish ways of asking these questions that are sensitive to the feelings of the participants while gathering pertinent information regarding the construct.

Additionally, findings regarding acculturative stress may have been compromised due to measurement issues. Though acculturative stress was not related to gay cultural identity in this study, an examination of the items helps to understand the lack of support for the construct. Further development of items to assess this construct may reveal that acculturative stress does in fact play an important role in the development of depressive and suicidal symptoms in this population.

The low response rate is another limitation to be considered. That so few of the packets were returned may have compromised the generalizability of the findings in ways that are unknown. Furthermore, there may have been personality or other factors unique to those who did respond that affected the relationships among the variables included in the study, again, in ways that are unknown.

The small sample size also limits the statistical power of the study. The many tests that were run with this small sample increase the likelihood of Type I error; however, more stringent statistical controls such as a Bonferroni correction unnecessarily limit the findings in an exploratory study such as this one. Given these considerations, the findings of this study should be considered starting points for future research using

larger samples as opposed to definitive conclusions regarding the relationships among the identified variables.

### *Future directions*

This paper has attempted to introduce the concepts of identity formation and acculturation as they apply to gay, lesbian, and bisexual youth who are self-identifying and making determinations about the effect that their homosexuality will have on their relationships with family, friends, and the community at large. The parallels drawn here between the acculturation processes in ethnic minority adolescents and sexual minority adolescents do appear to be useful ones for making sense of the experiences of sexual minority groups within a larger society, and these ideas need to be expanded upon through expanded empirical investigation.

The present study has identified some measurement difficulties to be addressed in order to better account for the variance in depressive and suicidal symptoms in gay, lesbian, and bisexual youth. Continued investigations of the role of religious involvement, family relationships, and acculturative stress are necessary to further elucidate these constructs as they may relate to adjustment in this population. The association of disclosure to adjustment also needs to be further explored. The timing of disclosure and reactions from others may ultimately prove to be stronger predictors of adjustment than were found in this study.

The strong role of social support in the final model suggests the need for continued research into the most effective methods of service delivery to gay, lesbian, and bisexual youth. Effective points of intervention as well as effective formats for

building social supports in the spheres of both the minority and the majority culture have yet to be identified. Future research should address the extent to which social support from other gay, lesbian, and bisexual individuals and support from heterosexual individuals differentially impact adjustment. In addition, the roles of support from family members versus friends should also be further explored.

In addition, there are many complex issues that were beyond the scope of this study. For example, this paper does not begin to address such complex questions as the identity formation and acculturation processes for gay and lesbian adolescents who are also members of minority groups. Another important issue yet to be addressed is the vast gap in availability of social support and community resources for gay, lesbian, and bisexual individuals who live in more rural areas of the country as opposed to major metropolitan areas. Most of the research to date has employed easily accessible samples in New York City or the larger cities of California. It may well be that the identity formation and acculturation processes have different effects depending on the availability of such resources. It may also be posited, based on the results of this study, that gay, lesbian, and bisexual youth who are more geographically and culturally isolated from affirming sources of social support may experience greater levels of depressive and suicidal symptoms. Unfortunately, the same factors that may predict poorer adjustment in these individuals also make them more difficult to sample for research purposes. This sample takes a step toward assessing samples in smaller cities and towns. However, the participants of this study also had the advantage of having ready access to social support.

This paper is a starting point for research on identity formation and acculturation processes within the gay/lesbian/bisexual population and how these processes may

influence this population's risk for depression and suicidal behavior. It should be used not only as a base for further empirical testing of these ideas, but also as a springboard for the generation of new ones.

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Table 1

Means and Standard Deviations

<b>Variable</b>	<b>M</b>	<b>SD</b>
Participant Age	21.37	3.25
Self-rating of sexual orientation	2.28	1.21
<b>MEIM</b>		
Ethnic Identity	3.18	.51
Ethnic Identity Achievement	3.23	.52
Affirmation and Belonging	3.26	.61
Ethnic Behaviors	2.80	.67
Other Group Orientation	3.65	.36
<b>FACES-III</b>		
Cohesion	28.27	9.14
Adaptability	23.60	7.11
<b>ISEL</b>		
Tangible	40.17	5.89
Belonging	36.71	8.35
Appraisal	41.44	7.61
Self-esteem	34.73	4.77
Total	153.06	22.09
<b>Social Network Index</b>		
Network diversity	5.65	1.62
Number of high contact people	39.67	38.05
<b>Spiritual Well-Being</b>		
Religious Well-Being	36.73	13.71
Existential Well-Being	25.64	11.04
<b>Acculturative Stress Scale</b>		
Perceived Discrimination	3.11	.97
Perceived Hate	2.64	.99
Fear	2.07	.88
Miscellaneous	2.80	.74
Total	2.73	.75
Beck Depression Index-II	12.54	12.24
Modified Scale for Suicidal Ideation	6.60	9.22

Table 2

Zero-Order Correlations Among the Variables

	Sex	Age	Sexual Orientation	Length of group assoc.	# Parents Told	MEIM—Gay Identity
Sex	1.00	-.098	.542**	-.073	-.261	-.169
Age		1.00	.028	.401**	.033	-.033
Sexual Orientation			1.00	-.077	-.368**	-.403**
Length of Group Assoc.				1.00	.322*	.309*
# Parents Told					1.00	.379**
MEIM—Gay Cultural Identity						1.00
MEIM—Other Group Orientation						
Acculturative Stress Scale Total						
FACES-III Cohesion						
FACES-III Adaptability						
ISEL-Total						
SNI-Network Diversity						
SNI-# high contact people						
Religious Well-Being						
Existential Well-Being						
Religious Involvement						
Family Religiosity						
Ever attempted suicide						
SIB Incidents						
BDI-II+MSSI						
BDI-II Total						
MSSI Total						

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 2 (continued)

	MEIM— Other Group Orientation	Acculturative Stress Total	FACES- III Cohesion	FACES-III Adaptability	ISEL-- Total
Sex	.244	.099	.052	-.042	-.035
Age	-.212	.032	.281*	.038	-.140
Sexual Orientation	.121	.393**	.069	-.031	-.080
Length of Group Assoc.	-.262	-.100	.004	.069	.089
# Parents Told	-.026	-.128	-.153	-.141	.241
MEIM—Gay Cultural Identity	-.193	-.089	.026	-.079	.231
MEIM—Other Group Orientation	1.00	-.242	-.041	-.092	.276*
Acculturative Stress Scale Total		1.00	-.056	-.069	-.380**
FACES-III Cohesion			1.00	.313*	.215
FACES-III Adaptability				1.00	.133
ISEL-Total					1.00
SNI-Network Diversity					
SNI-# high contact people					
Religious Well-Being					
Existential Well-Being					
Religious Involvement					
Family Religiosity					
Ever attempted suicide					
SIB Incidents					
BDI-II+MSSI					
BDI-II Total					
MSSI Total					

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 2 (continued)

	SNI— Network Diversity	SNI— # high contact people	Religious Well- Being	Existential Well- Being	Religious Involvement
Sex	.114	-.053	-.109	.018	-.212
Age	-.080	-.099	-.050	-.085	-.183
Sexual Orientation	-.070	.017	-.173	-.075	-.306*
Length of Group Assoc.	-.108	.092	.008	.000	-.112
# Parents Told	-.003	-.041	-.037	.137	.232
MEIM—Gay Cultural Identity	.287*	.292*	-.019	.288*	.051
MEIM—Other Group Orientation	.139	.138	.126	.194	.045
Acculturative Stress Scale Total	.003	.084	.019	-.243	.112
FACES-III Cohesion	.206	-.016	.151	.128	.059
FACES-III Adaptability	-.133	-.286*	.222	.051	.080
ISEL-Total	.316*	.190	.045	.655**	.002
SNI-Network Diversity	1.00	.622**	.205	.491**	.113
SNI-# high contact people		1.00	.092	.279*	-.012
Religious Well-Being			1.00	.188	.638**
Existential Well-Being				1.00	-.026
Religious Involvement					1.00
Family Religiosity					
Ever attempted suicide					
SIB Incidents					
BDI-II+MSSI					
BDI-II Total					
MSSI Total					

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 2 (continued)

	Family Religiosity	Ever attempted suicide	SIB Incidents	BDI-II + MSSI	BDI-II Total	MSSI Total
Sex	-.062	.088	.228	.232	.250	.173
Age	-.193	.174	.012	-.028	-.028	-.022
Sexual Orientation	.100	.140	-.045	.176	.132	.207
Length of Group Assoc.	.052	.105	-.028	-.130	-.083	-.173
# Parents Told	.067	.003	-.096	-.091	-.107	-.055
MEIM—Gay Cultural Identity	-.081	.069	.142	-.305*	-.278*	-.294*
MEIM—Other Group Orientation	-.114	.028	.158	-.077	-.036	-.119
Acculturative Stress Scale Total	.137	.120	-.157	.339*	.307*	.329*
FACES-III Cohesion	.083	-.129	-.160	-.126	-.104	-.136
FACES-III Adaptability	-.023	-.115	-.127	-.062	-.004	-.129
ISEL-Total	-.043	-.091	.060	-.514**	-.481**	-.480**
SNI-Network Diversity	-.078	-.085	-.187	-.272	-.253	-.255
SNI-# high contact people	-.025	.054	-.052	-.269	-.268	-.230
Religious Well-Being	.148	-.273	-.035	-.192	-.131	-.243
Existential Well-Being	.029	-.188	-.120	-.788**	-.745**	-.725**
Religious Involvement	.345*	-.007	-.069	.085	.072	.089
Family Religiosity	1.00	-.105	-.250	.048	.021	.076
Ever attempted suicide		1.00	.148	.136	.078	.191
SIB Incidents			1.00	.068	.101	.015
BDI-II+MSSI				1.00	.951**	.912**
BDI-II Total					1.00	.740**
MSSI Total						1.00

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 3

Variance in Social Support (SNI—Network Diversity) Explained by Gay CulturalIdentity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.206	.230
Age				-.054	.706
Sexual Orientation	.040	.572	.040	-.180	.292
2: Sex				.208	.229
Age				-.013	.936
Sexual Orientation				-.190	.270
Years of group affiliation	.009	.514	.049	-.103	.514
3: Sex				.186	.261
Age				.045	.769
Sexual Orientation				-.038	.830
Years of group affiliation				-.232	.150
Gay Cultural Identity	.104	.021	.154	.377	.021

Table 4

Variance in Social Support (SNI—Number of high contact people) Explained by GayCultural Identity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b><i>p</i></b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b><i>p</i></b>
1: Sex				-.106	.541
Age				-.111	.444
Sexual Orientation	.018	.831	.018	.078	.652
2: Sex				-.109	.528
Age				-.177	.267
Sexual Orientation				.094	.587
Years of group affiliation	.022	.307	.040	.162	.307
3: Sex				-.130	.436
Age				-.124	.424
Sexual Orientation				.235	.192
Years of group affiliation				.042	.793
Gay Cultural Identity	.089	.035	.129	.348	.035

Table 5

Variance in Social Support (ISEL Total) Explained by Gay Cultural Identity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.010	.952
Age				-.139	.339
Sexual Orientation	.025	.741	.025	-.071	.681
<hr/>					
2: Sex				-.014	.936
Age				-.206	.195
Sexual Orientation				-.054	.753
Years of group affiliation	.023	.293	.048	.166	.293
<hr/>					
3: Sex				-.026	.880
Age				-.175	.273
Sexual Orientation				.028	.879
Years of group affiliation				.097	.562
Gay Cultural Identity	.030	.227	.078	.202	.227

Table 6

Variance in Existential Well-Being Explained by Gay Cultural Identity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.071	.683
Age				-.075	.605
Sexual Orientation	.016	.853	.016	-.111	.519
<hr/>					
2: Sex				.050	.765
Age				-.071	.614
Sexual Orientation				.022	.904
Gay Cultural Identity	.076	.053	.092	.302	.053

Table 7

Variance in Religious Well-Being Explained by Gay Cultural Identity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.003	.863
Age				-.048	.739
Sexual Orientation	.032	.660	.032	-.155	.365
<hr/>					
2: Sex				-.023	.896
Age				-.049	.733
Sexual Orientation				-.201	.279
Gay Cultural Identity	.009	.504	.042	-.105	.504

Table 8

Variance in Religious Involvement Explained by Gay Cultural Identity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b><i>p</i></b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b><i>p</i></b>
1: Sex				-.095	.560
Age				-.185	.179
Sexual Orientation	.130	.079	.130	-.250	.127
<hr/>					
2: Sex				-.089	.588
Age				-.187	.179
Sexual Orientation				-.287	.107
Gay Cultural Identity	.006	.567	.137	-.086	.567

Table 9

Variance in the Numbers of Parents to Whom the Individual Has Disclosed Explained byLength of Group Association

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.081	.614
Age				.035	.799
Sexual Orientation	.142	.060	.142	-.325	.048
2: Sex				-.088	.567
Age				-.101	.478
Sexual Orientation				-.292	.063
Years of group affiliation	.093	.021	.235	.334	.021
3: Sex				-.105	.505
Age				-.178	.358
Sexual Orientation				-.316	.054
Years of group affiliation				-.167	.845
Interaction between age And years of affiliation	.006	.553	.241	.541	.553

Table 10

Variance in Acculturative Stress Explained by Gay Cultural Identity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.160	.314
Age				.002	.987
Sexual Orientation	.173	.027	.173	.480	.004
<hr/>					
2: Sex				-.167	.300
Age				.003	.979
Sexual Orientation				.520	.004
Gay Cultural Identity	.007	.525	.180	.093	.525

Table 11

Variance in Depressive and Suicidal Symptoms Explained by Gay Cultural Identity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.212	.203
Age				-.015	.916
Sexual Orientation				-.056	.750
Gay Cultural Identity	.071	.056	.129	-.292	.056

Table 12

Means and Standard Deviations of Depressive and Suicidal Symptoms Based on Modes of Acculturation

<i>Variable</i>	<i>M</i>	<i>SD</i>
Marginalization	26.00	24.50
Assimilation	19.38	20.59
Separation	17.71	20.14
Integration	11.91	10.36

Table 13

Variance in the Numbers of Parents to Whom the Individual Has Disclosed Explained by Family Religiosity

<b>Step Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.081	.614
Age				.035	.799
Sexual Orientation	.142	.060	.142	-.325	.048
2: Sex				-.060	.717
Age				.059	.675
Sexual Orientation				-.348	.038
Family Religiosity	.011	.437	.153	.109	.437

Table 14

Variance in Maternal Support Ratings Explained by Family Religiosity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.243	.218
Age				.187	.303
Sexual Orientation	.129	.241	.129	-.142	.483
<hr/>					
2: Sex				-.252	.208
Age				.163	.382
Sexual Orientation				-.156	.450
Family Religiosity	.011	.548	.140	-.110	.548

Table 15

Variance in Paternal Support Ratings Explained by Family Religiosity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.030	.901
Age				.267	.254
Sexual Orientation	.061	.701	.061	-.175	.500
<hr/>					
2: Sex				.057	.815
Age				.298	.217
Sexual Orientation				-.168	.521
Family Religiosity	.024	.464	.085	.163	.464

Table 16

Variance in Acculturative Stress Explained by SNI Network Diversity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.160	.314
Age				.002	.987
Sexual Orientation	.173	.027	.173	.480	.004
<hr/>					
2: Sex				-.172	.291
Age				.005	.968
Sexual Orientation				.490	.004
SNI Network Diversity	.003	.670	.176	.058	.670

Table 17

Variance in Acculturative Stress Explained by SNI Number of High Contact People

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.160	.314
Age				.002	.987
Sexual Orientation	.173	.027	.173	.480	.004
<hr/>					
2: Sex				-.153	.342
Age				.010	.942
Sexual Orientation				.474	.004
SNI Number of high contact people	.005	.610	.177	.069	.610

Table 18

Variance in Acculturative Stress Explained by ISEL Total

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.160	.314
Age				.002	.987
Sexual Orientation	.173	.027	.173	.480	.004
<hr/>					
2: Sex				-.164	.270
Age				-.047	.706
Sexual Orientation				.455	.003
ISEL Total	.124	.006	.296	-.356	.006

Table 19

Variance in Depressive and Suicidal Symptoms Explained by SNI Network Diversity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.254	.129
Age				-.027	.844
Sexual Orientation				.018	.913
SNI Network Diversity	.087	.033	.145	-.302	.033

Table 20

Variance in Depressive and Suicidal Symptoms Explained by SNI Number of High

Contact People

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.164	.324
Age				-.040	.772
Sexual Orientation				.093	.572
SNI Number of high contact people	.070	.059	.127	-.266	.059

Table 21

Variance in Depressive and Suicidal Symptoms Explained by ISEL Total

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.187	.203
Age				-.082	.505
Sexual Orientation				.036	.805
ISEL Total	.260	.000	.318	-.517	.000

Table 22

Variance in Depressive and Suicidal Symptoms Explained by Existential Well-being

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.248	.015
Age				-.071	.395
Sexual Orientation				-.017	.865
Existential Well-being	.630	.000	.687	-.800	.000

Table 23

Variance in Depressive and Suicidal Symptoms Explained by Religious Well-being

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.187	.270
Age				-.019	.896
Sexual Orientation				.047	.782
Religious Well-being	.026	.253	.084	-.164	.253

Table 24

Variance in Acculturative Stress Explained by Religious Involvement

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.160	.314
Age				.002	.987
Sexual Orientation	.173	.027	.173	.480	.004
<hr/>					
2: Sex				-.136	.383
Age				.050	.704
Sexual Orientation				.545	.001
Religious Involvement	.059	.064	.231	.260	.064

Table 25

Variance in Past Suicidal Behavior Explained by Family Religiosity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.045	.792
Age				.175	.223
Sexual Orientation	.050	.477	.050	.111	.511
<hr/>					
2: Sex				.028	.874
Age				.157	.291
Sexual Orientation				.130	.455
Family Religiosity	.007	.563	.057	-.086	.563

Table 26

Variance in Acculturative Stress Explained by Family Religiosity

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				-.160	.314
Age				.002	.987
Sexual Orientation	.173	.027	.173	.480	.004
<hr/>					
2: Sex				-.143	.378
Age				.021	.878
Sexual Orientation				.461	.006
Family religiosity	.007	.535	.180	.086	.535

Table 27

Variance in Depressive and Suicidal Symptoms Explained by FACES-III Adaptability x

Disclosure to a Parent

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.189	.274
Age				-.011	.939
Sexual Orientation				.042	.816
Disclosure to Parent				-.080	.612
FACES-III Adaptability	.008	.823	.066	-.065	.656
<hr/>					
3: Sex				.181	.303
Age				-.023	.877
Sexual Orientation				.054	.770
Disclosure to Parent				.229	.720
FACES-III Adaptability				.082	.803
Disclosure x Adaptability	.005	.618	.071	-.327	.618

Table 28

Variance in Depressive and Suicidal Symptoms Explained by FACES-III Cohesion x

Disclosure to a Parent

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.203	.236
Age				.037	.802
Sexual Orientation				.034	.849
Disclosure to Parent				-.117	.460
FACES-III Cohesion	.032	.454	.089	-.181	.241
<hr/>					
3: Sex				.200	.247
Age				.035	.814
Sexual Orientation				.023	.898
Disclosure to Parent				.226	.669
FACES-III Cohesion				-.028	.917
Disclosure x Cohesion	.009	.497	.099	-.354	.497

Table 29

Variance in Depressive and Suicidal Symptoms Explained by Acculturative Stress

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Sex				.192	.259
Age				-.011	.940
Sexual Orientation	.058	.411	.058	.072	.668
<hr/>					
2: Sex				.249	.132
Age				-.011	.933
Sexual Orientation				-.097	.582
Acculturative Stress Total	.103	.020	.160	.353	.020

Table 30

Social Support (ISEL) as a Mediator Between Gay Cultural Identity and Depressive and Suicidal Symptoms

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Gay cultural identity	.093	.028	.093	-.305	.028
<hr/>					
2: Gay cultural identity				-.197	.116
ISEL Total	.208	.000	.301	-.469	.000

Table 31

ISEL-Tangible support as a Mediator Between Gay Cultural Identity and Depressive and Suicidal Symptoms

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Gay cultural identity	.093	.028	.093	-.305	.028
2: Gay cultural identity ISEL Tangible	.134	.005	.227	-.276 -.368	.033 .005

Table 32

ISEL-Belonging support as a Mediator Between Gay Cultural Identity and Depressive and Suicidal Symptoms

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Gay cultural identity	.093	.028	.093	-.305	.028
2: Gay cultural identity ISEL Belonging	.099	.018	.192	-.248 -.368	.064 .018

Table 33

ISEL-Appraisal support as a Mediator Between Gay Cultural Identity and Depressive and Suicidal Symptoms

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Gay cultural identity	.093	.028	.093	-.305	.028
2: Gay cultural identity				-.227	.089
ISEL Appraisal	.113	.011	.206	-.346	.011

Table 34

ISEL-Self-esteem support as a Mediator Between Gay Cultural Identity and Depressive and Suicidal Symptoms

<b>Step: Variables</b>	<b>R<sup>2</sup> change</b>	<b>p</b>	<b>R<sup>2</sup> Total</b>	<b>b</b>	<b>p</b>
1: Gay cultural identity	.093	.028	.093	-.305	.028
2: Gay cultural identity				-.129	.264
ISEL Self-esteem	.320	.000	.413	-.593	.000

Figure 1. Model guiding the present study

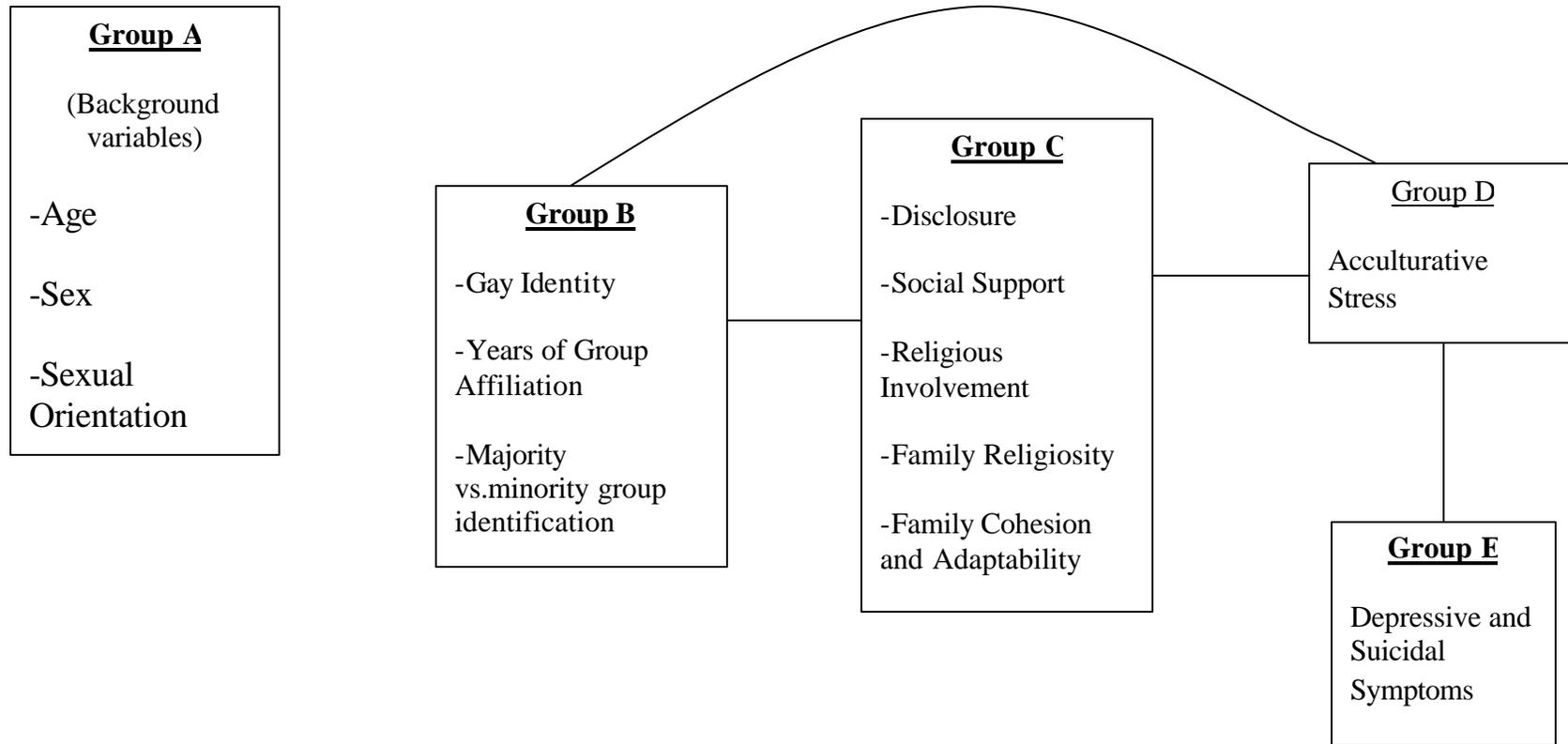


Figure 2. Distribution of depressive and suicidal symptoms based on acculturative stress scores

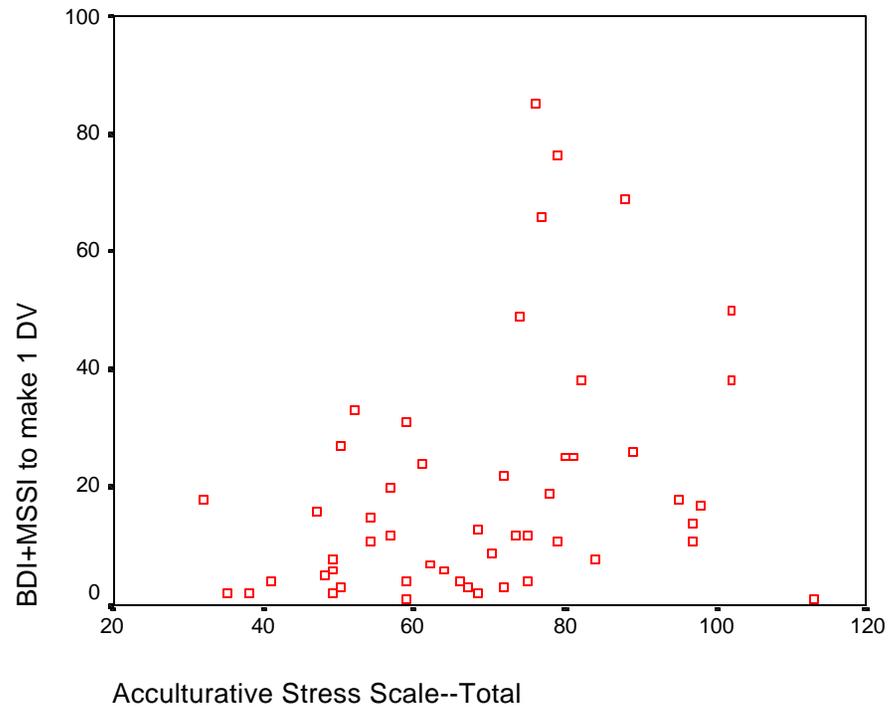


Figure 3. Depressive and suicidal symptoms plotted based on a quartile split of acculturative stress scores

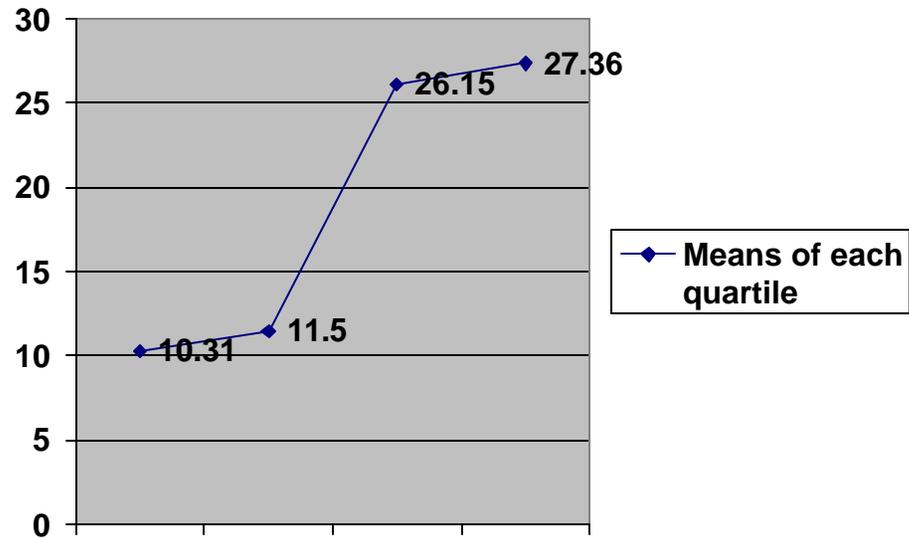


Figure 4. Revised model excluding acculturative stress

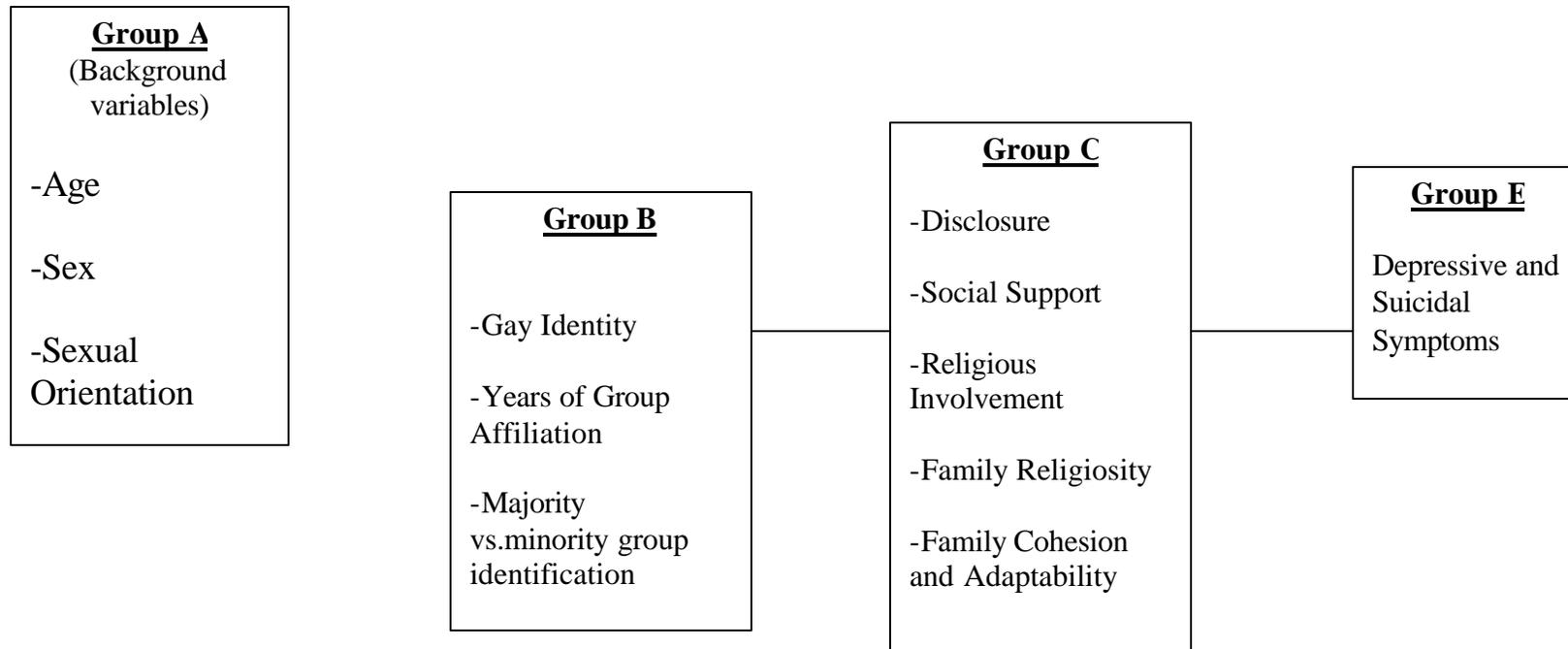
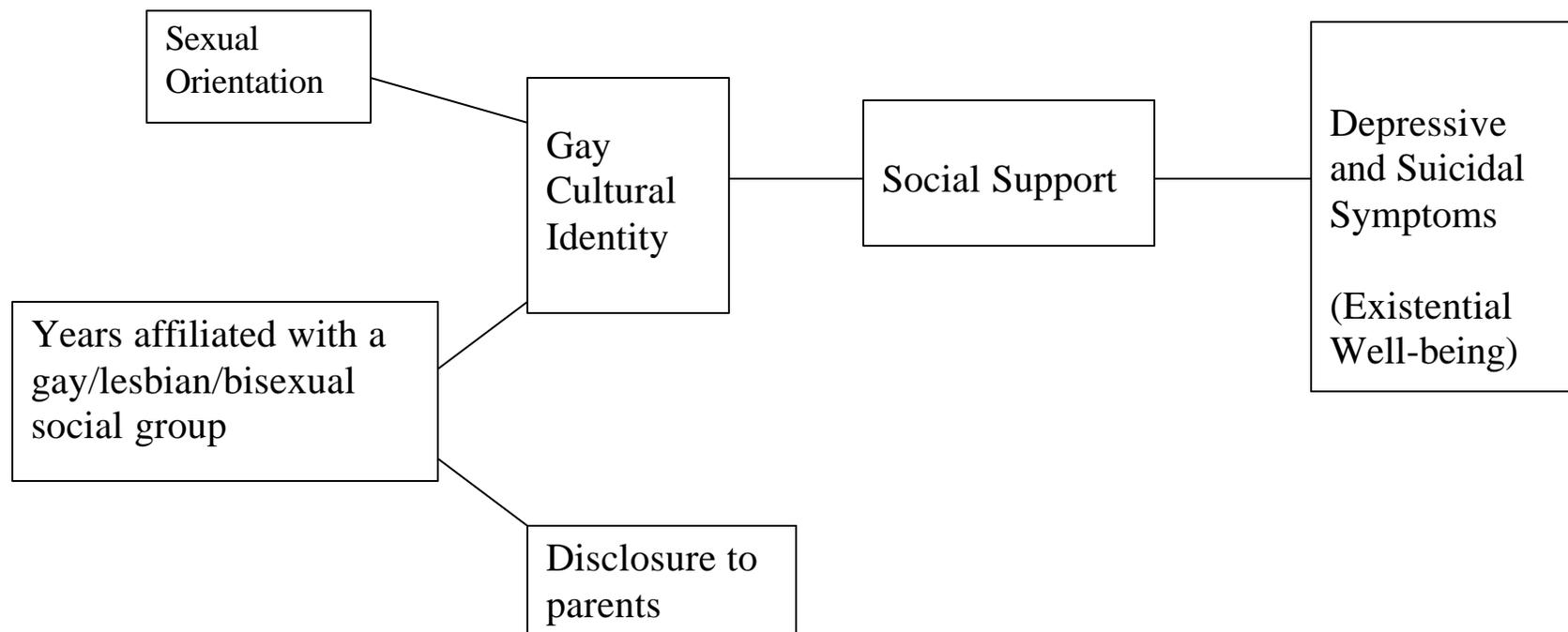


Figure 5. Revised model summarizing the findings of this study



## **Curriculum Vitae of**

### **CHRISTINA MARIE KEPHART**



#### **Education:**

##### **Virginia Tech, Blacksburg, VA**

Ph.D. in Clinical Psychology anticipated August 2003

Dissertation: Acculturation Processes and Risk of Suicidal Behavior in Gay and Lesbian Adolescents

##### **Virginia Tech, Blacksburg, VA**

M.A.Ed in Curriculum and Instruction awarded May 2002; GPA: 4.0

Emphasis and Virginia Licensure in Elementary Education PK-6

##### **Virginia Tech, Blacksburg, VA**

M.S. in Psychology awarded May 2001; GPA: 3.75

Thesis: Factors that Influence Coping Following Residential Fire: The Roles of Attributional Style and Family Functioning

##### **University of Kentucky, Lexington, KY**

B.A. summa cum laude with honors in psychology awarded May 1997; GPA: 4.0

Major: psychology; Minors: French, music

#### **Professional Affiliations:**

Association for Advancement of Behavior Therapy, student member, 1998-present

American Psychological Association, student member, 1998-present

Division 53 (Clinical Child Psychology), American Psychological Association, student member, 2000-present.

#### **Clinical Experience:**

##### **Predoctoral Internship, Indiana University School of Medicine Psychology Training Consortium**

##### **Child and Adolescent Inpatient Programs, Larue Carter Memorial Hospital, Indianapolis, Indiana, May 2003-August 2003.**

Participated in the diagnosis and treatment of children and adolescents in intermediate to long-term inpatient programs as part of a multidisciplinary team. Patient diagnoses included conduct disorders, mood disorders, ADHD, anxiety disorders, and mental retardation. Performed psychological assessments, provided individual and family therapy, developed treatment plans, and consulted to direct care staff.

Supervisor: Robert L. Ten Eyck, Ph.D., HSPP

**Adult Partial Hospitalization and Intensive Outpatient Programs, St. Vincent Hospital and Stress Centers, Indianapolis, Indiana, January 2003-April 2003.**

Participated in the diagnosis and treatment of adults in short term (three to six weeks) partial hospitalization and intensive outpatient programs. Patient diagnoses included mood disorders, dissociative disorders, anxiety disorders, and personality disorders. Performed intake assessments, provided individual, marital, and group therapy, led psychoeducational groups, and developed treatment plans.

Supervisor: Paul Lefkowitz, Ph.D., HSPP

**Riley Hospital Child and Adolescent Psychiatry Clinic, Indianapolis, Indiana, September 2002-December 2002.**

Served as diagnostician and therapist for individual and family therapy cases in an outpatient clinic setting and performed comprehensive psychological and psychoeducational assessments for children and adolescents. Clients ranged in ages from two to twenty-one years of age. Patient diagnoses included mood disorders, anxiety disorders, conduct disorders, thought disorders, and learning disabilities. Managed caseload of approximately eight clients at a given time and one assessment per week.

Supervisors: Ann Lagges, Ph.D., HSPP, Linn LaCleave, Ph.D., HSPP, William Kronenberger, Ph.D., HSPP

**Graduate Clinician, Virginia Tech**

**Clinical Practicum, Virginia Tech, Psychological Services Center, Fall 2000-Spring 2001.**

Assisted with development and supervision of first-year practicum team. Instructed students on assessment strategies, treatment tools and theoretically and empirically supported treatment protocols. Modeled and role-played client-therapist interactions with first year clinicians. Provided supervision and feedback to first-year students. Managed caseload of one adult client and one child client.

Supervisors: George A. Clum, Ph.D., A.B.P.P., Thomas H. Ollendick, Ph.D.

**Clinical Externship, Montgomery County School System, Christiansburg, Virginia, Fall 1999-Spring 2000.**

Served as therapist for child clients in individual therapy context and co-leader of anger management group for adolescent boys. Managed caseload of five to six individual clients and one group.

Supervisor: Bonita Sims-Gude, Ed.D.

**Child Assessment Team, Virginia Tech, Psychological Services Center and Child Study Center, Fall 1998-Spring 1999.**

Performed comprehensive psychoeducational assessments with children referred through local psychiatrists and school systems as a part of the child assessment team, provided feedback to families regarding results and recommendations. Completed tasks related to the administration of the clinic (e.g., chart reviews, maintenance of assessment materials).

Supervisor: Thomas H. Ollendick, Ph.D.

**Clinical Practicum, Virginia Tech, Psychological Services Center, Fall 1998-Spring 1999.**

Managed caseload of three clients, including individual and family cases, as well as one adolescent social skills/anger management group. Incorporated cognitive-behavioral and interpersonal approaches into formulation and treatment of clients.

Supervisors: Richard Eisler, Ph.D., Angela Scarpa, Ph.D.

**Clinic Assistant, Virginia Tech, Psychological Services Center, Summer 1998.**

Managed caseload of six clients, including individual adult and child as well as family cases. Implemented cognitive-behavioral treatments for ODD and GAD. Conducted adult and child psychoeducational assessments.

Supervisor: Thomas H. Ollendick, Ph.D.

**Clinical Practicum, Virginia Tech, Psychological Services Center, Fall 1997-Spring 1998.**

First year practicum. Learned basic clinical skills including assessment and diagnosis, rapport building, and chart management. Observed upper-level students conducting therapy. Conducted one child psychoeducational assessment.

Supervisor: Russell T. Jones, Ph.D.

**Research Experience:****Project Coordinator, FEMA-funded research grant, June 2001-December 2001.**

Duties: managing multi-site research grant examining the psychological and physiological effects of residential fire and burn injuries on children and families, developing assessment protocol, coordinating subject acquisition, dispensing funds for subject payment and resource acquisition, supervising graduate students in collection of data and undergraduate students in management and entry of data.

Supervisors: Russell T. Jones, Ph.D. and Glenn Saxe, M.D.

**Project Coordinator, NIMH-funded research grant (RO1), June 2000-December 2001.**

Duties: managing multi-site research grant examining psychological effects of residential fire on children and families, coordinating subject acquisition, dispensing funds for subject payment and resource acquisition, supervising graduate students in collection of data and undergraduate students in management and entry of data, analyzing data and preparing presentations and manuscripts for publication

Supervisors: Russell T. Jones, Ph.D. and Thomas H. Ollendick, Ph.D.

**Graduate Research Assistant, Virginia Tech, May 1998-May 2000.**

Duties: completed clinical interviews with adults and children who had experienced residential fire, recruited and scheduled appointments for participating families, gathered and managed data from physicians and teachers of participating children, and supervised undergraduate research assistants as a part of the NIMH-funded grant named above

Supervisors: Russell T. Jones, Ph.D., and Thomas H. Ollendick, Ph.D.

**Senior Honors Thesis, University of Kentucky, 1996-97.**

Duties: proposed and completed an original project, data input and analysis, written thesis and oral defense. Partially funded through grant awarded within the university, Fall 1996.

Supervisor and collaborating professor: Margo J. Monteith, Ph.D.

**Publications:**

Kephart, C., Jones, R.T., & Ollendick, T.H. (in preparation). The role of attributional style in the prediction of children's coping following residential fire.

Ollendick, T.H., Langley, A.K., Jones, R.T., & Kephart, C.K. (2001). Fear in children and adolescents: Relations with negative life events, attributional style, and avoidant coping. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 42, 1029-34..

Jones, R.T., Kephart, C., Langley, A.K., Parker, M.N., Shenoy, U., & Weeks, C. (2001). Cultural and ethnic diversity issues in clinical child psychology. In C.E. Walker & M.C. Roberts, Eds. *Handbook of Clinical Child Psychology*. John Wiley & Sons: New York.

**Poster and Paper Presentations:**

Kephart, C., Wang, Y., Jones, R.T., & Ollendick, T.H. Coping efficacy and the utilization of coping strategies in children following residential fire. (2001). Poster presented at the 35<sup>th</sup> Annual Convention of the Association for Advancement of Behavior Therapy, Philadelphia, PA.

Kephart, C., Wang, Y., Jones, R.T., & Ollendick, T.H. (2001). Parent and child reports of child symptoms following residential fire. Poster presented at the Seventeenth Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.

Wang, Y., Kephart, C., Jones, R.T., & Ollendick, T.H. (2001). Predictors of PTSD and depressive symptoms following residential fire. Poster presented at the Seventeenth Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.

Kephart, C., & Chandler, H.K. (2000). Risk of Suicidal Behavior in Gay and Lesbian Adolescents. Paper presented at the 33<sup>rd</sup> Annual Conference of the American Association of Suicidology, Los Angeles, CA.

Kephart, C., Chandler, H.K., Jones, R.T., & Ollendick, T.H. (2000). Children's Coping Strategies Predict PTSD Following Residential Fire. Poster presented at the 108<sup>th</sup> Convention of the American Psychological Association, Washington, DC.

Kephart, C., & Jones, R.T. (2000). Intermediary Factors for Abused or Neglected Children. Poster presented at the Sixteenth Annual Meeting of the International Society for Traumatic Stress Studies, San Antonio, TX.

Langley, A.K., Kephart, C., Jones, R.T., & Ollendick, T.H. (1999). Appraisal of Control and Coping Strategy Utilization Following a Traumatic Stressor in Youth: Relationships to depressive symptomatology. Poster presented at the 33<sup>rd</sup> Annual Convention of the Association for Advancement of Behavior Therapy, Toronto, ON.

Langley, A.K., Kephart, C., Byrd, D.A., Parker, M.N., Seligman, L.D., Weeks, C., Lease, C.A., Jones, R.T., & Ollendick, T.H. (1998). Effects of Residential Fires on Children: The impact of appraisal and coping on outcome. Poster presented at the 32<sup>nd</sup> Annual Convention of the Association for the Advancement of Behavior Therapy, Washington, DC.

Langley, A.K., Parker, M.D., Weeks, C., Seligman, L.D., Byrd, D.A., Shenoy, U., Kephart, C., Jones, R.T., Ollendick, T.H., & Lease, C. A. (1998). Children and Adolescents Exposed to Residential Fire: Impact of trait anxiety on posttraumatic symptomatology. Poster presented at the Fourteenth Annual Meeting of the International Society for Traumatic Stress Studies, Washington, DC.

### **Awards and Honors:**

Virginia Tech Graduate Research Development Project Grant, 2003

Hahn Memorial Scholarship, 2001

Virginia Tech Graduate Research Development Project Grant, 2000

Phi Beta Kappa, 1997

University of Kentucky Honors Program

University of Kentucky Commonwealth Scholarship, 1993-97

Senior Honors Thesis in Psychology, 1996-1997

Undergraduate Research and Creativity Grant, Fall 1996

Mary Agnes Gordon Scholarship (awarded to outstanding female psychology student), 1996-97

University of Kentucky Dean's List, 1993-1997

### **Teaching Experience:**

**Teaching Assistant, Introductory Psychology, Virginia Tech, Blacksburg, VA, 1997-1998.**

Duties: taught two recitation sections each semester for the Introductory Psychology class.

Supervisor, Jack W. Finney, Ph.D.

**References available upon request**