THE MODERATIONAL EFFECTS OF COPING STRATEGIES ON THE ASSOCIATIONS OF STRESS, DEPRESSION, AND PERCEIVED FAMILY CONFLICT WITH RISKY SEXUAL BEHAVIOR AMONG ADOLESCENTS LIVING WITH A CHRONIC ILLNESS

By

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To my Mom and my sister, Phelicia, for your consistent support
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Special appreciation goes to my mother and my sister, Phelicia, for your unwavering support and the sacrifices that you made in order that I might accomplish the goal that I set for myself. Thank you to Dr. Tucker for keeping a promise and being willing to go through the fire for me. Most importantly, I thank God for always being with me.
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The purpose of the present study was to examine self-reported levels of stress, depression, perceived family conflict, and coping strategy (i.e., active, support seeking, distraction, avoidance) as predictors of engagement in risky sexual behavior among adolescents living with a chronic illness. The current study proposed that coping strategy serves as a moderator of the relationship between the predictor variables (stress, depression, and perceived family conflict) and engagement in risky sexual behavior. The current study also examined the associations of participants’ age, gender, and ethnicity with their self-reported levels of (a) risky sexual behavior, (b) depression, (c) stress, and (d) coping strategies. Participants in this study included 56 chronically ill adolescents (16 African American and 40 non-Hispanic White American) ages 12-17.

Results of Pearson Product Moment correlations revealed that levels of stress, depression, or perceived family conflict were not significantly associated with engagement in risky sexual behavior. Multiple regression analyses revealed that levels of stress, depression, and perceived family conflict were not significant predictors of chronically ill adolescents’ engagement in risky sexual behavior. Additionally, hierarchical multiple regression analyses were performed to
determine if coping strategy would moderate the relationship between (a) levels of depression, stress, and perceived family conflict and (b) engagement in risky sexual behavior. The results revealed that active coping was a significant predictor of sexual risk behavior, accounting for 39.9% of the variance. A significant depression x active coping interaction was found as well as a significant perceived family conflict x active coping interaction. Finally, a multivariate analysis of covariance was performed to test the associations of participants’ age, gender, or ethnicity with their self-reported levels of (a) risky sexual behavior, (b) depression, (c) stress, and (d) coping strategies. Findings indicated significant differences in distraction coping as a function of ethnicity and a significant difference in depression as a function of a gender x ethnicity interaction.

Results of the present study suggest that interventions designed to address risky sexual behavior should incorporate increasing the use of active coping strategies which would prove particularly relevant in situations where adolescents are depressed and/or are experiencing conflict within their family
Risky Sexual Behavior

Health-risk behaviors among adolescents are a major health concern. Health-risk behaviors are defined as behaviors that occur under one’s own volition and that have uncertain and possibly negative health outcomes (Irwin, 1990). Although homicide, suicide, and accidental injury comprise the major causes of all deaths of adolescents, preventable health-risk behaviors also make substantial contributions to adolescent morbidity rates (Millstein, Irwin, Adler, Cohn, Kegeles, & Dolcini, 1992).

Risky or unsafe sexual activity is one of the primary preventable health-risk behaviors engaged in by adolescents. Risky sexual behavior is any sexual behavior that increases the risk of contracting a sexually transmitted infection (STI), including the human immunodeficiency virus (HIV), or becoming pregnant (Taylor-Seehafer & Rew, 2000). Sexual risk behaviors, which place adolescents at increased risk for a number of potentially serious health consequences, can include such sexual activity as intercourse at an early age, engaging in unprotected sexual activity, and sexual activity with a number of different partners (Taylor-Seehafer & Rew, 2000). Findings from the 2007 national Youth Risk Behavior Survey indicated that 48% of U.S. high school students nationwide had ever had sex in their lifetime. Of those who had engaged in sex, 15% had had four or more partners since they had become sexually active (CDC, 2008). National surveys have shown that by as early as eighth grade, up to 30% of adolescents report being sexually active (Johnston, O’Malley, & Bachman, 1998). Meschke, Bartholomae, & Zentall (2001) report that by age 12 approximately 12.1% of males and 3.0% of females have had sexual intercourse. Additionally, African American adolescents are significantly more likely than White
adolescents or Hispanic adolescents to have engaged in sexual intercourse prior to reaching 13 years of age (Centers for Disease Control, 1994).

Not only are adolescents engaging in sexual activity at an alarming rate, the consequences of sexual risk behavior among adolescents are substantial and undesirable. Teenage pregnancy is one of the serious consequences of risky sexual behavior. The teen pregnancy rate in the United States, although on the decline, is much higher than the rates in other Western industrialized countries, and remains a significant problem (Kirby, 2002). Nearly 900,000 teen pregnancies occur in the United States each year, with eight out of ten of those pregnancies being unintended (Henshaw, 2004).

Adolescents are also at a high risk of contracting sexually transmitted infections, including human immunodeficiency virus (HIV; CDC, 2000). Four million teens a year acquire an STD, with about half of the new cases of HIV reported each year occurring among those under 25 years of age (CDC, 2004). According to the CDC (2003), between 1985 and 2003, over an estimated 5,000 cases of AIDS were reported among 13 to 19 year olds. Of the over 400 cases reported in 2003 alone, females comprised 46% of the cases (CDC, 2003). Among all of the newly reported cases of HIV infection among women, 64 percent of those cases were African American women (CDC, 2001). Given that there is generally a 10-year incubation period from the time of contraction of HIV to diagnosis, many of these African American women were presumably exposed to the virus during their adolescence. These alarming statistics, coupled with the report that many minorities of lower socioeconomic status have a greater likelihood of dying from HIV due to disparities in healthcare (AHRQ, 2004), magnify the need for research to identify the factors that increase or decrease the likelihood that teenagers will engage in risky sexual behavior.
Although medical interventions have proven moderately effective in decreasing the number of adolescents who become pregnant or infected with an STI, including AIDS, complete control and prevention cannot be achieved through medical advances alone (Hovell & Hillman, 1994). According to Kirby (2002), it is through the identification of the critical antecedents of sexual behaviors that meaningful interventions can be developed. Identification of these antecedents may also lead to the ability to identify adolescents who are more likely to engage in risky sexual behaviors. Behavioral science research, which includes research within the field of psychology, provides the best means for identifying, understanding, and controlling adolescent sexual risk behavior (Kirby, 2002).

Theories of Health Risk Behaviors

A number of biological, psychological, and social variables have been examined as influences on engagement in risky behaviors among adolescents. A number of different theoretical perspectives and models have been utilized to examine these variables (Pertains, 1995). Theorists have postulated that adolescents engage in risky behaviors for a number of reasons, including negative family influences, poor academic performance, negative emotions or affect, peer influences, and sensation seeking (Caffray & Schneider, 2000). A majority of the proposed theories explicitly or implicitly suggest that adolescents’ engagement in risky behaviors, including risky sexual behavior, is motivated by a desire to enhance positive affective states or to avoid negative affective states (Caffray & Schneider, 2000). Consequently, researchers have suggested that more attention should be given to affectively-oriented motivations for behavior when exploring the risky health-related behaviors of adolescents (Brown, DiClemente, & Reynolds, 1991).

According to a motivational model based on coping, risky sexual behavior may result from a desire to avoid or minimize negative emotions (Cooper, Agocha, & Sheldon, 2000).
According to this theory, negative emotionality motivates engagement in problem behaviors as a means of coping. Therefore, adolescents who suffer from negative emotional states may engage in risky sexual behavior to alleviate negative feelings, such as depression and stress. However, adolescents who possess adaptive coping strategies may be less likely to engage in risky sexual behavior, regardless of the presence of negative emotional states. Thus, coping strategy may serve as a variable that moderates the association between the presence of negative emotional states in adolescents and the adolescents’ engagement in risky sexual behavior.

**Adolescent Depression, Stress, and the Family Environment**

Adolescence is a period of adjustment, transition, and change that can potentially be marked by depression and stress. Depression among adolescents has been shown to be highly prevalent (Schraedley, Gotlib, & Hayward, 1999). Studies have found that 25% to 40% of adolescent girls and 25% to 35% of adolescent boys experienced symptoms of depression during a six-month period (Compas, Ey, & Grant, 1993).

A variety of factors such as family, peer pressure, and academic concerns may be sources of stress for adolescents. Research has indicated that an accumulation of stressful events and circumstances may occur as a function of the transitions and adjustments that are characteristic during adolescence (Rudolph & Hammen, 1999). This accumulation of life stressors places adolescents at increased risk for emotional and behavioral problems (Jackson & Warren, 2000). Results of some studies have shown a direct relationship between stress and various problem or risk behaviors (Schmeelk-Cone & Zimmerman, 2003). Sexual behavior is among those problem/risk behaviors that have been linked to reports of stress (Kirby, 2002).

It has been reported that adolescents who are depressed are significantly more likely than a control sample of adolescents to have experienced stressful events prior to becoming depressed (Williamson, Birmaher, Frank, Anderson, Matty, and Kupfer, 1998). Given that studies have
indicated a relationship between depression and risky sexual behavior, and that stress has been shown to be related to depression, it appears that stress may have both a direct and an indirect association with risky sexual behavior in adolescents. Therefore, it stands to reason that both depression and stress are important variables to investigate in association with adolescents’ risky sexual behavior.

In examining risky sexual behavior, not only are individual variables important, family environment variables are also worthy of investigation because they have also been linked to risky sexual behavior in adolescents (Kirby, 2002). The results of a review study conducted by Kirby (2002) indicated that the quality of relationships within the family is an antecedent to the initiation of sex, pregnancy, and safe sex practices. High levels of warmth and support from parents may reduce an adolescent’s desire to seek intimacy from alternative relationships (Moore & Chase-Lansdale, 2001). Additionally, results of studies have shown that family environment variables are associated with depression (Lau & Kwok, 2000) and stress in adolescents.

Although a motivational model of coping with negative emotions such as depression and stress can be used to explain adolescents’ engagement in risky sexual behavior, one limitation of the theory is that it neglects to consider the possible influence of the coping strategy of the adolescent on the occurrence of risky sexual behavior. Cooper, Wood, Orcutt, and Albino (2003) state that dysfunctional coping styles are key risk factors in the promotion of problem behaviors in adolescents. Therefore, it can be extrapolated that if adolescents are capable of utilizing adequate coping mechanisms, they will be less likely to engage in sexual risk behaviors when experiencing stress, depression, or perceived family conflict.

Researchers have suggested that more attention should be given to affectively-oriented motivations for behavior when exploring the health-related behaviors of adolescents (Brown,
DiClemente, & Reynolds, 1991). The present study will examine the moderating influence of coping on the associations of stress, depression, and perceived family conflict with risky sexual behavior among adolescents. Specifically, the purpose of the planned study is to examine whether adolescents’ coping strategies moderate the association between (a) their levels of stress, depression, and perceived family conflict and (b) their engagement in risky sexual behaviors.
CHAPTER 2
REVIEW OF THE LITERATURE

Health Risk Behaviors in Adolescents

Adolescence is a crucial developmental period. During this developmental stage, adolescents are exposed to a number of challenges in their lives ranging from academic pressures and social influences to family and relationship conflict. Given the many challenges that adolescents face, adolescence is a period marked by adjustment in response to these numerous challenges (Spruijt-Metz, 1999). Adolescence is also a period of life in which patterns of behavior are established that have life long effects (Spear & Kulbok, 2001). Health-risk behaviors are among those behaviors that are often established during adolescence. According to Shapiro, Siegel, Scovill and Hays (1998), experimentation with roles, ideas, styles, as well as risky behaviors, is characteristic of the period of adolescence.

Health risk behaviors are defined as behaviors that are undertaken by one’s own volition and that have uncertain and possibly negative health outcomes (Irwin, 1990). Health risk behaviors include behaviors that can interfere with healthy living (Zaleski, Levey-Thors, & Schiaffino, 1998). Despite the potential damage to one’s health and well-being that engagement in health risk behaviors can cause, many theorists and researchers consider participation in health risk behaviors during adolescence to be a normal part of the developmental process (Zweig, Lindberg, & McGinley, 2001).

Adolescents often engage in a variety of health-risk behaviors including drug and alcohol use, violence, and risky sexual behaviors (Centers for Disease Control, 1998.) Integrative reviews of research focused on adolescent risk behaviors demonstrate the extensiveness and diversity of the existing literature that is focused on adolescent risk behaviors (Fahs, Smith, Atav, Britten, Collins, Morgan, & Spencer, 1999). Results of the data from the 2005 national
Youth Risk Behavior Survey (YRBS) conducted by the Centers for Disease Control and Prevention (CDC; 2006) are particularly noteworthy. Specifically, during the 30 days preceding the administration of the YRBS, the following adolescent health risk behavior reportedly occurred among students in grades 9 – 12: (a) 43.3% had drunk alcohol; (b) 9.9% had driven a car or other vehicle when they had been drinking alcohol; (c) 18.5% had carried a weapon; and (d) 20.2% had used marijuana. Additionally, during the 12 months preceding administration of the 2005 YRBS, 35.9% of students in grades 9 – 12 had been in a physical fight and 8.4% had attempted suicide.

Research focusing specifically on sexual risk behavior has also been conducted. Data from a 2002 National Survey of Family Growth, a survey which specifically assessed sexual activity, indicated that by 20 years of age, 75% of young respondents had engaged in premarital sex (Finer, 2007). Of high school students who reported that they were sexually active, 37.2% had not used a condom at last sexual intercourse (CDC, 2006).

Of all of the potential health-risk behaviors in which adolescents may engage, risky sexual behavior is a health-risk behavior that can have particularly detrimental consequences (e.g., pregnancy, sexually transmitted diseases, etc.). In an effort to decrease adolescents’ engagement in risky sexual behavior, increased educational measures have been implemented. Educational programs designed to reduce or delay sexual activity among adolescents have focused on a range of topics from teaching abstinence to providing knowledge about sexual reproduction and contraceptive options to increasing decision-making skills (Coley and Chase-Lansdale, 1998). For example, Lindberg, Ku, & Sonenstein (2000) found that between 1991 and 1998, the number of states requiring HIV-prevention education in schools increased from 13 to 35. Additionally, there were increases in abstinence-related education and education about reproductive health.
Despite the increases in education provided to adolescents about risky sexual behavior, solely educating adolescents regarding the risk of engaging in various health risk behaviors is usually insufficient for resultant changes in behavior (Fahs, Smith, Atav, Britten, Collins, Morgan, & Spencer, 1999). Therefore, research aimed at understanding the potential precipitating variables for engaging in risky sexual behaviors and the potential protective variables is essential.

“The scientific study of adolescent development has always had as part of its implicit and explicit agenda the goal of describing, explaining, predicting, and ameliorating problematic behavior” (Steinberg & Morris, 2001, p. 85). In efforts to achieve this goal, there have been numerous studies that have examined the factors that serve to increase the likelihood of engaging in risky sexual behaviors or that serve as protective factors against engaging in risky sexual behaviors. According to Thornberry, Smith, and Howard (1997), the identification of risk factors is important for a number of different reasons. First, the identification of salient risk factors elucidates areas of increased vulnerability for at-risk adolescents. Additionally, it provides structure for designing intervention programs by identifying particular areas to target for interventions. Finally, the identification of salient sexual risk factors assists in determining which adolescents may benefit the most from the interventions targeting those risk factors.

The identification of sexual risk factors is complex given that adolescents’ engagement in risk-taking behaviors is neither a simple nor unidimensional concept (Shapiro et al., 1998). Although a number of studies have been conducted with the goal of identifying sexual risk factors, Bachanas, Morris, Lewis-Gess, Sarett-Cuasay, Sirl, Ries, & Sawyer (2002) point out that a limited number of these studies have been theoretically based. Therefore, there is a need for more studies that identify risk factors for adolescent engagement in health risk behaviors utilizing a theoretical framework. This need for theoretical grounding is particularly relevant
when examining factors that contribute to or moderate adolescent engagement in sexual risk behavior.

**Theories of Health-Risk Behaviors**

A number of theories and models of adolescent engagement in health-risk behaviors have been developed. These theories address a number of factors that may contribute to adolescents’ engagement in health-risk behaviors, including risky sexual behavior. Some of the most popular theories include the Protection Motivation Theory (Rogers, 1975), the Theory of Reasoned Action (Ajzen & Fishbein, 1980), Social Cognitive Theory (Bandura, 1986), the Theory of Planned Behavior (Ajzen, 1987), and Problem Behavior Theory (Jessor & Jessor, 1977).

The above mentioned theories are considered to be cognitive or decision-making theories; however, they do include environmental, psychological, and social variables. These cognitive theories or models are focused on determining “why” a decision is made to engage in risk-taking behaviors rather than focusing on the consequences of the behavior (Shapiro, Siegel, Scovill, & Hays, 1998). In cognitive or decision-making models, an emphasis is placed on an individual’s subjective expectation regarding behavior; as such, these models are also known as value-expectancy models. Thus, according to Spruijt-Metz (1999), with value-expectancy models, behavior is viewed as the product of a subjective value of an expected outcome and a specific expectation that the behavior will lead to the expected outcome. Therefore, it is believed that the motivation for engaging in behaviors is based upon a desire to achieve the expected outcome.

One of the earliest proposed value-expectancy theories was the Protection Motivation Theory (PMT) which was originally developed by Rogers (1975) and later revised to include an emphasis on the cognitive processes that mediate behavioral change (Rogers, 1983). PMT has four basic tenets: (1) the perceived severity of the threat or the perception of negative consequences, (2) the individual’s vulnerability to the perceived threat or consequences, (3) the
perceived efficacy of the protective behavior, and (4) the individual’s perceived self-efficacy. According to PMT, protection motivation arises from a process of health threat appraisal and a process of coping appraisal. An individual’s appraisals of the health threat combined with an appraisal of the coping responses result in the individual’s intention to perform adaptive responses, which are considered protection motivation; alternatively, the appraisals may lead to maladaptive responses, which are responses that place an individual at health risk.

Although PMT has been demonstrated to be useful in predicting and influencing some health-related behaviors, the theory has received three criticisms. One of these criticisms is that PMT is more useful for predicting intention to perform a behavior rather than predicting actual behavior. Another criticism of PMT is that it does not take environmental influences on health related behavior into consideration. Finally, PMT theory is criticized for being largely based upon fear. Researchers have demonstrated that the use of fear-based interventions to reduce the health risk behavior of adolescents actually increased their anxiety levels, and failed to decrease engagement in health-risk behaviors (Sherr, 1990). Thus, PMT may not be very useful in exploring health-risk behaviors among adolescents.

Social cognitive theory (SCT), which was developed by Albert Bandura (1986), is a cognitively oriented theory which emphasizes the roles of observational learning, values, and expectancies in determining behavior. A primary concept in SCT is reciprocal determinism, which is the view that people influence their environment just as their environment also influences them. According to SCT, behavior is a result of a combination of expectations regarding environmental or situational variables (variables that lie outside of the person), self-efficacy expectations (beliefs that one can accomplish certain outcomes), and outcomes.
Like Protection Motivation Theory, SCT has also been criticized for being a better predictor of intention than behavior. Intention to engage in a behavior may not accurately reflect actual engagement in a behavior. Additionally, despite self-efficacy’s ability to consistently predict health-related behavior, in relevant studies, the predictive power often proves to be quite modest (Ogden, 2003).

The Theory of Reasoned Action (TRA), as originally developed by Ajzen and Fishbein (1980) is a cognitive theory of health behavior that is built on the premise that all behavior is under volitional control and is determined by an individual’s intentions. According to the Theory of Reasoned Action, an individual’s intentions are composed of one’s attitudes toward a behavior and the prevailing social norms. Social norms are defined as one’s perceptions about the attitudes of other important people about the behavior. Thus, according to TRA, behavior can be predicted by one’s intention to perform a behavior.

However, when predicting an adolescent’s likelihood to engage in sexual risk behavior, the adolescent’s attitude and prevailing social norms may not hold as much predictive value regarding their intentions. Despite the efforts to educate adolescents about the potentially deleterious consequences of engaging in sexual risk behaviors, their attitudes often remain unchanged. Research has shown that the knowledge of the potential consequences of risky sexual behavior is not enough to deter adolescents from engaging in sexual risk behavior (Taylor-Seehafer & Rew, 2000). Additionally, for adolescents, the motivation to have sex often appears to be stronger than the social controls hoped to prevent it (Ream & Savin-Williams, 2005).

The Theory of Planned Behavior (TPB), as developed by Ajzen (1991), was developed to address the criticized assumption made by the Theory of Reasoned Action (TRA) that behavior is always under one’s volitional control. According to TPB, as well as TRA, the determinant of
volitional behavior is one’s intention to perform that behavior. Intention encompasses one’s motivation to engage in the behavior as well as one’s attitude toward the behavior and the prevailing social norms regarding the behavior. However, in an effort to explain behaviors that are not under volitional control, the concept of perceived behavioral control was added to TPB. According to TPB, perceived behavioral control is the person’s perception of the ease or difficulty of performing a behavior (Ajzen, 1991).

The TPB has also undergone criticism. The results of a review of 47 empirical articles which was conducted by Ogden (2003) indicated that many studies which utilized the Theory of Planned Behavior (TPB) showed no predictive role for subjective norms, attitudes, or perceived behavioral control. The TPB assumes that perceived behavioral control is predictive of actual behavior control, which may not be a correct assumption (Sharma & Kanekar, 2007). Additionally, Sharma and Kanekar (2007) noted that the TPB, as well as TRA, rely on rational thinking rather than take into account irrational thought processes.

Problem Behavior Theory (PBT), by Jessor and Jessor (1977), was developed for examining problem behaviors among adolescents rather than health promoting behaviors like the previously mentioned theories. According to PBT, there are three primary systems of importance: the personality system, the perceived environment system, and the behavior system. The relationships between the factors in any of the three systems can lead to a condition of “proneness” - a state in which an individual is more likely to engage in health risk behaviors. Jessor and Jessor proposed that health risk behaviors, along with health promoting behaviors, are a part of the adolescent developmental process. As such, health risk behaviors were viewed to be purposeful and goal-oriented. Given that health risk behaviors can be functional and purposeful, Jessor (1991) suggested that the potential benefits of risky behavior, as perceived by the
adolescents, should be taken into consideration when examining adolescents’ engagement in risky behaviors.

According to Problem Behavior Theory, adolescents who possess fewer adaptive coping strategies are more likely to engage in health risk behaviors. These adolescents may resort to risky behaviors as a means of coping, in particular, with stress. Thus, an adolescent’s engagement in health risk behaviors may be a sign that stress is present in his or her life.

Although Problem Behavior Theory posits that adolescents who have inadequate coping skills are more likely to engage in health risk behaviors, the theory does not fully incorporate the influences of negative emotional states on health-risk behaviors, nor does it address the role that the lack of adequate coping skills may play in motivating engagement in health risk behaviors in an effort to regulate negative emotions. By taking a purely functionalist perspective of motivation to compensate for the deficits of Problem Behavior Theory, the role of negative emotions and of coping strategies in sexual risk behavior can be assessed.

According to a functional perspective of motivation for understanding sexual risk taking, behavior is understood in terms of the goal or need that it serves (Cooper, Shapiro, & Powers, 1998). Cooper et al. delineated two common distinctions within motivational theories: appetitive behaviors and aversively motivated behaviors. Appetitive behaviors are those which involve seeking pleasurable or positive experiences. Whereas, aversively motivated behaviors involve avoiding or escaping from painful or negative emotions. Sexual risk behaviors, like other health-risk behaviors among adolescents, may function as either appetitive behaviors or aversively motivated behaviors which serve as a means of helping adolescents cope with negative emotions when their strategies for coping are maladaptive or insufficient.
A study by Cooper, Frone, Russell, and Mudar (1995) highlights the functional perspective in regards to alcohol consumption. Cooper et al. (1995) examined the use of alcohol as an aversive motivational process. They hypothesized that adults and adolescents (age 13-19) who rely on maladaptive emotion-focused coping and who hold positive expectancies for the tension reduction effects of alcohol would be more likely to use drinking as a coping response. The results of the study supported Cooper et al.’s (1995) hypotheses among both adults and adolescents by indicating that those who relied on maladaptive coping responses engaged in more alcohol consumption than those who used more adaptive coping responses. Thus it can be extrapolated that the use of adaptive coping mechanisms may moderate the likelihood of engagement in certain health-risk behaviors.

The moderating role of potentially protective factors that are associated with engagement in sexual risk behaviors has rarely been assessed (Bachanas et al., 2002). As stated by Jessor, Van Den Bos, Vanderryn, Costa, & Turbin (1995), protective factors, such as coping, can serve as moderators when they modify the relationship between the risk factors (i.e., stress, depression, and a negative family environment) and the problem behavior (i.e., sexual risk behavior). The linear and positive relationship between the risk factors and the risk behavior is high in the absence or dearth of the moderating variable (i.e., coping). However, if the moderating variable is highly present, the positive relationship between the risk factors and the risk behaviors is likely attenuated.

**Sexual Risk Behaviors Among Adolescents**

Sexual risk behavior among adolescents has garnered a lot of attention in the literature primarily due to the possible dire consequences of engaging in these behaviors. Sexual risk behavior, as defined by Taylor-Seehafer and Rew (2000), is any sexual behavior that potentially increases the risk of becoming pregnant or contracting a sexually transmitted infection, including
human immunodeficiency virus (HIV). Examples of sexual risk behaviors include early sexual debut, unprotected sexual activity, inconsistent use of condoms, having multiple partners, and having high-risk partners.

Early sexual debut is considered a potential health hazard given the current AIDS epidemic and the increased possibility of contracting other sexually transmitted diseases (Small & Luster, 1994). Early initiation of sexual intercourse also increases the time period that adolescents are at risk for teenage pregnancy (Harvey & Spigner, 1995). In addition, early sexual debut may be an indicator of the potential to engage in other sexual risk behaviors (McBride, Paikoff, & Holmbeck, 2003). For example, Felton and Bartoces (2002) found that among a group of Black adolescent females and White adolescent females, those who first experienced intercourse at an early age were more than twice as likely not to use a contraceptive during their first sexual experience.

The rise in the numbers of teens and young adults newly infected with HIV highlights the need for an emphasis on teenage sexual risk behaviors. According to data for 2001 to 2005 from the U.S. Centers for Disease Control and Prevention (as referenced in Mundell, 2007), the number of newly infected 15-to-19 year olds in the United States increased from 1,010 in 2001 to 1,213 in 2005. Among 20-to-24 year olds, the number of newly infected individuals rose from 3,184 in 2001 to 3,876 in 2005. In terms of gender, among 13 to 19 year olds, males account for approximately one-third of the adolescents infected with HIV in this age group; however, females account for nearly two-thirds of those infected (Center for Disease Control and Prevention, 2000). The increase in the number of AIDS cases among heterosexual women in general, and among African-American women and men in particular, also speaks to the growing
need for interventions aimed at having teens delay engagement in sexual intercourse or at increasing their engagement in safer sex practices (Talashek, Norr, & Dancy, 2003).

There has also been a recent rise in the teen birth rates. According to statistics compiled by the CDC and referenced by Reinberg (2007) and based on 99 percent of all births in 2006, the birth rate for girls aged 15 to 19 rose from 40.5 births per 1,000 in 2005 to 41.9 births per 1,000 in 2006. This represented nearly a 5 percent increase across a one year period. Black teenage girls experienced the highest increase at 5 percent.

In the recent past in an effort to decrease sexual risk behavior among adolescents, there has been an increase in formalized education about reproductive health and an increase in abstinence-related education for adolescents (Lindberg & Sonenstein, 2000). In 1991, according to Lindberg & Sonenstein (2000), 13 states required HIV-prevention education in schools. By 1998, the number of states requiring HIV-prevention education in schools had increased to 35.

The underlying premise of reproductive health and abstinence-related education is that adolescents will use the information that they have learned to make rational decisions to refrain from engaging in sexual risk behavior. Formalized reproductive health education, particularly abstinence-only education programs, has come under criticism (Dworkin & Santelli, 2007). Rather than relying solely on rational risk prevention methods which are often presented in HIV-prevention education programs and materials, McKirnan, Ostrow, and Hope (1996) advocate for more innovative methods of risk prevention that address the non-rational, affective processes that are often inherent in risk-taking behaviors. Thus, research aimed at addressing the influence of affective processes on sexual risk behavior is particularly relevant.

**Influences on Sexual Risk Behavior**

Numerous factors, including developmental, psychological, and environmental factors, have been shown to have an impact on the sexual risk behavior of adolescents. Developmental
factors such as biological changes and hormonal levels have influential roles in sexual risk behavior. Early pubertal development is a biological factor that has been shown to be directly associated with early sexual debut and early sexual experimentation (Brooks-Gunn, 1988; Resnick et al., 1997). Early sexual debut has been associated with higher pregnancy rates, sexually transmitted diseases, inconsistent contraceptive use, and having multiple sex partners (Coker, Richter, Valois, Mckeown, Garrison, & Vincent, 1994; Center for Disease Control and Prevention, 1991). Early pubertal development has also been associated with psychological and emotional consequences that have been linked to sexual risk behavior. For example, the occurrence of puberty among girls has resulted in decreases in self-esteem and increases in symptoms of depression (Petersen, Compas, Brooks-Gunn, Stemmier, Ey, Grant, 1993). Thus early onset of puberty may have direct and indirect effects on sexual risk behavior in adolescents.

Hormonal influences may also play a role in sexual risk behavior. In a study of Hispanic teenage males conducted by Talashek et al. (1999, as cited in Talashek, Norr, & Dancy, 2003), testosterone levels were associated with early sexual debut. Although the developmental factors of hormonal levels and early pubertal development may impact sexual risk behavior, they are not easily modifiable factors and thus would be of least interest in addressing and reducing sexual risk behaviors among adolescents.

**Depression and Stress Among Adolescents**

Adolescence is a period of adjustment, transition, and change that can potentially be marked by stress and depression. Rates of depressive disorders in adolescents range from approximately .4% to 8.3% (Birmaher, Ryan, Williamson, Brent, Kaufman, Dahl, et al., 1996). However, depressed mood is a much more common occurrence among adolescents (Steinberg, 1999). Several studies have provided data which indicate that between 15% and 60% of adolescents report experiencing an unhappy, sad, or dysphoric mood (Rutter, 1986; Petersen,
Sarigiani, & Kennedy, 1991). Studies have also found that 25% to 40% of adolescent girls and 25% to 35% of adolescent boys experienced symptoms of depression during a six-month period (Compas, Ey, & Grant, 1993; Petersen, Compas, Brooks-Gunn, Stemmler, Ey, & Grant, 1993). Although symptoms of depressed mood are prevalent among adolescents, 70% to 80% of adolescents with depressed mood do not receive any treatment (Keller, Lavori, Beardslee, Wunder, & Ryan, 1991).

Research on the prevalence of the symptoms of depression among adolescents with a chronic illness or multiple chronic illnesses has increased over the past several years (Key, Brown, Marsh, Spratt, & Recknor (2001). Key et al. (2000), in a study examining adolescents ranging in age from 13-18 years old, found that in comparison to healthy adolescents, adolescents with chronic illnesses (i.e., cystic fibrosis, spina bifida, diabetes, and asthma) had a higher prevalence of elevated depression scores. Additionally, those adolescents who rated their illnesses as more severe were more likely to endorse more depressive symptoms than adolescents who rated their illnesses as mild. A higher prevalence of depressive symptoms among adolescents with chronic illnesses places them at higher risk for engaging in sexual risk behaviors.

**Influence of Depression on Sexual Risk Behavior**

In clinical assessments of depression, decreased libido and sexual desire are considered to be symptoms of depression (Kaltiala-Heino, Kosunen, & Rimpela (2003). However, Kaltiala-Heino et al. maintain that the research on this presumed association between depression and decreased sexual desire is very limited, particularly among adolescents. The limited numbers of studies that have investigated the associations between depression and sexual desire have yielded mixed results.
Bachanas, Morris, Lewis-Gess, Sarett-Cuasay, Sirl, Ries, & Sawyer (2002a) examined depression, conduct problems, drug use, peer norms, social support, and HIV knowledge as predictors of sexual risk behavior among 158 African-American females ranging in age from 12-19. The researchers predicted that higher levels of depression would be associated with engagement in more sexual risk behaviors. They also predicted that those teens who were depressed but who reported higher levels of social support or having peers who were engaging in fewer sexual risk behaviors would engage in fewer sexual risk behaviors. Contrary to their hypotheses, when controlling for age, Bachanas et al. found that teens’ self-reported levels of depression were not significantly associated with the their self-reported engagement in risky sexual behavior. Although a significant association between depressive symptoms and risky sexual behavior was not found, utilization of interviews rather than anonymous self-report measures may have contributed to this unexpected finding.

In a study similar to the previously mentioned study, Bachanas, Morris, Lewis-Gess, Sarett-Cuasay, Sirl, Ries, & Sawyer (2002b) assessed the associations between psychological adjustment, drug use, coping style, social support, HIV knowledge, and risky sexual behavior among a sample of 164 African-American females aged 12-19. They divided the adolescents into two age groups, younger (12-15) and older (16-19), and analyzed the data separately for each age group.

Bachanas et al. (2002b) found that the younger adolescents were significantly more depressed than the older adolescents, and the younger adolescents who reported more symptoms of depression also reported sexual debut at younger ages. Additionally, among the younger adolescents, reports of higher levels of psychological distress were associated with sexual debut
at younger ages. Among the older adolescents, there were no significant associations found between their psychological functioning and their sexual behaviors.

Research conducted by Hallfors, Waller, Ford, Halpern, Brodish, & Iritani (2004) in which the correlations between drug use, early sexual intercourse, depression, suicidal ideation, and previous suicide were examined, revealed results similar to those of Bachanas et al. (2002b). Hallfors et al. assessed the degree to which drinking, smoking, and sexual behavior is associated with depression and suicidal ideation among 18,924 primarily white adolescents in grades 7 through 12. Although a causal direction was not examined, the results indicated that engagement in any drinking, smoking, and/or sexual behavior was associated with significantly increased odds of depression, suicidal ideation, and suicidal attempts. Girls were found to be at increased risk for exhibiting these associations.

The link between depression and sexual activity was also demonstrated in the findings of research conducted by Kaltiala-Heino, Kosunen, & Rimpela (2003). In an examination of the association between pubertal timing, depression, and sexual activity in adolescents aged 14-16, depression was associated with the experience of intimate sexual relations (i.e., heavy petting and sexual intercourse) among girls. Among boys, depression was associated with engaging in intercourse.

Kosunen, Kaltiala-Heino, Rimpelas, and Laippala (2003) studied the associations between sexual risk behaviors and self-reported depression among 11,793 girls and 10,443 boys in eighth grade and ninth grade in Finland. Depression was associated with a number of different sexual risk behaviors. Results of the study indicated that self-reported depression increased in proportion to the number of sexual partners. Self-reported depression was also associated with
the non-use of contraception at the most recent intercourse. Additionally, self-reported depression increased in proportion with the number of reported coital experiences.

In a study conducted by Harvey and Spigner (1995), 1,206 adolescents in grades 10-12 of which 90% of the adolescents were Caucasian, the levels of depression and stress in sexually inexperienced males and females were compared to the levels of depression and stress in males and females who reported having engaged in sexual activity. The findings indicated that sexually experienced adolescents reported higher levels of depressive symptomatology and stress than adolescent males and females who were sexually inexperienced.

**Influence of Stress on Sexual Risk Behavior**

Like depression, an association between stress and various risk behaviors has been established. For example, Guthrie, Young, Boyd, & Kintner, (2001) examined cigarette use in association with daily life hassles among a sample of 105 African American adolescent girls. Guthrie et al., (2001) divided the adolescents into two groups, those who smoked vs. those who had never smoked. The researchers found that girls who had smoked reported a significantly greater number of daily hassles than the girls who had never smoked. The increased number of daily hassles was especially prominent within the school and family domains.

Orlando, Ellickson, & Jinnett (2001) also found an association between emotional distress and tobacco use in adolescents. In an examination of boys and girls in grades 10 through 12, the results of the study indicated that emotional distress led to increased tobacco use. Orlando et al. (2001) proposed that emotional distress can lead to initial use and continued, increasing usage of tobacco.

Although the link between stress and other risk or problem behaviors has been highly researched, very few studies have been conducted which examined the association between stress and risky sexual behavior among adolescents. In one such study, Harvey and Spigner
(1995) conducted an examination of factors associated with sexual behaviors among adolescents. The study consisted of 1,026 male and female high school students. Harvey and Spigner found that sexually active males and females reported higher levels of stress than the males and females who had never had sexual intercourse. However, the researchers did note that the research design of the study limited their ability to determine if higher levels stress led to engagement in sexual activity or if higher levels of stress resulted from engagement in sexual activity. Given the paucity of research in this area, more studies examining the possible direct association between stress and risky sexual behavior among adolescents are needed.

Stress has also been shown to be linked to depression which, as previously mentioned, is directly related to sexual risk behavior in adolescents. Jose & Ratcliffe, (2004) found that in adolescents aged 11-19 stressor frequency was significantly correlated with level of depression, particularly for the females. Additionally, stressor frequency was found to be a strong positive predictor of depression.

Findings of a longitudinal study conducted by Waakataar, Borge, Fundingsrud, Christie, & Torgersen, (2004) also support the link between stress and depression. Waakataar et al. (2004) examined the role of stressful life events on the development of depressive symptoms among 163 adolescents. The researchers found a positive relationship between the amount of stressful life events experienced during the adolescents’ last year and an outcome of depressive mood.

The link between stress and depression is particularly relevant among adolescents with chronic illnesses. In a study conducted by DiGirolamo, Quittner, Ackerman, & Stevens, (1997), adolescents with chronic illnesses rated their problems with clinic and hospital visits as very difficult. They also rated problems in the parent-teen relationship and health concerns as highly
difficult. Additionally, among the sample, the adolescents who rated their problems as more
difficult also endorsed more symptoms of depression.

**Family Environment and Sexual Risk Behavior**

Family variables have also been highly studied in relation to adolescent sexual behavior. The family is the closest and most important social system that affects the development of the adolescent and is considered to wield a potentially prominent influence on adolescent sexual behavior (Perrino, Gonzalez-Soldevilla, Pantin, & Szapocznik, 2000). Numerous family environment variables have been implicated in the occurrence of adolescents’ engagement in risky sexual behavior. The family variables that have been studied include family structure, parenting style, parental monitoring, family communication about sex, and family environment. For instance, Luster and Small (1997) found that adolescents from families exhibiting poor parental monitoring, low levels of support, low cohesion, and poor communication between the adolescents and their parents were more likely to engage in sexual risk behaviors. Of the numerous family variables that have been examined, family environment appears to have an important association with sexual risk behavior in adolescence.

For example, in their examination of maltreatment, quality of the family relationship, and life stress as predictors of sexual behaviors in adolescents, Friedrich, Lysne, Sim, & Shamos (2004) found that the quality of the family relationship predicted sexual risk taking and deviant behaviors. Results of a study by Deardorff, Gonzales, & Sandler, (2003) indicated that among a sample of 7th and 8th grade students, family stress, which included extrafamilial difficulties experienced by family members other than the adolescent and intrafamilial problems and conflicts, was associated with their (the adolescents’) depressive symptoms.

Lau and Kwok (2000) examined the relationship between three family environment domains (i.e., relationship, personal growth, and system maintenance) and depression among a
sample of seventh, eighth, and ninth graders. The researchers found that the adolescents’ depression was associated with their perception of their family environment, particularly the relationship domain of the family environment. Although the relationship domain was found to be most influential, Lau and Kwok (2000) did not independently examine the different subscales of the relationship domain of the family environment (i.e., cohesion, conflict, & expressiveness) in relation to depression.

**Influence of Family Conflict on Sexual Risk Behavior**

The results of prior research have suggested that adolescents’ perception of conflict within the family may have deleterious effects on the physical and psychological well-being of adolescents. The role of family conflict and its association with a number of health-compromising behaviors among adolescents has been highly researched (McBride, Paikoff, & Holmbeck, 2003). For example, in a study of 4th and 5th grade African American students and their families, McBride et al. (2003) found that the adolescents’ reports of conflict within the family were a significant predictor of an early sexual debut. Interestingly, the parents’ report of conflict within the family was not found to be a significant predictor. Thus, adolescents’ perceptions of conflict within the family may provide a more useful variable for predicting adolescents’ engagement in risky sexual behavior. Indeed, it has been found that adolescents who report having more connected and less conflict-laden relationships with their parents have lower rates of unprotected sex, have fewer sexual partners, are older at age of first intercourse, and overall, make safer decisions about sex (Henrich, Brookmeyer, Shrier, & Shahar, 2006).

Family conflict may also have an indirect impact on adolescents’ engagement in sexual risk behaviors by contributing to depression among adolescent family members. Constantine (2006) conducted a study examining the mediational role of parental attachment on the relationship between perceived family conflict and depression among African American female
adolescents. The results of the study revealed a significant and positive direct relationship between perceived family conflict and depression, indicating that higher levels of perceived family conflict resulted in higher levels of depression among the African American female participants. The results also revealed a significant, indirect relationship between perceived family conflict and depression with parental attachment mediating 28% of the effect.

**Depression, Stress, and Family Conflict Among Adolescents with Chronic Illnesses**

Living with a chronic illness causes both psychological and social hardship on an adolescent and the adolescent’s family Bauman, Drotar, Leventhal, Perrin, & Pless (1997). Adolescents who have chronic illnesses face unique challenges and stressors beyond those of adolescents who are not living with chronic illnesses. Challenges such as disruptions in daily activities due to treatment regimens may lead to increased levels of stress for adolescents living with a chronic illness. According to Moos (2002), adolescents who are living with chronic illnesses and who also face other life stressors are at risk for developing adjustment problems such as stress and depression.

Research has demonstrated an increase in depressive symptoms among adolescents who are living with a chronic illness. Findings from a review of 60 studies of depressive symptoms among children and adolescents with chronic illnesses revealed that adolescents with chronic illnesses may be at a slightly increased risk of reporting symptoms of depression (Bennett, 1994). Seigel, Golden, Gough, Lahley, and Sacker (1990) found that adolescents with asthma reported having more depressive symptoms than adolescents without asthma. Additionally, in a similar study which examined the relationship between asthma and psychological distress among adolescents with asthma and adolescents without asthma, Gillaspy, Hoff, Mullins, Van Pelt, and Chaney (2002) found that adolescents with asthma scored significantly higher on measures of depression, anxiety, and global psychological distress. In a study examining psychopathology
among adolescents who are obese, the adolescents who are obese scored significantly higher on a depression inventory than adolescents in a normal weight control group (Erermis, Cetin, Tamar, Bukusoglu, Akdeniz, & Goksen, 2004).

Few studies have explored the role of family conflict on the psychosocial adjustment of adolescents with a chronic illness. A review of the few studies investigating the relationship between family conflict and adjustment of adolescents with a chronic illness indicates that family conflict does play a role in psychological adjustment. Among adolescents with diabetes, the perception of high levels of family conflict was associated with poorer adjustment (Moos, 2002). Results of a study by Reichenberg and Broberg (2005) indicated that family conflict was negatively associated with psychological adjustment among adolescents with asthma.

In conclusion, empirical studies have shown that adolescents living with a chronic illness are more likely to experience increased levels of stress and depression than their healthier peers. Research has also shown that family conflict in the families of adolescents living with a chronic illness is negatively associated with the psychological adjustment of the adolescents. The increased likelihood of psychological adjustment problems among chronically ill adolescents may make them more prone to engage in risky sexual behaviors as a means of coping with stress, depression, and family conflict.

**Coping**

An adolescent’s coping strategy may be useful in protecting the adolescent during the adolescent period of life (Bachanas et al., 2002). Given that adolescence can be a stressful and difficult time which may draw on all of one’s resources, an adolescent’s ability to cope may be particularly relevant to her or his health (Steiner, Erickson, Hernandez, & Pavelski, 2002). Thus, adolescents who utilize more adaptive coping strategies may be less likely to engage in risky behaviors (Bachanas et al., 2002).
According to Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth (2001) coping consists of a process that involves cognitive, emotional, and behavioral responses aimed at reducing the consequences of stress. Coping not only involves managing a stressful situation, but it also consists of managing the negative emotional reactions that arise as a consequence of the stressful situation (Piko, 2001). Additionally, a person’s ability to cope is influenced by his or her mental and social functioning (Compas et al., 2001). Thus, individuals who are experiencing stress or depression or problems within their interpersonal relationships, such as familial relationships, may have difficulty coping with life stressors.

**Coping Strategies**

Coping appears to be a multidimensional and context driven concept (Ayers, Sandler, Twohey, 1998). Although numerous types or strategies of coping can be utilized, it is important to determine which strategies are useful and which are not (Lewis & Frydenberg, 2002). As such, coping responses can be viewed as being either adaptive or maladaptive (Lewis & Frydenberg, 2002).

There are a number of different adaptive and maladaptive coping strategies. These strategies have been categorized in numerous ways. One of the methods of categorizing coping strategies is to classify them as either approach coping strategies or avoidance coping strategies. According to Roth and Cohen (1988), approach coping involves taking direct actions which are aimed at changing or resolving the stressful event or the consequences of the stressful event. Approach coping arises out of an individual making positive appraisals of the stressful event. Examples of approach coping strategies include direct problem solving, support seeking, and cognitive restructuring.
According to Plunkett, Radmacher, and Moll-Phanara (2000) avoidance coping strategies refer to attempts to escape or avoid issues or persons that are appraised as being stressful. Avoidant strategies may include trying to ignore, forget, or manage potentially stressful life events through seeking diversions or distractions. Avoidant strategies can be either behavioral (e.g., avoiding a stressful situation) or cognitive (e.g., imagining that a situation is better).

Chapman and Mullis (2000) found that both African-American adolescents and Caucasian adolescents reported using the emotion-focused coping strategy of seeking diversions more frequently than they used any of the other types of coping strategies. Furthermore, of the nine strategies that were reported in the study as most commonly used by the participating adolescents, six of them were emotion-focused strategies.

Coping in Association with Stress, Depression, and Family Environment

An increasing number of studies have focused on the utility of understanding adolescent risk for psychopathology as a function of coping with stress (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). A central tenet of these studies was the assumption that stress increases youth’s risk for experiencing psychopathology symptoms, and that coping helps to weaken the association between stress and psychopathology symptoms (Compas et al., 2001). Results of these studies have varied.

In a study conducted by Hampel and Petermann (2006) which examined age and gender effects on perceived interpersonal stress and coping with emotional and behavioral problems among 286 junior high school students, the results indicated that emotion-focused coping was negatively correlated with emotional and behavioral problems including emotional distress, stress, and antisocial behavior among girls. It was also found that, among the female participants, problem-focused coping was negatively correlated with anger control problems and negative
self-image, and maladaptive coping was positively correlated with emotional distress, anger control problems, and negative self-image.

For the male participants in the Hampel and Peterman (2006) study, maladaptive coping was positively associated with emotional distress and negative self-image. Problem-focused coping was negatively associated with negative self-image. However, emotion-focused coping was not significantly associated with any of the emotional or behavioral problems being investigated. Overall, the results of the study indicated that maladaptive coping strategies are positively associated with internalizing and externalizing problems for both female and male adolescents.

Tolan, Gorman-Smith, Henry, Chung, and Hunt (2002) conducted a study that examined the developmental-ecological approach to coping. This approach places an emphasis on the concepts of developmental timing and context in the understanding of certain coping behaviors. Specifically, the researchers sought to determine what patterns of coping were prevalent among inner-city youth and the relation of these coping patterns to the presence of internalizing and externalizing symptoms.

The participants in the Tolan et al. (2002) study consisted of 372 adolescents ranging from ages 12 to 16 who were from lower socioeconomic neighborhoods in two large Midwestern cities. The adolescent participants were administered measures to assess coping, social stress, and externalizing and internalizing psychopathology symptoms. Results of the study, which were consistent with those of other studies, include that a relationship existed between emotion-focused coping and symptomatology. Specifically, the findings revealed that adolescents who primarily relied on emotion-focused coping and made relatively little use of other coping strategies reported higher levels of internalizing and externalizing symptoms.
In a direct assessment of the possible moderating affects of coping, Wadsworth and Compas (2002) studied coping as a mediator and a moderator of the influence of family conflict and economic strain on adjustment among a sample of 364 adolescents. The results of the study indicated that coping mediated the relationship between family conflict and adjustment. The results did not show support for coping as a moderator of family conflict or economic strain. Whereas the Wadsworth and Compas (2002) study focused economic strain and family conflict, the present study utilized a broader conceptualization of stress by assessing various stressors that the adolescents may have encountered.

**Coping in Association with Health-Risk Behaviors**

Mixed results have also been obtained regarding the effects of stress, depression and coping on adolescents’ engagement in health-risk behaviors. Piko (2001) examined the relationships between psychological well-being, health-related variables, health-risk behaviors and ways of coping among students 14-19 years old. Piko found that passive coping (i.e., wishing that the situation would go away, tendency to criticize oneself, or praying) and risky coping factors (i.e., drinking, eating, smoking, using drugs or medication, or “taking it out” on other people) were negatively associated with psychological well-being; whereas, the coping strategies of problem-analyzing (i.e., problem solving, being optimistic, and looking on the bright side of things) and support-seeking (i.e., accepting sympathy or understanding from someone) were positively associated with psychological well-being. These findings suggest that maladaptive coping, specifically passive coping and risky coping, coupled with psychosocial health problems might result in a cycle in which risk-taking becomes a primary way of coping among adolescents.

Hansell and White (1991) conducted a study that investigated the interrelationships among psychological distress, drug use, and physical symptoms. They proposed that higher levels of
distress would lead to increased drug use. They also hypothesized that the presence of more physical symptoms would contribute to greater drug use. Adolescents were interviewed in three waves (12, 15, and 18 years of age). Contrary to the hypotheses, drug use did not increase with higher reported levels of distress or physical symptoms.

Galaif, Sussman, Chou, & Wills (2003) examined relationships among stress, depression, adaptive coping (i.e., seeking social support), and maladaptive coping (i.e., anger coping and substance use) in a sample of 646 adolescents who were 14-19 years old. The study consisted of a longitudinal design in which the adolescents were administered a pre-test and a 1-year follow-up post-test. The study found that depression predicted perceived stress, but not substance use. However, anger coping behaviors increased hard drug use.

**Coping in Association with Sexual Risk Behavior**

Cohen (1995) asserts that adolescents may engage in sexual risk behaviors for reasons other than sexual fulfillment. Cohen proposes a number of nonsexual needs which may stem from underlying emotional dissatisfaction that adolescents may fulfill by engaging in sexual activity. According to Wills and Hirky (1996), an adolescent’s decision to engage or not to engage in health-risk behaviors may be an indication of the adolescent’s ability to successfully cope with distress. As such, adolescents may engage in sexual risk behaviors as a result of having insufficient coping strategies to deal with emotional factors such as stress or depression or environmental factors such as family conflict.

McKirnan, Ostrow, & Hope (1996) developed the cognitive escape model in examining HIV risk behaviors among gay and bisexual men. According to McKirnan et al., for some people, sexual behaviors arise out of a need to “cognitively disengage” from their awareness of societal norms and standards and from negative emotional states. Thus, this cognitive disengagement may make individuals more prone to engage in risky sexual behavior.
Cooper, Shapiro, and Powers (1998) utilized a functionalist perspective of health-risk behaviors to examine adolescents’ motivations for engaging in sexual behaviors. The researchers combined two dimensions that are commonly used in motivational theories and are relevant to understanding human behavior: 1) the distinction between whether a behavior is driven by the pursuit of pleasure or the avoidance of pain, and 2) the distinction between whether a behavior is self-focused and internally driven or other-focused and externally driven. Cooper et al. (1998) crossed these two dimensions to derive four types of motives for adolescents’ sexual behaviors: 1) appetitive self-focused motives, 2) aversive self-focused motives, 3) appetitive social motives, and 4) aversive social motives.

Appetitive self-focused motives (i.e., enhancement motives) are motives aimed at increasing one’s own physical or emotional pleasure. For example, one would have sex purely for physical satisfaction. Aversive self-focused motives (i.e., coping motives) are those which work to decrease negative emotions, such as having sex to counteract feelings of depression. Appetitive social motives (i.e., intimacy motives) involve motives aimed at gaining interaction with another person. Having sex in order to achieve intimacy is an example of an appetitive social motive. Aversive social motives (i.e., approval motives) are motives whose purposes are to avoid negative social consequences. Having sex to avoid the disapproval of a partner is an example of an aversive social motive for having sex.

In the first study conducted by Cooper et al. (1998), they sought to determine whether students’ self-generated motives for engaging in sex were similar to the researchers’ theoretically derived motive categories. The researchers asked 178 college students aged 17 to 21 to provide an open-ended response to a question about their reason for deciding to have sex at a time when they had an opportunity to do so. Qualitative analysis of the 335 responses revealed that 212 of
the responses were able to be assigned to one of the four motive categories, lending support to the four-category motive typology. Of the 212 responses, the majority of the responses (105) were categorized as enhancement motives and a large number (91) were categorized as intimacy motives. The remaining responses (16) were categorized as either coping motives or approval motives.

In an additional study, Cooper et al. (1998) examined the premise that sexual motives would be differentially associated with risky sexual behavior. Specifically, they hypothesized that engaging in sex due to aversive motives, such as having sex to decrease negative emotions, would be associated with risky sexual behavior. Cooper et al.’s hypothesis was based on a theory proposed by Baumeister and Scher (1988) which suggested that individuals seeking to gain quick and easy relief from negative emotional states may be more likely to engage in “self-destructive” behaviors to obtain relief. Additionally, the need for immediate relief through sexual means may be more prominent than the possible future consequences of engaging in risky sexual behavior.

To test their hypothesis based on Baumeister and Scher’s (1988) theory, Cooper et al. (1998) conducted a study using a sample of 1,666 adolescents and young adults who were sexually experienced. The results of the study provided some support of the hypothesis that individuals who used sex as a means of coping with aversive negative emotional states would engage in more risky sexual behavior. Coping motives for engaging in sexual behavior were associated with having multiple sexual partners and engaging in risky sexual practices which were defined as those that are considered to be “high risk” for contracting the HIV virus. Therefore, the results of Cooper et al.’s study suggest that sex may serve as a coping strategy for some adolescents and that a coping motive for engagement in sexual behavior is associated with riskier sexual practices.
In a longitudinal study of college freshmen, Zaleski et al. (1998) found that students who were unable to cope effectively were more likely to engage in higher levels of sexual behavior under conditions of higher stress. However, Bachanas et al. (2002) found no associations between coping style and engagement in sexual risk behaviors among a group of adolescent females.

Stein and Nyamathi (1999) examined gender differences among 205 impoverished minority females and males in the associations among stress, self-esteem, avoidant and active coping strategies, and health outcomes of depression, drug use, and sexual risk behaviors. The results indicated a large and significant relationship between stress and sexual risk behaviors among women, but this association was not found among the men. Women also reported significantly more stress, depression, and avoidant coping styles than men. Additionally, greater stress and less use of active coping strategies predicted more sexual risk behaviors for women, but not for men. These findings are significant in demonstrating links among stress, depression, coping strategies, and sexual risk behaviors. Although these findings are significant, the study participants were adults rather than adolescents. Thus, the associations between stress, depression, coping, and sexual risk behaviors among adolescents were not examined.

**Summary**

Risky sexual behaviors place adolescents at increased risk for a number of potentially serious health consequences. A review of the existing literature suggests that a number of factors affect the potential of adolescents to engage in risky sexual behavior. Factors associated with these sexual behaviors among adolescents need to be further examined in order to develop effective interventions to address decreasing these behaviors.

Depression, stress, family conflict and coping have all been implicated as important factors in association with adolescents’ engagement in risky sexual behaviors. However, there has been
limited research aimed at examining the associations of the above mentioned variables within one study, particularly among adolescents with chronic illnesses and are thus more likely to be experiencing depression, stress, and conflict within the family.

Thus, the purpose of present study is to investigate the association of depression, stress, and conflict in the family among adolescents with a chronic illness. The influence of coping strategies on risky sexual behavior will also be investigated. Specifically, the present study will empirically examine whether or not adolescents who experience more depressive symptoms, higher levels of stress, and/or higher levels of conflict in the family engage in more sexual risk behaviors, and if so, whether or not the presence of more effective coping strategies by the adolescents moderates the influence of depression, stress and family conflict on engagement in risky sexual behavior.

**Hypotheses and Research Questions**

The following hypotheses will be investigated:

1. Among adolescents, level of depression (as measured by the Center for Epidemiologic Studies Depression Scale) will have a significant positive association with engagement in risky sexual behavior (as measured by the Youth Risk Behavior High School Questionnaire 2003).

2. Among adolescents, stress level (as measured by the Life Stressors and Social Resources Inventory – Youth Form) will have a significant positive association with engagement in risky sexual behavior.

3. Among adolescents, level of perceived family conflict (as measured by the Conflict subscale of the Family Relations Index) will have a significant positive association with engagement in risky sexual behavior.

4. Among adolescents, levels of depression, stress, perceived family conflict, and coping strategy (as measured by the Children’s Coping Strategies Checklist – Revision 1) will be significant predictors of engagement in risky sexual behavior.

5. Among adolescents, coping strategy will moderate the relationship between (a) levels of depression, stress, and perceived family conflict and (b) engagement in risky sexual behavior.
The following research question will also be explored:

Among adolescents, are there any significant age, gender, or ethnicity differences in engagement in risky sexual behavior and in levels of depression, stress, and coping strategy?
CHAPTER 3
METHOD

Participants

Participants in this study included 56 adolescents (24 males and 32 females) between the ages of 12 and 17 who were outpatients recruited from primary health care clinics associated with the Children’s Medical Services (CMS) Network. The CMS Network is a health care program specifically designed for children with a chronic illness who thus have special health care needs. This population of adolescents was chosen due to the probability of these adolescents suffering from more negative emotional states as well as increased family stress due to their chronic health problems. These adolescents were recruited for this study as part of a larger research study examining engagement in health-risk behaviors and health promoting behaviors among adolescents. The descriptive data for these adolescents is presented in Table 3-1.

Instruments

Each participant was mailed an Assessment Battery. The adolescent Assessment Battery consisted of a Youth Information Questionnaire (YIQ, see Appendix A), the Youth Risk Behavior High School Questionnaire 2003 (YRBS, see Appendix B), The Life Stressors and Social Resources Inventory – Youth Form (LISRES-Y, see Appendix C), the Center for Epidemiologic Studies Depression Scale (CES-D, see Appendix D), the Family Relations Index (FRI, see Appendix E), the Children’s Coping Strategies Checklist – Revision 1 (CCSC-R1, see Appendix F), and the Marlowe-Crowne Social Desirability Scale, short-form (MCSDS, see Appendix G).
Youth Risk Behavior High School Questionnaire 2003 (YRBS).

The YRBS, which was developed by the Centers for Disease Control and Prevention (2003), was used to determine participants’ engagement in various sexual behaviors. The YRBS is a 56-item self-report measure that assesses behaviors such as tobacco use, alcohol use, drug use, and engagement in sexual behaviors. A composite score was created consisting of the eight items on the YRBS that address sexual behavior. The composite score was derived using a method similar to the method utilized by Bachanas, Morris, Lewis-Gess, Sarett-Causay, Sirl, Ries, and Sawyer (2002), which involved assigning a numeric value of 1 to responses which were indicative of engagement in a risky sexual behavior. Possible scores ranged from 0 to 33. Higher scores indicate higher levels of sexual risk behavior. Respondents rated items based upon their experience. Examples of items from the YRBS include: “Have you ever had sexual intercourse” (0 = No; 1 = Yes), “Did you drink or use drugs before you had sexual intercourse the last time” (0 = Never had intercourse; 1 = Yes; 2 = No), and “The last time you had sexual intercourse, did you or your partner use a condom.” (0 = Never had intercourse; 1 = Yes; 2 = No).

The Life Stressors and Social Resources Inventory – Youth Form (LISRES-Y).

The LISRES-Y, developed by Moos & Moos (1990), was used to measure the life stressors of the adolescents within the past twelve months. The LISRES-Y measures the relationship between stable life stressors and social resources and the effects of these two variables on the health and well-being of adolescents 12 to 18 years old. The LISRES-Y consists of 230 items comprising 16 subscales. Only the Negative Life Events Subscale of the LISRES-Y was used in the present study. The Negative Life Events Subscale is composed of 73 stressful events within 8 domains that may have occurred within the past year. The 8 domains include physical health,
home and money, school, relationships with parents, relationships with siblings, relationships with extended family members, relationships with friends, and relationship with boyfriend or girlfriend. The inventory assesses whether or not the respondent has experienced each of the items on the Negative Life Events Subscale that are listed based on their responses to these items. Examples of such items are as follows: “Frequent headache or dizziness,” “Did you move to a new home,” and “Has your relationship with your mother or stepmother changed for the worse.” Inventory item response choices are either “yes” or “no.” The domain subscale scores are calculated by summing the “yes” responses. The overall subscale score is the sum of the eight domain subscores. Higher sub-scale scores indicate a higher level of stressful life events.

The eight domain subscales of the Negative Life Events Subscale of the LISRES-Y have been reported to have moderate to high internal consistency with Cronbach’s alphas ranging from .66 to .92 (Moos & Moos, 1990). According to Moos & Moos (1990), seven of the eight domain subscales were found to have significant positive correlations ranging from .14 to .29 with an assessment of behavior problems (i.e., the Deviant Behavior Scale by Jessor & Jessor [1977]) . The health subscale was the only domain subscale score that was not correlated with behavior problems. Five of the eight domain subscale scores (health, home and money, parents, siblings, school, & friends) had significant positive associations with depression, with the correlations ranging from .13 to .29.

Center for Epidemiologic Studies Scale (CES-D)

The CES-D, by Radloff (1977) is a 20-item self-report inventory that was used to measure respondents’ levels of symptoms of depression. An example of an item on the CES-D is “I felt hopeless about the future.” Responses to the items are “Rarely or none of the time (< 1 day)”, “Some or a little of the time (1-2 days)”, “Occasionally or a moderate amount of the time (3-4 days)”, and “Most or all of the time (5-7 days).” The responses are scored from 0 to 3 based on
the frequency of the occurrence of the symptom. Item scores are summed to obtain a total score ranging from 0-60, with higher scores indicating greater symptomatology.

The CES-D has demonstrated high internal consistency with Cronbach’s alphas ranging from .85 in the general population to .90 in a patient sample. The CES-D correlated moderately and in the appropriate direction with similar scales designed to measure symptoms of depression such as the Lubin and the Bradburn Negative Affect scale. The CES-D also has been show to possess good discriminate validity in research that tested its ability to discriminate between psychiatric inpatient and general population samples (Radloff, 1977).

**Family Relations Index (FRI)**

The FRI, constructed by Moos and Moos (1986), was used to assess the quality of the relationships within participating adolescents’ families as perceived by the adolescents. The FRI measures the level of cohesion, expressiveness, and conflict within the family. The scale is composed of 3 subscales consisting of nine true-false items each. Examples items from the FRI include: “We fight a lot in our family,” “We tell each other about our personal problems,” and “We really get along well with each other.” The three subscales have demonstrated moderate internal consistencies ranging from .61 to .78.

**Children’s Coping Strategies Checklist—Revision 1 (CCSC-R1).**

The CCSC-R1, by Ayers, Sandler, West, and Roosa (1996), is a 54-item scale that was used to assess the coping strategies that are used by the adolescents. The CCSC-R1 assesses active coping strategies, distraction strategies, avoidance strategies, and support seeking strategies of coping. Examples of items from the scale are as follows: “You tried to ignore it,” and “You tried to make things better by changing what you did.” Each item is rated on a four-point Likert scale with response categories of “Never,” “Sometimes,” “Often,” and “Most of the
time.” The CCSC-R1 was not designed to produce a full scale score. Therefore, a full scale score was not utilized in the current study. Scores for each of the four subscales of the CCSC-R1 were calculated. The subscales of the CCSC-R1 have demonstrated moderate to high internal consistency with Cronbach’s alphas ranging from .46 to .72.

Marlowe-Crowne Social Desirability Scale-Short Form (MCSD-S).

The MCSD-S, created by Strahan and Gerbasi (1972), is a 20-item scale that was used to determine the degree to which the adolescents responded to the measures in order to present themselves in a socially desirable manner. An example item on the MCSD-S is “At times, I have really insisted on having things my way.” Responses to the scale items are indicated by marking “True” or “False.” Responses that indicate social desirability are given a score of 1 and responses that are not indicative of social desirability are given a score of 0. Possible scores range from 0 to 20 with higher scores indicating that a participant may be responding in a socially desirable manner.

The 20-item version of the MCSD-S was derived from the original 33-item measure which was developed by Crowne and Marlowe (1960). The alpha coefficient of the 20-item version of the MCSD-S was reported to be .82. The Kuder Richardson formula 20 (K-R 20) reliability coefficients were .83 for a sample of females and .78 for males (Strahan & Gerbasi, 1972). A Pearson product-moment correlation between the 20-item version of the scale and the original version was reported to be .97, indicating that the 20-item scale has high construct validity (Fraboni & Cooper, 1989).

Procedure

Identification and Recruitment of Participants

The potential adolescent participants were selected by the appropriate CMS staff based on the following participant criteria: (a) the adolescent is between the ages of 12 and 17, (b) the
adolescent has been a CMS patient for at least one month prior to participating in the study, and (c) the adolescent is able to read, comprehend, and respond independently (i.e., without assistance from anyone) to the research questionnaires.

Once lists of potential participants were compiled, the designated CMS staff members mailed each of the primary parent/caregivers of the potential adolescent participants an Invitation Packet, which was provided by the principle investigator and her research team. The Invitation Packet consisted of (a) an invitation letter from the research supervisors (see Appendix H), which explained the purpose of the study, (b) two copies of a Parental Informed Consent Form (see Appendix I), (c) two copies of an Adolescent Assent Form (see Appendix J), (d) a Payment Release Form (see Appendix K), and (e) a postage-paid business reply envelope addressed to the Primary Investigator.

The primary parent/caregivers of the potential adolescent participants who received the Invitation Packet were able to decide if they wanted their children to participate in the study. The primary parent/caregivers who decided to allow their child to participate returned a signed copy of their Informed Consent Form and Payment Release Form. The adolescent participants returned a signed copy of their Adolescent Assent Forms and completed Youth Information Questionnaire in the provided pre-addressed envelope. The Principle Investigator and her research team did not have access to the names or personal information of the adolescents or their primary parent/caregivers prior to receiving the reply envelopes with the specified documents.

Data Collection

Upon receipt of the signed Informed Consent Form and Adolescent Assent Form, the adolescent was mailed an Assessment Battery and a postage-paid business reply envelope. The
reply envelopes contained a code that was used to calculate the return rate of the study. Of the 135 adolescents who agreed to participate, 83 (61%) of the adolescents returned the Assessment Battery. Of those 83 returned Assessment Batteries, 56 of them were completed Assessment Batteries, which resulted in an overall 41% return rate. Participants were compensated $20 for their research participation. The data collection process occurred across a four-month period.

Table 3-1. Participant demographic data

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>24</td>
<td>43%</td>
</tr>
<tr>
<td>Female</td>
<td>32</td>
<td>57%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>16</td>
<td>29%</td>
</tr>
<tr>
<td>White</td>
<td>40</td>
<td>71%</td>
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<td><strong>Adolescent gender/race</strong></td>
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<td></td>
</tr>
<tr>
<td>Black male</td>
<td>06</td>
<td>11%</td>
</tr>
<tr>
<td>Black female</td>
<td>10</td>
<td>18%</td>
</tr>
<tr>
<td>White male</td>
<td>18</td>
<td>32%</td>
</tr>
<tr>
<td>White female</td>
<td>22</td>
<td>39%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ages 12-14</td>
<td>42</td>
<td>75%</td>
</tr>
<tr>
<td>Ages 15-17</td>
<td>14</td>
<td>25%</td>
</tr>
</tbody>
</table>
CHAPTER 4
RESULTS

This chapter will present the results of the analyses to test the hypotheses and research questions set forth in this study. This chapter is divided into three main sections. The first section contains the descriptive data for all of the major variables of this study. The second section provides descriptions of the results of the statistical analyses conducted to test the five investigated hypotheses. The final section provides descriptions of the results of the statistical analyses conducted to address the research question investigated in this study.

Descriptive Data

The mean scores, standard deviations, minimum scores, and maximum scores for the major variables in this study are presented in Table 4-1 through Table 4-5. The variables of interest include risky sexual behavior, depression, stress, perceived family conflict, and the coping strategy variables (active coping, avoidant coping, support seeking coping, and distraction coping).

Results from the Analyses to Test Hypotheses 1-5

Hypotheses 1-3 predicted that stress, depression, and level of perceived family conflict among adolescents would have significant positive associations with their engagement in risky sexual behavior. The hypotheses were tested using a Pearson Product Moment Correlation. The results of this analysis are shown in Table 4-6.

Hypothesis 1 states that among adolescents, level of depression will have a significant positive association with engagement in risky sexual behavior. The results revealed a non-significant positive correlation between level of depressive symptoms and risky sexual behavior ($r = .14, p = .30$) as shown in Table 4.6. This finding failed to support Hypothesis 1.
Hypothesis 2 states that among adolescents, their stress level will have a significant positive association with engagement in risky sexual behavior. The results of the Pearson Product Moment Correlation revealed a non-significant positive correlation between self-reported stress and risky sexual behavior ($r = .05$, $p = .70$) as shown in Table 4-6. This finding failed to support Hypothesis 2.

Hypothesis 3 states that among adolescents, level of perceived family conflict will have a significant positive association with engagement in risky sexual behavior. The results revealed a non-significant positive correlation between level of perceived family conflict and risky sexual behavior ($r = .23$, $p = .09$) as shown in Table 4-6. This finding failed to support Hypothesis 3.

Hypothesis 4 states that among adolescents, levels of depression, stress, perceived family conflict, and coping strategy will be significant predictors of engagement in risky sexual behavior. A multiple regression was performed to test hypothesis 4. The predictor variables were levels of depression, stress, perceived family conflict, and coping strategies. The criterion variable was self-reported level of engagement in risky sexual behavior. The predictor variables were simultaneously entered into the model. Regression diagnostics revealed no significant concerns regarding multicollinearity (VIF ranged from 1.19 to 2.82; Tolerance ranged from 0.35 to 0.84). The model containing all of the predictor variables was not significant ($R^2 = .210$, $F(7, 55) = 1.81$, $p = .105$). These results fail to provide support for Hypothesis 4. Thus it is concluded that the level of depression, level of stress, level of family conflict and coping strategy do not uniquely explain a significant amount of the variance in the risky sexual behaviors of the adolescents in this study. The results of this regression are shown in Table 4-7.

Hypothesis 5 states that among adolescents, coping strategy will moderate the relationship between (a) levels of depression, stress, and perceived family conflict and (b) engagement in
risky sexual behavior. To test the hypothesis, four separate hierarchical multiple regression analyses were performed with sexual risk behavior as the criterion using the following steps: (1) depression, stress, and family conflict were entered as predictor variables in each of the hierarchical regressions; (2) each of the four coping strategies (i.e., active, avoidance, support seeking, and distraction) were individually added into one of the four separate hierarchical regressions to determine if there was a significant reduction in any of the predictors from Step 1; and (3) all of the interaction terms between the first block of predictor variables (i.e., depression, stress, and perceived family conflict) and each of the coping strategy variables were separately entered into each of the regressions. To address problems with multicollinearity the predictor variables were centered by subtracting the mean of the predictor variables from each of the adolescents’ scores on the predictor variables (Cohen, Cohen, West & Aiken, 2003; Keith, 2006).

The results of the first step of the hierarchical multiple regressions, which was the same for all four multiple regressions, indicated that neither depression, nor stress, nor perceived family conflict predicted engagement in risky sexual behavior. In the first hierarchical regression, the incremental increase in $\Delta R^2$ with the addition of active coping to the model was significant ($\Delta R^2 = .140, F[4, 55] = 3.04, p = .025$). Active coping was a significant predictor of sexual risk behavior and accounted for 39.9% of the variance. A significant depression x active coping interaction ($\Delta R^2 = .002, F[5, 55] = 2.42, p = .048$) was found; however, it explained less than 1% of the variance. Additionally, a significant perceived family conflict x active coping ($\Delta R^2 = .056, F[7, 55] = 2.32, p = .040$) interaction was found, which accounted for 5.6% of the total variance. Table 4-8 shows the results of this regression.
In the second hierarchical regression, the incremental increase in $\Delta R^2$ with the addition of avoidance coping to the model was not significant ($\Delta R^2 = .005, F[4, 55] = .782, p = .542$). None of the interaction terms were found to be significant predictors of sexual risk behavior. The results of this regression are shown in Table 4-9.

With the third hierarchical regression, the increase in $\Delta R^2$ with the addition of support seeking coping to the model was not significant ($\Delta R^2 = .085, F[4, 55] = 2.03, p = .105$). All of the interaction terms were non-significant. The results of this regression are shown in Table 4-10.

In the fourth and final hierarchical regression, the increase in $\Delta R^2$ with the addition of distraction coping to the model was not significant ($\Delta R^2 = .033, F[4, 55] = 1.19, p = .329$). None of the interaction terms were found to be significant. The results of this regression are shown in Table 4-11.

**Results from the Analysis to Test the Research Question**

A multivariate analysis of covariance (MANCOVA) was performed to test the research question. This research question is as follows: Among adolescents, are there any significant age, gender, or ethnicity differences in engagement in risky sexual behavior and in levels of stress, depression, and coping strategy? The independent variables were age, gender, and ethnicity. The dependent variables were level of risky sexual behavior, level of stress, level of depression, and levels of each of the different coping strategies (active, avoidant, support seeking, and distraction). Due to significant correlations between level of social desirability and some of the variables of interest, social desirability was entered as a covariate.

Results of the MANCOVA indicated significant differences in distraction coping as a function of ethnicity ($F[1, 55] = 6.38, p = .015$). There was also a significant difference in depression as a function of a gender x ethnicity interaction ($F[1, 55] = 5.58, p = .022$). Follow-up post-hoc analysis revealed that African American adolescents scored significantly higher than
the Non-Hispanic White American adolescents on the Center for Epidemiologic Studies Depression Scale (CES-D). There were no other differences indicated as a result of age, gender, ethnicity, or other interactions between the independent variables.
Table 4-1. Descriptive data for the major variables for all participants

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>M</th>
<th>SD</th>
<th>Norm M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex risk</td>
<td>56</td>
<td>.00</td>
<td>8.00</td>
<td>.45</td>
<td>1.70</td>
<td>N/A</td>
</tr>
<tr>
<td>Stress</td>
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</tr>
<tr>
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<td>10.92</td>
<td>11.71</td>
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</tr>
<tr>
<td>Family con</td>
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<td>.00</td>
<td>9.00</td>
<td>3.10</td>
<td>2.14</td>
<td>4.30</td>
</tr>
<tr>
<td>AC-cope</td>
<td>56</td>
<td>1.36</td>
<td>3.63</td>
<td>2.40</td>
<td>.51</td>
<td>2.30</td>
</tr>
<tr>
<td>D-cope</td>
<td>56</td>
<td>1.00</td>
<td>3.35</td>
<td>2.30</td>
<td>.57</td>
<td>2.21</td>
</tr>
<tr>
<td>S-cope</td>
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<td>3.68</td>
<td>2.25</td>
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<td>2.20</td>
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<tr>
<td>AV-cope</td>
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<td>1.33</td>
<td>3.17</td>
<td>2.42</td>
<td>.43</td>
<td>2.45</td>
</tr>
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</table>

Note: Sex risk = sexual risk behavior; Stress = perceived stress; Family con = perceived family conflict; AC-cope = active coping strategies; D-cope = distraction coping strategies; S-cope = support seeking coping strategies; AV-cope = avoidance coping strategies

Table 4-2. Descriptive data for the major variables for African American participants

<table>
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<th>Norm M</th>
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</thead>
<tbody>
<tr>
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<td>.51</td>
<td>1.81</td>
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<tr>
<td>Stress</td>
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<td>6.00</td>
<td>2.35</td>
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<td>4.30</td>
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<td>AC-cope</td>
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<td>.54</td>
<td>2.30</td>
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<td>D-cope</td>
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<td>2.20</td>
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<td>3.08</td>
<td>2.43</td>
<td>.45</td>
<td>2.45</td>
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</table>

Note: Sex risk = sexual risk behavior; Stress = perceived stress; Family con = perceived family conflict; AC-cope = active coping strategies; D-cope = distraction coping strategies; S-cope = support seeking coping strategies; AV-cope = avoidance coping strategies

Table 4-3. Descriptive data for the major variables for non-Hispanic white participants

<table>
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<tr>
<th>Variables</th>
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<th>Min</th>
<th>Max</th>
<th>M</th>
<th>SD</th>
<th>Norm M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex risk</td>
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<td>2.24</td>
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<td>2.35</td>
<td>.49</td>
<td>2.30</td>
</tr>
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<td>3.03</td>
<td>2.16</td>
<td>.57</td>
<td>2.21</td>
</tr>
<tr>
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<td>1.00</td>
<td>3.68</td>
<td>2.19</td>
<td>.64</td>
<td>2.20</td>
</tr>
<tr>
<td>AV-cope</td>
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<td>1.33</td>
<td>3.17</td>
<td>2.41</td>
<td>.44</td>
<td>2.45</td>
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</table>

Note: Sex risk = sexual risk behavior; Stress = perceived stress; Family con = perceived family conflict; AC-cope = active coping strategies; D-cope = distraction coping strategies; S-cope = support seeking coping strategies; AV-cope = avoidance coping strategies
Table 4-4. Descriptive data for the major variables for female participants

<table>
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<tr>
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<th>Max</th>
<th>M</th>
<th>SD</th>
<th>Norm M</th>
</tr>
</thead>
<tbody>
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<td>.48</td>
<td>1.88</td>
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</tr>
<tr>
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<td>21.00</td>
<td>11.13</td>
<td>5.45</td>
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</tr>
<tr>
<td>Depression</td>
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<td>.00</td>
<td>46.00</td>
<td>12.36</td>
<td>13.32</td>
<td>N/A</td>
</tr>
<tr>
<td>Family con</td>
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<td>9.00</td>
<td>2.86</td>
<td>2.08</td>
<td>4.30</td>
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<td>3.63</td>
<td>2.45</td>
<td>.56</td>
<td>2.30</td>
</tr>
<tr>
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<td>2.30</td>
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</tr>
<tr>
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<td>1.20</td>
<td>3.68</td>
<td>2.39</td>
<td>.64</td>
<td>2.20</td>
</tr>
<tr>
<td>AV-cope</td>
<td>32</td>
<td>1.75</td>
<td>3.17</td>
<td>2.45</td>
<td>.41</td>
<td>2.45</td>
</tr>
</tbody>
</table>

Note: Sex risk = sexual risk behavior; Stress = perceived stress; Family con = perceived family conflict; AC-cope = active coping strategies; D-cope = distraction coping strategies; S-cope = support seeking coping strategies; AV-cope = avoidance coping strategies

Table 4-5. Descriptive data for the major variables for male participants

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>M</th>
<th>SD</th>
<th>Norm M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex risk</td>
<td>24</td>
<td>.00</td>
<td>7.00</td>
<td>.42</td>
<td>1.47</td>
<td>N/A</td>
</tr>
<tr>
<td>Stress</td>
<td>24</td>
<td>2.00</td>
<td>23.00</td>
<td>10.29</td>
<td>4.80</td>
<td>N/A</td>
</tr>
<tr>
<td>Depression</td>
<td>24</td>
<td>.00</td>
<td>38.60</td>
<td>9.00</td>
<td>9.05</td>
<td>N/A</td>
</tr>
<tr>
<td>Family con</td>
<td>24</td>
<td>.00</td>
<td>8.00</td>
<td>3.42</td>
<td>2.22</td>
<td>4.30</td>
</tr>
<tr>
<td>AC-cope</td>
<td>24</td>
<td>1.67</td>
<td>3.38</td>
<td>2.33</td>
<td>.44</td>
<td>2.30</td>
</tr>
<tr>
<td>D-cope</td>
<td>24</td>
<td>1.50</td>
<td>3.00</td>
<td>2.29</td>
<td>.51</td>
<td>2.21</td>
</tr>
<tr>
<td>S-cope</td>
<td>24</td>
<td>1.00</td>
<td>3.13</td>
<td>2.08</td>
<td>.61</td>
<td>2.20</td>
</tr>
<tr>
<td>AV-cope</td>
<td>24</td>
<td>1.33</td>
<td>3.17</td>
<td>2.36</td>
<td>.47</td>
<td>2.45</td>
</tr>
</tbody>
</table>

Note: Sex risk = sexual risk behavior; Stress = perceived stress; Family con = perceived family conflict; AC-cope = active coping strategies; D-cope = distraction coping strategies; S-cope = support seeking coping strategies; AV-cope = avoidance coping strategies
<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sexual Behavior</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Depression</td>
<td>.142</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Stress</td>
<td>.052</td>
<td>.302*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Family Conflict</td>
<td>.226</td>
<td>.504**</td>
<td>.198</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Active Coping</td>
<td>.310*</td>
<td>-.109</td>
<td>.242</td>
<td>-.179</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Avoidance Coping</td>
<td>.069</td>
<td>.110</td>
<td>.077</td>
<td>-.040</td>
<td>.419**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Support Seeking Coping</td>
<td>.242</td>
<td>-.129</td>
<td>.164</td>
<td>-.158</td>
<td>.751**</td>
<td>.277*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Distraction Coping</td>
<td>.147</td>
<td>-.028</td>
<td>-.008</td>
<td>-.147</td>
<td>.324*</td>
<td>.315*</td>
<td>.237</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>9. Social Desirability</td>
<td>-.164</td>
<td>-.412**</td>
<td>-.098</td>
<td>-.527**</td>
<td>.243</td>
<td>.007</td>
<td>.187</td>
<td>.013</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*p < .05, two-tailed. **p < .01, two-tailed.
Table 4-7. Summary of the multiple regression analysis for the variables predicting sexual risk behavior

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$</th>
<th>$F$</th>
<th>df</th>
<th>$B$</th>
<th>SE B</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>.210</td>
<td>1.82</td>
<td>7,55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>0.00</td>
<td>.023</td>
<td>.101</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stress</td>
<td>0.00</td>
<td>.047</td>
<td>-.127</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Conflict</td>
<td>.228</td>
<td>.121</td>
<td>.287</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Coping</td>
<td>1.34</td>
<td>.720</td>
<td>.401</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidance Coping</td>
<td>-.498</td>
<td>.576</td>
<td>-.127</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support Seeking Coping</td>
<td>0.00</td>
<td>.520</td>
<td>.033</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distraction Coping</td>
<td>.280</td>
<td>.420</td>
<td>.093</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05, two-tailed.  ** p < .01, two-tailed.
Table 4–8. Hierarchical multiple regression models with depression, stress, perceived family conflict, and active coping strategy as predictors and sexual risk behavior as the criterion

<table>
<thead>
<tr>
<th>Measure</th>
<th>Variable</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$Df$</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$β$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Risk Behavior</td>
<td>Constant</td>
<td>.052</td>
<td>.957</td>
<td>3,55</td>
<td>.451</td>
<td>.227</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Active Coping</td>
<td></td>
<td></td>
<td></td>
<td>1.34</td>
<td>.449</td>
<td>.399</td>
<td>2.98**</td>
</tr>
<tr>
<td></td>
<td>Depression x Active Coping</td>
<td></td>
<td></td>
<td></td>
<td>-1.02</td>
<td>.027</td>
<td>-.052</td>
<td>-.386</td>
</tr>
<tr>
<td></td>
<td>Stress x Active Coping</td>
<td></td>
<td></td>
<td></td>
<td>-3.331</td>
<td>.101</td>
<td>-.047</td>
<td>-.330</td>
</tr>
<tr>
<td></td>
<td>Family conflict x Active Coping</td>
<td></td>
<td></td>
<td></td>
<td>.521</td>
<td>.275</td>
<td>.332</td>
<td>1.90</td>
</tr>
</tbody>
</table>

*Note. The full models included depression, stress, perceived family conflict, active coping, depression x active coping, stress x active coping, and perceived family conflict x active coping.  
*p < .05, two-tailed. **p < .01, two-tailed.*
Table 4–9. Hierarchical multiple regression models with depression, stress, perceived family conflict and avoidance coping strategy as predictors and sexual risk behavior as the criterion

<table>
<thead>
<tr>
<th>Measure</th>
<th>Variable</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$Df$</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Risk Behavior</td>
<td>Constant</td>
<td>.052</td>
<td>.957</td>
<td>3,55</td>
<td>.451</td>
<td>.227</td>
<td>.075</td>
<td>.544</td>
</tr>
<tr>
<td></td>
<td>Avoidance Coping</td>
<td></td>
<td></td>
<td></td>
<td>.293</td>
<td>.539</td>
<td>.075</td>
<td>.544</td>
</tr>
<tr>
<td></td>
<td>Depression x Avoidance Coping</td>
<td>-2.93</td>
<td>.048</td>
<td></td>
<td>-0.92</td>
<td>-.612</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stress x Avoidance Coping</td>
<td>7.49</td>
<td>.121</td>
<td></td>
<td>.094</td>
<td>.619</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Family Conflict x Avoidance Coping</td>
<td>.150</td>
<td>.314</td>
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<td>.078</td>
<td>.634</td>
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<td></td>
</tr>
</tbody>
</table>

Note. The full models included depression, stress, perceived family conflict, avoidance coping, depression x avoidance coping, stress x avoidance coping, and perceived family conflict x avoidance coping.

* $p < .05$, two-tailed. ** $p < .01$, two-tailed.
Table 4–10. Hierarchical multiple regression models with depression, stress, perceived family conflict, and support seeking coping as predictors and sexual risk behavior as the criterion

<table>
<thead>
<tr>
<th>Measure</th>
<th>Variable</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$Df$</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Risk Behavior</td>
<td>Constant</td>
<td>.052</td>
<td>.957</td>
<td>3,55</td>
<td>.451</td>
<td>.227</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support Seeking Coping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depression x Support Seeking</td>
<td></td>
<td></td>
<td></td>
<td>-.047</td>
<td>-.336</td>
<td>-.057</td>
<td>-.377</td>
</tr>
<tr>
<td></td>
<td>Stress x Support Seeking</td>
<td></td>
<td></td>
<td></td>
<td>-.047</td>
<td>-.336</td>
<td>-.057</td>
<td>-.377</td>
</tr>
<tr>
<td></td>
<td>Family Conflict x Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seeking Coping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.99</td>
<td>.212</td>
<td></td>
<td></td>
<td>.058</td>
<td>.377</td>
<td></td>
</tr>
</tbody>
</table>

Note. The full models included depression, stress, perceived family conflict, support seeking coping, depression x support seeking coping, stress x support seeking, and perceived family conflict x support seeking coping.

*p < .05, two-tailed. **p < .01, two-tailed
Table 4–11. Hierarchical multiple regression models with depression, stress, perceived family conflict, and distraction coping as predictors and sexual risk behavior as the criterion

<table>
<thead>
<tr>
<th>Measure</th>
<th>Variable</th>
<th>$R^2$</th>
<th>$F$</th>
<th>$Df$</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Risk Behavior</td>
<td>Constant</td>
<td>.052</td>
<td>.957</td>
<td>3.55</td>
<td>.451</td>
<td>.227</td>
<td>.183</td>
<td>1.35</td>
</tr>
<tr>
<td></td>
<td>Distraction Coping</td>
<td></td>
<td></td>
<td></td>
<td>.549</td>
<td>.407</td>
<td>.199</td>
<td>1.35</td>
</tr>
<tr>
<td></td>
<td>Depression x Distraction Coping</td>
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<td></td>
<td>-6.28</td>
<td>.080</td>
<td>-.113</td>
<td>-.782</td>
</tr>
<tr>
<td></td>
<td>Stress x Distraction Coping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Family Conflict x Distraction Coping</td>
<td></td>
<td></td>
<td></td>
<td>.279</td>
<td>.218</td>
<td>.020</td>
<td>1.28</td>
</tr>
</tbody>
</table>

Note. The full models included depression, stress, perceived family conflict, distraction coping, depression x distraction coping, stress x distraction coping, and perceived family conflict x distraction coping.

*p < .05, two-tailed. **p < .01, two-tailed.
CHAPTER 5
DISCUSSION

The purpose of the present study was to empirically examine depression, stress, perceived family conflict, and coping strategy as predictors of engagement in risky sexual behavior among adolescents with chronic illnesses. Specifically, the study examined whether coping strategies moderate the relationship between (a) depression, stress, and perceived family conflict and (b) risky sexual behavior. This chapter presents a summary and interpretation of the results of the present study, limitations of the study, and clinical implications and directions for future research.

Summary and Interpretations of the Results

Results from this study did not support Hypothesis 1, which stated that among adolescents, level of depression will have a significant positive association with engagement in risky sexual behavior. Although the Pearson Product Moment Correlations revealed a positive correlation between level of depression and risky sexual behavior, the correlation was not found to be significant.

The results of the present study regarding Hypothesis 1 differ from those of previous studies in which significant positive associations between depression and risky sexual behavior have been found (Hallfors, Waller, Ford, Halpern, Brodish, & Iritani, 2004; Kosunen, Kaltiala-Heino, Rimpelas, & Laippala, 2003; Harvey & Spigner, 1995). However, these previous studies were conducted utilizing very large sample sizes ranging from 1,206 participants to 18,924 participants. The use of large sample sizes increases the likelihood of detecting significant associations. Additionally, given the large sample sizes utilized in the above cited research, the researchers were able to only include participants who had moderate to high scores on the measures used to detect depressive symptomatology in their respective studies. The analyses
conducted in the present research used the data from all of the participants regardless of the participants’ scores on the measures.

Also of note was the low mean score for the level of engagement in risky sexual behavior for the sample. The highest possible score that could be obtained on the YRBS was 33. However, the mean score for the participants was .45, which indicates that there was minimal engagement in risky sexual behavior by the participants in the study. The low mean level of engagement in risky sexual behavior and the lack of variance in the scores likely affected the ability to accurately determine if there were associations between risky sexual behaviors and the other variables of interest in the study (i.e., depression, stress, perceived family conflict, and coping style).

The results of this study also failed to support Hypothesis 2, which stated that, among adolescents, stress level will have a significant positive association with engagement in risky sexual behavior. Analyses revealed a small positive correlation between stress and engagement in risky sexual behavior; however, the correlation was not significant.

The results of the present study regarding Hypothesis 2 differ from the results obtained by Harvey and Spigner (1995). Results from the Harvey and Spigner study indicated an association between stress and sexual behavior among adolescents. However, the study conducted by Harvey and Spigner is one of the few studies that have examined a direct association between stress and sexual behavior. Also of note, Harvey and Spigner’s study did not explicitly examine risky sexual behavior but merely looked at adolescents’ engagement in sexual intercourse.

Results from the present study did not support Hypothesis 3, which stated that, among adolescents, level of perceived family conflict will have a significant positive association with engagement in risky sexual behavior. Results of the present study indicated a positive but non-
significant relationship between level of perceived family conflict and engagement in risky sexual behavior.

The results of the present study regarding Hypothesis 3 are not consistent with the findings of McBride, Paikoff, and Holmbeck (2003) who found that adolescents’ report of conflict in the family was associated with early sexual debut. Similar findings were achieved by Henrich, Brookmeyer, Shrier, and Shahar (2006) who found that less conflict-laden relationships between teens and their parents resulted in the teens engaging in fewer sexual risk behaviors. However, it is of note that the mean score on the Conflict subscale of the Family Relationship Index for the adolescents in the present study was lower than the reported normative mean.

Results from the study also failed to support hypothesis 4. Hypothesis 4 stated that among adolescents, levels of depression, stress, perceived family conflict, and coping strategy will be significant predictors of engagement in risky sexual behavior. The overall model was not significant.

The findings from the present study regarding Hypothesis 4 were contrary to the findings of other studies which have found depression (Smith, 1997; Kosunen, Kaltiala-Heino, Rimpela, and Laippala, 2003) and family conflict (McBride, Paikoff, & Holmbeck, 2003; Henrich, Brookmeyer, Shrier, & Shahar, 2006) to be predictors of engagement in various risky sexual behaviors. The adolescents in the present study exhibited low scores on the depression measure and the measure of perceived family conflict. The low levels of depressive symptomatology and perceived family conflict reported by the adolescents likely hindered the ability to detect any associations between these variables and engagement in risky sexual behaviors. The results of the present study also revealed that the adolescents utilized the four coping strategies to the same degree as indicated by the similar mean scores and standard deviations.
The results of the present study provided partial support for Hypothesis 5, which stated that, among adolescents, coping strategy will moderate the relationship between (a) levels of depression, stress, and perceived family conflict and (b) engagement in risky sexual behavior. Four hierarchical regressions were conducted to test Hypothesis 5. In the first regression, active coping was the only individual variable found to be a significant predictor of risky sexual behavior. The interaction terms of depression x active coping and perceived family conflict x active coping were also found to be significant predictors. However, the stress x active coping interaction was not found to be significant.

The finding that the stress x active coping interaction was not a significant predictor of engagement in risky sexual behavior among the adolescents in this study is a surprising one. One possible explanation for this finding is that active coping may not be associated with the number and types of stressful events to which an adolescent may be exposed, which were assessed in the present study. Therefore, the interaction between active coping and stress, as stress was measured in the present study, may not impact adolescents’ engagement in sexual behavior; whereas, the interaction between active coping and an adolescent’s perceived level of stress may have revealed different results.

None of the other types of coping (i.e., avoidance coping, support seeking coping, or distraction coping) were found to be significant predictors of engagement in risky sexual behaviors among the adolescents in the present study. In addition, none of the interaction terms (i.e., depression x avoidance coping, stress x avoidance coping, perceived family conflict x avoidance coping, depression x support seeking coping, stress x support seeking coping, perceived family conflict x support seeking coping, depression x distraction coping, stress x distraction coping, perceived family conflict x distraction coping) were found to be significant.
predictors. These findings suggest that of the four types of coping examined in this study, active coping is the only type of coping that moderates the relationships between (a) depression, stress, and perceived family conflict and engagement in risky sexual behavior.

Results from the examination of the research question presented in the present study revealed that the Non-Hispanic White American adolescents reported significantly higher levels of depression than the African American adolescents. Mixed results have been obtained regarding differences in the levels of depression between African American adolescents and Non-Hispanic White American adolescents (Shaffer, Forehand, Kotchik and The Family Health Project Research Group, 2002). Given the mixed results that have been obtained, further research is necessary to determine whether differences in the levels of depression between African American adolescents and Non-Hispanic White American adolescents do indeed exist.

Results of the present study revealed no other significant differences in levels of depression, levels of stress, levels of perceived family conflict, and the four coping strategies among the adolescents in association with age, gender, or ethnicity. These findings were contrary to the results of other studies which have found significant differences in levels of depression and levels of stress due to demographic variables such as age and gender (e.g., Bachanas et al., 2002; McCarthy & Brack, 1996; Galambos, Leadbeter, & Barker, 2004). Although the differences in the present study were not significant, the African American participants had higher mean scores for risky sexual behavior, stress, and for all four of the coping strategies (i.e., active distraction, support seeking, and avoidance) than the non-Hispanic White participants. The females in the study had higher mean scores than males for risky sexual behavior, stress, depression, and all four of the coping strategies. Males only had higher mean scores than the females for perceived family conflict.
Limitations of the Present Study

The results of the present study should be interpreted with caution due to several limitations of the study. The use of self-report measures may have affected the results of the study. Adolescents were asked to respond to questions about their engagement in sexual activity. The use of self-report measures to assess such sensitive data allowed for the possibility that the adolescents may have responded in a socially desirable manner. The lack of a correlation between the adolescents’ scores on the Youth Risk Behavior Scale and their scores on the Marlowe-Crowne Social Desirability Scale does not indicate with certainty that the adolescents were not responding without bias.

Another limitation is the small sample size of the current study. The small sample size limits the generalizability of its findings. Additionally, the sample size may have affected the power of the analyses that were conducted thus limiting the ability to find the hypothesized associations among the investigated variables.

Other limitations involve the use of the Youth Risk Behavior Surveillance and the Life Stressors and Social Resources Inventory as measures of risky sexual behavior and levels of stress, respectively. The Youth Risk Behavior Surveillance (YRBS) was designed to be a survey inventory and was not developed to yield a scale score. As such, a scoring protocol was developed for the present study. Therefore, the YRBS may not have been a reliable measure of risky sexual behavior in the present study.

The Negative Life Events Subscale of the Life Stressors and Social Resources Inventory-Youth Form (LISRES-Y) was used to determine the adolescents’ level of stress. However, as designed, the Negative Life Events Subscale of the LISRES-Y directs respondents to indicate if they have experienced a series of stressful events that may have occurred within the past year. Whether or not an adolescent has experienced any of the stressful events listed on this subscale
does not provide a clear assessment of the adolescents’ perception of the level of stress that they have experienced. Therefore, it is not apparent whether scores on the LISRES-Y in the present study reflected the perceived stress levels of the participating adolescents.

**Directions for Future Research**

Future research should be conducted that is similar to the research conducted in the present study in which the affects of stress, depression, family conflict, and coping on engagement in risky sexual behavior is examined. Researchers have suggested that more attention should be given to affectively-oriented motivations for behavior when exploring the health-related behaviors of adolescents (Brown, DiClemente, & Reynolds, 1991). However, this future research should utilize larger sample sizes than that of the present study which would increase statistical power and may increase the variance among the investigated variables. Also, different measures should be used to assess risky sexual behavior and levels of stress.

Another important issue to consider for future research on risky sexual behavior among adolescents with a chronic illness is the inclusion of Hispanic/Latino participants. Given the differences in mean scores that were found in the investigated variables of the present study between the African American adolescents and the non-Hispanic White adolescents, it is likely that Hispanic/Latino adolescents with chronic illnesses may also differ from the participants of this study in the levels of the investigated variables. The inclusion of Hispanic/Latino adolescents is also warranted because of the increased risk of engagement in risky sexual behavior by this group of adolescents.

Finally, future research should be directed at determining other variables that are affecting adolescents’ engagement in risky sexual behavior. Particular emphasis should be placed on examining the role of negative emotional states in the occurrence of risky sexual behavior among adolescents. Additionally, this research should include an examination of the variables that may
moderate the impact that negative emotional states may have on an adolescents’ engagement in risky sexual behavior.

**Implications for Counseling Psychologists**

Keeping in mind the previously mentioned limitations, the present study does however have some important clinical implications. The association found between active coping and risky sexual behavior suggests that interventions designed to address risky sexual behavior should incorporate methods (e.g., role plays, parental modeling) for increasing the use of active coping strategies. The use of active coping strategies would be particularly relevant in situations where adolescents are depressed and/or are experiencing conflict within the family. In addition, non-Hispanic White American adolescents may especially benefit from adopting a more active coping style given the higher level of depressive symptoms that was exhibited by the non-Hispanic White American adolescents in comparison to the African American adolescents in this study.

The incorporation of a focus on active coping strategies into sexual education programming is consistent with a holistic type of programming. A holistic approach to sexual education programming has been found to be effective in reducing sexual risk behavior (Kirby, 2003). The addition of a component that addresses active coping strategies may improve the effectiveness of existing programs.
APPENDIX A
YOUTH INFORMATION QUESTIONNAIRE (YIQ)

Please provide the requested information by shading in your answer.

It should look like this: •

1. What is your age?
   - 12
   - 13
   - 14
   - 15
   - 16
   - 17

2. What is your gender?
   - Male
   - Female

3. Your Race/Ethnicity:
   - Cuban/Cuban-American
   - Dominican Republican
   - Mexican/Mexican-American/Chicano(a)
   - Puerto Rican
   - Other Hispanic/Latino (please specify: _____________________)
   - Caucasian/White/European-American
   - African-American/Black-American
   - Other (please specify: _____________________)

4. With whom do you live?
   - Both parents
   - Mother only
   - Father only
   - Legal Guardian
   - Other (please specify: _____________________)

5. Highest level of education that you have completed:
   - Elementary School
   - Middle/Junior High School
   - High School

6. Do you have children?
   - Yes (How many?: _________)
   - No
APPENDIX B
YOUTH RISK BEHAVIOR HIGH SCHOOL QUESTIONNAIRE (YRBS)

Directions: Please give all of your answers by completely filling in the circle beside your answer. It should look like this: •. Remember, all of your answers will be kept strictly private and confidential.

The next 8 questions ask about sexual behavior.

1. Have you ever had sexual intercourse?
   - ○ Yes
   - ○ No

2. How old were you when you had sexual intercourse for the first time?
   - ○ I have never had sexual intercourse
   - ○ 14 years old
   - ○ 15 years old
   - ○ 16 years old
   - ○ 17 years old or older

3. During your life, with how many people have you had sexual intercourse?
   - ○ I have never had sexual intercourse
   - ○ 4 people
   - ○ 5 people
   - ○ 6 or more people

4. During the past 3 months, with how many people did you have sexual intercourse?
   - ○ I have never had sexual intercourse
   - ○ I have had sexual intercourse, but not during the past 3 months
   - ○ 1 person
   - ○ 2 people
   - ○ 3 people
   - ○ 4 people
   - ○ 5 people
   - ○ 6 or more people
5. Did you drink alcohol or use drugs before you had sexual intercourse the last time?
   - I have never had sexual intercourse
   - Yes
   - No

6. The last time you had sexual intercourse, did you or your partner use a condom?
   - I have never had sexual intercourse
   - Yes
   - No

7. The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? (Select only one response.)
   - I have never had sexual intercourse
   - No method was used to prevent pregnancy
   - Birth control pills
   - Condoms
   - Depo-Provera (injectable birth control)
   - Withdrawal
   - Some other method
   - Not sure

8. How many times have you been pregnant or gotten someone pregnant?
   - 0 times
   - 1 time
   - 2 or more times
   - Not sure
APPENDIX C
LIFE STRESSORS AND SOCIAL RESOURCES INVENTORY–YOUTH FORM (LISRES-Y)

Directions: Please answer “Yes” or “No” to each of the following questions by completely filling in a bubble. It should look like this: ⬪

Have you had any of these physical problems **DURING THE PAST 12 MONTHS?**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</table>
Have you had any of these medical conditions **DURING THE PAST 12 MONTHS**?  
(Answer “Yes” only if the condition was diagnosed by a doctor.)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>☒</td>
<td>☒</td>
<td>15. Anemia</td>
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<tr>
<td>☒</td>
<td>☒</td>
<td>16. Asthma or allergies</td>
</tr>
<tr>
<td>☒</td>
<td>☒</td>
<td>17. Arthritis or rheumatic disease</td>
</tr>
<tr>
<td>☒</td>
<td>☒</td>
<td>18. Chronic bronchitis</td>
</tr>
<tr>
<td>☒</td>
<td>☒</td>
<td>19. Kidney trouble</td>
</tr>
<tr>
<td>☒</td>
<td>☒</td>
<td>20. Serious back trouble</td>
</tr>
<tr>
<td>☒</td>
<td>☒</td>
<td>21. Stomach ulcer or duodenal ulcer</td>
</tr>
<tr>
<td>☒</td>
<td>☒</td>
<td>22. Eating disorder (anorexia, bulimia)</td>
</tr>
<tr>
<td>☒</td>
<td>☒</td>
<td>23. Do you have any other health problems that have not been mentioned so far? (For example, cancer, physical handicaps, epilepsy/seizures, a learning disability such as dyslexia, or AD/HD.)</td>
</tr>
</tbody>
</table>

**In the past 12 months:**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th></th>
</tr>
</thead>
</table>
| ☒   | ☒  | 24. Did you move to a new home? (If not, skip to question 26)  
  If Yes, |
| ☒   | ☒  | 25. Is it a worse home? |

**In the past 12 months:**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th></th>
</tr>
</thead>
</table>
| ☒   | ☒  | 26. Has someone new moved into your home? (If not, skip to question 28)  
  If Yes, |
| ☒   | ☒  | 27. Has it made things worse? |
28. Has someone moved out of your home? (If not, skip to question 30)
   If Yes,

29. Has it made things worse?

Yes  No  In the past 12 months:

30. Were any of your personal belongings stolen or damaged?

31. Was your home burglarized?

32. Were you personally attacked (hit, beaten, assaulted, etc.)?

Yes  No  In the past 12 months:

33. Have your parents separated?

34. Have your parents divorced?

35. Has your mother or female guardian died?

36. Has your father or male guardian died?

37. Has your mother remarried and it made things worse?

38. Has your father remarried and it made things worse?

Yes  No  In the past 12 months:

39. Has your relationship with your mother or stepmother changed for the worse?

40. Has your mother or stepmother had a serious accident or injury?

41. Has your mother or stepmother been hospitalized?

42. Has your mother or stepmother lost her job?

43. Has your mother or stepmother developed a new medical condition?

44. Has your mother or stepmother developed a new emotional or behavioral problem?
In the past 12 months:

45. Has your relationship with your father or stepfather changed for the worse?

46. Has your father or stepfather had a serious accident or injury?

47. Has your father or stepfather been hospitalized?

48. Has your father or stepfather lost his job?

49. Has your father or stepfather developed a new medical condition?

50. Has your father or stepfather developed a new emotional or behavioral problem?

In the past 12 months:

51. Has a brother or sister died?

52. Has a sibling developed a new medical condition?

53. Has a sibling developed a new emotional or behavioral problem?

54. Has a relationship with a brother or sister changed for the worse?

55. Has a brother or sister had a serious accident or injury?

56. Has a brother or sister been hospitalized?

In the past 12 months:

57. Has your relationship with a relative changed for the worse?

58. Has a relative had a serious accident or injury?

59. Has a relative become very ill or had medical problems?

60. Has a relative had emotional or mental problems?
61. Has a relative died in the last year?  
62. Has a relative moved far away?  

**Yes**  **No**  **In the past 12 months:**  
63. Have you tried out for a team but did not make it?  
64. Have you got into trouble at school?  
65. Have you been suspended from school?  
66. Have you been held back a year in school?  
67. Have you been dropped by friends at school?  
68. Have you changed to a worse school?  

**Yes**  **No**  **In the past 12 months:**  
69. Has a friendship changed for the worse?  
70. Have you been dropped by a group of friends?  
71. Have you tried out for a club or team outside of school, but did not make it?  
72. Has a friend died?  
73. Has a friend moved away?  

**Yes**  **No**  **In the past 12 months:**  
74. Have you been rejected or turned down by someone you really liked?  
75. Have you broke up with a boyfriend or girlfriend?  
76. Has your relationship with a boyfriend or girlfriend changed for the worse?
APPENDIX D  
CENTER FOR EPIDEMIOLOGIC STUDIES (CES-D)

Directions: For the 20 items listed below, please fill in the answer that best describes how you have felt over the last week. It should look like this: •

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
<th>Rarely or None (&lt;1 Day)</th>
<th>Some or a little (1-2 Days)</th>
<th>Occasionally (3-4 Days)</th>
<th>Most or all of the time (5-7 Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I was bothered by things that usually don’t bother me.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2.</td>
<td>I did not feel like eating; my appetite was very poor.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3.</td>
<td>I felt that I could not shake off the blues even with the help from my family and friends.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4.</td>
<td>I felt that I was not as good as other people.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5.</td>
<td>I had trouble keeping my mind on what I was doing.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6.</td>
<td>I felt depressed.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7.</td>
<td>I felt that everything I did was an effort.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>8.</td>
<td>I felt hopeless about the future.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>9.</td>
<td>I thought my life had been a failure.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>10.</td>
<td>I felt fearful.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>11.</td>
<td>My sleep was restless.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>12.</td>
<td>I was unhappy.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>13.</td>
<td>I talked less than usual.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>14.</td>
<td>I felt lonely.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>15.</td>
<td>People were unfriendly.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>16.</td>
<td>I did not enjoy life.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>17.</td>
<td>I had crying spells.</td>
<td>•</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
18. I felt sad.  
19. I felt that people disliked me.  
20. I could not get “going”.  

<p>| | | | | |</p>
<table>
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</table>
APPENDIX E
FAMILY RELATIONS INDEX (FRI)

**Directions:** There are 27 statements on these pages. They are statements about families. You are to decide which of these statements are true of your family and which are false.

**True** – Fill in the circle under the “True” column when you think the statement is True or mostly True of your family.

**False** – Fill in the circle under the “False” column when you think the statement is False or mostly False of your family.

You may feel that some of the statements are true for some members and false for others. Fill in the circle under the “True” column if the statement is true for most members. Fill in the circle under the “False” column if the statement is false for most members. If the members are evenly divided, decide what is the stronger overall impression and answer accordingly.

Remember, we would like to know what your family seems like to you. So do not try to figure out how other members see your family, but do give us your general impression of your family for each statement.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>1. Family members really help and support one another.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2. Family members often keep their feelings to themselves.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. We fight a lot in our family.</td>
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<tr>
<td></td>
<td></td>
<td>4. We often seem to be killing time at home.</td>
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<tr>
<td></td>
<td></td>
<td>5. We say anything we want to around home.</td>
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<tr>
<td></td>
<td></td>
<td>6. Family members rarely become openly angry.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. We put a lot of energy into what we do at home.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. It’s hard to “blow off steam” at home without upsetting somebody.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Family members sometimes get so angry they throw things.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. There is a feeling of unity and cohesion in our family.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11. We tell each other about our personal problems.</td>
</tr>
</tbody>
</table>
12. Family members hardly ever lose their tempers.

13. We rarely volunteer when something has to be done at home.

14. If we feel like doing something on the spur of the moment we often just pick up and go.

15. Family members often criticize each other.

16. Family members really back each other up.

17. Someone usually gets upset if you complain in our family.

18. Family members sometimes hit each other.

19. There is very little group spirit in our family.

20. Financial matters are openly discussed in our family.

21. If there’s a disagreement in our family, we try hard to smooth things over and keep the peace.

22. We really get along well with each other.

23. We are usually careful about what we say to each other.

24. Family members often try to one-up or out-do each other.

25. There is plenty of time and attention for everyone in our family.

26. There are a lot of spontaneous discussions in our family.

27. In our family, we believe you don’t ever get anywhere by raising your voice.
**Directions:** Sometimes people have problems or feel upset about things. When this happens, they may do different things to solve the problem or make themselves feel better. For each item below, choose the answer that BEST describes how often you usually did this to solve your problems or make yourself feel better during the past month. There are no right or wrong answers, just indicate how often YOU USUALLY did each thing in order to solve your problems or make yourself feel better during the past month.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>You thought about what you could do before you did something.</td>
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<td></td>
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<tr>
<td>2.</td>
<td>You tried to notice or think about only the good things in your life.</td>
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<tr>
<td>3.</td>
<td>You tried to ignore it.</td>
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<td>4.</td>
<td>You told people how you felt about the problem.</td>
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<tr>
<td>5.</td>
<td>You tried to stay away from the problem.</td>
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<tr>
<td>6.</td>
<td>You did something to make things better.</td>
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<tr>
<td>7.</td>
<td>You talked to someone who could help you figure out what to do.</td>
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<tr>
<td>8.</td>
<td>You told yourself that things would get better.</td>
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<tr>
<td>9.</td>
<td>You listened to music.</td>
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<tr>
<td>10.</td>
<td>You reminded yourself that you are better off than a lot of other people.</td>
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<tr>
<td>11.</td>
<td>You daydreamed that everything was okay.</td>
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</tr>
<tr>
<td>12.</td>
<td>You went bicycle riding.</td>
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</tr>
</tbody>
</table>
13. You talked about your feelings to someone who really understood.

14. You told other people what you wanted them to do.

15. You tried to put it out of your mind.

16. You thought about what would happen before you decided what to do.

17. You told yourself that it would be OK.

18. You told other people what made you feel the way you did.

19. You told yourself that you could handle this problem.

20. You went for a walk.

21. You tried to stay away from things that made you feel upset.

22. You told others how you would like to solve the problem.

23. You tried to make things better by changing what you did.

24. You told yourself you have taken care of things like this before.

25. You played sports.

26. You thought about why it happened.

27. You didn’t think about it.

28. You let other people know how you felt.

29. You told yourself you could handle whatever happens.

30. You told other people what you would like to happen.
31. You told yourself that in the long run, things would work out for the best.

32. You read a book or magazine.

33. You imagined how you’d like things to be.

34. You reminded yourself that you knew what to do.

35. You thought about which things are best to do to handle the problem.

36. You just forgot about it.

37. You told yourself that it would work itself out.

38. You talked to someone who could help you solve the problem.

39. You went skateboarding or roller skating.

40. You avoided the people who made you feel bad.

41. You reminded yourself that overall things are pretty good for you.

42. You did something like video games or a hobby.

43. You did something to solve the problem.

44. You tried to understand it better by thinking more about it.

45. You reminded yourself about all of the things you have going for you.

46. You wished that bad things wouldn’t happen.

47. You thought about what you needed to know so you could solve the problem.

48. You avoided it by going to your room.
49. You did something in order to get the most you could out of the situation.

50. You thought about what you could learn from the problem.

51. You wished that things were better.

52. You watched TV.

53. You did some exercise.

54. You tried to figure out why things like this happen.
APPENDIX G
MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE (MCSDS)

Directions: For each of the following statements, please completely fill in the answer you consider to be True (T) or False (F).

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I never hesitate to go out of my way to help someone in trouble.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I have never intensely disliked anyone.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. I sometimes feel resentful when I don’t get my way.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I like to gossip at times.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. There have been times when I felt like rebelling against people in authority even though I knew they were right.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. I can remember “playing sick” to get out of something.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7. There have been occasions when I took advantage of someone.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8. I’m always willing to admit it when I make a mistake.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>10. I sometimes try to get even, rather than forgive and forget.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>11. When I don’t know something I don’t at all mind admitting it.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>12. I am always courteous, even to people who are disagreeable.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>13. At times I have really insisted on having things my way.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>14. There have been occasions when I felt like smashing things.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>15. I would never think of letting someone else be punished for my wrong-doings.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>16. I never resent being asked to return a favor.</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>17. I have never been irked when people expressed ideas very different from my own.</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
18. There have been times when I was quite jealous of the good fortune of others.

19. I am sometimes irritated by people who ask favors of me.

20. I have never deliberately said something to hurt someone’s feelings.
APPENDIX H
INVITATION LETTER

Dear Patient:

Thank you for your sustained interest in our research project. We are a Research Team, supervised by Dr. Carolyn M. Tucker, Distinguished Alumni Professor at the University of Florida. The purpose of this project is to teach young people ways to live more healthy lives.

Participation in this study involves you and your adolescent completing a set of questionnaires. Although we do not believe that completing these questionnaires will cause you any harm, you do have the right to skip any questions that you find offensive and you have the right to stop completing a questionnaire if it makes you feel uncomfortable.

You will be asked to complete these same questionnaires again in approximately five months. If you choose to complete the questionnaires again, you will again receive compensation for your time. Both you and your adolescent will be compensated for completing the questionnaires. You may decide later whether or not you would like to complete the questionnaires again.

Your participation in this research project is voluntary. If you experience any discomforts with completing these questionnaires, you may call Dr. Carolyn M. Tucker, at (352) 392-0601 ext. 260, and/or the University of Florida Institutional Review Board (IRB) Office at (352) 846-1494 to discuss your concerns.

Your information will not be shared with your doctor or other members of the health care staff at your clinic. Also, your name will not be placed on any of the questionnaires that you complete. Instead, the information from you will be assigned a code number. The list of names that identify these codes will be kept in a separate locked location from the information that you provide us with. The questionnaires that you provide will be destroyed as soon as all information from you and other participants has been gathered. All this information will be locked in file cabinets in Dr. Tucker's lab in the psychology building at the University of Florida. All information from participants will be combined so that no one can identify your information.

In return for your participation in our study, you will be mailed a payment of $20 within three (3) weeks of when we receive your completed questionnaires and ‘payment release form’.

Please sign the Informed Consent Form and have your adolescent sign the Adolescent Assent Form. Also, in addition to completing the questionnaires, sign and return the completed ‘Payment Release Form’. We need your name, address, and social security number requested on this form so that we can send you a check for $20. Your signed Informed Consent Form and Payment Release Forms will be locked in a separate file cabinet from the locked file cabinet in which your completed questionnaires will be kept. This will be done to further protect your confidentiality.

In order to participate, please complete the enclosed questionnaires and ‘Payment Release Form’, then return them by mail in the pre-paid reply envelope provided. This should only take about an hour. If you need help completing the questionnaires, you may ask a family member or friend to read them to you; however, we only want your answers to the questions. You may also call Dr. Carolyn M. Tucker at (352) 392-0601, Ext. 260 to set up an appointment.
to have a Research Assistant read the questionnaires to you at the health care clinic that you attend.

If you have any questions about this research project, please call a member of our research team at the (352) 392-0601 ext. 260. We are looking forward to your participation.

Sincerely,

Dr. Carolyn M. Tucker
Distinguished Alumni Professor
Professor of Psychology
Professor of Pediatrics
Professor of Community Health and Family Medicine
Informed Consent to Take Part in Research
and Authorization for Collection, Use, and Disclosure of Protected Health Information
(Parents/Caregivers - CMS)

You are being asked to take part in a research study. This form provides you with information about the study and seeks your authorization for the collection, use and disclosure of your protected health information necessary for the study. The Principal Investigator (the person in charge of this research) or a representative of the Principal Investigator will also describe this study to you and answer all of your questions. Before you decide whether or not to take part, read the information below and ask questions about anything you do not understand. Your participation is entirely voluntary.

1. Name of Parent/Caregiver Participant (please print):

____________________________________________________________
Last name   First name           Middle name

2. Title of Research Study

The Children’s Health Self-Empowerment Project

3a. Principal Investigator and Telephone Number(s):
Carolyn M. Tucker, Ph.D.
University of Florida
Distinguished Alumni Professor
Professor of Psychology and Director of Training
Professor of Pediatrics
Professor of Community Health and Family Medicine
352-392-0601 Ext. 256

3b. Co-Investigator
4. **Source of Funding or Other Material Support**

The State of Florida Department of Health, Division of Children’s Medical Services, is funding this research.

5. **What is the purpose of this research study?**

The goal of this project is to teach young people ways to live more healthy lives. The project will involve both teenagers and their parents or guardians. The people who take part in the project will be African American, Hispanic/Latino(a) American and Caucasian American. Teenagers who take part in the study will be patients at Children’s Medical Services (CMS). There will be about 270 teenagers who will take part in this project. One parent or guardian will take part with each teenager, so there will be about 270 adults taking part in this project.

Another goal of this project is to teach ways to live more healthy lives to a group of African American teenagers who took part in a neighborhood after school program. The teenagers’ parent or guardian will also take part. If these teenagers want to take part, they must tell us that they are overweight and/or have high blood pressure. They might also say that their parent or guardian is overweight and/or has high blood pressure. There will be 25 teenagers and 25 adults in this group.

**The project will use 3 workshops to teach:**

1. ways to eat healthier, exercise, and worry less.
2. ways to not fight, not use drugs and alcohol, and not have protected or unprotected sex.
3. ways to lose weight if they are overweight.
4. ways to lower their blood pressure if they have high blood pressure.
5. ways to lower their blood sugar levels if they have diabetes.

**The project will also ask teenagers who have CMS health care providers and their parents or guardians:**

1. What behaviors and attitudes of their CMS Nurse Care Coordinators, doctors, nurses, and clinic staff can make them feel:
   a) more comfortable
   b) more respected
   c) more trusting

2. how the waiting room and doctors exam room of the clinic can make them feel:
a) more comfortable  
b) more respected  
c) more trusting  

6. What will be done if you take part in this research study?

You are being invited to take part in this project because your child:
1. Is 12 to 17 years old.
2. Is a patient of Children’s Medical Services (CMS).

This project has two parts: Part I and Part II. If you want to take part in this project, you will be chosen for only one of the two parts. Here is what will happen in each of the two parts:

Part I. If you are chosen to be in this part of the project, you will be asked to:

1. answer questions about your child’s Nurse Care Coordinator, doctors, nurses, and clinic staff. The questions will ask what these persons can do to make you feel:
   a) more comfortable  
b) more respected  
c) more trusting of them  

2. rate how important some behaviors and attitudes are to make you feel:
   a) more comfortable  
b) more respected  
c) more trusting of them  

3. answer some true or false questions about yourself

It should take about one hour to answer all of these questions. Your name and your child’s name will not be put on any of your answers to the questions that you are asked to fill out. Instead of using your name we will give you a code. We will write this code on all of the research forms to protect your privacy. None of your child’s CMS Nurse Care Coordinators, doctors, nurses, or clinic staff will see your answers. These persons will also not be told if your family is taking part in the project.

If you are chosen to take part in Part I, you will get a packet in about 3 weeks. You will be asked to fill out the forms and send them back to us in about 2 weeks. We will send the packet after we get your completed and signed Informed Consent Form. Once you finish the packet and send it to the CHSE research team you should get paid in about 3 weeks (go to item number 10 on page 8 to learn about getting paid for taking part in this research). The total time you could be asked to take part in this research is about 3 months.

A person from the CHSE research team may call you if the packet is not completed and sent back to us in about 2 weeks. This call will be made to make sure that you
got the packet. You may also be called after you send your packet to us. A person from the CHSE research team may call you if some of the information is missing. When we call, if you do not want to answer the questions you do not have to.

All information about you will be kept private. All information about you will be given a code to make this information private. Your name will be kept in a locked file cabinet in the Psychology building at the University of Florida. None of your child’s CMS Nurse Care Coordinators, doctors, nurses, or clinic staff will be told if you are in this project.

Part II: If you are chosen for this part of the project, you will be asked to:

1. take part in 3 health workshops. Each workshop will be about 4 hours long. The health workshops will teach you things like:
   - how to have less family worry and sadness
   - how to make and eat healthier food
   - how to exercise more and worry less
   - the risks of having unprotected and protected sex, and so on.

You will be asked to take part in all of the workshop activities. You can choose not to take part in any activity that makes you feel uncomfortable. You can also choose not to finish any activity that you may have started.

2. answer some questions about things like:
   - your health behaviors and beliefs
   - how your family deals with worry and sadness
   - if you have unprotected sex
   - smoking
   - drug use
   - alcohol use
   - violent behaviors
   - if you have tried to kill yourself
   - if you exercise
   - what kinds of foods you eat
   - how motivated you are
   - whether some questions about you are true or false

If you have problems or need help with these things, please talk to your doctor. We will not be able to help you. Your answers to these questions will be kept private.

It should take you about two hours to answer all of the questions. You should take breaks when filling out the forms so that you do not get tired.
Please try to work on the forms for only 45 minutes at a time. Then take at least a 2-hour break before working some more on finishing the forms.

Your name will not be put on any of the questions or forms you fill out. Instead of using your name we will give you a code. We will write this code on all of the forms that you fill out to protect you and your child’s privacy. None of your child’s CMS Nurse Care Coordinators, doctors, nurses, or clinic staff, will see your answers. They will not be told if your family is taking part in the project.

There will be 2 different groups in Part II. If you are chosen to take part in Part II, you will be put in only one of the groups.

- **Part II Intervention Group**
  - About 3 weeks after we get your completed Informed Consent Form you will get your first packet of questionnaires and forms.
  - Once you finish the packet and send it to the CHSE research team you should get paid in about 3 weeks (go to item number 10 on page 8 to learn about getting paid for taking part in this research).
  - About 2 months later you will be asked to take part in the 3 workshops.
  - The 3 workshops will be about 3 weeks apart. Each workshop will be about 4 hours long. You should get paid about 3 weeks after you go to the 3rd workshop (go to item number 10 on page 8 to learn about getting paid for taking part in this research). You will need to go to all 3 workshops to get paid.
  - About 6 months after the 3rd workshop you will get your 2nd packet of questionnaires and forms.
  - Once you finish the packet and send it to the CHSE research team you should get paid in about 3 weeks (go to item number 10 on page 8 to learn about getting paid for taking part in this research).

This means that if you are chosen to be in the Part II Intervention Group you would take part for about 9 months.

- **Part II Control Group**
  - About 3 weeks after we get your completed Informed Consent Form you will get your first packet of question forms.
  - Once you finish the packet and send it to the CHSE research team you should get paid in about 3 weeks (go to item number 10 on page 8 to learn about getting paid for taking part in this research).
  - About 9 months later you will get your 2nd packet of questionnaires and forms.
  - About 3 weeks later you will be asked to take part in the 3 workshops.
  - The 3 workshops will be about 3 weeks apart. Each workshop will be about 4 hours long. You should get paid about 3 weeks after you go to the 3rd workshop (go to item number 10 on page 8 to learn about
getting paid for taking part in this research). You will need to go to all 3 workshops to get paid.

- About 6 months after the 3rd workshop you will get your 3rd packet of questionnaires and forms.
- Once you finish the packet and send it to the CHSE research team you should get paid in about 3 weeks (go to item number 10 on page 8 to learn about getting paid for taking part in this research).

This means that if you are chosen to be in the Part II Control Group you would take part for about 18 months.

A person from the CHSE research team may call you if a packet is not sent back in about 2 weeks. This call will be made to make sure that you got the packet. You may also be called after you send a packet to us. A person from the CHSE research team may call you if some of the information is missing. When we call, if you do not want to answer the questions you do not have to. Lastly, a person from the CHSE research team may call to remind you about upcoming project activities.

All information about you will be kept private. All information about you will be given a code. Your name will be kept in a locked file cabinet in the Psychology building at the University of Florida. None of your child’s CMS Nurse Care Coordinators, doctors, nurses, or clinic staff will be told if you are in this project.

7. **What are the possible discomforts and risks?**

If you want to take part in this research, there should be no physical or psychological risks to you.

Some of the questions that will be asked may make you feel uncomfortable. If you do feel uncomfortable, please feel free to skip the questions that caused this feeling. During the study we will tell you of any changes in the risk of you taking part in the research. We will also tell you about any information that may change your wanting to take part in the study.

If you want to talk about the information above or any worries you may have, please call the Principal Investigator of the research, Dr. Carolyn M. Tucker. Dr. Tucker’s phone number is (352) 392-0601 Ext. 256.

8a. **What are the possible benefits to you?**

If you are chosen for Part I, there is no instant or direct benefit to you.

If you are chosen for Part II, you may gain helpful ways to make healthy life choices. Your family may gain from learning how to deal with worries and disputes better in the health workshops.
8b. **What are the possible benefits to others?**

Your answers to the questions during the study will be joined with the answers of the other people in the study. When put together, your answers may help other people. They may help teach teenagers and their parents or guardians ways to live healthier lives. Your answers may also help teach CMS Nurse Care Coordinators, doctors, nurses, and clinic staff helpful ways to give better health care to all of their patients. These results may also raise patients’ liking of the health care that they get.

9. **If you choose to take part in this research study, will it cost you anything?**

No, this research will not cost your family any money.

10. **Will you receive compensation for taking part in this research study?**

Yes. How much you will get paid depends on the part of the study you take part in. **You cannot choose the part of the study that you will take part in.** The amount of money that will be paid to you (and your child) for taking part in the research study is explained below:

1) Each family (you and your child together) in Part I who fill out and send back the question form packet will get a total of $20.

2) Each family (you and your child together) in Part II who is asked to take part in the intervention group and who fill out and send back the question form packet will get $20. Each family is asked to do this 2 times for a total of $40. You will get another $40 for going to all 3 workshops. So, each family in the intervention group will get a total of $80.

3) Each family (you and your child together) in Part II who is asked to take part in the control group and who fill out and send back the question form packet will get $20. Each family is asked to do this 2 times for a total of $40. You will get another $40 for going to all 3 workshops. After the 3 workshops you will be asked to fill out and send back the question form packet a 3rd time. You will get an extra $10 for doing this. So, each family in the control group will get a total of $90.

***Please Note: You will not get paid for sending us back this Informed Consent Form and the Adult Information Questionnaire. The question forms you will get paid for filling out will be sent to you after you agree to take part in the project.***

In order to pay you, we will have to give your name and social security number to the people at the University of Florida who write the checks. They will also write down that you have been paid. **You will get paid about 3 weeks after we get each of your packets. You will also get paid about 3 weeks after you go to all 3 workshops. If**
you stop taking part during the research study, you will only be paid for the parts that you took part in.

11. What if you are injured because of the study?

If you get hurt as a direct result of this study, you can be seen by a professional consultant at the University of Florida Health Science Center free of charge. But, hospital bills will have to be paid by you or your insurance provider. No other payment for being injured is offered.

12. What other options or treatments are available if you do not want to be in this study?

We do not know of any other options or treatments that are available to you if you do not want to be in this study.

13a. Can you withdraw from this research study?

Yes, you may stop taking part in or decide not to take part in this study at any time. If you do choose to stop taking part in the middle of the study,

- you will not be punished
- your child will not be punished
- you will still be paid for the parts that you took part in

If you decide to stop taking part in the middle of the study for any reason, you should contact Dr. Tucker, the Principal Investigator, at (352) 392-0601 ext. 256.

If you have any questions regarding your rights as a research subject, you may phone the Institutional Review Board (IRB) office at (352) 846-1494 or the Florida Department of Health Review Council for Human Subjects at (850) 245-4585, or toll free in Florida at (866) 433-2775.

13b. If you withdraw, can information about you still be used and/or collected?

Yes.

- Any information collected about you can be used for further research purposes.
- Any information given directly to us by you can be used for further research purposes.
- Only information collected before your decision to no longer take part in this research study will be used.
- No further information will be collected after you decide to stop taking part in this research study.
13c. Can the Principal Investigator withdraw you from this research study?

Yes, we may not allow you to stay in the study if:

1) You do not return this Informed Consent Form (or contact the principal investigator) within two weeks of getting it.
2) You do not send us the question sheets we send you to fill out within two weeks of getting them.
3) You are sent to jail or prison for more than one month while you are in the study.
4) The Principal Investigator (Dr. Tucker) gives you a job while you are in the study.
5) You do not meet the rules for taking part in the study. If you are not sure about these rules, please call the Principal Investigator (Dr. Tucker) at (352) 392-0601 Ext. 256.
6) The Principal Investigator (Dr. Tucker) or Co-Investigator (Ms. Surrency) think that you might be hurt if you stay in the study.
7) The study is stopped by the State of Florida Department of Health and/or is stopped for other administrative reasons.

14. How will your privacy and the confidentiality of your protected health information be protected?

To keep your privacy:
- your Informed Consent Forms which identify you will be separated from your Adult Information Questionnaire
- both will be locked in separate filing cabinets in the Psychology Building at the University of Florida.
- a 3-digit number code followed by a “P” for parent will be placed on your questionnaires in place of your name.
- the master-list that identifies you will be kept in a separate key-locked filing cabinet in Dr. Tucker’s office in the Psychology Department at the University of Florida.

If you take part in this research, your private health information will be collected, used, and shared under the terms specified in sections 15–24 below.

15. If you agree to participate in this research study, what protected health information about you may be collected, used and disclosed to others?

To find out if you can be in the study, the following information may be collected, used, and shared with others:
- Your name, address, and phone number (which will not be shared with others)
- Your age and ethnicity
- Your answers to the questions that you will be asked to complete
16. **For what study-related purposes will your protected health information be collected, used and disclosed to others?**

No personal protected health information will be given out. All of your information will be joined with other people’s information. Your protected health information will be collected to make a general report. Your protected health information will be used to find out if you are eligible for our study. Your information added to information from others to report how useful the workshops are for helping people (teenagers and parents or guardians) with:

- lowering blood pressure
- lowering body weight
- lowering blood sugar level
- lowering drug use, violence, and unprotected sex in teenagers
- helping people to exercise, eat healthy foods, and worry less.

17. **Who will be authorized to collect, use and disclose to others your protected health information?**

Your private health information may be collected, used, and shared with others by:

- Dr. Carolyn M. Tucker, Ms. Sharon Surrency, and Dr. Tucker’s research staff (Dr. Frederic Desmond, Dr. Keith Herman, Christopher Mack, Kellie Hyde, Phyllis Ivery, Rachelle Studer, and Cynthia Karlson)
- Other professionals at the University of Florida or Shands Hospital that provide study-related treatment or procedures
- The University of Florida Institutional Review Board
- The Florida Department of Health Review Council for Human Subjects

18. **Once collected or used, whom may your protected health information be disclosed to?**

Your protected health information may be given to:

a. The Florida Department of Health Review Council for Human Subjects

b. US and foreign governmental agencies who are responsible for overseeing research, such as the Food and Drug Administration, the Department of Health and Human Services, and the Office of Human Research Protections

c. Government agencies who are responsible for overseeing public health concerns such as the Centers for Disease Control and Federal, State and local health departments

19. **If you agree to participate in this research, how long will your protected health information be collected, used and disclosed?**
Your private health information may be collected, used, and shared until the end of our study. The subject identifiers will be removed at the end of the study and the information will be maintained in a secure database forever.

20. **Why are you being asked to authorize the collection, use and disclosure to others of your protected health information?**

Under a new Federal Law, researchers cannot collect, use or share any of your private health information. Researchers must get you to allow them to do so by having you sign this consent form.

21. **Are you required to sign this consent and authorization and allow the researchers to collect, use and disclose (give) to others of your protected health information?**

No. If you do not want them to get your private health information, do not sign this consent form. It will not change anything of yours outside of this research study. **If you do not sign this consent, you cannot take part in the research study. If you do not send this consent form back to us, you will not be contacted again.**

22. **Can you review or copy your protected health information collected, used or disclosed under this authorization?**

Yes. You have the right to look at and copy your private health information. But, you will not be allowed to do so until after the study is done.

23. **Is there a risk that your protected health information could be given to others beyond your authorization?**

Yes. There is a small risk that information given to the researchers could be given to others. It would be outside of your control and not covered by the law.

24. **Can you revoke (cancel) your authorization for collection, use and disclosure of your protected health information?**

Yes. You can stop allowing the collection, use, and sharing of your private health information at any time. It could be before, during or after you take part in the research. No new information will be collected about you after you tell us to stop. If information was already collected it may still be used and shared with others. You can tell the researchers to stop collecting information by writing to us and signing your name.

25. **How will the researcher(s) benefit from your being in this study?**

In general, doing research helps the career of a scientist. So, Dr. Carolyn M. Tucker and her research team may benefit. They will benefit if the results of the study are shown at scientific meetings or in scientific journals.
26. Signatures

As the Principal Investigator of this study, I have shared with you:

- the goals
- the things that you will have to do if you want to take part
- the possible benefits
- the risks of this research study
- the other options to being in the study
- how your private health information will be collected, used, and shared.

______________________________________________   _______
Carolyn M. Tucker, Ph.D. (Principal Investigator)                  Date

As the person who wants to take part in this study, you agree that you have been told about:

- the goals
- the things that you will have to do if you want to take part
- the possible benefits
- the risks of this research study
- the other options to being in the study
- how your private health information will be collected, used, and shared.

You have been given the chance to ask questions before you sign. You have also been told that you can ask other questions at any time.

You voluntarily agree to take part in this study. By signing this Form, you are allowing the collection, use, and sharing of your private health information. This is described in sections 15-24 above. By signing this Form, you are not giving up any of your legal rights.

__________________________________________      _________
Parent/Guardian Signature       Date
APPENDIX J
ADOLESCENT ASSENT FORM

You are being asked to take part in a research study. The goal of the project is to teach young people ways to live more healthy lives. The project will involve both teenagers and their parents (or guardians). There will be about 270 teenagers who will take part in this project. One parent or guardian must take part with each teenager. Most of the teenagers who take part in this project will be patients at Children’s Medical Services. To take part in this project you will need to be African American, Caucasian American, or Hispanic/Latino(a) American.

Your parent must give permission for you to be in this study, but you can make up your own mind whether or not you want to take part in it.

1. What is the name of the research project?

   The name of the project is the Children’s Health Self-Empowerment Project (CHSE).

2. Who is in charge of the project?

   Dr. Carolyn M. Tucker is in charge of the project. Dr. Tucker works at the University of Florida. A group of university students help Dr. Tucker with the project.

3. Why are you being invited to take part in this project?

   You are being invited to take part in this project because you:
   1. are 12 to 17 years old
   2. are a patient of Children’s Medical Services

4. What will you be asked to do if you want to take part in this project?

   There are two parts of the project, Part I and Part II. You will be asked to take part in only one of the two parts of the project. You cannot choose which part you want to be in.

   **Part I.** If you are chosen to be in this part I of the project, you will be asked to:

   2. answer questions about your Nurse Care Coordinator, doctors, nurses, and clinic staff. The questions will ask what they can do to make you feel:
      d) more comfortable
      e) more respected
      f) more trusting of them

   3. rate how important some behaviors and attitudes are to make you feel:
      d) more comfortable
      e) more respected
f) more trusting of them

3. answer some true or false questions about yourself

If you are chosen to take part in Part I, you will get a packet of question forms in about 3 weeks. We will send the question forms after we get your completed and signed Assent Form. You will be asked to fill out the forms and send them back to us in about 2 weeks.

If you are chosen to be in Part I, you will be in the project for about 3 months.

**Part II:** If you are chosen for this part of the project:

1. You will be asked to take part in 3 health workshops. Each workshop will be about 4 hours long. The health workshops will teach you things like:
   - how to have less family worry and sadness
   - how to make and eat healthier food
   - how to exercise more and worry less
   - the risks of having unprotected sex and protected sex, and so on.

   You will be asked to take part in all of the workshop activities. You can choose **not** to take part in any activity that makes you feel uncomfortable. You can also choose not to finish any activity that you may have started.

2. You will be asked to answer some questions about things like:
   - your health behaviors and beliefs
   - how your family deals with worry and sadness
   - if you have unprotected sex
   - smoking
   - drug use
   - alcohol use
   - violent behaviors
   - if you have tried to kill yourself
   - if you exercise
   - what kinds of foods you eat
   - how motivated you are
   - whether or not some questions about you are true or false

   If you have problems or need help with these things, please talk to your doctor. We will not be able to help you. Your answers to these questions will be kept private.
There will be 2 different groups in Part II. If you are chosen to take part in Part II, you will be put in only one of the groups.

- **Part II Intervention Group**
  - About 3 weeks after we get your completed Assent Form you will get your first packet of question forms.
  - About 2 months later you will be asked to take part in the 3 workshops. At the workshops, trained nursing students will collect your height, weight, and blood pressure.
  - Each workshop will be about 4 hours long.
  - About 6 months after the 3rd workshop you will get your 2nd packet of question forms.
    - At this time you may be asked to go to your local Health Department or to a central location to have your height, weight, and blood pressure taken.

This means that if you are chosen to be in the Part II Intervention Group you would take part in the project for about 9 months.

- **Part II Control Group**
  - About 3 weeks after we get your completed Assent Form you will get your first packet of question forms.
  - At this time you may be asked to go to your local Health Department or to a central location to have your height, weight, and blood pressure taken.
  - About 9 months later you will get your 2nd packet of question forms.
  - About three weeks later you will be asked to take part in the 3 workshops. At the workshops, trained nursing students will collect your height, weight, and blood pressure.
  - Each workshop will be about 4 hours long.
  - About 6 months after the 3rd workshop you will get your 3rd packet of question forms.
    - At this time you may again be asked to go to your local Health Department or to a central location to have your height, weight, and blood pressure taken.

This means that if you are chosen to be in the Part II Control Group you would take part in the project for about 18 months.
5. Will you get paid for taking part in this project?

Yes. How much you will get paid depends on the part of the study you take part in. You cannot choose the part of the study that you will take part in. The amount of money that will be paid to you and your parent or guardian for taking part in the research study is stated below:

1) Each family (your child and you together) in Part I that fills out and sends back the question forms we send you will get a total of $20.

2) Each family (you and your child together) in the Part II intervention group that fills out and sends back the question forms we send you will get $20. Each family is asked to fill out questions forms two times for a total of $40. Each family will get another $40 for going to all 3 workshops. So, each family in the Part II intervention group will get a total of $80.

3) Each family (you and your child together) in the Part II control group that fills out and sends back the question forms we send you will get $20. Each family is asked to fill out question forms two times for a total of $40. Each family will get another $40 for going to all 3 workshops. After the 3 workshops each family will be asked to fill out question forms a third time. Each family will get an extra $10 for doing this. So, each family in the Part II control group will get a total of $90.

4) Each child that goes to her or his local Health Department or a central location to have her or his height, weight, and blood pressure taken will be given a gift certificate to a local business.

***Please Note:*** You will not get paid for sending us back this Informed Consent Form and the Adult Information Questionnaire. The question forms you will get paid for filling out will be sent to you after you agree to take part in the project. You will get paid about 3 weeks after we get each of your packets of question forms. You will also get paid about 3 weeks after you go to all 3 workshops. If you stop taking part during the research study, you will only be paid for the parts that you finished.

6. What information will we ask about you?

If you are chosen to be in the project, we will need to get your grade point average (GPA). We will get it from the school board where you go to school. By signing this form, you are telling us that it is okay to get your GPA. We will also ask Children’s Medical Services Nurse Care Coordinators to give us the following medical information from your Children’s Medical Services medical chart:

- medical diagnosis
body weight
height
blood pressure
blood sugar level
only medications that you are taking for your medical diagnosis
your social security number (to check your grades)
the name of your Nurse Care Coordinator.
the name of your regular doctor’s clinic

This is the only information about you that our research team will get from Children’s Medical Services. This information will be used for research reasons only. We will only get this information during the time the research study is going on. By signing this form, you are telling us that it is okay for us to get your medical information.

7. How long will it take to answer the questions in the packets we send to you?

    Part I: It should take you about one hour to answer all of these questions.

    Part II: It should take you about two hours to answer all of the questions.

You should take breaks when filling out the forms so that you do not get tired. Please try to work on the forms for only 45 minutes at a time. Then take at least a 2-hour break before working some more on finishing the forms. You should work on the question forms in a quiet place, away from other people. This is so that no one else will see your answers. That way you will be able to answer the questions honestly.

8. Will we call you during the project?

A person from the research team may call you if you do not send a packet back to us within 2 weeks of getting it. This call will be made to make sure that you got the packet. You may also be called after you send a packet to us. A person from the CHSE research team may call you if some of the information is missing. When we call, if you do not want to answer the questions, you do not have to. Lastly, a person from the CHSE research team may call to remind you about upcoming project activities.

9. Will all of your information be kept private?

Yes. All information about you and your parent or guardian will be kept private. All information about you will be given a code to make this information private. Your name will
be kept in a locked file cabinet in the Psychology Building at the University of Florida. None of your CMS Nurse Care Coordinators, doctors, nurses, or clinic staff will be told if you are in this project.

10. Tell us what you would like to do by putting an “X” in only one of the boxes below:

- I agree to take part in this study.
- I do **not** want to take part in this study.

_________________________________________     __________
Print your name here       Date

_________________________________________     __________
Sign your name here       Date
APPENDIX K
PAYMENT RELEASE FORM

Please give us the information below. We will need some of the information so we can get in touch with you and mail you your payment for taking part in the research. We need your social security number so you can get paid for taking part in the study. All of this information will be kept private as stated in Section 14 of this Informed Consent Form. Please write large and as neatly as possible. Feel free to call Dr. Carolyn M. Tucker at 352-392-0601 Ext. 256, if you feel your information may be hard to read.

Primary Parent/Caregiver’s name (Please Print)

____________________ ____________________
Social Security Number of Primary Parent/Caregiver

Are you a UF employee? Yes (or) No

Phone Number(s):

Home: ________________________  Cell:  _________________________
(Area code)  Number (Area code)  Number

Other: ________________________
(Area code)  Number

Your Mailing Address:

___________________________________________________
(Street or Post Office Box)

________________________________
(City) (State) (Zip Code)

(Parent or Guardian Signature)
LIST OF REFERENCES


BIOGRAPHICAL SKETCH

Phyllis Diana Ivery is a graduate of the University of Florida’s Counseling Psychology Doctoral Program. She received her undergraduate degree from Armstrong State College in 1996 with a Bachelor’s of Science in psychology. She is currently employed as a Coordinator of Clinical Services and therapist at a small liberal arts college in middle Georgia.