ADJUSTMENT TO COLLEGE: THE RELATIONSHIP AMONG FAMILY FUNCTIONING, STRESS, AND COPING IN NON-RESIDENTIAL FRESHMEN STUDENTS

by

DALIA RIVKA GEFEN

A dissertation submitted to the Graduate Faculty in Educational Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2010

This manuscript has been read and accepted for the
Graduate Faculty in Educational Psychology in satisfaction of the
dissertation requirement for the degree of Doctor of Philosophy

Marian C. Fish, Ph.D.

_____	_____
Date	Chair of Examining Committee

Mary Kopala, Ph.D.

_____	_____
Date	Executive Officer

_____Marian C. Fish, Ph.D._____

_____Mary Kopala, Ph.D._____

_____Jay Verkuilen, Ph.D._____

Supervisory Committee

Outside Readers:

Ida Jeltova, Ph.D. & Bert Flugman, Ph.D.

THE CITY UNIVERSITY OF NEW YORK

Abstract

ADJUSTMENT TO COLLEGE: THE RELATIONSHIP AMONG FAMILY FUNCTIONING, STRESS, AND COPING IN NON-RESIDENTIAL FRESHMEN STUDENTS

by

Dalia Rivka Gefen

Advisor: Professor Marian C. Fish

This study examined the relationships among family functioning, stress, and coping strategies and their predictive utilities in student adjustment to non-residential colleges. Four research questions were explored: (a) What types of stressors do freshmen students in non-residential colleges face? (b) Is family functioning associated with specific coping strategies? (c) Do coping strategies mediate the relationship between perceived stress and freshmen student adjustment to college? (d) Do family functioning, perceived stress, and coping strategies predict freshmen student adjustment to college?

One hundred and sixty seven college freshmen (ages 18- 23) were recruited from the departments of psychology at two large urban commuter colleges in the Northeast. Participants completed an online survey that was composed of a demographic information sheet and 5 questionnaires. The Undergraduate Stress Questionnaire (USQ; Crandall, Preisler, & Aussprung, 1992) was used to measure life event stress in college students. The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) was used to measure self-appraised levels of stress experienced in the last month. The 56-item Young Adult Coping Orientation for Problem Experiences (YA-COPE; Patterson, McCubbin, & Grochowski, 1983) was used to assess coping styles of students. Students filled out the 42-item Family Adaptability and Cohesion Evaluation

Scales (FACES-IV; Olson, Gorall, & Tiesel, 2007) to measure family cohesion and adaptability. Students also filled out the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1984), a 67-item self-report measure that assesses adjustment to college across four domains: academic, social, personal/emotional, and goal commitment-institutional attachment.

Overall, results suggest that freshmen students experience a number of stressors related to academics, finances, personal relationships, and other issues. Balanced family functioning was associated with specific coping strategies, mainly ones that are problem-focused. Coping strategies did not mediate the relationship between perceived stress and adjustment to college. However, academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment were predicted by family functioning, stress, and specific coping strategies. Implications for personnel working with college freshmen such as mental health counselors are provided as well as directions for future research.

Dedication

To my dear parents who have instilled in me a passion for learning, intellectual curiosity, and the drive to achieve. Words cannot express my deep gratitude for your ongoing love and support throughout this journey.

Acknowledgements

I have been blessed to have wonderful people in my life. They have stood by my side in challenging times and have shared my accomplishments and joy. This work could not be possible without their support.

To my family, to the greatest sisters, Sheera and Tamar, and the best "brothers" Asael and Mayer, thank you for your love and encouragement. Ilana, your hugs, kisses, and the sound of your laughter makes a hard or even ordinary day amazing.

To my dearest friends, thank you for the love and laughter that have helped keep me sane. Amanda, Jen, and Jodi, I am lucky to have friends who are like sisters to me. To Elliot, thank you for the long conversations and coping strategies. Your words of encouragement have kept me strong and motivated. To Ori, thank you for the statistics tutorials, jokes, and above all- your belief in me. Thanks for being one of my biggest fans from the very beginning. I am eternally grateful to all of you for your friendship and support.

Thank you to John for sharing your knowledge of statistics with me and special thanks to Darsh for the countless times you met with me and gave me guidance and confidence.

To my dissertation chair, Dr. Fish, thank you for embracing my ideas and giving me your insights and guidance. Most of all, many thanks for pushing me to reach my goals.

To my committee members, Dr. Fish, Dr. Kopala, and Dr. Verkuilen, thank you for your wisdom and feedback. I am grateful to you for encouraging my intellectual growth and for promoting my development as an emerging researcher.

I share this accomplishment with my dear grandfather, Rabbi Dr. William Orentlicher (z"l). You are always in my heart and you are a constant reminder that there are no boundaries to what I can achieve.

TABLE OF CONTENTS

List of Tables

List of Figures

CHAPTER 1

Introduction

This chapter provides an overview of the literature on stress, how perceived stress is related to the student transition to college, coping and family functioning, and how these factors relate to college adjustment. This literature is integrated into a rationale for the present study using the theoretical model developed by Lazarus and Folkman (1987). A list of research questions is provided at the end of this chapter followed by a summary of results.

Stress has been a widely researched topic for many years. Researchers have differentiated between stressors and stress. Stressors are viewed as objective qualities of events or objects (Barling, 1990). Zeidner and Endler (1996) discuss various types of stressors which may consequently result in experiencing stress. They include cataclysms such as war, major life events such as illness, daily stressors such as work, ambient stressors such as extreme temperatures, and role strains such as taking on excessive responsibilities.

In contrast to stressors, stress is the subjective experience of the stressor (Barling, 1990). The physiological theory of stress that is often used in medicine and biology discusses the body's reaction and adaptation to stressors (Selye, 1976). According to this theory, stressors cause the body to enter the general adaptation syndrome. In a series of three different stages, the body gets alarmed by the stressor, adapts to the stressor, and then can or cannot effectively fight against the stressor. If it cannot fight, physical and/or mental health may be affected.

Traditional psychological theory views stress as the relationship between an individual and an environment that is perceived as stressful (Lazarus & Folkman, 1984). Central to Lazarus and Folkman's (1987) transactional theory of stress and coping is the notion of appraisal. There are three possible ways to primarily appraise a potentially stressful encounter: harmful,

threatening, and/or challenging (Lazarus, 1999). During secondary appraisal, the individual must evaluate his or her coping resources and abilities. According to Lazarus and Folkman (1984, 1987) perceived stress is an outcome of the stressor and appraisal. These factors, in addition to coping strategies, consequently influence psychological outcomes and emotions.

The transition to college can be viewed as one type of life event stressor in late adolescent development. Research has demonstrated that this period is stressful for many students (Lu, 1994). Numerous negative psychological symptoms such as loneliness, depression, and anxiety are common in this population Students also experience changes in eating and sleeping habits (Ross, Neibling, & Heckert, 1999). The topic of college student stress is such an important one that the American College Health Association (ACHA) has devoted much research and attention to it over the past few years. Data collected for the "Healthy Campus 2010" plan found that college students had higher levels of stress than people in the same age group who did not attend college. Many students also reported dropping out of college due to high levels of stress (American College Health Association, 2007).

The stressors faced by college students are unique to this population. Several researchers have attempted to explore the types and nature of such stressors. Jackson and Finney (2002) cited financial changes, new work and school responsibilities, and changes in interpersonal and family relationships as stressors faced by college students. Ross et al. (1999) found that changes in sleeping and eating habits, vacations and breaks, academic work load, and new responsibilities were sources of stress in a sample of 100 Midwestern college students who lived on campus. Misra and McKean (2000) found that high levels of stress stemmed from competition, meeting deadlines, and interpersonal relationships in a different sample of residential college students.

In another study (Dusselier et al., 2005), chronic illness, sleep difficulties, and conflicts with roommates and faculty were significant predictors of stress, and women experienced more stress than men. Although these studies provide evidence for the variety of stressors and consequent stress experienced by college students, these results cannot be generalized to commuter colleges since the studies were conducted at colleges where students dorm. Most studies have also used small sample sizes with mostly Caucasian participants.

Empirical research suggests that the coping strategies that adolescents and young adults use may mediate the negative symptoms of stress. Coping resources such as social support and coping responses such as the actual efforts to deal with stressors are both important in the coping process. Coping responses can actually change the stressful situation, can control the meaning of the experience, or can control the stress itself. There are numerous ways of conceptualizing and defining coping such as engagement coping and disengagement coping (Compass et al., 2001) approach, avoidance, and behavioral coping (Ebata & Moos, 1991) and task-oriented, emotion-oriented, and avoidance coping (Higgins & Endler, 1995).

The most frequently cited theory of coping was developed by Folkman and Lazarus (1980, 1984). According to this theory, coping helps individuals maintain psycho-social adaptation during stressful periods. Coping involves both cognitive and behavioral efforts. The two most-frequently cited ways of conceptualizing coping are problem-focused vs. emotion-focused coping (Folkman & Lazarus, 1980). According to their transactional theory of stress and coping (1987), stress is a product of the environment and personal factors such as coping strategies. Any emotion felt as a result of stress is a consequence of the appraisal process (Lazarus & Folkman, 1984). For example, in a situation appraised as threatening, anxiety may be evoked. In a situation appraised as challenging, excitement may be evoked. In a situation

appraised as being harmful, anger may be evoked. Happiness may be evoked in a situation that is appraised as potentially beneficial.

Folkman and Lazarus (1985) studied their theory of emotion and coping in a sample of undergraduate students during three stages of a midterm exam. Students felt various emotions throughout the exam stages depending upon how the situation was appraised. Aside from this study, the connection between appraisal, coping, and emotion in college students under different types of stressors has not been widely researched.

Although there are differences in conceptualizing the coping process, it is clear that this topic has been widely researched in both adults and younger populations. The specific definition, types of coping, and the exact nature of the coping process have differed across studies. Although several definitions of coping exist, it seems that the basic distinction has been between approaching the stressful situation or avoiding it (Ebata & Moos, 1991). These categories are similar to the distinction between problem-focused and emotion-focused coping in that problem focused coping involves approaching the problem and trying to find a solution whereas emotion-focused coping involves avoiding the problem and trying to manage the emotions related to the stress (Lazarus & Folkman,1984). Although their work emphasized adults, Lazarus and Folkman (1987) provide a very useful framework for understanding coping in adolescents and young adults. Situational variables are clearly important in coping, as well as the person's appraisal of the situation. These factors contribute to how the stressful situation is handled and consequently experienced emotionally. However, the two categories of coping that Folkman and Lazarus (1980) posit are too broad and do not recognize the multidimensional nature of coping and the possibility that several different coping strategies can be used at once. Although the transactional theory of stress and coping (Lazarus & Folkman, 1987) is useful,

other ways of measuring coping in young adults may be more effective.

In response to the limitations of the transactional theory, researchers have developed other scales to measure coping in adolescents and young adults. However, several methodological issues exist with these scales such as the lack of generalizability of results across scales and the overly-broad categories of coping that are delineated by these researchers. Factor analysis techniques have revealed a different number of coping categories in each scale (Frydenberg & Lewis, 1991; Gamble, 1994; Halstead, Johnson, & Cunningham, 1993; Phelps & Jarvis, 1994). In some cases, the same scale has yielded a different number of factors when used in different studies (e.g., Patterson & McCubbin, 1987). It is evident that there is little consensus regarding the subtypes of coping strategies used by children, adolescents, and young adults. There is a need to examine the coping process in college students using the Lazarus and Folkman (1987) model as a theoretical framework with emphasis on exploring the multi-dimensional nature of coping.

Although there is no consensus regarding the definitions and subtypes of coping, the coping research provides ample support for the existence of a strong relationship between coping strategies and psychological outcomes in adolescents. This relationship has been studied in many different stressful contexts such as personal and parental illness, pain, family and peer conflicts, academic stress, sexual abuse, and terrorism (Compas et al., 2001). Results link favorable psychological adjustment in adolescents to problem-focused and approach methods of coping while avoidant coping strategies and emotion-focused strategies have been linked with negative psychological outcomes such as depression and anxiety (Herman-Stahl & Peterson, 1999; Holahan & Moos, 1987; Seiffge-Krenke, 1993). This relationship has also been found in college students (e.g., Holahan, Valentiner, & Moos, 1994). Chang and Strunk (1999) examined the role

of coping and appraisal on adjustment in a sample of undergraduate college students from a Midwestern public university. Dysphoria was significantly related to disengaged coping methods. However, primary appraisal was positively associated with disengaged coping, a finding that is inconsistent with the transactional model. This finding was attributed to different coping inventories used. Despite this limitation, dysphoria and adjustment in students was mediated by coping methods and appraisal.

Kariv and Heiman (2005) studied task-oriented vs. emotion-oriented coping strategies in a sample of students in universities and colleges in Israel. Students who engaged in more task-oriented coping strategies experienced lower levels of academic stress while higher levels of academic stress were associated with the use of emotion-oriented strategies. In another study, approach coping predicted academic adjustment and personal-emotional adjustment (Leong & Bonz, 1997). The strength of the relationships was weak, however, which suggests that other factors may mediate the relationship between coping and adjustment in college students.

Although the literature is replete with studies linking coping strategies to psychological outcomes, the emphasis has often been on college students in general without emphasis on first-year students. Regarding freshmen students, studies have often used students from other countries who were mostly Caucasian. Samples were used from private colleges and/or dormitory schools. Research indicates that the majority of American students who attend college do not dorm on campus. Horn and Berktold (1998) found that 86% of college students commute to campus. Thus, it behooves researchers to explore the nature of the coping process in this population of college students.

It has been widely demonstrated that coping occurs across and within contexts (Olson, 1986). Although the transition to college is not necessarily a family stressor, the family plays a

role in the student's coping process and consequent psychological well-being. Several researchers have documented the role that family functioning plays in the development of adolescents (e.g., Shek, 1997). Family functioning includes cohesion, the emotional bonding between family members, and family adaptability which is defined as a family's flexibility to change its relationship roles and rules (Olson, 1986). Researchers have found strong associations between low levels of family cohesion and adaptability and negative psychological outcomes such as depression, suicide, low self-esteem (Carbonell, Reinherz, & Giaconia, 1998; Kashani, Suarez, Luchene, & Reid, 1998) and high levels of eating disorders (Willo et al., 2003).

Family functioning has also been studied in college students. For example, Holmbeck, Grayson, and Wandrei (1993) found that high levels of adaptability and cohesion in students' families predicted fewer physical symptoms and lower levels of depression in students. Although this association has been studied in college freshmen, again most studies have used Caucasian participants. College campuses where students live away from home have also been used. There is a lack of research demonstrating the link between family functioning and psychological well-being in diverse populations of students who commute to non-residential colleges.

Empirical evidence suggests that family functioning is also strongly associated with the coping strategies that adolescents use. This association has been found in participants with a variety of stressors including Insulin Dependent Diabetes Mellitus (Hanson et al., 1989) and general daily hassles (Lohman & Jarvis, 2000). Adolescents who perceived their families as being high in cohesion and high in flexibility demonstrated more active coping styles. These results have also been demonstrated with participants from different countries such as Israel (Shulman, Seiffge-Krenke, & Samet, 1987) and China (Hamid, Nicholas, Xiao, & Chi, 2003). Stern and Zevon (1990) conducted similar studies in a sample of American adolescents.

Adolescents from families low in cohesion and high in conflict used more emotion-focused coping strategies. Adolescents from families high in cohesion and low in conflict used more problem-focused coping.

This relationship between family functioning and coping strategies has also been studied in college students. Perosa and Perosa (1993) found that clear boundaries, conflict resolution, and a lack of cross-generational alliances were associated with confronting problems and seeking help from family members. Although results suggested that coping strategies mediate family functioning, the sample was limited in diversity and primarily female. It was also unclear if students were living away from home or with their parents. In another study, students from families with lower levels of conflict, high levels of family coping, and those who used more active coping strategies showed higher levels of adjustment (Feenstra, Banyard, Rines, & Hopkins, 2001). Most participants were female, however, and researchers did not measure psychological symptoms.

It is clear that there is a link between family functioning and coping strategies. Coping methods such as problem-solving and engagement have been associated with high levels of family cohesion and adaptability; emotion-focused strategies and avoidance have been associated with low levels of cohesion and adaptability in students. It is also apparent that the literature lacks specific emphasis on freshmen college students. Studies have explored the nature of college students' family environment but have not used a diverse sample of students. In other cases, small sample sizes were used or samples from non-commuter schools. There is a need to explore the relationship between family functioning, coping, and psychological functioning in American commuter college freshmen students. Students who commute to college often live with their parents who may influence their coping strategies and psychological functioning in

ways that are different from students who dorm. Such research has important implications for the prevention of and intervention for psychological illness in commuter college freshmen who are a vulnerable population due to high stress levels.

In summary, there is an important need to examine stressors that affect college freshmen in commuter campuses and their levels of stress. Specifically, there is a particular necessity to explore the role of coping in mediating stress within the context of the family environment. Although several models and dimensions of coping exist, there is little consensus among researchers. Using the transactional theory of stress and coping (Lazarus & Folkman, 1987) as a framework for this study, specific coping strategies were explored using a coping scale designed specifically for use with college freshmen and one that contains many subscales of coping. Given the wealth of research that links healthy family functioning and active coping strategies with positive psychological functioning, this study added to the existing literature by incorporating family variables in a model of stress and coping in college freshmen. The present study also considered both negative and positive psychological functioning in assessing student outcomes following the transition to college. Assessing student strengths and weaknesses will enable researchers and practitioners to better advise and counsel college commuter freshmen during a stressful period in their lives.

Research Questions

In the present study, the following research questions were explored:

1. What types of stressors do freshmen students in non-residential colleges face?
2. Is family functioning associated with specific coping strategies in freshmen students?
3. Do coping strategies mediate the relationship between perceived stress and freshmen student adjustment to college?
4. What is the utility of family functioning, perceived stress, and coping strategies in predicting freshmen student adjustment to college?

It was hypothesized that balanced family functioning and problem-focused coping strategies would be positively correlated and that unbalanced family functioning and emotion-focused and avoidant coping strategies would be positively correlated. It was also hypothesized that coping strategies would mediate the relationship between perceived stress and student adjustment to college. The final hypothesis was that adjustment to college would be predicted by family functioning, perceived stress, and coping strategies.

Students reported experiencing numerous stressors, particularly those related to academics, finances, personal relationships, and other issues. Students with high levels of balanced family functioning experienced lower levels of perceived stress. Balanced family functioning was also associated with specific coping strategies, such as family problem-solving. Although coping strategies did not mediate the relationship between perceived stress and adjustment to college, subtypes of college adjustment were predicted by family functioning, perceived stress, and specific coping strategies. Important implications are provided for mental health care providers and other professionals who work with college freshmen.

CHAPTER 2

Literature Review

This chapter provides an overview of definitions of stressors and stress and their relationships to the college transition. This is followed by a description of the research pertaining to coping as it relates to adolescents and adults. Methodological issues and traditional ways of assessing coping are discussed. Research supporting the role of coping strategies in predicting psychological outcomes is presented, following the theoretical model of Lazarus and Folkman (1987). The critical role that family plays in development and adjustment is then discussed including the connection between family functioning and coping strategies. Finally, a theoretical model of stress, coping, and family functioning is presented.

Stressors and Stress

It is necessary to define and differentiate between stress and stressors. Barling (1990) broadly defines stressors as situations or events that may potentially affect health outcomes. Zeidner and Endler (1996) present five general categories of stressors: (a) Cataclysms are sudden events such as natural disasters and war that impose severe demands on a group of people. (b) Major life events are viewed as episodes in one's life that are often irreversible, demanding, and impose severe stress on the average person. Examples include the loss of a loved one, a serious illness or disability, and life transitions. (c) Daily stressors include a variety of ongoing events that are experienced in day-to-day life. Several little or insignificant daily events may also build up to cause significant stress. Examples include missing the bus or difficulty getting work done. (d) Ambient stressors are environmental conditions that impose demands and can be relatively minor or major to the average person. Examples include noise and extreme temperature changes. (e) Role strains are ongoing demands that are related to fulfilling certain roles and obligations.

These demands are usually severe to the average person and include role ambiguity as a result of divorce and taking on too many responsibilities. The idea that stressors can vary from minor to major is supported by other researchers and studies in both adults and younger populations (Kaplan, 1996).

Barling (1990) defines stress as "environmental events or chronic conditions that objectively threaten the physical and/or psychological health or well-being of individuals of a particular age in a particular society" (p. 449). According to this definition, stress is an inclusive term that refers to both the environmental stressors and the processes involved in responding to the stressors. Stress has traditionally been viewed as the relationship between the individual and the environment that one has perceived as being stressful (Lazarus & Folkman, 1984). Barling (1990) notes that the distinction between stressors and stress is very important. Stressors are objective characteristics of an environment, situation, or object whereas stress is a subjective reaction to stressors that are present. The appraisal of a stressor and consequently the perceived stress that one may experience depends on individual differences (Lazarus & Folkman, 1984). Fisher (1994) agrees with Lazarus and Folkman (1984) and explains stress as a broad term related to factors in the environment. Cognitive factors are viewed as important in defining stress. For example, what seems stressful to one individual may seem thrilling to another.

Kaplan (1996) states, "stress is linked to the requirement of change" (p. 33). Too much change may have an effect on how stressful one may perceive a situation. According to this view, stressors are "conditions of threat, demands, and structural constraints that, by their very occurrences or existence, call into question the operating integrity of the organism" (p. 38). This is similar to the predominant view of stress presented by Lazarus and Folkman (1984).

There are two main definitions of stress found in the literature: (a) the physiological or response definitions, and (b) psychological or relational definitions. Response definitions of stress are more prevalent in the fields of biology and medicine where stress is viewed as the individual being in a state of stress and reacting to the stress. The response definition of stress, also viewed as the physiological theory of stress, was pioneered by Hans Selye (1976). According to the researcher, the body will mobilize itself in response to a stressor in a process called the general adaptation syndrome. In the first stage of this process, the body's defense mechanisms respond to the stressor in an alarm reaction. In the resistance stage, the person adapts to the stressor. Under chronic stress, the body enters the exhaustion stage where the person cannot resist or effectively fight against the stressor. Many negative psychological outcomes such as depression are common as a result of this stage. Selye (1950) explains that stress is not merely nervous tension or secretions of emergency hormones. Stress is a steady example of the body maintaining homeostasis. Stress does not cause an alarm reaction; rather stressors cause alarm reactions.

Lazarus and Folkman (1987) are considered the pioneers of the relational definition of stress that is most often used in psychological theories of stress and coping. According to this view, the amount of stress a person actually experiences as a reaction to stressors depends on the person-environment relationship. Stress is defined as a "relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus, 1999, p. 19). According to this definition, stress occurs when threat or harm is perceived in a situation (after appraisal). When demands are equal to resources, there is a moderate amount of stress. When resources are greater than demands, stress is low. However, when demands exceed resources, stress is high. Anxiety is likely to occur when one feels that demands exceed the resources he or she has available.

Lazarus and Folkman (1987) describe two pathways to measure primary appraisal-- through cognition and through emotion. The cognitive pathway involves assessing a person's goals and commitments in a particular situation such as gaining respect, affection, financial resources, or academic achievement. Assessing emotion reflects a person's appraisal of an event. Lazarus (1999) discusses various ways of appraising a stressful situation that consequently affect emotion. If a situation is considered harmful, a person may experience fear. If a situation is deemed threatening, a person may feel anxiety. If a situation is considered challenging, a person may feel motivation to act or even excitement.

After primary appraisal has occurred, the individual is focused on what can be done about the situation during secondary appraisal. As part of this process, the person also evaluates his or her coping options and ability to effectively deal with the situation. Short-run outcomes can be thought of as the emotions during and immediately after the stressful event, while long-run outcomes include factors such as social and emotional well-being and health.

To summarize, stress has been a widely researched topic for several years. The literature differentiates between stressors-- objective environmental conditions that may harm an individual's well-being (Barling, 1990; Zeidner & Endler, 1996) and stress-- the subjective experience of stressors (Lazarus & Folkman, 1984). Other researchers emphasize that the appraisal of a stressor results in different levels of perceived stress (Fisher, 1994; Lazarus & Folkman, 1984). The relational definition of stress is most often used in psychological theories of stress and emphasizes that the person-environment relationship predicts the amount of stress a person actually experiences as a reaction to stressors (Lazarus & Folkman, 1984).

Stress and College Adjustment

The transition and adjustment to college is often viewed as a life event stressor and has been a popular topic of research for years. College adjustment has been conceptualized differently by researchers. Most agree that this construct encompasses many domains. Arnett (2000) conceptualizes student adjustment to college as a multidimensional process that includes several components. The student must separate from his or her family, accept responsibility for the task of balancing social and academic pressures, and learn to cope with new stressors. Chickering and Reisser (1993) explain seven vectors of college student development that may present difficulties to students. Students must achieve competence, manage their emotions, become independent, establish their identities, manage their interpersonal relationships, clarify their purpose in life, and develop a sense of integrity.

Baker and Siryk (1984) also view college adjustment as a multidimensional construct. They emphasize that adjustment to college relates to the variety of academic, social, personal and emotional demands placed on students. Adjustment to the institution itself is also part of college adjustment. Baker and Siryk (1984) studied American students in their first year of college and found that academic adjustment was significantly correlated with Grade Point Average. Poor personal/emotional adjustment was predictive of being seen for psychological counseling. In a more recent study with freshmen students, Taylor and Pastor (2005) reported negative correlations between the subscales of the Student Adjustment to College Questionnaire (Baker & Siryk, 1989) and attrition. Students who did not drop out of college reported higher values on adjustment than students who dropped out.

Numerous researchers have characterized the college transition life period as being a stressful one (Dyson & Renk, 2006; Lu, 1994). The topic of college student stress has also been a

popular one in many initiatives of the American College Health Association (ACHA). Data conducted for the development of the ACHA national plan indicated that levels of stress among college students were higher than those in the same age group who did not attend college (American College Health Association, 2007). The data also indicated that 30% of students reported poor grades and dropping out of college due to stress. In a recent national survey of 54,111 students attending 71 schools it was found that stress was the number one impediment to academic performance. Colds/flu/sore throats, sleep difficulties, concern for friends or family, and depression/anxiety disorders were also among the top five concerns. The study also noted that the rate of students reporting ever being diagnosed with depression has increased by over half in the last six years. Another recent study found that between one-fourth to one-half of all U.S. college students who are seen in college health and counseling centers take antidepressant drugs as a result of stressors that are distinctive to the college population (Kadison, 2005).

Many emotional and physical symptoms of college students such as headaches, depression, anxiety, and fatigue have been found to correlate with high levels of stress (Lu, 1994). Researchers have found associations between college student stress and factors such as chronic illness, academic load, conflicts with faculty, sexual experiences, and family events (e.g, Damush, Hays, & DiMattero, 1997). High rates of depression, anxiety, and related disorders have been well documented in college populations (Twenge, 2006).

The effects of stress on health habits, health status, and self-esteem were studied in a sample of 225 undergraduate students in randomly selected campus dorm rooms (Hudd et al., 2000). It was found that over half of the students indicated high levels of stress. Females showed the highest levels of stress, and athletes showed lower levels of stress when compared to non-athletes. Recent alcohol and junk food consumption was related to higher levels of stress. Most

participants of the study were seniors in non-residential college, thus results cannot be generalized to freshmen or students who attend non-residential colleges. Another limitation of the study was that only one question was used to measure stress, rather than traditional multi-item assessment tools.

Other researchers interested in the adjustment of college freshmen surveyed students at a single university at the beginning and end of their first year (Pritchard, Wilson, & Yamnitz, 2007). Physical health, alcohol use and smoking, stress levels, perfectionism, self-esteem, coping tactics, optimism, and personality measures were assessed. To measure psychological adaptation, students responded to a questionnaire assessing anxiety, tension, depression, anger, vigor, confusion, and fatigue. Results indicated that health and psychological well-being decreased within the year students began college. Certain coping tactics, perfectionism, low optimism, extroversion, and low self-esteem seemed to account for this decline. Although stress levels did not increase, the authors attributed this to the fact that students were assessed during freshman orientation week which may be a stressful time as well.

Personal characteristics, parental support, and college adjustment were studied in a sample of freshmen students at a Midwestern university (Mounts, Valentiner, Anderson, & Boswell, 2006). It was found that students who scored high on measures of shyness, low on measures of sociability, and low on levels of parental support demonstrated higher levels of loneliness. Loneliness was associated with higher levels of depression and anxiety in students. Although the researchers mentioned their efforts to include students from diverse ethnic backgrounds, 61% were Caucasian.

A study conducted by Dyson and Renk (2006) examined freshmen adaptation to college using a sample of students from a southeastern university. Researchers looked at levels of

femininity and masculinity, depressive symptoms, coping strategies, and levels of stress. It was found that femininity was positively related to emotion-based coping whereas masculinity was positively related to problem-solving coping. Most importantly, the levels of stress related to the transition predicted depression in both males and females.

The college stress literature differentiates between traditional and nontraditional students (Morris, Brooks & May, 2003). Traditional students are often younger and unmarried. They are usually not employed full-time since most of their time and responsibilities center around going to school. Nontraditional students are older, may be married, and may have children. Studies show that this group of students differs in concerns surrounding academic, social, and family relations (e.g., Dill & Henley, 1998). Traditional students seem to worry more about academic performance and have fewer concerns about child-care responsibilities. Despite the differences, between traditional and nontraditional college students, both rate many aspects of college life as being stressful.

Most of the stress research concerning college students has focused on students from private colleges. The distinction between public and private college is an important one. Several researchers have noted differences in student and institutional characteristics between these two types of colleges. Scott, Bailey, and Kienzl (2006) note that public colleges tend to have more commuter students and a higher number of older students compared to private colleges. In terms of selectivity, a larger number of private colleges are highly selective when compared to public colleges. This may be reflected in overall higher SAT scores and GPAs in students who attend private colleges compared to students who attend public colleges. Tuition costs, the student to faculty ratio, and graduation rates are also higher at private colleges. (Scott et al., 2006).

Several researchers have compared public and private school graduation rates. Astin and

Oseguera (2002) report on research examining several institutional and student characteristics that predict graduation rates. After six years of enrollment, private universities had graduation rates of 80%, while public colleges had graduation rates of 49%. Institution type (public versus private), religious denomination, SAT score, GPA, race and gender were all found to impact outcomes. The gap in six-year graduation rates between public and private colleges diminished significantly from 31% to about 7% when all of these characteristics were controlled. Researchers suggest that any gap in public vs. private college graduation rates is best understood through a regression model that uses different student characteristics (Aston & Oseguera, 2002; Scott, Bailey, & Kienzl, 2006). Although there is no consensus regarding which type of college is better regarding student outcomes such as graduation rates, it is clear that there are differences between private and public college students and institutional characteristics. This suggests that the nature of the stressors faced by private college students versus public college students would be different as well.

Stressors among College Students

The study of stress in college students is unique in that this population has various daily and life experiences that act as stressors that are different from ones experienced in other populations. Jackson and Finney (2002) reported several stressors that were common among college students including financial changes, new responsibilities related to both work and school, and changes in interpersonal and family relationships. Chandler and Gallagher (1996) found that concerns about relationships with family members and peers, and academic performance were the most frequent presenting stressful problems at college and university counseling centers. Darling, McWey, Howard, and Olmstead (2007) studied responses to stress and coping in 500 freshmen students at a southern university. Quality of life, emotional and

physical health, as well as sense of coherence which includes comprehensibility, manageability, and meaningfulness were assessed. Findings revealed that females experienced greater stress from issues relating to friendships, love, and parental relationships. Family relationships had the greatest effect on sense of coherence for males, whereas emotional health had the greatest effect on sense of coherence for females.

Several main stressors emerged from the results of the study's qualitative methodology (Darling et al., 2007). Leaving friends, living with friends, and re-thinking friendships were cited as stressful themes. Love relationship stressors included dealing with unhealthy relationships, ending, or missing relationships. Independence from parents, parental expectations and marital issues also emerged as stressful issues for students. Relationships with other family members were also sources of stress. Noteworthy is the fact that the sample was drawn from a single university from a single course, thus results may not be generalizable. There were also many more female participants than males in this study.

Ross, Neibling, and Heckert (1999) surveyed 100 students at a Midwestern university to explore the most common sources of stress for college students. Overall, daily hassles were reported as stressors more often than major life events. Intrapersonal sources of stress were the most frequently reported sources of stress. Changes in sleeping and eating habits, vacations and breaks, academic work load, and new responsibilities were cited as the top five sources of stress.

Dusselier, Dunn, Wang, Shelly, and Whalen (2005) studied contributors to stress among college students at a Midwestern university where students dorm. Chronic illness, sleep difficulties, and conflicts with roommates and faculty were significant predictors of stress. Women experienced more stress than men. Caution should be exercised when generalizing these results to non-residential colleges, since this study was conducted in a residence hall

environment. Enrollment at the selected university was also 88% Caucasian, thus results may not generalize to minority populations.

Misra and McKean (2002) examined the academic stress experienced by students by comparing student and faculty ratings and descriptions of student stress. Although faculty members perceived that their students experienced higher amounts of stress than students actually reported, both groups agreed upon the main sources of student stress. High levels of stress stemmed from competition, meeting deadlines, and interpersonal relationships. Reactions to stress were in terms of both emotion such as anxiety and worry and cognition such as appraisal of the situation. Noteworthy is the finding that students in their freshman year had the highest ratings of stress. This finding is consistent with other research that suggests that the first year of college is the most stressful due to changing and new demands and responsibilities (Rawson, Bloomer, & Kendall, 1994).

Stressors among Students in Non-residential Campuses

Although many researchers have explored the types of stressors experienced by freshmen in residential campuses, fewer have examined stressors experienced by freshmen in non-residential campuses. Research suggests that the nature of stress experienced by this population is different from the stress experienced by students who dorm. Wilmes and Quade (1986) identify several main concerns of commuter students. The first is related to transportation. Jacoby and Garland (2004) note that the act of commuting to and from campus is stressful in itself. Weather, parking, costs of driving are all considerations. Balancing work, school and household obligations is another concern of many commuters, as well as developing a sense of belonging on campus (Wilmes & Quade, 1986).

Clark (2005) conducted a qualitative study of a small group of traditional-age college

students in an urban commuter college. The study revealed that students face several challenges such as finding effective places to study at home and negotiating family and peer relationships. Other challenges they face include feeling isolated and not knowing how to use campus resources most effectively. There might also be little continuity from one semester to the next making it even more difficult to navigate through college.

In summary, the transition from high school to college is not an easy one for many students. Findings of numerous studies suggest that this time in a student's life results in additional academic, emotional, social, and financial stressors (Dyson & Renk, 2006). Negative psychological outcomes such as loneliness, anxiety, and depression are often experienced by freshmen students. Although the literature reports the difficulties encountered by students transitioning to college, a clear theoretical basis for understanding how adjustment problems arise with particular emphasis on students who commute to school is lacking. The literature also has not thoroughly explored factors that may buffer against such adjustment problems. Despite attempts to use diverse samples, most research relates to Caucasian students and excludes minority groups. Researchers have also explored stress mainly in residential campuses and not commuter schools.

Stress and Coping

Although the transition to college may be stressful and is often accompanied by negative psychological symptoms, many students successfully navigate through the transition. There is much evidence to suggest that the coping strategies that adolescents use may predict psychological well-being in times of stress. Numerous researchers have proposed various definitions of coping and models to explain the coping process. One of the earliest views of coping was presented by Pearlin and Schooler (1978). They defined coping as, "the things that

people do to avoid being harmed by life-strains" (p. 2). The purpose of coping is to "prevent, avoid, or control emotional distress" (p. 2). Their coping literature differentiates between coping resources and coping responses. Resources refer to what individuals have "available to them in developing their coping repertoires" (p. 5). Social support from family and friends are examples of social resources; self-esteem and perceived control are examples of psychological resources. Coping responses refer to individuals' "concrete efforts to deal with the life-strains they encounter in their different roles" (p. 5). The actual behaviors and thoughts that are used to deal with problems may fall under this category (Pearlin & Schooler, 1978).

Coping responses have been further classified into three types (Pearlin & Schooler, 1978). The first type refers to a response that changes the stressful situation. This response is the most direct way to cope by attempting to modify the problem. It is similar to Lazarus and Folkman's problem-focused coping strategy (Lazarus & Folkman, 1984). The second response controls the meaning of the experience after it has occurred but before the stress emerges by utilizing strategies such as making positive comparisons or selective ignoring. Another example of this response is given by Lazarus and Folkman (1984) who described activities such as cognitive restructuring. Controlling the stress itself after it has emerged is the third type of coping response. Examples of this type of coping response include engaging in relaxing activities, watching television, playing sports or music, and using alcohol, drugs, or tobacco.

Skinner and Wellborn (1994) present a theory of coping that focuses on the basic needs that people have which include relatedness to others, competence, and autonomy. Three universal stressors are discussed: neglect which threatens relatedness; chaos, which undermines competence; and coercion which imposes upon autonomy. Coping is explained as "an organizational construct that describes how people regulate their own behavior, emotion, and

motivational orientation under conditions of psychological distress" (p. 112). Close relationships are seen as crucial elements to the coping process. Perceived control over the stressful situation is viewed as a critical psychological resource for coping.

Compas and colleagues view coping as willful efforts to control emotion, thoughts, behavior in response to the environment (Compas et al., 2001). Responses to stress are divided into two dimensions: voluntary versus involuntary and engagement versus disengagement. Voluntary coping is goal-directed and conscious. Involuntary responses to stress are uncontrollable and can include the ventilation of emotions by actions such as crying. Engagement coping involves directly confronting the stressor; disengagement coping involves moving away from or distracting oneself from the stressor. These dimensions are similar to the approach versus avoidant responses presented by other researchers (e.g., Ebata & Moos, 1991; Endler & Parker, 1990).

Eisenberg and colleagues also provide a theoretical framework for coping in adolescents and young adults (Eisenberg, Fabes, & Guthrie, 1997). Coping is viewed as a self-regulatory process and, thus, there are three aspects of the self-regulation: "attempts to directly regulate emotion (e.g., emotion-focused coping), attempts to regulate the situation (e.g., problem-focused coping), and attempts to regulate emotionally-driven behavior (e.g., behavioral regulation) (p. 45). According to this model, coping is not always intentional or conscious. This model is similar to Skinner and Wellborn's (1994) in that coping includes both voluntary and involuntary responses to stress.

In an effort to combine the major dimensions of coping, several researchers have identified subtypes of coping. Most of the coping theories propose three or four categories of coping. Although they are termed slightly differently, most classifications of coping fall into the

broad categories of approaching or avoiding the problem. Examples of coping subtypes and common scales used to measure coping in adults are presented in Table 1. Table 2 presents a summary of coping scales used with children and adolescents. The ways that researchers conceptualize coping within these scales may be applied to adults as well.

Table 1

Common Measures of Adult Coping

Author(s) and Measure	Participants	Stressor	Subtypes of coping
Carver, Scheier, & Weintraub (1989): Coping Orientation for Problem Experiences (COPE)	Adults	Participant selected	Active coping Planning Seeking social support Suppression of activity Religion Positive reinterpretation Resignation/acceptance Venting of emotions Denial Mental disengagement Behavioral disengagement Alcohol/drug use Humor
Folkman & Lazarus (1985): Revised Ways of Coping Questionnaire (WCQ)	Adults College students	Daily living events	Confrontive Distancing Self-controlling Seeking social support Accepting responsibility Problem-solving Escape-avoidance Positive reappraisal
Lazarus & Folkman (1980): Ways of Coping Questionnaire (WCQ)	Adults	Participant selected	Problem-focused Emotion-focused

Table 2

Common Measures of Child and Adolescent Coping

Author(s) and Measure	Participants	Stressor	Subtypes of coping
Ayers, Sandler, West, & Roosa (1996): Children's Coping Checklist (CCSS)	9-13 years old	General	Active Avoidance Distraction Support seeking
Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman (2000): Responses to Stress Questionnaire	11-19 years old	Peer stressors Economic strain Family conflict Abdominal pain	Volitional/Involuntary Primary/Secondary Control Engagement/Disengagement
Ebata & Moos (1991): Coping Responses Inventory- Youth Form (CRI-Y)	12-18 years old	Most important problem in previous year	Approach Avoidance Behavioral
Endler & Parker (1990): Coping Inventory for Stressful Situations (CISS)	13-18 years old	General	Task-oriented Emotion-oriented Avoidant
Patterson & McCubbin (1983): Adolescent Coping Orientation for Problem Experiences (ACOPE)	M age = 15.6	General	Ventilating feelings Seeking diversions Self-reliance Social support Solving family problems Avoiding problems Spiritual support Investing in close friends Professional support Engaging in high activity Being Humorous Relaxing

Lazarus and Folkman's (1987) Model of Stress and Coping

The predominant theory of coping was developed by Folkman and Lazarus (1980) and was elaborated upon in 1984. They explained the coping process as a stabilizing factor that helps individuals to maintain psycho-social adaptation during stressful periods. Coping involves all cognitive and behavioral efforts that are utilized in order to respond to demands, both internal and external. Coping can also be explained as efforts to master conditions of harm, threat, or challenge when a routine or automatic response is not readily available. Lazarus and Folkman (1987) introduced the transactional theory to explain stress and coping as a relationship and process. A dynamic interplay of variables leads to psychological outcomes. According to the transactional model, such variables include environmental antecedents, person antecedents, mediating processes, short-run outcomes, and long-run adaptational outcomes. Environmental antecedents include demands, constraints, and resources. Person antecedents include factors such as goals and belief systems. Appraisal and coping are examples of mediating processes. The two most-frequently cited ways of conceptualizing coping are Folkman and Lazarus' (1980) problem-focused vs. emotion-focused coping. Based on these ways of coping, two main functions are served-- managing a problem and regulating emotion (Folkman, 1992). Coping is also classified in terms of how the person views the problem and which activity is used to respond to the problem (Cronkite & Moos, 1995). Folkman and Lazarus (1988) maintain that coping serves the function of regulating stressful emotions (emotional-focused) and altering the nature of the environment causing the stress (problem-solving).

Folkman and Lazarus (1980) studied problem-focused and emotion-focused coping in a sample of 100 middle-aged men and women in a longitudinal study. The Ways of Coping Checklist was designed for this study to assess thoughts and actions individuals use to manage

specific daily stressful encounters. The instrument was later revised and used with the same sample. It was renamed "Ways of Coping Questionnaire" (Folkman & Lazarus, 1985) and consisted of 8 subscales. Confrontive Coping focuses on the problem itself. Distancing involves avoiding the problem. Self-Control includes items that relate to trying to keep feelings to oneself. Seeking Social Support includes efforts to talk to someone about the problem. Accepting Responsibility includes criticizing oneself for causing the problem. Escape-Avoidance is similar to distancing but also includes efforts to feel better by eating, drinking, smoking, or using drugs. Planful Problem-Solving is similar to Confrontive Coping but also includes forming a plan of action and following it. Positive Reappraisal involves thinking about the problem in a positive way and finding meaning in the situation. Both problem-focused and emotion-focused coping strategies were used in 98% of more than 1,000 different stressful encounters (Folkman & Lazarus, 1980). This suggests that the use of a specific coping strategy may depend upon how the stressful event is appraised at any given time. The context is thus important when assessing the coping process.

Folkman and Lazarus (1985) offer a theory for the quantity and intensity of emotions that a person may feel during a stressful encounter based on appraisal. Emotions such as anxiety, jealousy, sorrow, happiness, or relief are dependent upon the appraisal of the encounter. For example, if a situation is appraised as threatening, anxiety may be evoked. If a situation is appraised as a challenge, excitement may be evoked and if there is harm, anger may be evoked. If there is potential benefit obtained from the situation, happiness or relief may be evoked.

This theory of emotion and coping was studied in a sample of undergraduate students during three stages of a psychology midterm exam (Folkman & Lazarus, 1985). During the first stage before the exam, the anticipation stage, students used problem-solving coping the most.

The emotion-focused strategies of emphasizing the positive and seeking social support were also at their height during this time. During the second stage of the exam, the waiting stage before the grades were announced, problem-solving coping, emphasizing the positive, and seeking social support decreased. The emotion-focused strategy of distancing increased which suggests that people may resort to this type of coping in situations when there is nothing left to do but wait. During the last stage of the exam after the grades were posted, students who received poorer grades engaged more in emotion-focused coping, seemingly to manage the distress associated with their performance. At least 94% of the subjects used both problem-focused and emotion-focused coping across all three stages confirming prior findings that people utilize both types of coping strategies during a stressful encounter. There were also significant changes in the emotions felt by the students throughout the various stages of the exam. Threat and challenge emotions such as anxiety increased during the first and second stage of the exam and decreased in the last stage. Harm and benefit emotions increased from the first stage to the second stage and remained high during stage three. Findings suggest that coping, particularly in college students, is a dynamic and complex process. The emotions experienced by students as a result of a stressful experience may also be mediated by appraisal of the situation and coping strategies they use.

Folkman and Lazarus (1988) studied the role of coping as a mediator of emotion using the revised Ways of Coping Questionnaire. Two different samples were examined. A younger sample consisted of 85 married couples and an older sample consisted of 161 people whose average age was around 68 years old. Problem-solving coping was associated with less negative emotion and more positive emotion. Confrontive coping was associated with negative emotions in the younger group. Positive appraisal was associated with positive emotions in the younger

group but negative emotions in the older group. Distancing contributed to a worsened emotional state in both groups. This study provides support for the role of coping strategies in mediating emotion during stressful encounters. Although the scale was used to assess coping strategies in college students, the scale items are not specific to the stressors experienced by this population.

Coping in Children and Adolescents

Although much of the coping research presented by Lazarus and Folkman (1984, 1987) has been validated with studies focusing on adults, more recent researchers have examined coping responses in adolescents and young adults. Compas, Malcarne, and Fondacaro (1988) studied Lazarus and Folkman's (1984) classifications of coping in older children and adolescents. Junior high school students in six public schools were given an open-ended instrument to assess coping with stressful events. They were asked to describe one stressful interpersonal event and one stressful academic event that recently occurred and then list potential ways to handle the situations. Responses were classified as problem-focused or emotion-focused. Participants were also given an instrument to assess behavior problems. Participants' mothers also filled out a behavior checklist. Results of the study showed that the coping model developed by Lazarus and Folkman (1984) is useful in predicting coping processes in younger ages as well as adults. Findings indicated that problem-focused and emotion-focused coping strategies were used by participants in response to stressful situations in academic and interpersonal areas. Coping and behavior/emotional problems were moderately correlated. However, students who generated fewer problem-focused strategies and more emotion-focused strategies to cope with stressful situations experienced more emotional/behavioral problems as reported by both themselves and mothers.

Ayers, Sandler, West, and Roosa (1996) studied coping in children and adolescents and

differentiated between dispositional and situational coping. Dispositional coping is viewed as a general style of what a person usually does in a stressful situation. This approach to coping is similar to several other measures of child and adolescent coping (eg., Patterson & McCubbin, 1987). Situational coping is viewed as a changing process specific to a context or situation. Situational coping is closely tied to the transactional theory of stress and coping provided by Lazarus and Folkman (1987). Two studies conducted by Ayers et al. (1996) assessed the psychometric properties of two measures that were developed to assess both types of coping in fourth through sixth grade children. Eleven empirically-based categories of coping were developed. Findings from a confirmatory factor analysis supported a four-factor model of dispositional coping which included active coping, distraction, avoidant coping, and support seeking. This model was a better fit for the data than the traditional two-factor models of problem-focused versus emotion-focused (Lazarus & Folkman, 1984) or active versus passive coping (Billings & Moos, 1981). The structures of this four factor model for dispositional coping were similar to the four factor structures for situational coping. This suggests that the coping strategies that children use in specific situations may be influenced by their preferred coping styles. It also supports the notion that coping strategies cannot merely be classified into two broad categories such as the ones provided by Lazarus and Folkman (1984).

Weisz and colleagues (Band & Weisz, 1988; Rudolf, Denning, & Weisz, 1995) offer a model of stress and coping in adolescents and young adults adapted from Lazarus and Folkman's (1984) model. According to this model, coping is also viewed as goal-directed but the main focus of efforts is to exert or change control over the environment or self. Primary control attempts to change an event or condition. Secondary control coping attempts to maximize one's fit with the current situation. When control is relinquished, there is an absence of coping. Like

Lazarus and Folkman (1984), Weisz and colleagues differentiate among coping responses, goals, and outcomes (Rudolf et al., 1995). Coping responses can be physical or mental and are directed toward the environment or internal state. Coping goals are viewed as objectives and coping outcomes are viewed as consequences of intentional coping strategies.

Measuring Coping in Children and Adolescents

Recognizing that the coping process in youth may be different from that of adults, several researchers have developed different scales to measure coping in children and adolescents. Table 2 presents several scales that were developed to assess coping strategies in youth. It is evident that similar to coping scales used for adults, the scales used for adolescents and young adults mostly classify coping strategies into either approaching the problem or avoiding it.

A common scale used with adolescent samples has been the Adolescent Coping Orientation for Problem Experiences Scale (A-COPE) developed by Patterson, McCubbin, and Needle (1983). Principal component analysis was performed on 98 items selected from open-ended reports of high school students and items failing to load on a factor were dropped. Fifty four items were retained. Although these items are grouped into 12 factors, factor analyses performed by different authors have yielded a different number of factors (Compas et al., 2001). Patterson and McCubbin (1987) point out that adolescent stressors stem from multiple demands, thus a tool like the A-COPE that assesses coping styles should not be stressor specific. Since coping is multidimensional, one coping strategy can serve more than one function. These factors are taken into account resulting in the subscales of the A-COPE.

The Young Adult Coping Orientation for Problem Experiences (YA-COPE) was developed by Patterson, McCubbin, and Grochowski (1983) as a modification for the A-COPE. It was specifically designed to measure coping in older adolescents with emphasis on college

freshmen. Wording was changed from high school to college connotations and new items were added based on interviews with the college population. Both the A-COPE and YA-COPE are ideal tools to measure coping in adolescents since they include specific subscales rather than the standard two or three factor models that researchers have traditionally used. The YA-COPE includes a subscale to measure social support and emphasizes the role of family in coping as well.

Methodological Issues of Coping Assessment in Adolescents

Despite many attempts to distinguish between different types of coping responses and to consequently develop scales to measure coping in youth, there has been little consensus among researchers. It is also difficult to integrate findings across studies due to the different coping scales that have traditionally been used. Critics of the Lazarus and Folkman (1980) model argue that their dimensions of coping are too broad and place different types of coping responses in the same two categories (Coyne & Gottlieb, 1996). In addition, one coping strategy (such as seeking social support) may be emotion-focused and problem-focused. It is important to consider different subtypes of coping that compose the broad dimensions often presented by researchers. It is evident that researchers have proposed many subtypes of coping in adolescents such as problem-solving, cognitive restructuring, ventilation, blaming others, withdrawal, wishful thinking, alcohol or drug use, and religious coping (Compas et al., 2001). These subtypes are not applied in the same measures and studies, thus there is great difficulty in clearly defining the nature of the coping process in adolescents. There is also little consistency in the different subscales of coping that factor analysis studies yield. For example, Ayers and colleagues factor-analyzed 10 different coping scales and found four factors: active coping, social support, distraction, and avoidance (Ayers et al., 1996). Walker, Smith, Garber, and Van Slyke (1997)

examined several coping scales and identified three factors they used to developed a scale for pediatric pain: active coping, passive coping, and accommodative coping (e.g., acceptance, distract-ignore, and self-encouragement). Another recent confirmatory factor analysis identified primary control engagement coping, secondary control engagement coping, and disengagement coping. In all of these studies, two-factor models that only represented problem-focused and emotion-focused coping or approach and avoidance coping did not provide adequate fits with the data.

Another problem with coping scales is that different samples have generated different results using exploratory factor analysis. For example, as previously stated, Patterson and colleagues developed the Adolescent Coping Orientation for Problem Experiences scale (A-COPE) using 98 items with three studies of adolescent samples (Patterson et al., 1983). They retained 54 items and grouped them into 12 factors. Another study using the A-COPE yielded 6 factors and in another study 3 factors were found (Compas et al., 2001). It is not uncommon for a researcher to find a different number of factors as another researcher despite using the same scale to measure coping.

In summary, the coping process is a topic that has been widely researched in both adults and younger populations. The specific definition, types of coping, and the exact nature of the coping process are areas that are less clear. Although several definitions of coping exist, it seems that the basic distinction has been between approaching the stressful situation or avoiding it. Although they emphasized adults, Lazarus and Folkman (1987) provide a very useful framework for understanding coping in adolescents and young adults. Situational variables are clearly important in coping, as well as the person's appraisal of the situation. These factors contribute to how the stressful situation is handled and consequently experienced emotionally. Although

researchers have developed other scales to measure coping in adolescents and young adults, several methodological issues exist such as the lack of generalizability of results across scales, and the overly-broad categories of coping that are delineated by researchers. There is a need to examine the coping process in college students using the Lazarus and Folkman (1987) model as a theoretical framework. A scale geared specifically toward college students that explores coping strategies in response to several stressors can be used to provide a more thorough understanding of stress and coping.

Coping and Psychological Adjustment in Youth

The relationship between coping styles and psychological outcomes in adolescents has been studied in a wide range of stressful contexts such as personal and parental illness, pain, family and peer conflicts, academic stress, sexual abuse and terrorism (Compas, et al., 2001). Hypothetical stressful situations have also been used to assess coping styles and outcomes. Results of such studies link favorable psychological adjustment in adolescents to specific coping processes (Holahan & Moos, 1987). There is much research to suggest that avoidant coping styles are associated with negative psychological outcomes in adolescents. Avoidant coping strategies were found to be a risk factor for developing psychological disorders such as depression and anxiety (Seiffge-Krenke, 1993). Herman-Stahl and Peterson (1999) reported that depressive symptomatology among adolescents was associated with higher levels of avoidant coping and lower levels of approach coping methods.

Steward and colleagues conducted a study which identified the degree to which coping strategies and academic competence influenced psychological adjustment of high school students. (Steward et al., 1998). Participants were administered a self-report adjective mood scale and the Adolescent Coping Orientation for Problem Experiences (A-COPE; Patterson, et

al., 1983). It was found that adolescents who coped with stressors by talking to parents, sharing activities with their family, and by going along with parents' requests and rules demonstrated a higher level of positive affect than negative feelings. Low Grade Point Average and a high use of coping strategies such as self-reliance and avoiding problems were associated with higher levels of negative affect reported. Limitations of this study include the fact that only one high school setting was used for data collection. It also looked at GPA as a main contributing factor to psychological adjustment, and only African American students in an urban setting were used as participants.

Murberg and Bru (2005) studied the effects of approach and avoidant coping styles on school-related stress and depressive symptoms in adolescents in two Norwegian secondary schools. A depressive symptoms inventory, stress inventory, and coping styles inventory were used to collect data. Results demonstrated that approach coping styles, specifically seeking help from parents, were related to fewer symptoms of depression. This finding is particularly interesting in that it sheds light on the critical role that family plays in adolescent coping. Perhaps adolescents with active coping styles and close families demonstrate better psychological adjustment.

Coping and Psychological Adjustment in College Students

The role of coping strategies in predicting psychological outcomes has also been studied in college students. Valentiner, Holahan, and Moos (1994) examined variables that would potentially mediate and moderate in the coping process in college students. Participants filled out a measure of parental support, a coping inventory, and a measurement of psychological adjustment which included factors such as depression, self-worth, and anxiety. Participants were also assessed on their appraisals of event controllability. Parental support was associated with

higher psychological adjustment both directly and indirectly through adaptive coping strategies. Family support also predicted adaptive coping, but only when events were appraised as controllable. Coping then predicted psychological adjustment. The authors suggested that future research continue to explore coping as a mediator between family factors and psychological adjustment.

Chang and Strunk (1999) tested the potential mediational roles of coping and appraisal on adjustment in a sample of undergraduate college students from a Midwestern public university. Participants were assessed on variables including dysphoria, appraisals, physical health and psychological symptoms. Dysphoria was found to be significantly related to disengaged coping methods. Inconsistent with Lazarus and Folkman's (1987) model, primary appraisal was positively associated with disengaged coping. The authors attributed this finding to different coping inventories used. The mediational model was supported, however, whereby dysphoria and adjustment was mediated by coping methods and appraisal.

Task-oriented vs. emotion-oriented coping strategies were assessed in a sample of students in universities and colleges in Israel (Kariv & Heiman, 2005). Students rated their perceived stress, coping strategies, and actual academic loads (measured by class hours and study hours). Academic stress was significantly negatively related to the use of task-oriented strategies. Academic load predicted the use of task-oriented strategies and academic stress predicted the use of emotion-oriented strategies. Results suggest that students may at first set out to directly deal with actual academic loads with a task-focused approach. They then may use a more indirect approach that is emotion-oriented to deal with any perceived stress that may result.

A longitudinal study examined predictors of freshmen academic achievement and retention (DeBerard, Spielmans, & Julka, 2004). High school GPA, SAT scores, social support,

and two coping strategies (escape-avoidance coping and accepting responsibility/self-blaming coping) were included as predictors. The researchers also looked at the effects of health-related quality of life, smoking, and drinking on academic achievement and retention. Although the only statistically significant correlate of retention was low high school GPA, the study was noteworthy for other reasons. Coping and the level of social support students had were significant predictors of achievement. Both coping strategies that were selected in this study were considered to be maladaptive by the researchers and were correlated with low student achievement. Although results are suggestive of the important role of coping and social support in the transition process, the sample used in this study presents a major limitation. Participants were from a selective private northwest university, thus, it is not possible to generalize results to other populations.

Leong and Bonz (1997) studied the coping responses and adjustment of 161 first-year university students. Approach coping predicted academic adjustment and personal-emotional adjustment. Social adjustment, institutional commitment, and goal commitment were not predicted by coping styles. The strength of the relationships found in this study, however, was weak. This suggests that other factors may also explain the relationship between coping and student adjustment.

Higgins and Endler (1995) explored the relationship among stressful life events and three coping styles: emotion-oriented, task-oriented, and avoidance-oriented. Avoidance-oriented coping was further divided into distraction and social diversion. Physical and psychological distress was also examined using a sample of undergraduate students from a Canadian university. Male students who utilized task-oriented coping styles experienced less distress. Emotion-focused coping positively predicted distress in both males and females. Distraction and social

diversion were positively correlated with psychiatric symptoms such as depression in both males and females. Life events were also positively correlated with distress in both males and females. Although this study provided further evidence for the positive roles of task-oriented coping, the research did not investigate specific types of coping styles within each category of coping.

In summary, the coping strategies that adolescents utilize in order to cope with stressful events are associated with certain outcomes. Problem-focused coping, engagement, and task-oriented coping styles seem to be associated with positive outcomes such as low levels of anxiety and depression, better physical health, and even higher grades. Coping strategies that are emotion-focused and where disengaging or avoidance is used seem to be related to poor physical and psychological outcomes. Regarding freshmen students, studies have been limited to other countries, Caucasian samples, private colleges, and/or dormitory schools. The coping literature lacks exploration of the process of coping in American freshmen students from public commuter colleges.

Family Functioning

In addition to the coping styles that adolescents use, the perceived functioning of one's family may also contribute to positive outcomes in times of stress. Although the transition from high school to college is not primarily a family transition, the context of family relationships has a large influence on how the change is handled. Adolescents are in the midst of exploring their identities along with redefining parent-child bonds. Family relations need to be renegotiated at this time in order to give the adolescent a sense of autonomy. At the same time, however, the adolescent needs to rely on the family for support during this transitioning time (Holmbeck et al., 1993). Family can also be a source of coping with the stress associated with the transition to college.

It has been well-documented that family functioning plays a critical role in the development of adolescents (Shek, 1997). Olson (1990) suggested that the adaptability and cohesiveness of a family can help a child handle stress and the negative emotions that may result from it. Olson (1986) defines cohesion as the emotional bonding between family members. This also includes the degree of individual autonomy that family members have, supportiveness, and family boundaries. Family adaptability is defined as a family's flexibility which involves the ability to change its relationship roles and rules and power structure in response to shifting demands of a situation.

The Circumplex Model of Marital and Family Systems is useful in exploring these dimensions of family functioning (Olson, Sprenkle, & Russell, 1979). According to this model, four levels of cohesion exist that range from disengaged (very low) to separated (low to moderate) to connected (moderate high) to enmeshed (very high). Olson (1990) explains that in a separated relationship time is spent together but also apart. A connected relationship emphasizes time together and emotional closeness. In a disengaged relationship there is great independence and little involvement among family members. In an enmeshed relationship, family members are very dependent on each other and there is extreme emotional closeness. Very low or very high levels of cohesion create unbalance when either extreme emotional separateness or extreme emotional closeness is present (Olson, 1990).

According to Olson and colleagues family flexibility includes concepts such as control, discipline, and relationship roles and rules (Olsen, Gorall, & Tiesel, 2007). There are four levels of flexibility ranging from rigid (very low) to structured (low to moderate) to flexible (moderate to high) to chaotic (very high). In a rigid family, there is little negotiating between members and one person is highly controlling. In a chaotic family there is limited leadership and unclear roles.

In a structured family, roles are stable and there are few changes in the rules, but there is some democracy. In a flexible family, roles are shared and rules may change. Decision-making is a democratic process.

The authors of The Circumplex Model also identify three general types of families. Balanced family types are balanced on both dimensions. Midrange types are extreme on one dimension but balanced on another, and extreme types are extreme on both dimensions (Olson et al., 1979). Extensive research has demonstrated that families that are very high or very low on both cohesion and flexibility dimensions appear to be dysfunctional. Families who are balanced on both dimensions seem to function adequately (Olson, 1990).

Family Functioning and Psychological Well-being

Numerous researchers have found strong associations between balanced levels of family cohesion and adaptability and adolescent psychological well-being. A longitudinal study conducted in 1998 examined adolescents who were identified as at risk for major depression (Carbonell et al., 1998). Higher measures of psychological well-being were associated with stronger family cohesion and social support. Measures of well-being included the Youth Self-Report, a measure of academic achievement, a self-esteem and self-concept scale, and a scale of interpersonal problems.

A similar study was conducted by other researchers who explored familial variables in adolescents who were at risk for suicide and non-suicidal adolescents (Kashani et al., 1998). The scales used were the Family Adaptability and Cohesion Evaluation Scales (FACES-II; Olson, Portner, & Bell, 1982) and one that measured problem behaviors. Results showed that suicidal participants viewed their families as less cohesive and adaptive than did non-suicidal participants. Suicidal adolescents' negative perceptions of their families also correlated with a

high number of maladaptive behaviors.

Family functioning and adolescent adjustment were also studied in a sample of African American youth with sickle-cell disease (Brown & Lambert, 1999). The independent variables in this study were scores from the FACES-II that measured family functioning (from both the child and caretaker's perspectives), and the outcome variables were scores on a behavior checklist and depression inventory. A large number of depressive symptoms was endorsed by participants when both they and their caretakers reported low cohesion in their families.

Bernstein, Warren, Massie, and Thuras (1999) studied 12-18 year olds with comorbid anxiety and major depression and their parents in a school refusal treatment study. The FACES-II was used to assess family functioning (Olson et al., 1982). Adolescents and parents reported low levels of cohesion and adaptability. It was also found that adolescents in extreme families reported significantly higher scores on measurements of depression and somatic symptoms than did adolescents in a more balanced family.

Willo and colleagues examined the association between perceived levels of family functioning and eating disorders in female patients ranging from 12-27 (Willo et al., 2003). Patients were assessed using the FACES-II (Olson et al., 1982) and an eating disorders scale. Perceived family functioning yielded significant predictions for Anorexia Nervosa and Eating Disorders Not Otherwise Specified. The authors supported prior findings that the severity level of eating disorders increases as the perceived level of family dysfunction increases.

Manzi, Vignoles, Regalia, and Scabini (2006) also explored the role of family functioning on adolescent well-being but in Italy and the U.K. Participants were secondary students transitioning into high school. They answered questionnaires about family differentiation, identity threat, and life satisfaction, depression, and anxiety. The authors found

that psychological well-being was positively predicted by family cohesion. Cohesion was associated with higher levels of life satisfaction and fewer depressive and anxiety symptoms. Although these findings were true in both groups of participants, it is important to note that results cannot be generalized to other populations.

Family Functioning and College Students

Many researchers have explored the role that family plays in an adolescent's transition to college. Holmbeck, Grayson, and Wandrei (1993) studied leaving home status (living at home or away from home), family functioning, separation-individuation issues, and personality variables such as adaptability and self-esteem in first-year college students. Results showed that the quality of family functioning including factors such as adaptability and cohesiveness helped predict healthy outcomes in students. Differences between men and women were detected where depression and physical symptoms were higher for women who demonstrated higher levels of enmeshment and lower levels of adaptability. Separation-individuation, family factors, and the personality variables were better predictors than leaving home status. Limitations include the fact that 77% of the participants were Caucasian and all students were recruited from a single Introduction to Psychology course at an urban university.

Other factors thought to predict positive student adjustment to college, including family, were explored in a study conducted by Lafreniere, Ledgerwood, and Docherty (1997). Family support and perceived stress were looked at in a sample of 100 students. Half of the students left home to attend college and half continued to live at home while attending college. Results showed that women who continued to live at home exhibited the highest levels of stress. Male students who continued to live at home showed lower levels of stress. To further analyze this pattern, the authors looked at social support from family. When family support was high, both

males and females reported similar levels of adjustment. When family support was low, females living away from home showed lower levels of stress than females who continued to live at home. Males with low levels of family support seemed to be better adjusted when living at home. Findings suggest that family dynamics play a vital role in student psychological adjustment to college.

British researchers conducted a longitudinal study that examined the psychological responses to students transitioning to college prior to leaving home and in the sixth week of the start of school (Fisher & Hood, 1987). The study also looked at the differences between students who left home and those who went to college near home. Psychological disturbance, absent-mindedness, homesickness, and adaptation to university life were the variables assessed. Both students living at home and moving away from home during the start of college experienced an increase in psychological disturbances, particularly in depression, absent-mindedness, and obsessionality. Residential status did not affect the level of psychological disturbance that students experienced. This suggests that the actual experience of transitioning to college and the university environment may be the factors contributing to the outcome. Those students who were homesick had higher levels of psychological disturbances than those who were not homesick. However, these students showed more disturbances prior to leaving home. This finding has implications for future research regarding how family factors influence students' stress and psychological well-being.

In summary, ample research supports the critical role that family plays in adolescent development. Adolescents who have families that share strong emotional bonds between members and that adhere to rules that are flexible appear to have better psychological outcomes. Although this association has been studied in college freshmen, most studies use samples that are

predominantly Caucasian or look at college campuses where students live away from home. There is a lack of research demonstrating the link between family functioning and psychological well-being in diverse populations of students who commute to non-residential colleges.

Family Functioning and Coping Strategies

Empirical evidence suggests that the nature of the family environment which includes the level of cohesion, degree of conflict, and organization is also strongly associated with the coping styles that adolescents use. Hanson and colleagues (1989) studied the coping strategies, psychological functioning, and health outcomes in youths with Insulin Dependent Diabetes Mellitus (IDDM). Adherence to a treatment regimen, coping styles, and chronic life stress were assessed as well as family relations using the Family Adaptability and Cohesion Evaluation Scales (FACES-II; Olsen et al., 1982). It was found that adolescents who frequently used personal resources, ventilation, and avoidance styles of coping showed less adherence to IDDM treatment. Children with higher levels of stress also reported using more avoidant coping strategies. Low family cohesion was a strong predictor of avoidance coping, with children from rigid families using more avoidant coping strategies. While the adherence measure and the coping and stress questionnaires were answered by the children, the FACES-II was completed by the parents. Thus, the adolescent's perception of the family functioning was not taken into account in this study.

In another study conducted by Fallon, Bowles, and Terry (2001), data from adolescents' self-report measures were used to examine the relationship between help-seeking behavior (classified as active coping) and perceived family functioning. Participants filled out questionnaires pertaining to types and characteristics of problems they face, the time they spent with their family members, and a family functioning scale that measured family intimacy,

parenting style, and conflict. The authors found that adolescent perceptions of their families' functioning were not associated with help-seeking behavior. However, help-seeking behavior was related to the problems that adolescents chose to report. The exact nature of this linkage could not be established in this study. Greater time spent with parents was also associated with fewer problems reported. Further research is needed to determine if greater time spent with family members results in avoidance coping strategies or alleviating stress thereby reducing problems.

Lohman and Jarvis (2000) studied stressors in adolescents ranging in age from 11-18 years old, coping styles, and psychological health within the context of the family. Adolescents were asked to list up to 10 stressors or hassles they encountered recently and then rank them in order of significance. Daily stressors that adolescents experienced included problems with family relationships, school, peers, and extracurricular activities. Greater family cohesion predicted the use of active coping; more conflict in the family predicted avoidant coping. Generalizability of results, however, is limited due to the small sample size in the study which consisted of only 42 adolescents.

The link between family functioning and coping styles has been demonstrated across different countries. In one study, researchers examined differences in coping styles and family environment in a sample of 10-12th grade Israeli adolescents (Shulman et al., 1987). Family cohesion, organization, and the encouragement of independence predicted higher levels of functional coping. Dysfunctional coping styles were associated with a lack of family cohesion and a lack of organization. Adolescent perception of family environment was also found to be related to the nature of the stressful situation, suggesting the importance of contextual factors in coping. This study was replicated by Seiffge-Krenke (1995) using a sample of Scandinavian

adolescents. Previous results were supported. Adolescents from families low in cohesion and organization, high in conflict, and low in expressiveness were more likely to use dysfunctional coping strategies. Hamid et al. (2003) reported that Chinese families high in cohesion, expressiveness, organization and with low levels of control and conflict were associated with a more constructive coping style. Participants were administered a Chinese version of a coping scale, a modified version of the Family Environment Scale, a self-esteem scale and a self-mastery scale. Adolescents were least likely to demonstrate constructive coping styles when they perceived their families negatively. Although this study supported prior findings, it was conducted using a sample of Chinese students and does not necessarily reflect the coping style or family environment of Western cultures. Stern and Zevon (1990) replicated the above studies in a sample of American adolescents. Emotion-focused strategies were used by adolescents from families low in cohesion and high in conflict. Problem-focused coping was used more by adolescents from families high in cohesion and low in conflict.

Perosa and Perosa (1993) studied adolescent development in college students at a midsized university in the Middle Atlantic region and at a large state university in the Midwest. Students completed a measure of family functioning that included flexibility and cohesion as well as an identity achievement scale and the Adolescent Coping Orientation for Problem Experiences Scale (A-COPE; McCubbin et al., 1983). It was found that clear boundaries, conflict resolution, and a lack of cross-generational alliances were associated with positive coping strategies and identity achievement. Positive coping strategies were confronting problems and seeking help from family members. Results suggested that coping styles mediate family functioning and identity achievement. The sample limits generalizability of this study since 70% of participants were women and 93% of participants were Caucasian. The authors also did not

ascertain whether students were living away from home or if they were commuting to school and living with their parents.

Feenstra et al. (2001) studied 139 first-year students in relation to their family environment, family coping strategies, and adjustment. Family conflict significantly correlated with overall social and emotional adjustment with students from families with lower levels of conflict exhibiting positive adjustment. Higher levels of family coping and active coping strategies were also significantly correlated with better adjustment. Although this study provides evidence for the important roles that both coping and family functioning play in the adjustment of college students, the sample used was 78% female. Caution must be used when generalizing results to male students. This study also did not incorporate any measure of psychological symptomology.

In summary, several studies have supported the link between family functioning and coping styles that adolescents use. Positive coping styles such as problem-solving and engagement have been associated with high levels of family cohesion and adaptability. Negative coping styles such as emotion-focused coping and avoidance have been associated with low levels of family cohesion and adaptability. Although these associations have been established, the literature lacks specific emphasis on freshmen college students. Studies that have explored the nature of the college students' family environment have used students from primarily Caucasian and middle-upper class backgrounds or other countries. In other cases, a small sample size was used. These limitations make it difficult to generalize findings to American college freshmen students.

Rationale

The topic of stress, particularly how it relates to college students, has been a popular one in recent years. The literature differentiates between stressors, the objective characteristics of external events or objects, and stress which is the result of individual subjective perceptions of stressors (Barling, 1990). Most research citing psychological theories of stress refer to Lazarus and Folkman (1984). According to these researchers, stress is the result of individual characteristics, the environment, and the way the environment is perceived. During primary appraisal, a potentially stressful encounter is assessed as harmful, threatening, and/or challenging (Lazarus, 1999). During secondary appraisal, coping resources and abilities are evaluated. Psychological outcomes, including emotions, result from the interaction of environmental factors, appraisal, and individual factors such as coping styles.

The transition to college is often viewed as a life-event stressor that is perceived as stressful for many students (Lu, 1994). Research indicates the presence of high levels of stress in college students in addition to high rates of depression and anxiety. Stress has also been associated with college retention rates (American College Health Association, 2007).

Researchers have identified several stressors that are unique to the college population. Financial changes, work and school responsibilities, and interpersonal and family relationships, the academic work load, and conflicts with roommates and faculty were cited as stressors faced by college students (Jackson & Finney, 2002; Ross et al., 1999). Most studies exploring college stressors have been conducted in college dormitories with primarily Caucasian participants. Research on types of experienced stressors and perceived stress in freshmen students who commute to non-residential colleges is lacking.

Although the transition to college may be stressful, coping is conceptualized as a factor

that helps individuals adapt to stressful situations. Lazarus and Folkman (1984) divide coping strategies into problem-focused (efforts are directed at solving the problem or changing the stressful situation) vs. emotion-focused (efforts are directed at alleviating negative emotions felt as a results of a stressful encounter). Several researchers have criticized these categories for being too simplistic and breaking down a complex coping process into merely broad dimensions (Coyne & Gottlieb, 1996). Consequently, various scales have been developed to measure coping in children and adolescents (Frydenberg & Lewis, 1991; Gamble, 1994; Halstead, Johnson, & Cunningham, 1993; Phelps & Jarvis, 1994; Seiffge-Krenke, 1993). Different subcategories including active coping, passive coping, avoidant coping, accommodative coping, emotion-focused coping, acceptance, assistance-seeking, cognitive-behavioral problem solving, emoting or aggressing, seeking social support, and wishful thinking have resulted from the development of such scales. The Young Adult Coping Orientation for Problem Experiences (YA-COPE) was developed to specifically measure coping in older adolescents with emphasis on college freshmen (Patterson et al., 1983). Table 2 provides a summary of the coping classifications found in youth and coping scales that have been designed to measure coping in children and adolescents.

Regardless of the scale used to measure coping, there is much support demonstrating the relationship between coping strategies and psychological outcomes in adolescents. Favorable psychological adjustment has been associated with problem-focused and approach methods of coping. Negative psychological outcomes have been associated with emotion-focused and avoidant coping strategies (Herman-Stahl & Peterson, 1999; Holahan & Moos, 1987; Seiffge-Krenke, 1993).

Numerous researchers have examined the relationship between coping strategies and

psychological outcomes in college students (e.g., Valentiner et al., 1994). In one study, dysphoria was significantly related to disengaged coping methods in a sample of Midwestern undergraduate college students (Chang & Strunk, 1999). Task-oriented coping strategies were associated with lower levels of academic stress and higher levels of academic stress were associated with the use of emotion-oriented strategies in a sample of Israeli undergraduate students (Kariv & Heiman, 2005). Leong and Bonz (1997) found that approach coping predicted academic adjustment and personal-emotional adjustment. Although there is much literature to support the link between coping strategies and psychological outcomes, there are few that examine American freshmen from diverse backgrounds who commute to non-residential colleges.

In addition to coping strategies, family functioning is another important construct related to the well-being of adolescents and college students. Research suggests that the family plays a role in the coping process thus affecting psychological outcomes (Shek, 1997). Olson (1986) described family functioning as including cohesion and adaptability. Cohesion is defined as the emotional bonding between family members. Family adaptability is defined as a family's flexibility to change its relationship roles and rules (Olson, 1986). Strong associations have been found between low levels of family cohesion and adaptability and various adolescent psychological outcomes such as depression, suicide, and low self-esteem (Carbonell et al., 1998; Kashani et al., 1998). Holmbeck et al. (1993) found that high levels of adaptability and cohesion predicted fewer physical symptoms and lower levels of depression in college students. However, most studies conducted with college students have had a disproportionate number of Caucasian participants and have recruited students who dorm and live away from home.

Empirical evidence supports the role that family functioning plays in coping strategies.

Adolescents from families perceived as being high in cohesion and flexibility have been found to demonstrate more active coping strategies (Hamid et al., 2003; Seiffge-Krenke, 1995; Shulman et al., 1987; Stern & Zevon, 1990). Perosa and Perosa (1993) studied this relationship in college students. Students who confronted problems and sought out help from family members tended to perceive their families as having clear boundaries, conflict resolution, and a lack of cross-generational alliances. In another study, students showed higher levels of adjustment when they perceived their families as having lower levels of conflict when they used more active coping strategies (Feenstra et al., 2001).

The link between family functioning and coping strategies has been well established. Positive coping strategies that attempt to solve the problem, are active, and task-oriented are associated with high levels of family cohesion and adaptability. Negative coping strategies such as emotion-focused coping and avoiding the problem are associated with low levels of cohesion and adaptability in students. There are few studies that explore this relationship with specific emphasis on American freshmen college students from diverse backgrounds. More importantly, the traditional focus has been on students who dorm away from home. Students who commute to college may have different stressors and cope differently than their peers who dorm since they may live close to or with their families.

The present study builds upon the previous findings regarding the relationships among stress, coping, and family functioning in college students. It advances the existing literature by answering important questions that have not been emphasized in the research. The present study tests the transactional model of stress and coping (Lazarus & Folkman, 1987) and sheds light on the nature of stress and the coping process in American freshmen in non-residential colleges. The college transition was examined in the important context of family functioning (Olson, 1990). In

an effort to predict student adjustment to college, a comprehensive model of stress, coping, and family functioning was tested.

This study has important implications for working with freshmen college students in non-residential campuses. Results of this study will provide college counselors with insight regarding the nature and types of stressors that such students face. An understanding of their coping strategies and family functioning will aid college counselors in helping students optimize the use of their available resources. Coping strategies can also be the focus of freshmen orientation programs that help students adjust to college and minimize stress. Better coping strategies and lower stress levels may lead to better psychological outcomes in freshmen college students and overall better adjustment to college life.

Research Questions

1. What types of stressors do freshmen students in non-residential colleges face?
2. Is family functioning associated with certain coping strategies in freshmen students?
3. Do coping strategies mediate the relationship between perceived stress and freshmen student adjustment to college?
4. What is the utility of family functioning, perceived stress, and coping strategies in predicting student adjustment to college?

Hypotheses

The first research question is exploratory in nature and clarifies what specific types of stressors freshmen commuter students have experienced most frequently during their second semester.

HO1: Balanced family functioning and problem-focused coping strategies will be positively correlated. More specifically, students who perceive their families as having balanced cohesion and adaptability will demonstrate coping strategies such as self-reliance and positive appraisal and family problem solving.

HO2: Unbalanced family functioning and emotion-focused and avoidant coping strategies will be positively correlated. More specifically, students who perceive their families as having unbalanced cohesion and adaptability will demonstrate coping strategies such as low and high activity levels, ventilation, establishing emotional connections, seeking spiritual support, and humor.

HO3: Coping strategies will mediate the relationship between perceived stress and student adjustment to college.

HO4: Adjustment to college will be predicted by family functioning, perceived stress, and coping strategies.

CHAPTER 3

Methodology

This chapter describes the methodology of the study that explored the relationship among family functioning, perceived stress, coping strategies, and student adjustment in college freshmen. This chapter begins with a description of the participants, settings, and procedures that were used in the study. It then explains the different instruments that were utilized to measure the variables in the study.

Participants and Setting

This study was conducted at two public 4-year commuter colleges in the Northeast. These colleges include students from culturally and linguistically diverse backgrounds, which is essential to the current study. Data provided by The National Center for Education Statistics IPEDS data feedback report (2008) indicates that college #1 had 10,630 full time undergraduate students and 8,098 part time undergraduate students enrolled in Fall 2008. One percent were American Indian, 24% were Asian, 10% were Black, 19% were Hispanic, and 47% were White. The data indicated that 63% of students were women and 37% were men. Data gathered from The Office of Institutional Research and Assessment in Spring 2008 of college #1 indicated that 73% of undergraduates were under the age of 25 years old and 27% were 25 years old and older. Eight percent lived alone, 85% lived with family members, and 7% lived with others. Fifty three percent lived with parents, and 14% lived with a spouse or domestic partner.

Data provided by The National Center for Education Statistics IPEDS data feedback report (2008) indicated that college #2 had 11,523 full time undergraduate students and 9,088 part-time undergraduate students enrolled in Fall 2008. Three percent were American Indian, 22% were Asian, 14% were Black, 43% were White/non-Hispanic, and 20% were Hispanic. The

data indicated that 32 % of students were women and 68% were men. Data gathered from the Office of Institutional Research and Assessment of college #2 in Spring 2008 showed that 71 % of undergraduates were under the age of 25 years old and 29 % were 25 years old and older. Eleven percent lived alone, 74% lived with family members, and 3% lived with others. Thirty nine percent lived with parents, and 15% lived with a spouse or domestic partner.

In this study, participants were 167 freshmen ages 18-23 years old (mean=18.66). Table 3 reports descriptive statistics of participants.

Table 3

Participant Descriptive Statistics for Ages, Ethnicity, Gender, Living Situation, Household Income, Work Hours for Pay, and Campus Commute

Descriptor	%	Descriptor	%
Gender			
Male	34.1%		
Female	65.9%		
Age		Ethnicity	
18	52.1%	Asian American	27.5%
19	38.3%	African American	6.6%
20	4.2%	Hawaiian or Pac. Islander	1.2%
21	3.6%	Hispanic/Latina	19.2%
22	0.6%	Mixed Race	10.8%
23	1.2%	White/Caucasian	34.7%
Living Situation		Campus Commute	
Alone	1.2%	0 hrs/wk	7.2%
With parents only	22.8%	1-5 hrs/wk	46.1%
With parents and siblings	69.5%	6-10 hrs/wk	35.9%
With partner	0.6%	11-20 hrs/wk	9.0 %
With others	5.4%	Over 20 hrs/wk	1.8%
With partner and children	0.6%		
Work Hours for Pay		Household Income	
0 hrs/wk	46.1%	Less than $20,000	19.2%
1-5 hrs/wk	4.2%	Between $20,000-$40,000	24.0%
6-10 hrs/wk	8.4%	Between $40,000-$60,000	20.4%
11-20 hrs/wk	25.1%	Between $60,000-$80,000	15.6%
Over 20 hrs/wk	16.2%	Between $80,000- $100,000	5.2%
		Over $100,000	15.6%

Note. N = 167

Measures

The study consisted of a demographic information sheet and 5 questionnaires. The demographic section included 8 questions on age, gender, student status, ethnic background, living arrangement, household income, travel time to and from campus, and number of paid hours worked per week. Family questions included family structure and number of children in the family (Appendix A).

The Undergraduate Stress Questionnaire (USQ; Crandall, Preisler, & Aussprung, 1992) (Appendix B). The USQ measures life event stress in college students. Items were developed by having a sample of 30 undergraduate college students in a health psychology class generate a list of stressful life events ranging from major crises to minor hassles. The following week they were presented with a condensed version of the list consisting of 82 items and asked to rate the level of severity of each item by asking them to rate "how stressful would this be to you, if it occurred to you?" on a 4-point scale of none, a little, some, a lot. A panel of 30 different undergraduates rated the stressors for frequency on a scale of 1-5 (never, infrequently, sometimes, often, always). To determine the frequency of occurrence of these events, the USQ was then administered to 86 different undergraduates who were asked to check off if the stressful event had happened to them any time in the last week. The frequency of events was calculated this way.

Participants of this study were asked to endorse which items (from the checklist of 82 items) pertain to an experience that they have had in the past semester. Scores ranged from 0 to 82 and a total score on the USQ was obtained by tallying the endorsed check marks. Examples of events included in the checklist include the "death of a family member" and "lack of money." The USQ has been found to negatively correlate with mood and positively correlate with

measures of physical health symptoms (Crandall et al., 1992). It has also shown good internal consistency (.80) and split-half reliability (.83). Test-retest reliability was found to be moderate (.50).

The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) (Appendix C). The PSS measures self-appraised levels of stress experienced in the last month. This measure calls for participants to take into account their individual assessments of environmental demands, consistent with the Lazarus and Folkman (1984) model of stress and coping. The scale consists of 10 items that were validated on two samples of college students and one sample of participants in a community smoking-cessation program. Items were designed based on theoretical models of appraising situations as unpredictable, uncontrollable, and overloading which have been found to be significant components of experiencing stress (Lazarus & Folkman, 1984).

Participants were asked to indicate how often the items apply to them using a 4 point Likert scale that ranges from almost never to usually. Examples of questions include, "In the last month, how often have you been upset because of something that happened unexpectedly?" and "In the last month, how often have you felt that you were unable to control the important things in your life?" PSS scores were obtained by reversing the scores on the four positive items and then summing across all 10 items. Items # 4,5,7, and 8 are the positively stated items. Higher scores on the PSS indicate higher levels of perceived stress. The PSS has strong psychometric properties with coefficient alpha reliabilities ranging between .84 and .86. The measure correlates with physical health symptoms (.52 - .70) and measures of depressive symptomology (.65- .76) (Cohen, Kamarck, & Mermelstein, 1983).

*Young Adult Coping Orientation for Problem Experiences (YA-COPE; Patterson, McCubbin, & Grochowski, 1983). (*Appendix D). Coping strategies of students were assessed using the 56-item Young Adult Coping Orientation for Problem Experiences (YA-COPE; Patterson, McCubbin, & Grochowski, 1983). This scale is a modification of the 54-item Adolescent Coping Orientation for Problem Experiences (A-COPE; Patterson & McCubbin, 1983) which was developed on a sample of 30 high school students who participated in structured interviews. Students responded to questions about how they manage experienced life events and changes. For the purpose of assessing psychometric properties, a second sample of 467 junior and senior high school students responded to the A-COPE items by describing how frequently they use the behaviors that the original group listed. The YA-COPE was designed based on the A-COPE in order to identify coping strategies of college freshmen in particular. Modifications included the re-wording of 2 items (i.e., talk to instructor, advisor, or counselor about what bothers you and try to keep up high school friendships). Two other items (i.e., try to make new friends at college and try to be alone) were also added to the YA-COPE that were based upon interviews conducted with college freshmen.

The YA-COPE yields 9 subscales of coping as follows. Ventilation includes 8 coping behaviors, such as yelling, that express emotion (Cronbach's alpha = .71). Low activity level consists of 8 behaviors that involve escaping the source of the stress. Examples include watching T.V. and sleeping (Cronbach's alpha = .58). Self-reliance and positive appraisal include 5 items that relate to efforts to be in charge of the situation and think about it in a positive way (Cronbach's alpha = .72). Emotional connections include 6 items that involve staying emotionally connected and sharing in problem solving with others (Cronbach's alpha = .61). Family problem solving consists of 6 items that deal with sorting out the problems with

family members (Cronbach's alpha = .58). Avoidance includes 3 items that involve using substances to escape from the problem (Cronbach's alpha = .61). Spiritual support consists of 5 items that relate to using religious behaviors such as praying and talking to clergy to cope (Cronbach's alpha = .61). High activity level includes 6 items that relate to engaging in a challenging goal or activity such as strenuous physical activity or working hard at a project (Cronbach's alpha = .69). Humor consists of 3 coping behaviors that involve making light of the situation (Cronbach's alpha = .77).

Using this scale, participants rated how often they engaged in each coping behavior when faced with difficulties or when feeling tense from 1 (never) to 5 (most of the time). A score was obtained by summing the respondents' scores for each of the items. For eight items scores were reversed (7, 8, 24, 26, 28, 43, 47, and 50) in order to ensure that all items were weighted in a positive direction for analysis of results. The YA-COPE has been shown to have an internal consistency reliability of .82 and a test-retest reliability of .83 (Patternson, McCubbin, & Grochowski, 1983).

The Family Adaptability and Cohesion Evaluation Scales (FACES-IV; Olsen, Gorall, & Tiesel, 2007). (Appendix E). The Family Adaptability and Cohesion Evaluation Scales (FACES-IV; Olsen, Gorall, & Tiesel, 2007) was used to assess family cohesion and adaptability. The FACES-IV is a 42-item test that measures family cohesion and adaptability using six scales consisting of 7 items each. The scale includes two balanced subscale scales that assess balanced family cohesion and balanced family flexibility. The FACES IV also contains four unbalanced scales that assess how high or low families are in cohesion and flexibility. The two unbalanced scales for cohesion are disengaged and enmeshment. The two unbalanced scales for flexibility are rigid and chaotic.

The FACES IV software comes with an Excel program that automatically scores the data and sums each of the six subscales (balanced cohesion, balanced flexibility, disengaged, enmeshed, rigid, and chaotic). The Total Raw Scores of each of these six subscales are converted into percentage scores. A cohesion ratio, flexibility ratio and total circumplex ratio scores are also provided. The FACES IV scale and scoring software provides scores for a Family Communication and Family Satisfaction scale. Although data for these scales were collected, they were not analyzed since they do not relate to the research questions proposed.

The FACES IV was developed based on the Circumplex Model of Marital and Family Systems (Olson, Sprinkle, & Russell, 1979) and elaborated on by Olson in 1986. The FACES IV represents modifications and improvements on the earlier 20-item Family Adaptation and Cohesion Evaluation Scales III (FACES; Olson, Portner & Bell, 1982). The subscales were developed based on data collected from a sample of 469 university students, their friends, co-workers, fellow students and their family members.

Using this scale, participants rated their agreement with statements using a 5 point scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The balanced scale scores for flexibility and cohesion were used in analyzing the data. The manual reports reliabilities of the six FACES IV scales as follows: disengaged=.87, enmeshed=.77, rigid=.83, chaotic=.85, balanced cohesion=.89, balanced flexibility=.80. Alpha reliability ranged from .91 to .93. (Olsen, Gorall, & Tiesel, 2007).

Student Adaptation to College Questionnaire. The Student Adjustment to College Questionnaire (SACQ, Baker & Siryk, 1984, 1989) (Appendix F). The SACQ is a 67-item self-report measure that assesses adjustment to college across four domains: academic (24 items), social (20 items), personal/emotional (15 items) and goal commitment-institutional attachment

(15 items). The scale also yields an index of overall adjustment (full-scale adjustment score). The scale was developed and standardized on more than 1,300 college freshmen. It was stratified by semester of attendance (first or second) (Baker & Siryk, 1984*)*

SACQ scale items describe several college experiences such as, "I wish I were at another college/university" and "I have been feeling tense or nervous lately." Items referring to residential campuses and not applicable to commuter schools (e.g., "Lonesomeness for home is a source of difficulty for me now," "I enjoy living in a college dormitory," and "I am getting along very well with my roommate(s) at college") were taken out. Although certain items were deleted, scale reliability was not affected. Alpha reliabilities were calculated for the full adjustment scale and subscales and were found to be between .77-.89.

Participants rated how well each experience applies to them at the present time using a 9-point Likert scale ranging from 1 (*doesn't apply to me at all*) to 9 (*applies very closely to me*). Higher scores on the scale suggest better adjustment. Academic adjustment measures student motivation, academic performance, and student satisfaction with the academic environment. Social adjustment measures adaptation to interpersonal demands of college and satisfaction with the social environment. Personal-emotional adjustment assesses the extent to which the student experiences psychological distress or somatic symptoms of distress such as sleep disturbances and headaches. Attachment assesses overall student satisfaction and commitment to the specific institution's goals and the quality of the relationship between the student and college. Full-scale adjustment measures students' overall adjustment to college life. Baker and Siryk (1984) report Cronbach's alphas of .82- .87 for the academic adjustment subscale, .83.- .89 for the social adjustment subscale, .77- .86 for the personal-adjustment subscale, .85- .91 for the goal commitment-institutional attachment subscale, and.92- .95 for the full-scale college adjustment

subscale. Scores on the SACQ have been shown to correlate negatively with college attrition and positively with participation in social events (Baker & Siryk, 1984, 1989).

Procedure

Participants were recruited through the Psychology Departments of the 2 commuter colleges. These departments require students in Introduction to Psychology to become more familiar with psychological research either by serving as participants in research studies, attending Psychology Department colloquia, or by writing brief reports on articles in psychological journals or on the Internet. Freshmen students enrolled in this course for the spring 2009 semester had the option of participating in this study in order to earn one research credit. This study was posted on a website where they were instructed by the department to look for studies. The system's online survey feature was used so that the survey questions were entered directly into the system. Participants who signed up for this study were asked to immediately complete the survey and upon completion, they were granted credit.

To participate in the study, students logged onto the website and entered the username and password with which they registered. They clicked on the "study sign up" section where this study appeared. After reading the appropriate consent form (see Appendix G and Appendix H) and clicking on it, a link appeared to guide the participant to the online questionnaires. All questionnaire results obtained online were anonymous in that there was no identifying information anywhere in the questionnaire. The data also remained confidential. Only the researcher had the password for the website to view the results. Data collection proceeded throughout the end of the spring 2009 semester, at which point this study was taken off of the website. A list of mental health resources were provided at the end of the questionnaire so that students could seek help if they felt distressed by any of the items (see Appendix I).

CHAPTER 4

Results

This chapter describes the methods used to analyze the data as well as the results obtained. Reliabilities of all scale and subscales were first calculated. Descriptive statistics and correlations are reported as well as the results of a Hotelling's t-square test, path analysis models, and multiple regression. Results of the reliabilities of the measures used are presented in Table 4. Reliabilities ranged from .77-.89 and were comparable to those found by scale developers.

Table 4

Internal Consistency Reliabilities of Scales and Subscales

Measure	Cronbach's Alpha
1.PSS	.84
2.FACES-IV	.89
3.FACES-IV: Balanced subscale	.81
4.YA-COPE	.79
5.SACQ: Academic Adjustment	.85
6.SACQ: Social Adjustment	.83
7.SACQ: Personal-emotional Adjustment	.77
8.SACQ: Institutional Attachment	.84
9.SACQ: Full Adjustment	.89

Note. 1. Perceived Stress Scale 2. Family Adaptability and Cohesion Evaluation Scales-IV
3. Family Adaptability and Cohesion Evaluation Scales-IV: Balanced subscale
4. Young Adult Coping Orientation for Problem Experiences
5. Student Adaptation to College Questionnaire: Academic Adjustment
6. Student Adaptation to College Questionnaire: Social Adjustment
7. Student Adaptation to College Questionnaire: Personal-emotional Adjustment
8. Student Adaptation to College Questionnaire: Institutional Attachment
9. Student Adaptation to College Questionnaire: Full Adjustment

Descriptive Statistics

Table 5 presents the means and standard deviations for the 5 dependent measures that were completed by college freshmen: academic adjustment, social adjustment, personal emotional adjustment, attachment, and full adjustment. Scale norms from the second semester year of college are also presented. The means for all dependent measures in the current sample were lower than those in the normative sample.

Table 5

Student Adaptation to College Questionnaire (SACQ) Means and Standard Deviations for Academic Adjustment, Social Adjustment, Personal-emotional Adjustment, Attachment, and Full Adjustment

SACQ Measures	Sample (n=167)		SACQ scale norms (n=788)	
	M	SD	M range	SD range
Academic Adjustment	107.98	14.46	140.40-157.00	20.80-32.30
Social Adjustment	113.83	16.09	125.70-142.70	20.70-26.70
Personal-Emotional	72.75	15.74	90.10-101.80	15.40-24.40
Attachment	81.32	9.57	97.30-111.80	16.80-22.70
Full Adjustment	384.10	40.48	412.10-462.20	55.80-70.40

The first research question addressed in this study was exploratory and asked what types of stressors freshmen students in non-residential colleges experience. All raw data were initially entered and coded using SPSS version 15.0 (SPSS Inc., 2007). The 82 types of stressors as measured by the Undergraduate Stress Questionnaire were categorized into 7 main categories of stressors: academic, relationship, time management/organization, commuting, finance/work, health, and other. Items were assigned a value of "1" if they were endorsed as stressors or a "0" if they were not endorsed. Frequency counts were then created within each category and the counts were summed. The total score within each category was then divided by the total score possible within each category in order to get a percentage score. Four categories of stressors were then created based on the significant correlations with perceived stress as reported in the correlation matrix (see Table 6). Academic, finance/work, relationships, and other emerged as the stressors that were significantly correlated with perceived stress. Academic stressors emerged as the most frequently endorsed items by students (32.71%). Financial issues and work stressors accounted for 18.29% of items endorsed. Relationship stressors accounted for 17.12% of the total items endorsed, and 14.36% of the items endorsed pertained to other stressors such as the death of someone close or property stolen. Students endorsed other stressful items related to commuting (8.54%), time management/organization (5.87%), and health (3.11%). Although items under these categories were endorsed, they did not significantly correlate with perceived stress (see Table 7).

Table 6

Correlations between Undergraduate Stress Questionnaire Subscale Scores and Perceived Stress Scale Scores

Variable	1	2	3	4	5
1. Perceived stress	--				
2. Academic	.16*	--			
3. Relationship	.26**	.43**	--		
4. Finance/Work	.26**	.36**	.55**	--	
5. Other	.27**	.61**	.75*	.58**	--

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

Table 7

Percentage of Stressors Reported by Students on the Undergraduate Stress Questionnaire

Type of stressor	# of items	Exemplar	Total percent of items endorsed
Academic	22	Had a lot of tests	32.71%
Finance/Work	10	Lack of money	18.29%
Relationships	16	Breaking up with boy/girlfriend	17.12%
Other	19	Victim of a crime	14.36%
Commuting	4	Couldn't find a parking space	8.54%
Time management/organization	6	Erratic schedule	5.87%
Health	5	Sick/injury	3.11%
Total	82		100%

Note. N = 167.

Almost all students (96.41%) reported experiencing stressors related to school and assignments. Most students also reported experiencing relationship stressors (77.25%), time management and organization stressors (89.82%), work and financial stressors (75.45%) and other life stressors such as the being the victim of a crime or the death of a loved one. Over half of students reported experiencing heath-related stressors (66.46%). Commuting was also reported to be a stressor but only for 31.13% of students sampled. See Table 8.

Table 8

Percentage of Students Reporting Various Stressors on the Undergraduate Stress Questionnaire

Type of stressor	Percent of students
Academic	96.41%
Finance/Work	75.45%
Relationships	77.25%
Other	88.62%
Commuting	31.13%
Time management/organization	89.82%
Health	66.46%

Note. N = 167.

Hypothesis #1

It was hypothesized that students who perceive their families as having balanced cohesion and adaptability will demonstrate problem-focused coping strategies such as self-reliance and positive appraisal and family problem solving. As expected, there was a significant positive correlation between balanced family functioning and family problem solving ($r = .54$, $p < .01$). There was also a significant positive correlation between balanced family functioning and self-reliance/positive appraisal ($r = .34$, $p < .01$). This provides support for the first hypothesis.

Hypothesis #2

It was hypothesized that students who perceive their families as having unbalanced cohesion and adaptability will demonstrate coping strategies such as avoidance, low and high activity levels, ventilation, establishing emotional connections, seeking spiritual support, and humor. Findings did not support this hypothesis. Surprisingly, there were significant positive correlations, although small, between balanced family functioning and establishing emotional connections ($r = .17$, $p < .05$) and between family functioning and avoidance ($r = .17$, $p < .05$) suggesting that students with high balanced family functioning engage in high levels of establishing emotional connections and use avoidance as coping strategies. These results contradict the second hypothesis. See Table 9 for intercorrelations between variables.

Table 9

Intercorrelations between Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.FamFun	--															
2. PSS	-.16*	--														
3. FamPrb	.54**	-.14	--													
4. SelfRep	.34**	-.15	.31**	--												
5. SprtSup	.13	-.02	.40**	.07	--											
6. Humor	.15	-.06	.28**	.36**	.16*	--										
7. Ventln	.11	.21**	.29**	.17*	.15*	.06	--									
8.EmotCn	.17*	.05	.45**	.31**	.19*	.49**	.36**	--								
9. HigAct	.24	-.10	.36	.49	.25	.37**	.11	.34	--							
10.LowAct	.10	-.10	.27**	.36**	.14	.37**	.16*	.36**	.41**	--						
11. Avoid	.17*	.00	.16*	.09	.05	-.16*	.20**	-.12	.07	.05	--					
12.AcdAdj	-.14	.04	-.15	-.16*	-.11	-.06	.00	.03	-.18*	-.11	-.19*	--				
13. SocAdj	-.08	.11	-.21**	-.21**	.27**	-.22**	.01	-.17*	-.49**	-.17*	-.03	.44**	--			
14.PerEAdj	.16*	-.44**	.07	.23**	-.08	-.02	-.10	.01	.13	.09	.00	.31**	.11	--		
15. Attch	.00	.07	-.07	-.08	-.15	-.14	.07	-.07	-.28**	-.21**	-.03	.39**	.67**	.21**	--	
16. FullAdj	-.04	-.07	-.15	-.11	-.22**	-.15*	-.03	-.09	-.30**	-.14	-.10	.78**	.78**	.56**	.73**	--

Note. * $p < .05$; ** $p < .01$. 1. Family Functioning 2. Perceived Stress 3. Family Problem Solving 4. Self Reliance/Positive Appraisal 5. Spiritual Support 6. Humor 7. Ventilation 8. Emotional Connections 9. High Activity Level 10. Low Activity Level 11. Avoidance 12. Academic Adjustment 13. Social Adjustment 14. Personal Emotional Adjustment 15. Attachment 16. Full Adjustment

Hypothesis #3

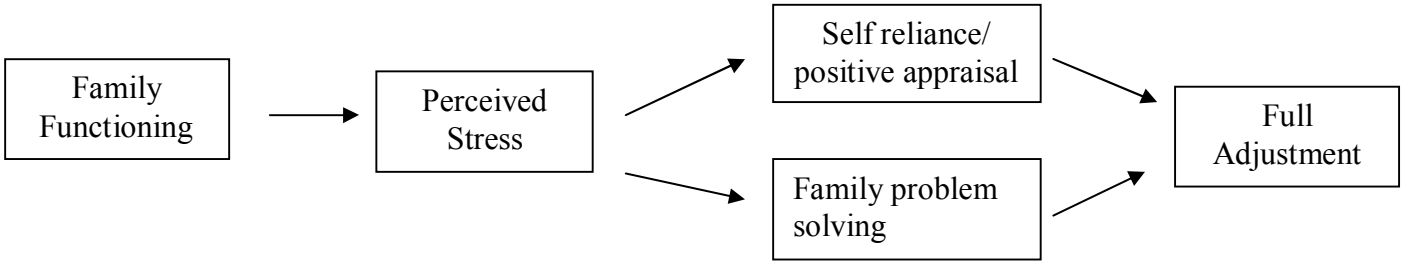
It was hypothesized that coping strategies would mediate the relationship between perceived stress and freshmen student adjustment to college. The relationships among perceived stress, coping strategies, and adjustment to college were examined using path analysis with LISREL 8.8 (Joreskog & Sorbom, 2006). To test the conceptual model, the principles of mediation outlined by Baron and Kenny (1986) were used. Mediators (perceived stress and coping strategies) provide an explanation between an independent and dependent variable (family functioning and student adjustment). In order for a construct to be considered a mediator, there must be evidence of certain conditions. First, the link between family functioning and student adjustment to college must be significant. For perceived stress and specific coping strategies to be significant mediators, the link between family functioning and perceived stress and the link between perceived stress and student adjustment to college must be significant. The direct link between family functioning and student adjustment should show a significant drop in the strength (beta value) after the mediators (perceived stress and coping strategies) are introduced into the model.

The relatively small sample size for this study (167 students) and the complexity of the proposed conceptual model did not lend itself to a comprehensive test of the model in a single analysis such as structural equation modeling using latent variables. The model was thus tested in five separate parts using path analysis with observed variables: (a) the links between family functioning and perceived stress, (b) perceived stress and coping strategies (c) perceived stress and student adjustment, (d) family functioning and coping strategies, and (e) coping strategies and student adjustment. Non-significant paths were dropped and only significant paths were used to put into the final model.

Figure 1 illustrates the original proposed model from family functioning which tested the problem-focused coping strategies as mediators and full adjustment as the dependant measure.

Figure 1

Model 1: The Impact of Family Functioning, Stress, and Coping Strategies on Full Adjustment to College



The model fit was evaluated using the fit indices suggested by Bollen (1989). A non-significant chi-square value in a path analysis shows the goodness of fit of a model. Other fit indices such as adjusted goodness-of-fit (AGFI), Root Mean Square Error of Approximation (RMSEA) and Comprehensive Fit Index (CFI) (Hoyle, 1995) are also used to estimate model fit. CFI values above .9 and AGFI values above .8 are generally interpreted as representing a good fit (Hayduk, 1987). RMSEA values of 0.08 or less indicate a reasonable error of approximation (Browne & Cudek, 1993).

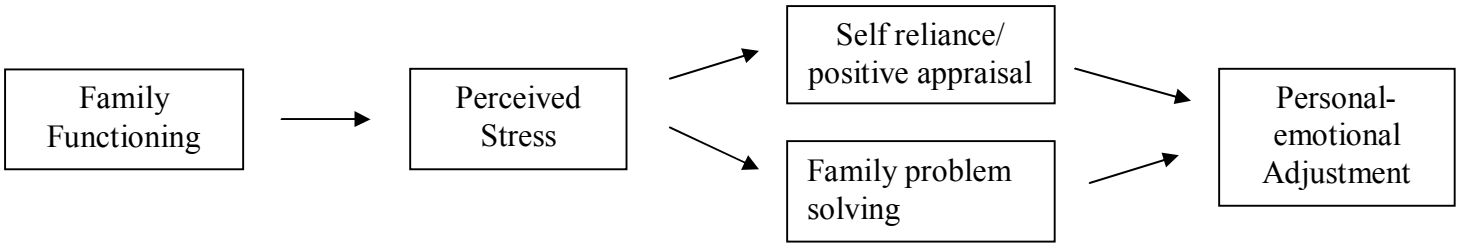
These fit indices were examined to determine the adequacy of the first model. If the model fit was not adequate, the modification index was examined to see which error terms, if freed, could improve the fit of the model. The first set of error terms that were looked at were ones with the largest modification index. After error terms were freed, changes in chi-square and

values of other fit indices were assessed at every step. The data were not a good fit for the other models that were run by taking out the largest error terms. A significant negative association was found between family functioning and perceived stress ($\beta = -.08$, $p < .05$), family functioning and family problem-solving ($\beta = .07$, $p < .05$), family functioning and self-reliance/positive appraisal ($\beta = .07$, $p < .05$) and perceived stress and self-reliance/positive appraisal ($\beta = .08$, $p < .05$). However, the association between perceived stress and student adjustment was insignificant ($\beta = -.07$). Thus, it was expected that data would not fit the full model which was the case.

One additional model was run using personal-emotional adjustment instead of full adjustment and the coping strategy self-reliance/positive appraisal (see Figure 2). This was done since personal-emotional adjustment was the only subtype of student adjustment that was found to have a significant correlation with perceived stress.

Figure 2

Model 2: The Impact of Family Functioning, Stress, and Coping Strategies on Personal-emotional Adjustment



The data were also not a good fit for this model. A significant association was found between self-reliance/positive appraisal and personal emotional adjustment ($\beta = .15$, $p < .05$) however, the

path between perceived stress and personal-emotional adjustment was insignificant (β = .09). Thus, it was expected that the data for this model would also not be a good fit which was the case. Results do not provide support for Hypothesis 3 which stated that coping strategies would mediate the relationship between perceived stress and student adjustment to college. See Table 10 for a summary of model fit indices.

Table 10

Summary of Model Fit Indices for Path Analyses

	X^2	CFI	GFI	AGFI	RMSE
Model 1	172.18	0.63	0.90	0.80	0.15
Model 2	139.00	0.79	0.87	0.77	0.11

Note. X^2 = Chi squared. CFI= Comprehensive Fit Index. GFI = Goodness-of-Fit AGFI = Adjusted Goodness-of-Fit. RMSE = Root Mean Square Error of Approximation.

Hypothesis #4

Hypothesis 4 stated that adjustment to college would be predicted by family functioning, perceived stress, and coping strategies. Multiple regression analysis was conducted to determine the values of family functioning, perceived stress, and coping strategies in predicting different types of student adjustment to college. Four separate regression models were tested. Each time, the predictor variables were simultaneously entered into the model. The specific coping strategies that were entered were chosen if they were significantly correlated with the specific adjustment to college being tested. The models containing all of the predictor variables were significant for academic adjustment (R^2 = .07, F (5, 166) =2.49, p <.05), social adjustment, (R^2 = .28, F (8, 166) = 7.48, p = <.01). personal-emotional adjustment (R^2 = .25, F (3, 166) = 15.57, p

<.01) and attachment (R^2 = .10, F (4, 166) = 4.23, p = <.01). This provides support for Hypothesis 4 which stated that adjustment to college would be predicted by family functioning, perceived stress, and coping strategies. Results indicated that avoidance predicted academic adjustment above and beyond the other variables (t = -2.13). Spiritual support (t = 2.31) and high activity level (t = 5.53) predicted social adjustment above and beyond the other variables. Perceived stress (t = -5.80) and self-reliance/positive appraisal (t = 2.13) predicted personal-emotional adjustment above and beyond the other variables. High activity level predicted attachment to college above and beyond other variables (t = -2.91). The results of all regression analyses are shown in Tables 11-14.

Table 11

Summary of the Multiple Regression Analysis for the Variables Predicting Academic Adjustment to College

	R^2	F	β	SE β	t
Model	.17	2.49*			
Family Functioning			-.06	.12	-.72
Perceived Stress			.01	.19	.09
Self-reliance/Positive Appraisal			-.07	.53	-.80
High Activity Level			-.11	.35	-1.30
Avoidance			-.16	.47	-2.13*

Note. * indicates significance at the p < .05 level; ** indicates significance at the p < .01 level

Table 12

Summary of the Multiple Regression Analysis for the Variables Predicting Social Adjustment to College

	R^2	F	β	SE β	t
Model	.28	7.48**			
Family			.07	.19	.89
Perceived Stress			.08	.19	1.11
Self-reliance/Positive Appraisal			.02	.55	.19
Spiritual Support			-.16	.31	2.31*
Humor			-.06	.57	-.70
Emotional Connections			.00	.35	.08
High Activity Level			-.47	.37	-5.53**
Low Activity Level			.07	.34	.84

Note. * indicates significance at the $p < .05$ level; ** indicates significance at the $p < .01$ level

Table 13

Summary of the Multiple Regression Analysis for the Variables Predicting Personal-emotional Adjustment to College

	R^2	F	β	SE β	t
Model	.22	15.57**			
Family Functioning			.04	.12	.60
Perceived Stress			-.41	.19	-5.80**
Self-reliance/Positive Appraisal			.16	.47	2.13*

Note. * indicates significance at the $p < .05$ level; ** indicates significance at the $p < .01$ level

Table 14

Summary of the Multiple Regression Analysis for the Variables Predicting Attachment to College

	R^2	F	β	SE β	t
Model	.34	4.23**			
Family Functioning			.08	.08	1.03
Perceived Stress			.05	.12	.62
High Activity Level			-.24	.22	-2.91**
Low Activity Level			-.11	.21	.17

Note. * indicates significance at the $p < .05$ level; ** indicates significance at the $p < .01$ level

Supplementary analysis

Although the hypotheses did not incorporate gender as an independent variable, a supplementary analysis was conducted to assess the effect of gender across coping strategies. Hotelling's T-square (Stevens, 2002) was used for a multivariate test of differences between the mean values of two groups. Female participants were found to have significantly higher scores on coping strategies overall than males (Hotelling's T^2, $F = 16.13$ (9, 166), df, $p < .001$). Follow-up univariate F-tests on the 9 subscales of the YA-COPE also revealed significant gender differences on three of the coping subscales, with females scoring significantly higher on all three. The three subscales were ventilation, establishing emotional connections, and family problem solving (see Table 15).

Table 15

Gender Differences in Coping Strategies

Test Name	Approximate F	Significance
Hotelling's T-squared	2.801	$p < .001$

	Males		Females			
Variable	M	SD	M	SD	Difference	CI (95%)
1. FamPrb	14.46	3.14	17.78	4.36	*3.33	(2.04; 4.61)
2. SelfRep	13.36	2.50	13.77	2.45	0.41	(-0.38; 1.21)
3.SprtSup	8.87	3.69	10.15	3.59	1.28	(0.11; 2.45)
4. Humor	7.28	3.17	6.97	2.98	0.31	(-1.09; 0.43)
5. Ventln	22.53	2.47	26.39	2.43	*3.86	(3.07; 4.64)
6. EmotCon	18.29	3.44	20.67	3.64	*2.38	(1.23; 3.53)
7. HigAct	16.52	3.57	16.66	3.70	0.14	(-1.04; 1.32)
8. LowAct	22.0	3.64	22.90	3.79	0.84	(-0.37; 2.04)
9. Avoid	12.33	3.21	13.87	1.63	1.53	(0.63; 2.44)

Note. * indicates significance at the $p < .05$ level
1. Family problem-solving 2. Self-reliance/positive appraisal 3. Spiritual support 4. Humor 5.Ventilation 6. Emotional connections 7.High activity level 8.Low activity level 9. Avoidance

CHAPTER 5

Discussion

This chapter describes the findings obtained from the statistical analyses as well as educational implications of the findings, limitations of this study, and directions for future research. The present study has provided a complex picture of the relationships among family functioning, perceived stress, coping, and adjustment to college. It also explored the nature of stressors that non-residential college freshmen experience. Results are in agreement with recent research on the role that family plays in student stress and coping. Family functioning influenced the levels of stress students experienced. Students from families with high levels of balanced cohesion and flexibility experienced lower levels of perceived stress. Although coping strategies did not mediate the relationship between perceived stress and adjustment to college, certain problem-focused coping strategies were significantly correlated with perceived stress and balanced family functioning. Certain coping strategies were also related to subtypes of student adjustment. Several significant correlations among coping strategies emerged which suggests that students may simultaneously use a variety of coping strategies to cope with stress. Finally, academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment were predicted by family functioning, perceived stress, and specific coping strategies.

Stressors and Perceived Stress

Overall, the study revealed several stressors that are common to non-residential college freshmen. The most frequently endorsed stressors related to academic issues, work and finances, and interpersonal relationships. Another category of stressors called "other" emerged which included events such as the death of a close one or stolen property. These categories of stressors were significantly positively related to the levels of perceived stress that students experienced.

Other stressors, such as commuting, time management and organization, and health were also experienced by students but these stressors were not significantly correlated with perceived stress. This suggests that the majority of stress experienced by non-residential college freshmen stems from academic obligations, personal relationships, and work and financial issues. As Millings and Mahmood (1999) stated, colleges should have programs in place to alleviate student stress, with specific emphasis on these concerns. For example, to alleviate academic concerns college advisement centers should be accessible to freshmen and encourage studying, turning in assignments on time, and talking to instructors. Counseling centers can host workshops on effective communication and building healthy relationships with family, friends, and significant others. Financial workshops could also be offered to help students manage their budgets and brainstorm strategies for increasing financial wealth and savings.

It is evident that non-residential college students share stressors in common with residential students. Research indicates that residential students, like non-residential ones, face stressors related to assignments, tests, and relationships with family and significant others (Hudd et al., 2000). It is not surprising that commuter students experience financial stressors, considering that 63.6% of students in the sample had a household income of under $60,000. This suggests that students probably have to work while in school to help support themselves and might have to take out loans to pay for school tuition which can contribute to the stress experienced. Most students did in fact work while in school. Of the total students sampled, 41.3% work 11 or more hours per week. Although non-residential students also endorsed items that related to time management and commuting, they did not emerge as the most common stressors. Descriptive data indicated that of the students in this sample, 46.1% of students commute 1-5 hours per week to and from campus and 35.9% of students commute 6-10 hours

per week. Although there is no comparative sample of residential students, commuting to and from campus would seemingly be a stressor unique to non-residential students. Potential differences in such variables between residential and non-residential students were not explored in this study but provide a direction for future research.

It is evident that non-residential students face many stressors, primarily ones related to academic work, finances, and relationships. In addition to helping freshmen students handle these particular stressors, more positive and functional appraisals of the stressors can also be encouraged. For example, helping students have a sense of control over the situation may affect the perception of stress. Research indicates that perceived sense of control, even if it is not actual control, may be a factor in reducing an individual's perception of stress. (Lazarus, 1999). Students can also be taught to be aware of negative thoughts that often create stress. Since appraisal is an important part of the coping process students can be trained to evaluate their stressors in a more productive manner. For example, instead of perceiving a situation as a threat, they can view it as an exciting challenge.

In light of the study's findings, creating stress management programs for college students should be an important goal for college administrators. An example of an effective component in stress management for college freshmen may be a required first-year academic course in which the aim is to improve problem-solving abilities and communication skills. Stress management workshops can be conducted by student wellness centers to also improve these skills. Freshman orientation workshops could include teaching and practicing skills, such as deep breathing and meditation, to reduce stress. Cognitive-behavioral strategies can be used that focus on identifying and changing maladaptive thinking such as overgeneralization and catastrophizing (Meichenbaum, 1977). An integral part of a stress management program should

also include students coming together to share their experiences, thoughts, and feelings. Findings of this study and others demonstrate that social support may be a buffer against the negative effects of stress. Finally, psycho-education should play a role in stress reduction. Information should be disseminated around campuses to increase personal knowledge about the causes of and contributors to stress. Students should also be aware of the cognitive, emotional, behavioral, and physiological effects of stress.

Family Functioning

According to Olson (1990), family cohesion and flexibility are important elements in healthy psychological development. Cohesion refers to the extent to which family members share close ties and bonds; flexibility refers to the extent to which rules and roles within the family can change when needed. Levels of cohesion and flexibility that are very high or very low are not healthy for the family unit (Olson et al., 2007). The association between balanced cohesion and flexibility and positive psychological outcomes in college students has been reported in the literature. Findings from this study reveal that students from families with higher balanced family functioning experience lower levels of perceived stress. This suggests that the support and bonds between family members could help alleviate stress in students. It may also imply that poor family functioning can create student stress.

Consistent with the current research, the results of the present study revealed that specific coping strategies were related to balanced family functioning. Students from families with balanced cohesion and flexibility used relatively larger amounts of family problem solving and self-reliance/positive appraisal. It seems that families who share balanced levels of cohesion and allow for flexibility in family roles and rules promote the sharing of problems and exploration of problem-focused coping strategies.

It was hypothesized that students from families with unbalanced family functioning would engage more in establishing emotional connections, however, the opposite was found in this study. Students from families with balanced functioning also appear to stay emotionally connected with family members and rely on them for social support which has been found to mitigate the negative effects of stress in college students (Wang, Chen, & Zhao, 2006).

Noteworthy is the fact that the living situation and family structure of students in this sample could have played a role in the results obtained. Over 90% of students lived at home with parents or parents and siblings (22.8% with parents only and 69.5% with parents and siblings). Living at home may present students with specific stressors such as additional responsibilities and roles that students who live away from home and dorm do not face.

These findings have implications for college advisors in non-residential campuses and mental health counselors working with college freshmen. Research indicates that the family is often not the focus in campus mental health services (Cogdal & Cozzens, 1995). Given the results of this study, a family focus could be a very useful intervention in addressing the coping strategies and psychological well-being of college students. Family therapy can be suggested in certain cases, but where it is not always an option, college counselors can help students explore their family histories of conflict, adaptability, and coping strategies. They can educate students about family issues and encourage them to share their concerns and problems. The levels of available student family support should be examined as well as the family functioning. If there is an absence of balanced family functioning, goals of therapy sessions could be addressing communication patterns, unresolved conflicts, and improving family relationships. If parents are able to be present for counseling sessions, it could be useful to address the issues and potential problems their children may face as they transition to college.

Therapists and counselors working with college freshmen students should receive the appropriate training needed to understand the functioning of family systems and coping. The sample of students used in this study came from a variety of cultural and ethnic backgrounds. As the research has indicated, both the context of the family, which includes cultural factors, as well as the levels of family functioning have important implications for how students cope with stressful situations. Thus better coping strategies that are problem-focused (e.g. self-reliance/positive appraisal) can be emphasized in counseling sessions, especially in students from families with unbalanced cohesion and adaptability.

Coping Strategies

This study explored the role of coping strategies in adjusting to college. It was hypothesized that coping strategies would mediate the relationship between perceived stress and adjustment to college. There are several factors that may explain why this hypothesis was not supported. Although the number of participants for a moderate effect size was 150, the sample size of this study might not have been large enough to detect mediation effects. In addition, other factors may influence whether or not coping mediates the relationship between stress and adjustment. For example, the use and effectiveness of any given coping strategy may be affected by gender, age, and/or ethnicity. These variables were not controlled for in this study nor where they tested as independent variables.

In order for a meditational effect to have been detected, it may be important to consider the specific nature of the stressor. Although this study explored the types of stressors that students experience, the stressors were not entered into the regression analysis. The transactional theory of stress and coping (Lazarus & Folkman, 1984) emphasizes appraisal as a factor contributing to perceived stress and consequent psychological outcomes. Students might have

appraised the stressors differently, and chosen different coping strategies based on their evaluations of each stressor. Future research should include a measure of appraisal in data collection.

Although a mediational effect was not found for coping strategies, subtypes of student adjustment were predicted by family functioning, perceived stress, and specific coping strategies. In addition to these findings, coping strategies were significantly associated with each other. This suggests that students may simultaneously use a variety of strategies to cope with various stressors. This also provides further evidence to support the notion that coping plays a large role in the adjustment to college.

Findings suggest that professionals working with non-residential college freshmen should make coping strategies the focus of intervention for and prevention of adjustment difficulties. Problem-focused coping strategies (e.g., planning, positive reframing, family problem-solving) can be taught to help students solve stressful situations. To the extent possible, given the specific circumstance, students should try to think in empowering ways and gain a sense of control over the situation so that the stressful situation can be resolved. Emotion-focused coping strategies (e.g., establishing emotional connections with others, venting) might also be recommended when students feel overwhelmed in the short-term or when a stressful situation is beyond their control. Using problem-focused strategies may be better for solving long-term stressful situations such as those related to meeting academic deadlines. Students should be encouraged not to use denying, making excuses, and feeling guilt or shame, and using drugs and alcohol to escape as ways of coping with stress.

Gender Differences

In the present study, gender played a significant role in specific coping strategies that male and female students used. Females scored significantly higher on ventilation, establishing emotional connections, and family problem solving. The fact that females engage in more ventilation and establish more emotional connections is consistent with prior findings. Surprisingly, females also used more family problem-solving than men which is a problem-focused strategy. Although the commonly held view is that males are more likely to use active and problem-focused coping, this was challenged by the results of a meta-analytic study wherein women were *more* likely to use these strategies (Tamres et al., 2002). Thus, there seems to be inconclusive evidence with regard to problem-solving strategies. In this study, females appeared to use more of the family problem-solving strategy but this could have been due to higher levels of balanced family cohesion and flexibility that may be found in females. Family problem-solving was found to be significantly positively associated with balanced family functioning.

In addition to differences in coping, literature supports the notion that female students face unique problems in adjusting to college. For example, as Baxter Magolda (1999) pointed out, the parents of female students may impose added stressors on them such as taking on certain traditional career paths and trying to find a mate while in college. Other researchers found that females were more likely than men to experience higher levels of depression and adjustment difficulties during their first year of college (Alfred-Liro & Sigelman, 1998). Gender differences in stress, coping, and adjustment to college should be further explored in future studies.

Adjustment to College

It was hypothesized that family functioning, perceived stress, and coping strategies would predict types of student adjustment. Support was provided for this hypothesis for each specific

type of adjustment. Academic adjustment, which includes motivation to learn and action to meet academic goals, was predicted by family variables, stress, and coping strategies. Findings revealed that avoidance predicted academic adjustment above and beyond the other variables. Students who used more avoidant coping strategies had lower levels of academic adjustment. As expected, using drugs and alcohol as a means of escaping stress, in particular school-related responsibilities, results in low levels of academic adjustment.

Social adjustment is related to the student's integration into the social environment of college. High activity level and spiritual support predicted social adjustment above and beyond the other variables. Students who engaged in high activity levels (e.g., strenuous physical activity) as a coping strategy demonstrated lower levels of social adjustment. Although activities such as exercising and lifting weights have been shown to reduce stress, high use of these activities as a coping strategy may result in a decrease in the time students spend socializing with others thereby resulting in lower levels of social adjustment. Students who cope by engaging in high levels of activity may also be lacking or neglecting the use of needed coping skills to solve social conflicts in a problem-focused manner. Students who cope by using spiritual support, which includes talking to clergy and attending religious services, experienced higher levels of social adjustment. This finding is expected given that support in general has been shown to mitigate the effects of stress. The coping scale used in this study did not tap into other forms of social support but leaning on family and friends would seem important for healthy adjustment to college.

The use of social support was found to predict social adjustment but not academic adjustment, personal-emotional adjustment or institutional attachment. This does not imply that having strong social support networks is not important for other types of adjustment. It may

mean, however, that it is critical for social adjustment, in particular for non-residential students. This may be due to the fact that non-residential students commute to college and do not have the same opportunities for interaction with other students. Obtaining this support from other outlets may be critical. Providing an ideal social environment may be more difficult to do in a college where students do not live on campus and may feel less connected to their institution. It is thus important for commuter colleges to create ample opportunities for students to socialize, both on campus and outside campus. Every effort should be made to create learning communities that combine academics and social activities.

Personal-emotional adjustment reflects the manifestation of personal or emotional problems through physical or somatic symptoms such as anxiety, depression, and sleep disturbances. The coping strategy self-reliance/positive appraisal and perceived stress predicted personal-emotional adjustment above and beyond the other variables. Students who demonstrated high levels of self-reliance/positive appraisal to cope demonstrated high levels of personal-emotional adjustment. This finding is consistent with other research which indicates that the use of problem-focused coping strategies is related to healthy psychological outcomes. It seems that taking personal responsibility and finding solutions to stressful situations buffers the negative physical effects of stress and results in fewer manifestations of stress-related health issues such as headaches and sleep disturbances. Students who experienced lower levels of stress also experienced higher levels of personal-emotional adjustment. Surprisingly, this relationship was not found with other types of adjustment. This finding could be attributed to the fact that the sample was comprised largely of females. Research demonstrates that female college students may experience higher levels of stress and may manifest the physical symptoms of stress such as weight changes and headaches to a greater extent than males (Economos,

Hildebrandt & Hyatt, 2008). Future research should examine the potential moderating effect of gender on stress and personal-emotional adjustment. Other factors such as personality variables may mediate the relationship between perceived stress and personal-emotional adjustment.

Institutional attachment includes the connection a student feels to a specific college and the firm resolve to complete a degree. This subscale has been shown to correlate with college retention rates and is closely connected to academic, social, and personal-emotional adjustment (Baker & Siryk, 1984). High activity level predicted low levels of attachment to college above and beyond other variables. This coping strategy, which includes engaging in strenuous physical activity and putting effort into other projects, is an avoidant strategy. Instead of confronting the stressor directly, students who use this strategy escape the source of stress by engaging in tasks that distract them. Students who used this strategy experienced lower levels of attachment to their college. This could be due to a number of factors. It may be that students are spending time avoiding the solving of interpersonal conflicts and not making friends or investing effort in their school work. These factors are related to the student's feeling of satisfaction with their particular college.

Noteworthy is the fact that the instrument which measured adjustment to college, the SACQ, was normed in 1985, over 20 years ago. Given these factors, it is not surprising that the means obtained on the SACQ full adjustment scale and subscales were all lower than the standardization means. This implies that the students in the current study appear to have lower levels of overall adjustment, academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment. Differences in levels of adjustment might also be attributed to the nature and amount of stressors experienced to date in comparison to decades ago. The SACQ standardization sample is comprised of students who attend residential colleges

and dorm. The finding that the sample of non-residential students in this study experienced lower levels of overall adjustment is significant in that it may suggest that the characteristics of commuter colleges are less conducive to academic, social, personal-emotional adjustment, and institutional attachment. Other measures of student adjustment might be more sensitive to these differences and could capture the current generation and stressors of non-residential students.

In the present study, academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment were predicted by family functioning, perceived stress, and specific coping strategies. Findings support the notion that low levels of perceived stress, balanced family cohesion and adaptability, and problem-focused coping strategies help students adjust to many aspects of college life. Results demonstrated that using avoidance (e.g., drugs and alcohol) to cope negatively predicts academic adjustment. Relying on spiritual support and other forms of social support seem to be effective coping strategies for social adjustment. Using self-reliance and positive appraisal as coping strategies and reducing levels of perceived stress seem to be effective for achieving high levels of personal-emotional adjustment. It may also be beneficial to encourage students to avoid using high activity levels (e.g. strenuous physical activity) as a way of coping with the stress of college life since this strategy was associated with low levels of both social adjustment and institutional attachment.

Limitations of the Current Study

Although the findings of this study make important contributions to the field of college stress and coping, there are several limitations. First, a correlational research design was employed to examine the relationships among variables in question. As a result, no causal-effect statements regarding the effects of family, stress, and coping on student adjustment to college can be made. The significant relations among the variables studied can be bidirectional.

Results of the study should be interpreted with caution. Since the majority of the participants in this study's sample were female, the generalizability of the results derived from this study may be limited. Although the sample used in this study had more cultural diversity than most of the other studies reviewed, the majority of participants were Caucasian. Findings regarding adjustment among students of different ethnic groups may therefore be limited. Participants were also recruited from one psychology course. Students who chose to participate in this research study based on the course requirement might present unique personal characteristics and life conditions that were not studied. Questionnaire answers might have been different had a more heterogeneous student sample been used.

Finally, this study provided a cross-sectional view of adjustment to college. The nature of stress is dynamic and the process of coping which affects adjustment is complex and fluid. A longitudinal study would better capture the relationships among family functioning, stress, and coping, and adjustment to college.

Future Research

Future research should compensate for the limitations present in this study. To answer if coping strategies have a causal effect on adjustment to college, an experimental study might be conducted. Such a study could examine if an intervention that emphasizes enhancing specific coping strategies reduces the impact of perceived stress and consequently increases student adjustment to college. A longitudinal study should also be considered in order to provide a more complete picture of stress, coping, and adjustment to college.

Although the data on stressors, family functioning, stress, coping, and college adjustment were collected using surveys with well-established psychometric properties, additional assessment tools could have been utilized to gather more information on these variables. The

addition of other instruments may better capture the underlying process of coping Results were also subject to the limitations of self-report measures. Students might have answered questions in a certain way to portray themselves in a socially accepted manner. Future research might include qualitative measures such as student interviews and focus groups.

The nature of stressors that students experience was examined in this study. These stressors should be considered within a more comprehensive model of stress, coping, and adjustment. In order to do this, a larger sample size should be used and more sophisticated statistical procedures such as structural equation modeling.

Noteworthy is the fact that the transition to college, although stressful, may be liberating and exciting for many students. There may be certain variables, such as motivation and optimism, that may determine if the transition will be a positive experience overall. Such variables could be examined in future research as well.

The present study examined the effects of family functioning on stress, coping, and adjustment to college. However, the specific make-up of a student's family may have a differential effect on the outcome variables. Factors such as the number of children in the family, adoption, and single-parent homes, can impact results. Other variables such as family income and living arrangement can also be explored.

Gender and culture should be further explored as independent variables that may impact coping and college adjustment. As this study and other research demonstrate, females may tend to use more emotion-focused coping strategies than males. In addition to gender differences among participants, cultural differences exist. These differences could have also affected the coping strategies that students used and the overall results obtained in this study. For example, certain cultures may engage in verbally mediated coping styles or may emphasize social support

to a greater extent than other cultures. Data can be regrouped along the lines of culture and gender and further analyzed for differences in coping behaviors and college adjustment.

The unique focus on non-residential college freshmen is perhaps one of this study's largest contributions to the field of psychology. In order to determine the extent of student differences, a comparative study exploring reported stressors and stress levels among residential and non-residential students should be conducted. Participants of such a study can be recruited from residential colleges that share similar characteristics with the colleges sampled in this study. In addition to exploring college adjustment as a dependant variable, other outcome measures such as attrition can be examined within the framework of this study. Meaningful comparisons may then be drawn between non-residential and residential freshmen that would provide useful information on the differences between these populations.

Conclusion

Although stressors and the relationships among family functioning, stress, and coping have been studied in college freshman, the impact of such variables on adjustment to college has not been widely researched in non-residential students. The present study was the first to explore these factors as they relate to students who commute to college. Findings suggest that students face academic, financial, work, and relationship stressors. Perceived stress appears to predict personal-emotional adjustment. Given that students with lower levels of perceived stress experience higher levels of personal-emotional adjustment, stress prevention programs are critical for college freshmen. College counselors and campus wellness centers can use this information to help students transition to college. Stress prevention programs should target these academic, financial, and interpersonal stressors in particular and teach students healthy ways to cope with stress. The use of problem-focused strategies is recommended as well as the support

provided by family and spiritual outlets. Students should rely less on avoidance strategies to cope, especially for academic challenges, as avoidance was negatively related to academic adjustment. Findings suggest that students should also engage in more self-reliance and positive appraisal, especially in order to increase their personal-emotional adjustment. Given the finding that using high activity levels is related to low levels of social adjustment and low levels of institutional commitment, students should be encouraged to socialize with each other as much as possible. Study groups and social events should be promoted on non-residential campuses so that students feel more attached to their college and peers.

In sum, the results of the present study provide new insight into the dynamic process of coping in non-residential college freshmen. Findings indicate that the transactional model of stress and coping provided by Lazarus and Folkman (1987) can be adapted for use with non-residential college freshmen. This study demonstrated the importance of assessing student stressors, levels of stress, and coping strategies in students within the context of family functioning. Lower levels of student stress, balanced family functioning, and effective coping strategies may help students successfully transition through a stressful period in their lives. Findings of this study provide important implications for increasing the academic, social, and personal-emotional adjustment of non-residential college freshmen, as well as the attachment they feel toward their college.

Appendix A

College Freshman Questionnaire

Background Information

Age: **Sex: M F** **Student Status: Full-time Part-time**

Ethnic Background: (check all that apply)

a) Asian American
b) Black/African American
c) Hawaiian or Pac. Islander
d) Hispanic/Latina
e) Mixed Race
f) Native American
g) White/Caucasian

Current Living Arrangement:

a) Alone
b) With parents only
c) With parents and siblings
d) With partner
e) With others (such as roommate, friend, etc.)
f) With children
g) With partner and children

Use Current Family: If no current family, use family of origin

Family Structure:

a) Two parents (biological)
b) Two parents (step family)
c) Two parents (adoptive)
d) Two parents (same sex)
e) One parent

Number of Children in Family:

a) None
b) One
c) Two
d) Three
e) Four
f) Five or more

Household Income:

a) Less than $20,000
b) Less than $40,000
c) Less than $50,00
d) $50,000-$59,000
e) $60,000-$69,000
f) $70,000-$79,000
g) $80,000-$89,000
h) $90,000-$99,000
i) Over $100,000

How long does it take you to travel to and from campus each week?

a) 0 hrs/wk
b) 1-5 hrs/wk
c) 6-10 hrs/wk
d) 11-20 hrs/wk
e) Over 20 hrs/wk

How many hours per week do you work for pay?

a) 0 hrs/wk
b) 1-5 hrs/wk
c) 6-10 hrs/wk
d) 11-20 hrs/wk
e) Over 20 hrs/wk

Appendix B

Undergraduate Stress Questionnaire (USQ)

Directions: Please check the appropriate stressors in your life that have affected you during the last month.

_____ 1. Death (family member or friend)
_____ 2. Had a lot of tests
_____ 3. It's finals week
_____ 4. Applying to graduate school
_____ 5. Victim of a crime
_____ 6. Assignments in all classes due the same day
_____ 7. Breaking up with boy/girlfriend
_____ 8. Found out boy/girlfriend cheated on you
_____ 9. Lots of deadlines to meet
_____ 10. Property stolen
_____ 11. You have a hard upcoming week
_____ 12. Went into a test unprepared
_____ 13. Lost something (especially wallet)
_____ 14. Death of a pet
_____ 15. Did worse than expected on test
_____ 16. Had an interview
_____ 17. Had projects, research papers due
_____ 18. Did badly on a test
_____ 19. Parents getting divorce
_____ 20. Dependent on other people
_____ 21. Having roommate conflicts
_____ 22. Car/bike broke down, fiat tire
_____ 23. Got a traffic ticket
_____ 24. Missed your period and waiting
_____ 25. Thoughts about future
_____ 28. Lack of money
_____ 27. Dealt with incompetence at the Register's Office
_____ 28. Thought about unfinished work
_____ 29. No sleep
_____ 30. Sick, Injury
_____ 31. Had a class presentation
_____ 32. Applying for a job
_____ 33. Fought with boy/girlfriend
_____ 34. Working while in school
_____ 35. Arguments, conflicts of values with friends
_____ 36. Bothered by having no social support of family
_____ 37. Performed poorly at a task
_____ 38. Can't finish everything you needed to do
_____ 39. Heard bad news

_____ 40. Had confrontation with an authority figure
_____ 41. Maintaining a long-distance boy/girlfriend
_____ 42. Crammed for a test
_____ 43. Feel unorganized
_____ 44. Trying to decide on major
_____ 45. Feel isolated
_____ 46. Parents controlling with money
_____ 47. Couldn't find a parking space
_____ 48. Noise disturbed you while trying to study
_____ 49. Someone borrowed something without permission
_____ 50. Had to ask for money
_____ 51. Ran out of toner while printing
_____ 52. Erratic schedule
_____ 53. Can't understand your professor
_____ 54. Trying to get into your major or college
_____ 55. Registration for classes
_____ 56. Stayed up late writing a paper
_____ 57. Someone you expected to call did not
_____ 58. Someone broke a promise
_____ 59. Can't concentrate
_____ 60. Someone did a "pet peeve" of yours
_____ 61. Living with boy/girlfriend
_____ 62. Felt need for transportation
_____ 63. Bad haircut today
_____ 64. Job requirements changed
_____ 65. No time to eat
_____ 68. Felt some peer pressure
_____ 67. You have a hangover
_____ 68. Problems with your computer
_____ 69. Problem getting home from bar when drunk
_____ 70. Used a fake ID
_____ 71. No sex in a while
_____ 72. Someone cut ahead of you in line
_____ 73. Checkbook didn't balance
_____ 74. Visit from a relative and entertaining them
_____ 75. Decision to have sex on your mind
_____ 76. Spoke with a professor
_____ 77. Change of environment (new doctor, dentist, etc.)
_____ 78. Exposed to upsetting TV show, book, or movie
_____ 79. Got to class late
_____ 80. Holiday
_____ 81. Sat through a boring class
_____ 82. Favorite sporting team lost

Appendix C

Perceived Stress Scale (PSS)

Directions: The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

2. In the last month, how often have you felt that you were unable to control the important things in your life?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

3. In the last month, how often have you felt nervous and "stressed"?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

5. In the last month, how often have you felt that things were going your way?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

7. In the last month, how often have you been able to control irritations in your life?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

8. In the last month, how often have you felt that you were on top of things?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

9. In the last month, how often have you been angered because of things that were outside your control?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

Appendix D

Young Adult Coping Orientation for Problem Experiences (YA-COPE)

Directions: Read each of the statements below which describes a behavior for coping with problems. Decide **how often** you do each of the described behaviors when you face difficulties or feel tense. Even though you may do some of these things just for fun, please indicate **only** how often you do each behavior as a way to cope with problems.

Circle one of the following responses for each statement:

(1) Never (2) Hardly Ever (3) Sometimes (4) Often (5) Most of the Time
Please be sure to circle a response for each statement.
Note: Anytime the words parent, mother, father, brother, or sister are used, they also mean step-parent, step-mother, foster parent, etc.

When you face problems or difficulties or feel tense, how often do you:

1. Go along with parents' requests and rules 1 2 3 4 5
2. Read 1 2 3 4 5
3. Try to be funny and make light of it all 1 2 3 4 5
4. Apologize to people 1 2 3 4 5
5. Listen to music- stereo, radio, etc. 1 2 3 4 5
6. Talk to instructor, advisor, or counselor about what bothers you 1 2 3 4 5
7. Eat food 1 2 3 4 5
8. Try to stay away from home as much as possible 1 2 3 4 5
9. Use drugs prescribed by a doctor 1 2 3 4 5
10. Get more involved in activities at college 1 2 3 4 5

When you face problems or difficulties or feel tense, how often do you:

11. Go shopping: buy things you like 1 2 3 4 5
12. Try to reason with parents and talk things out; compromise 1 2 3 4 5
13. Try to improve yourself (get body in shape, get better grades, etc.) 1 2 3 4 5
14. Cry 1 2 3 4 5
15. Try to think of the good things in your life 1 2 3 4 5
16. Be with a boyfriend or girlfriend 1 2 3 4 5
17. Ride around in the car 1 2 3 4 5
18. Say nice things to others 1 2 3 4 5
19. Get angry and yell at people 1 2 3 4 5
20. Joke and keep a sense of humor 1 2 3 4 5
21. Talk to a minister/priest/rabbi 1 2 3 4 5
22. Let off steam by complaining to family members 1 2 3 4 5

23. Go to church/synagogue 1 2 3 4 5

Circle one of the following responses for each statement:

(1) Never (2) Hardly Ever (3) Sometimes (4) Often (5) Most of the Time

24. Use drugs (not prescribed by a doctor) 1 2 3 4 5
25. Organize your life and do what you have to do 1 2 3 4 5
26. Swear or act rowdy 1 2 3 4 5
27. Work hard on schoolwork or other school projects
28. Blame others for what's going wrong 1 2 3 4 5
29. Be close with someone you care about 1 2 3 4 5
30. Try to help other people solve their problems 1 2 3 4 5
31. Talk to your mother about what bothers you 1 2 3 4 5
32. Try, on your own, to figure out how to deal with your problems or tension 1 2 3 4 5
33. Work on a hobby you have (sewing, model building, etc.) 1 2 3 4 5
34. Try to make new friends at college 1 2 3 4 5
35. Get professional counseling (not from a college instructor or advisor) 1 2 3 4 5
36. Try to keep up high school friendships 1 2 3 4 5
37. Tell yourself the problem is not important 1 2 3 4 5
38. Go to a movie 1 2 3 4 5
39. Daydream about how you would like things to be 1 2 3 4 5
40. Talk to a brother or sister about how you feel 1 2 3 4 5
41. Get a job or work harder at one 1 2 3 4 5
42. Do things with your family 1 2 3 4 5
43. Smoke 1 2 3 4 5
44. Watch T.V. 1 2 3 4 5
45. Pray 1 2 3 4 5
46. Try to see the good things in a difficult situation 1 2 3 4 5
47. Drink beer, wine, liquor 1 2 3 4 5
48. Try to make your own decisions 1 2 3 4 5
49. Sleep 1 2 3 4 5
50. Say mean things to people; be sarcastic 1 2 3 4 5
51. Talk to your father about what bothers you 1 2 3 4 5
52. Let off steam by complaining to your friends 1 2 3 4 5
53. Talk to a friend about how you feel 1 2 3 4 5
54. Play video games (Pac-Man) pool, pinball, etc. 1 2 3 4 5
55. Do a strenuous physical activity (jogging, etc.) 1 2 3 4 5
56. Try to be alone 1 2 3 4 5

Appendix E

Family Adaptability and Cohesion Evaluation Scales (FACES-IV)

Directions: Circle one of the following responses for each statement:
(1) Strongly Disagree
(2) Generally Disagree
(3) Undecided
(4) Generally Agree
(5) Strongly Agree

1. Our family members are involved in each others lives 1 2 3 4 5
2. Our family tries new ways of dealing with problems 1 2 3 4 5
3. We get along better with people outside our family than inside
   1 2 3 4 5
4. We spend too much time together 1 2 3 4 5
5. There are strict consequences for breaking the rules in our family
   1 2 3 4 5
6. We never seem to get organized in our family 1 2 3 4 5
7. Family members feel very close to each other 1 2 3 4 5
8. Parents equally share leadership in our family 1 2 3 4 5
9. Family members seem to avoid contact with each other when at home
   1 2 3 4 5
10. Family members feel pressured to spend more free time together
    1 2 3 4 5
11. There are clear consequences when a family member does something wrong
    1 2 3 4 5
12. It is hard to know who the leader is in our family 1 2 3 4 5
13. Family members are supportive of each other during difficult times
    1 2 3 4 5
14. Discipline is fair in our family 1 2 3 4 5
15. Family members know very little about the friends of other family members
    1 2 3 4 5
16. Family members are too dependent on each other 1 2 3 4 5
17. Our family has a rule for almost every possible situation 1 2 3 4 5
18. Things do not get done in our family 1 2 3 4 5
19. Family members consult other family members on important decisions
    1 2 3 4 5
20. My family is able to adjust to change when necessary 1 2 3 4 5
21. Family members are on their own then there is a problem to be solved
    1 2 3 4 5
22. Family members have little need for friends outside the family
23. Our family is highly organized 1 2 3 4 5
24. It is unclear who is responsible for things (chores, activities) in our family
    1 2 3 4 5

Directions: Circle one of the following responses for each statement:

(1) Strongly Disagree
(2) Generally Disagree
(3) Undecided
(4) Generally Agree
(5) Strongly Agree

25. Family members like to spend some of their free time with each other
    1 2 3 4 5
26. We shift household responsibilities from person to person
    1 2 3 4 5
27. Our family seldom does things together 1 2 3 4 5
28. We feel too connected to each other 1 2 3 4 5
29. Our family becomes frustrated when there is change in our plans or routines
    1 2 3 4 5
30. There is no leadership in our family 1 2 3 4 5
31. Although family members have individual interests, they still participate in family activities. 1 2 3 4 5
32. We have clear rules and roles in our family 1 2 3 4 5
33. Family members seldom depend on each other 1 2 3 4 5
34. We resent family members doing things outside the family
    1 2 3 4 5
35. It is important to follow the rules in our family 1 2 3 4 5
36. Our family has a hard time keeping track of who does various household tasks
    1 2 3 4 5
37. Our family has a good balance of separateness and closeness
    1 2 3 4 5
38. When a problem arises, we compromise 1 2 3 4 5
39. Family members mainly operate independently 1 2 3 4 5
40. Family members feel guilty if they want to spend time away from the family
    1 2 3 4 5
41. Once a decision is made, it is very difficult to modify that decision
    1 2 3 4 5
42. Our family feels hectic and disorganized. 1 2 3 4 5

Appendix F

Student Adaptation to College Questionnaire (SACQ)

The following statements describe college experiences. Read each one and decide how well it applies to you at the present time (within the past few days). For each statement indicate how closely the statement applies to you by marking the appropriate number using the following scale:

1 Applies very closely to me ←---------→ 9 Doesn't apply to me at all

1. I feel that I fit in well as part of my college environment.
2. I have been feeling tense or nervous lately.
3. I have been keeping up to date on my academic work.
4. I am meeting as many people, and making as many friends as I would like at college.
5. I know why I am in college and what I want of it.
6. I am finding academic work at college difficult.
7. Lately I have been feeling blue and moody a lot.
8. I am very involved with social activities in college.
9. I am adjusting well to college.
10. I have not been functioning well during examinations.
11. I have felt tired much of the time lately.
12. Being on my own, taking responsibility for myself, has not been easy.
13. I am satisfied with the level at which I am performing.
14. I have had informal, personal contacts with college professors.
15. I am pleased now about my decision to go to college.
16. I am pleased now about my decision to attend this college in particular.
17. I'm not working as hard as I should at my course work.
18. I have several close social ties at college.
19. My academic goals and purposed are well defined.
20. I haven't been able to control my emotions very well lately.
21. I'm not really smart enough for the academic work I am expected to be doing now.
22. *Lonesomeness for home is a source of difficulty for me now. OMIT
23. Getting a college degree is very important to me.
24. My appetite has been good lately.
25. I haven't been very efficient in the use of study time lately.
26. *I enjoy living in a college dormitory. OMIT
27. I enjoy writing papers for courses.
28. I have been having a lot of headaches lately.
29. I really haven't had much motivation for studying lately.
30. I am satisfied with the extracurricular activities available at college.
31. I've given a lot of thought lately to whether I should ask for help from the Psychological/Counseling Services Center or from a psychotherapist outside of college.
32. Lately I have been having doubts regarding the value of a college education.
33. *I am getting along very well with my roommate(s) at college. (Please omit if you do not have a roommate).
34. I wish I were at another college or university.
35. I've put on (or lost) too much weight recently.

36. I am satisfied with the number and variety of courses available at college.
37. I feel that I have enough social skills to get along well in the college setting.
38. I have been getting angry too easily lately.
39. Recently I have had trouble concentrating when I try to study.
40. I haven't been sleeping very well.
41. I'm not doing well enough academically for the amount of work I put in.
42. I am having difficulty feeling at ease with other people at college.
43. I am satisfied with the quality or the caliber of courses available at college.
44. I am attending classes regularly.
45. Sometimes my thinking gets muddled up too easily.
46. I am satisfied with the extent to which I am participating in social activities at college.
47. I expect to stay at this college for a bachelor's degree.
48. I haven't been mixing too well with the opposite sex lately.
49. I worry a lot about my college expenses.
50. I am enjoying my academic work at college.
51. I have been feeling lonely a lot at college lately.
52. I am having a lot of trouble getting started on homework assignments.
53. I feel I have good control over my life situation at college.
54. I am satisfied with my program of courses for this semester/quarter.
55. I have been feeling in good health lately.
56. I feel I am very different from other students at college in ways that I don't like.
57. On balance, I would rather be home than here.
58. Most of the things I am interested in are not related to any of my course work at college.
59. Lately I have been giving a lot of thought to transferring to another college.
60. Lately I have been giving a lot of thought to dropping out of college altogether and for good.
61. I find myself giving considerable thought to taking time off from college and finishing later.
62. I am very satisfied with the professors I have now in my courses.
63. I have some good friends or acquaintances with whom I can talk about any problems I may have.
64. I am experiencing a lot of difficulty coping with the stresses imposed upon me in college.
65. I am quite satisfied with my social life at college.
66. I'm quite satisfied with my academic situation at college.
67. I feel confident that I will be able to deal in a satisfactory manner with future challenges here at college.

Appendix G

COLLEGE #1

CONSENT TO SERVE AS A PARTICIPANT IN A RESEARCH PROJECT

Project Title: Stress, Coping, and Adjustment to College

Project Director/Investigator: Dr. Marian Fish, Educational Psychology
CUNY Graduate Center, 212- 817-8285

Research/Study Investigator: Dalia Gefen

You are being asked to participate in a research project conducted through College #1 and the CUNY Graduate Center. Should you decide to participate, College #1 requires that you give your authorization to participate in this research project.

A basic explanation of the project is written below. Please read this explanation and discuss it with the Research Investigator if you wish. If you then decide to participate in the research project, please click the consent button.

Nature and Purpose of the Project:

This is a research study of factors such as coping strategies and family functioning that may predict freshmen adjustment to college. Participants must be freshmen students between the ages of 18-24 years old.

Explanation of Procedures:

The study is expected to take around 45 minutes and would require you to fill out questionnaires related to the way you perceive your family functioning and coping strategies as well as measures of student adjustment.

Potential Discomfort and Risk:

The risks from participating in this study are no more than encountered in everyday life. In the event that you feel any stress or anxiety while answering the items, a list of community resources is provided on the last page.

Potential Benefits:

In exchange for your participation in this study, you will receive one research credit as part of your research requirement for Psychology 100 at College #1. These "credits" count toward the Psych 100 research requirement only. They have no relationship whatsoever to College #1 course credit hours. Another benefit of your participation is that the results obtained will add to the generalized knowledge and understanding of how college freshmen cope and

adjust to the first year of college. I may publish results of the study, but names of people, or any identifying characteristics, will not be used in any of the publications. If you would like a copy of the study, please provide me with your address and I will send you a copy in the future.

Costs/Reimbursements:

You will receive one Psychology 100 credit in exchange for your participation in this study.

Alternatives to Participation:

You may choose not to participate in this study. Participation is strictly voluntary. You may also fulfill the Psychology 100 credit requirement by reading psychological research articles and taking a short quiz for each article.

Termination of Participation:

Approximately 150 participants are needed for this study. Participation may be terminated by the principal investigator/project director when there are enough participants.

Confidentiality:

We are making every effort to ensure that no one knows what your responses are on the survey. Zipsurvey is a well known company that collects data for online survey research. The researchers have purchased an encrypted version of their product to reduce the risk to subjects that their responses will be viewed by unauthorized persons. However, the study is not being run from a secure http server such as those used to handle credit card transactions, so there is a small possibility that responses could be viewed by unauthorized third parties, such as computer hackers. All information gathered from you will be stored on a personal computer to which only I, and my advisor, will have access. Information will be kept for a minimum of 3 years at which time it may be destroyed. You may request that the data you provide be destroyed and not used in any way. There is no penalty or loss of credit if your data are destroyed.

Withdrawal from the Project:

Your participation in this research project in completely voluntary. You may decide to stop participating in this project at any time. If you choose to withdraw from this experiment, You may participate in other studies or write a research report to fulfill the requirement of the psychology department. Participation is voluntary and student participation or refusal to participate will in no way affect your relationship with the college or student grades in any course. You may withdraw from an experiment while in progress without penalty.

Whom to Call if you have any Questions:

This project has been reviewed and approved for the period indicated by the Hunter College (CUNY) Institutional Review Board for the Protection of Human Subjects in Research and Research Related Activities.

If you have any questions about your rights as a research participant, or to report a research related injury, you may call: The Director of Regulatory Compliance, College #1 at 212-650-3053. If you feel that your rights have been violated or that you wish to make any complaints for any reason, you may also contact the administrator, Naitram Baboolall at 212-772-5612, or Professor Martin Chodorow at 212-772-5618.

What Giving Consent Means:

By clicking the consent button, you agree to participate in this research project. The purpose, procedures, to be used, as well as, the potential risks and benefits of your participation have been explained to you in full detail. You can refuse to participate or withdraw from this research project at anytime without penalty. Refusal to participate in this study or withdrawal from this study will have no effect on any services you may otherwise be entitled to from College #1.

Thank you for your participation in the study.

Appendix H

COLLEGE #2

CONSENT TO SERVE AS A PARTICIPANT IN A RESEARCH PROJECT

Project Title: Stress, Coping, and Adjustment to College

Project Director/Investigator: Dr. Marian Fish, Educational Psychology
CUNY Graduate Center, 212- 817-8285

Research/Study Investigator: Dalia Gefen

You are being asked to participate in a research project conducted through College #2 and The CUNY Graduate Center. If you decide to participate, College #2 requires that you give your authorization to participate in this research project.

A basic explanation of the project is written below. Please read this explanation and discuss it with the Research Investigator if you wish. If you then decide to participate in the research project, please click the consent button.

Nature and Purpose of the Project:

This is a research study of factors such as coping strategies and family functioning that may predict freshmen adjustment to college. Participants must be freshmen students between the ages of 18-24 years old.

Explanation of Procedures:

The study is expected to take around 45 minutes and would require you to fill out questionnaires related to the way you perceive your family functioning and coping strategies as well as measures of student adjustment.

Potential Discomfort and Risk:

The risks from participating in this study are no more than encountered in everyday life. In the event that you feel any stress or anxiety while answering the items, a list of community resources is provided on the last page.

Potential Benefits:

In exchange for your participation in this study, you will one research credit as part of your research requirement for Psychology 101 at College #2. Another benefit of your participation is that the results obtained will add to the generalized knowledge and understanding of how college freshmen cope and adjust to the first year of college. I may publish results of the study, but names of people, or any identifying characteristics, will not be used in any of the

publications. If you would like a copy of the study, please provide me with your address and I will send you a copy in the future.

Costs/Reimbursements:

You will receive one Psychology 101 credit in exchange for your participation in this study.

Alternatives to Participation:

You may choose not to participate in this study. Participation is strictly voluntary. If you choose to withdraw from this experiment, you will receive some credit, but not full credit, toward the Psychology 101 research requirement. You may participate in other studies or write a research report to fulfill the requirement of the psychology department. Participation is voluntary and student participation or refusal to participate will in no way affect your relationship with the college or student grades in any course.

Termination of Participation:

Approximately 150 participants are needed for this study. Participation may be terminated by the principal investigator/project director when there are enough participants.

Confidentiality:

All information gathered from you will be strictly confidential, and will be stored on a personal computer to which only I, and my advisor, will have access. Information will be kept for a minimum of 3 years at which time it may be destroyed. At any time you can refuse to answer any questions or withdraw from the study.

Withdrawal from the Project:

Your participation in this research project in completely voluntary. You may decide to stop participating in this project at any time. If you choose to withdraw from this experiment, you will receive some credit, but not full credit, toward the Psychology 101 research requirement. You may participate in other studies or write a research report to fulfill the requirement of the psychology department. You may participate in other studies or write a research report to fulfill the requirement of the psychology department instead of this study.

Whom to Call if you have any Questions:

This project has been reviewed and approved for the period indicated by the College #2 Institutional Review Board for the Protection of Human Subjects in Research and Research Related Activities.

If you have any questions about your rights as a research participant, or to report a research related injury, you may call:

Associate Director of Regulatory Compliance, College #2 at 718-997-5415. If you have concerns or questions about the conduct of this research project you may call: Dr. Marian Fish, Educational Psychology CUNY Graduate Center at 212- 817-8285.

What Giving Consent Means:

By clicking the consent button, you agree to participate in this research project. The purpose, procedures, to be used, as well as, the potential risks and benefits of your participation have been explained to you in full detail. You can refuse to participate or withdraw from this research project at anytime without penalty. Refusal to participate in this study or withdrawal from this study will have no effect on any services you may otherwise be entitled to from College #2.

Thank you for your participation in the study.

Appendix I

List of Community Resources

College #1
Counseling Center
(718) 997-5420

College #2
Counseling Center
(212) 772-4931

Ackerman Institute for the Family
149 E. 78th St., NYC
(212) 879-4900 ext. 122

The Center for Cognitive Behavioral Therapy
137 E. 36th St., Suite 4, NYC
(212) 686-6886

Fifth Avenue Center for Counseling & Psychotherapy
10 E. 21st St. (Broadway & 5th Ave), NYC
(212) 989-2990

Mount Sinai Adolescent Health Center (ages 10 to 21 years old)
312 East 94th Street
(212) 423-2981
www.mountsinai.org

References

American College Health Association (2007). American college health association- National college health assessment spring 2008 reference group data report (abridged). J*ournal of American College Health, 57(5),* 477-488.

Alfred-Liro, C., & Sigelman, C. K. (1998). Sex differences in self-concept and symptoms of depression during the transition to college. *Journal of Youth and Adolescence, 27,* 219-244.

Arnett, J. J. (2000). A theory of development from the late teens through the twenties. *American Psychologist, 55,* 469-480.

Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M. W. (1996). A dispositional and situational assessment of children's coping: Testing alternative models of coping. *Journal of Personality, 64(4),* 923-958.

Astin, A. W., & Oseguera, L. (2002). *Degree attainment rates at American colleges and universities.* Los Angeles: Higher Education Research Institute, Graduate School of Education, UCLA.

Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology. 31(2),* 179-189.

Baker. R. W., & Siryk, B. (1989). *Student Adaptation to College Questionnaire manual.* Los Angeles. CA: Western Psychological Services.

Band, E. B., & Weisz, J. R. (1988). How to feel better when it feels bad: Children's perspectives on coping with everyday stress. *Developmental Psychology, 24,* 247-253.

Barling, J. (1990). *Employment, stress and family functioning.* Oxford, England: John Wiley & Sons.

Baxter Magolda, M. B. (1999). Constructing adult identities. *Journal of College Student Development, 40,* 629-644.

Bernstein, G. A., Warren, S. L., Massie, E. D., & Thuras, P. D. (1999). Family dimensions in anxious-depressed school refusers. *Journal of Anxiety Disorders, 13(5),* 43-51.

Billings, A. G., & Moos, R. H. (1981). The role of coping responses in attenuating the impact of stressful life events. *Journal of Behavioral Medicine, 4,* 139-157.

Bollen, K. A. 1989. Structural equations with latent variables. *Wiley series in probability and mathematical statistics*. New York: Wiley.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In: Bollen, K. A. & Long, J. S. (Eds.) *Testing structural equation models*. pp. 136–162. Beverly Hills, CA: Sage

Brown, R. T., & Lambert, R. (1999). Family functioning and children's adjustment in the presence of a chronic illness: Concordance between children with sickle cell disease and caretakers. *Families, Systems, and Heath, 17(2),* 165-179.

Carbonell, D. M., Reinherz, H. Z., & Giaconia, R. M. (1998). Risk and resilience in late adolescents. *Child and Adolescent Social Work Journal, 15(4),* 84-93.

Chandler, L. A., & Gallgher, R. P. (1996). Developing a taxonomy for problems seen at a university counseling center. *Measurement and Evaluation in Counseling Development, 29*, 4-12.

Chang, E. C., & Strunk, D. R. (1999). Distinguishing between fundamental dimensions of individualism-collectivism. Relations to sociopolitical attitudes and beliefs. *Personality and Individual Differences, 27(4),* 665-671.

Chickering,W., & Reisser, L. (1993). Education and identity (2nd ed.). San Francisco: Jossey-Bass.

Clark, M. R. (2005). Negotiating the freshman year: Challenges and strategies among first-year college students. *Journal of College Student Development* , 46(3), 296-316.

Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapam & S. Oskamp (Eds.), *The social psychology of health: Claremont Symposium on applied social psychology.* Newbury Park, CA: Sage.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24,* 385-396.

Cogdal, P., & Cozzens, D. (1995).Family matters. A paper presented at the annual AUCCCD Director's Conference. New Port, Rhode Island.

Compas, B. (1987). Coping with stress during childhood and adolescence. *Psychological Bulletin, 101,* 393-403.

Compas, B. E., Conner-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research, *Psychological Bulletin, 127*, 87-127.

Compas, B. E., Malcarne, V. L., Fondacaro, K. M. (1988). Coping with stressful events in older children and young adolescents. *Journal of Counseling and Clinical Psychology, 56(3),* 405-411.

Crandall, C. S., Priesler, J. J., & Ausspring, J. (1992). Measuring life event stress in the lives of college students: The undergraduate stress questionnaire. *Journal of Behavioral Medicine, 15,* 627-662.

Cronkite, R. C., & Moos, R. H. (1995). Life context, coping processes, and depression. In E. E. Beckman & W. R. Leber (Eds.), *Handbook of depression* (pp. 569-587). New York: Guildford Press.

Coyne, J. C., & Gottlieb, B. H. (1996). The mismeasure of coping by checklist. *Journal of Personality, 64(4),* 959-991.

Dahmus, S., & Bernardin, H. J. (1992). Student adaptation to college questionnaire. *Measurement and Evaluation in Counseling and Development, 25*, 139-142.

Damush, T., Hays, R., & DiMattero, M. (1997). Stressful life events and health-related quality of life in college students. *Journal College Student Development, 38,* 181-190.

Darling, C. A., McWey, L. M., Howard, S. N., & Olmstead, S. B. (2007). College student stress: the influence of interpersonal relationships on sense of coherence. *Stress and Health, 23*, 215-229.

DeBerard, M. S., Spielmans, G., I.,, Julka, D. L. (2004). Predictors of academic achievement and retention among college freshmen: A longitudinal study. *College Student Journal, 38(1),* 66-77.

Dill, P. L. & Henley, T. B. (1998). Stressors of college: A comparison of traditional and nontraditional students. *Journal of Psychology, 132(1),* 25-32.

Dusselier, L., Dunn, B., Wang, Y., Shelly, M. C., Whalen, D. F (2005). Personal, health, academic, and environmental predictors of stress for residence hall students. *Journal of American College Health, 54,* 15-24.

Dyson, R., & Renk, K. (2006). Freshmen adaptation to university life: Depressive symptamology, stress, and coping, *Journal of Clinical Psychology, 62(10),* 1231-1244.

Ebata, A. T., & Moos, R. H. (1991). Coping and adjustment in distressed and healthy adolescents. *Journal of Applied Developmental Psychology, 17,* 33-54.

Economos**,** C. D., Hildebrandt**,** M. L., & Hyatt, R. R. (2008). College freshmen stress and weight change: Differences by gender. *American Journal of Health Behavior, 32(1),* 16-25.

Eisenberg**,** N., Fabes**,** R. A., & Guthrie**,** I. K. (1997). Coping with stress: The roles of regulation and development; In S. A. Wolchik & I.N. Sandler (Eds.), *Handbook of children's coping: Linking theory and intervention.* (pp. 41-70). New York, NY: Plenum Press.

Endler, N. & Parker, J. (1990). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology, 58*, 844-854.

Fallon, B. J., Bowles, T., & Terry, V. P. (2001). Family functioning and adolescent help-seeking behavior. *Journal of Family Relations, 50(30),* 67-75.

Feenstra, J. S., Banyard, V. L., Rines, E.N., & Hopkins, K. R. (2001). First year students' adaptation to college: The role of family variables and individual coping. *Journal of College Student Development, 42,* 106-113.

Fisher, S. (1994). *Stress in academic life: The mental assembly line*. Guildford, England: Open University Press.

Fisher, S., & Hood, B. (1987) The stress of the transition to university: A longitudinal study of psychological distress, absent-mindedness, and vulnerability to homesickness. *British Journal of Psychology, 78,* 425-441.

Folkman, S. (1992). Making the case for coping. In B. D. Carpenter (Ed.)., *Personal coping: Theory, research, and application* (pp. 31-46). Westport, CT: Praeger.

Folkman, S., & Lazarus, R. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21,* 219-239.

.

Folkman, S., & Lazarus, R. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48(1),* 150-170.

Folkman, S., & Lazarus, R. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Psychology, 54,* 466-475.

Frydenberg, E. (1997). *Adolescent coping: Theoretical and research perspectives*. New Fetter Lane, London: Routledege

Frydenberg E., & Lewis, R. (1991). Adolescent coping: The different ways in which boys and girls cope. *Journal of Adolescence*, *14(2),* 119-33.

Gamble, W. C. (1994). Perceptions on controllability and other stressor event characteristics as determinants of coping. *Journal of Youth & Adolescence, 23 (1),* 65-85.

Goldman, C. S., & Wong, E. H. (1997). Stress and the college student. *Education, 117,* 604-610.

Halstead, M., Johnson, S. B., & Cunningham, W. (1993). Measuring coping in adolescents: An application of the ways of coping checklist. *Journal of Clinical Child Psychology, 22(3),* 337-344.

Hamid, P., Nicholas, Y., Xiao, D., & Chi, Mei (2003). Adolescent coping in different Chinese family environments. *Journal of Adolescence, 38(149),* 93-98.

Hanson, C. L., Cigrang, J. A., Harris, M. A., Carle, D. L., Relyea, G., & Burghen, G. A. (1989). Coping styles in youths with insulin-dependent diabetes mellitus. *Journal of Consulting and Clinical Psychology, 57(5),* 76-91.

Hayduk, L.A. (1987). *Structural equations modeling with Lisrel.* Baltimore, MD: Johns Hopkins University Press.

Herman-Stahl, M., & Peterson, A. C. (1999). Depressive symptoms during adolescents: Direct and stress-buffering effects of coping, control beliefs, and family relationships. *Journal of Applied Developmental Psychology, 20,* 45-62.

Higgins, J. E., & Endler, Norman S. (1995). Coping, life stress, and psychological and somatic distress. *European Journal of Personality, 9(4),* 253-270.

Hoffman, J., & Weiss, B. (1987). Family dynamics and presenting problems in college students. *Journal of Counseling Psychology, 34,* 157-163.

Holahan, C. J., & Moos, R. H. (1987). Personal and contextual determinants of coping strategies. *Journal of Personality and Social Psychology, 52(5*), 946-955.

Holahan, C. J., Valentiner, D. P., & Moos, R. H. (1994). Parental support and psychological adjustment during the transition to young adulthood in a college sample. *Journal of Family Psychology, 8 (2),* 215-223.

Holmbeck, J., Grayson, N., Wandrei, M. L (1993). Individual and relational predictors of adjustment in first-year college students. *Journal of Counseling Psychology, 40(1),* 73-78.

Horn, L. J., & Berktold, J. (1998). *Profile of undergraduates in U.S. postsecondary education institutions: 1995-96*. Washington, DC: Office of Educational Research an Improvement, U.S. Department of Education.

Hudd, S. S., Dumlao, J., Erdmann-Sager, D., Murray, D., Phan, E., Soukas, N., & Yokozura, N. (2000). Stress at college: Effects on health habits, health status and self-esteem. *College Student Journal*, *34*, 217-30.

Jackson, P., & Finney, M. (2002). Negative life events and psychological distress among young adults. *Social Psychology Quarterly, 65,* 186-201.

Jacoby, B. (2000). Why involve commuter students in learning? In M. Kramer & B. Jacoby Eds., *New directions for higher education: Involving commuter students in learning* (pp. 3-12). San Francisco: Jossey-Bass.

Jacoby, B. & Garland, J. (2004). Strategies for enhancing commuter student success. *Journal of College Student Retention Research Theory and Practice, 6(1),* 61-79.

Joreskog, K. G. & Sorbom, D. (2006). LISREL 8.80 for Windows [Computer Software]. Lincolnwood, IL: Scientific Software International, Inc.

Kadison, R. (2005). Getting an edge — Use of stimulants and antidepressants in college. *New England Journal of Medicice. 353(11),* 1089-1091.

Kaplan, S. J. (1996). *Family violence: A clinical and legal guide.* American Psychiatric Association: Washington, DC, US.

Kariv, D., & Heiman, T. (2005). Task-oriented versus emotion-oriented coping strategies: The case of college students. *College Student Journal, 39(1),* 41-51.

Kashani, J. H., Suarez, L., Luchene, L., & Reid, J. C. (1998) Family characteristics and behavior problems of suicidal and non-suicidal children and adolescents. *Child Psychiatry & Human Development, 29(2), 157*-168.

Lafreniere, K. D., Ledgerwood, D. M., & Docherty, A. L. (1997). Influences of leaving home, perceived family support, and gender on the transition to university. *Guidance & Counseling, 12(4),* 134-146.

Largo-Wight, E. P., Peterson, M., & Chen, W. (2005). Perceived problem solving, stress, and health among college students. *American Journal of Health Behavior, 29(4*), 360-370.

Lazarus, R.S. (1999). *Stress and emotion.* New York: Springer.

Lazarus, R. S. (2000) Toward better research on stress and coping. *American Psychologist, 55(6*), 665-673.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer.

Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality, 1,* 141-169.

Leong, F. T., & Bonz, M. H. (1997). Coping styles as predictors of college adjustment among freshmen. *Counseling Psychology Quarterly, 10,* 211-220.

Lohman, B. J., & Jarvis, P. A. (2000). Adolescent stressors, coping strategies, and psychological health studied in the family context. *Journal of Youth and Adolescence, 29(1),* 15-42.

Lopez, F. (1986). Family structure and depression: Implications for the counseling of depressed college students. *Journal of Counseling and Development, 64,* 508-511.

Lu, L. (1994). University transition: Major and minor stressors, personality characteristics, and mental health. *Psychology Medicine, 24,* 81-87.

Manzi, C. V., Vignoles, V. L., Regalia, C. S., & Scabini, E. (2006). Cohesion and enmeshment revisited: Differentiation, identity, and well-being in two European cultures. *Journal of Marriage and Family, 68(3),* 62-81.

Meichenbaum, D. (1996). Stress inoculation training for coping with stressors. *The Clinical Psychologist, 49,* 4-7.

Millings, E. M., & Mahmood**,** Z. (1999). Student mental health: A pilot study. *Counseling Psychology Quarterly, 12(2*), 199-210.

Misra, R., & McKean, N. (2000). College students' academic stress and its relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies, 16(1),* 41-51.

Moos, R. H., & Schaefer, J. A. (1993). Coping resources and processes: Current concepts and measures. In L. Goldberger & S. Breznitz (Eds.). *Handbook of stress: Theoretical and clinical aspects* (2nd ed., pp. 243-257). New York: Free Press.

Mounts, N. S., Valentiner, D. P., Anderson, K. L., & Boswell, M. K. (2006). Shyness, sociability, and parental support for the college transition: Relation to adolescents' adjustment. *Journal of Youth and Adolescence, 35(1),* 71-80.

Morris, E. A., Brooks, P. R., & May, J. L. (2003). The relationship between achievement goal orientation and coping style: Traditional vs. nontraditional college students. *The College Student Journal*, *37*(1)*,* 3-8.

Murberg, T. A., & Bru, E. (2005). The role of coping styles as predictors of depressive symptoms among adolescents: A prospective study. *Scandinavian Journal of Psychology, 46,* 385-393.

Olson, D. H. (1990). *Clinical rating scale for circumplex model*. St. Paul: Family Social Science, University of Minnesota.

Olson, D. H. (1986). Circumplex model VIII: Validation studies and FACES III. *Family Process, 25,* 337-351.

Olson, D. H., Gorall, D. M, & Tiesel, J. W. (2007). *FACES-IV manual.* Minneapolios, MN: Life Innovations.

Olson, D. H., Portner, J., & Bell, R. (1982). FACES-II: Family adaptability and cohesion evaluation scales. In D.Olsen, H. McCubbin, H. Barnes, A. Larson, M. Muxen, & M.Wilson (Eds.), *Family Inventories* (pp. 5-24). St. Paul: University of Minnesota.

Olson, D. H., Sprenkle, D., H., & Russell, C. S. (1979). Circumplex model of marital and family systems I: Cohesion and adaptability dimensions, family types, and clinical applications. *Family Process, 18,* 3-27.

Patterson, J. M., & McCubbin, H. I. (1987). Adolescent coping style and behaviors: Conceptualization and measurement. *Journal of Adolescence, 10,* 163-186.

Patterson, J., McCubbin, H. I., & Grochowski, J. (1983). Young Adult Coping Orientation for Problem Experiences (YA-COPE). In H.I. McCubbin, A.I. Thompson, & M.A. McCubbin (1996). *Family assessment: Resiliency, coping, and adaptation- Inventories for research and practice.* (pp. 613-624). Madison: University of Wisconsin System.

Patterson, J. M., McCubbin, H. I., & Needle, R. H. (1983). *A-COPE: Adolescent coping orientation for problem experiences.* St. Paul: University of Minnesota Press.

Pearlin, L., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior, 19,* 2-21.

Persosa, S. L., & Person, L.M. (1993). Relationships among Minuchin's structural family model, identity achievement, and coping style. *Journal of Counseling Psychology, 40(4),* 479-489.

Phelps, S. B., & Jarvis, P. A. (1994). Coping in adolescence: Empirical evidence for a theoretically based to assessing coping. *Journal of Youth Adolescence, 23(3),* 359-371.

Pritchard, M. E., Wilson, G. S., & Yamnitz, B. (2007). What predicts adjustment among college students? A longitudinal panel study. *Journal of American College Health, 56 (1),* 15-22.

Rawson, H. E., Bloomer, A. K., & Kendall, A. (1994). Stress, anxiety depression, and physical illness in college students. *Journal of Genetic Psychology, 155(3),* 321-331.

Rice, K., Cole, D., & Lapsley, D. (1990). Separation-individuation, family cohesion, and Adjustment to college: Measurement and validation and test of a theoretical model. *Journal of Counseling Psychology, 37,* 195-202.

Ross, S. E., Niebling, B. C., & Heckert, T. M. (1999). Sources of stress among college students. *College Student Journal, 33,* 312-317.

Rudolph, K. D., Denning, M. D., & Weisz, J. R. (1995). Determinants and consequences of children's coping in the medical setting conceptualization, review, and critique. *Psychological Bulletin, 118*, 328-357.

Scott, M., Bailey, T. R., & Kienzl, G. S. (2006) Relative success: Determinants of college graduation rates in public and private colleges. *Research in Higher Education, 47*(3), 247-277.

Seiffge-Krenke, I. (1993). Coping behavior in normal and clinical samples: More similarities than differences. *Journal of Adolescence, 16,* 285-303.

Seiffge-Krenke, I. (1995). *Stress, coping, and relationships in adolescence.* Lawrence Erlbaum Associates. Mahwah, NJ.

Selye, H. (1950) *The physiology and pathology of exposure to stress*. Montreal: Acta Inc.

Selye, H. (1976). *Stress in health and disease.* Reading, MA: Butterworth.

Shek, D. (1997). Family environment and adolescent psychological well-being, school adjustment, and problem behavior: A pioneer study in a Chinese context. *Journal of Genetic Psychology, 158(1),* 52-65.

Shulman, S., Seiffge-Krenke, I., & Samet, N. (1987). Adolescent coping style as a function of perceived family climate. *Journal Adolescent Resiliency, 2,* 367-381.

Skinner, E. A., & Wellborn, J. G. (1994). Coping during childhood and adolescence: A motivational perspective. In D. Featherman, R. Lerner, & M. Perlmutter (Eds.), *Life-span development and behavior* (pp. 91-133). Hillsdale, NJ: Erlbaum.

SPSS Inc. (2007). SPSS base 15.0 for windows user's guide. SPSS Inc., Chicago IL.

Steward, R. J., Jo, I. H., Murray, F.W., Neil, D., Fear, F., & Hill, M. (1998). Psychological adjustment and coping styles of urban American high school students. *Journal of Multicultural Counseling and Development, 26(2),* 96-105.

Stern, M., & Zevon, M. A. (1990). Stress, coping, and family environment: The adolescents' response to naturally occurring stressors. *Journal Adolescent Resiliency 5(3),* 290-305.

Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences.* Mahwah, NJ: Lawrence Erblaum.

Stone, A. A., Helder, L., & Schneider, M. M. (1988). Coping with stressful events: Coping, dimensions and issues. In L.H. Cohen (Ed.), *Life events and psychological functioning: Theoretical and methodological issues* (pp. 182-210). Newbury Park, CA: Sage.

Suls, J., & Fletcher, B. (1985). The relative efficacy of avoidant and non-avoidant coping strategies: A meta-analysis. *Health Psychology, 4(3*), 249-288.

Tamres, L., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: A meta-analytic review. *Personality and Social Psychology Review, 6,* 2-30.

Taylor, M. A., & Pastor, D. A. (2005, May). *A confirmatory factor analysis of the student adaptation to college questionnaire*. A paper presented at the annual forum of the Association for Institutional Research, San Diego, CA.

The City University of New York- Office of Institutional Research and Assessment. 2008 Student Experience Survey. Retrieved on December 16, 2009 from http://oira.cuny.edu

The National Center for Education Statistics. IPEDS data feedback report 2008. Retrieved on December 16, 2009 from http://qcpages.qc.cuny.edu/Institutional_Research

Twenge, J. (2006). *Generation me. Why today's young American's are more confident, assertive, and entitled—and more miserable than ever before.* New York: Simon & Schuster.

Valentiner, D. P., Holahan, C. J., & Moos, R. H. (1994). Social support, appraisals of event controllability, and coping: An integrative model. *Journal of Personality and Social Psychology, 66(6),* 1094-1102.

Von Steen, P. G. (2000). Traditional-age college students. In D. C. Davis & K. M. Huphrey (Eds.), *College counseling: Issues and strategies for a new millennium* (pp. 111-131). Alexandria, VA: American Counseling Association.

Walker, L. S., Smith, C. A. Garber, J., & Van Slyke, D. A. (1997). Development and validation of the Pain Response Inventory for Children. *Psychological Assessment, 9,* 392-405.

Wang**,** J., Chen**,** & Zhao**,** B. (2006). First-year students' psychological and behavior adaptation to college: The role of coping strategies and social support. *Review, 3(5),* 51-57.

Willo, W., Dancyger, I., Fornari, V., Katz, J., Wisotskym, W. L., & Swencionis, C. (2003). The relationship between eating pathology and perceived family functioning in eating disorder patients in a day treatment program. Eating Disorders: *Journal of Treatment and Prevention, 11(2),* 89-99.

Wilmes, M. B., & Quade, S. L. (1986). Perspectives on programming for commuters: Examples of good practice. *NASPA Journal, 24(1),* 25-35.

Zeidner, M., & Endler, N. S. (1996). *Handbook of coping: Theory, research, and applications.* Canada: John Wiley & Sons.