

THE UNIVERSITY OF CALGARY

Demands and Coping Strategies of Post-Secondary Students

by

Nancy Marie Arthur

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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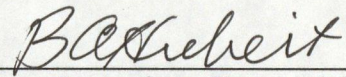
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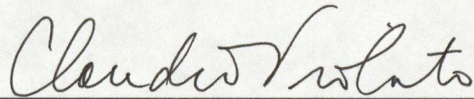


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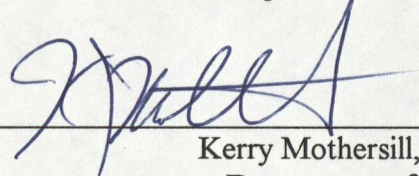
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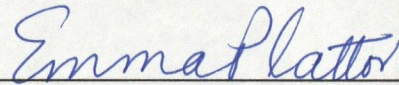
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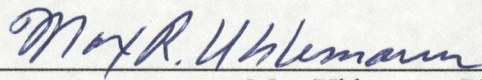
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ABSTRACT

There are two main theoretical positions within the literature on coping. The dispositional perspective considers coping to be the result of stable personality traits. In contrast, the situational perspective considers coping as a changing, unfolding process to meet appraised demand characteristics. One of the ways in which this debate may be resolved is to investigate coping over time with a diverse population.

The purpose of the study was to investigate the nature of perceived demands by students in their first year of a post-secondary program, the ways in which students coped with those demands, and the extent to which institutional resources were used to cope with demands. A group of student volunteers were given questionnaire packages containing standardized measures and a researcher-constructed questionnaire at four time periods across one academic year. One hundred and fifty-two students participated in the study at Time 1 and 94 students completed all questionnaires. A method of constant comparison was used to analyze open-ended questions to ensure that students' actual experience was reflected in the results.

Results showed that the most commonly reported demands by students were academic in nature, followed by relationship and financial demands. The coping strategies that were most often used included reframing the positive aspects of the demanding situation, and combinations of problem-focused and emotion-focused coping. In general, coping showed high stability over time; however, there was considerable variability in the characteristics associated with demands and students adjusted their coping efforts to meet different demands. Students' experience of emotional distress was related to the use of specific types of coping methods. Other factors that appeared to influence coping included the length of time experiencing demands and students' perceptions of control over demands. Students' sense of coping efficacy was a key determinant of their ratings of coping effectiveness. Students gave favorable ratings to the usefulness of campus

resources in coping with their top demands. The most important characteristics of resources that students evaluated as useful included the personal attention and attitude of staff and information available through campus resources.

ACKNOWLEDGEMENTS

This project has succeeded because of the support, wisdom, and generosity of several people. First of all, I would like to express appreciation to my supervisor, Dr. Bryan Hiebert, for his expertise and guidance during the past 3 years. I am grateful for our working relationship which has fostered both independent learning and working as a team. At some point in my career I hope that I can be the kind of mentor for another student that Bryan has been for me.

I would also like to thank the other members of my committee, Dr. Claudio Violato, and Dr. Kerry Mothersill, whose interest has helped me to develop a broader perspective of both research and human nature. Dr. Emma Plattor has provided a model of teaching excellence that is a source of inspiration.

I want to celebrate the completion of this project with Janice Waters and Wendy Johansson. It was through a sincere team effort that we were able to maintain our focus, motivation, and a sense of humor while completing this project.

To my colleagues at Counselling Services, SAIT, I want to express my thanks for your support to return to school and for your interest in this project. To the students who participated in the study through generously providing their time and personal information, I hope that your contributions can be returned through programming efforts to assist other students with their first year experience.

For his support during this adventure and his willingness to be a partner, I want to thank Richard.

Lastly, I would like to dedicate this work to my parents for they have each provided me with different gifts that guide my life.

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CHAPTER 1

Introduction

Research directed at understanding the nature of stress and coping has diverse theoretical and methodological roots. Nonetheless, there appears to be general agreement that (a) the stress response is influenced by people's appraisal of situational demands; (b) stress is related to perceived coping sufficiency; and (c) coping involves cognitive mediation focusing on the demand, coping adequacy, and probability of adaptational outcomes (Lazarus & Folkman, 1984; Matheny, Aycock, Pugh, Curlette, & Cannella, 1986). Accordingly, Folkman and Lazarus (1985) have defined stress as a particular person-environment relationship in which people appraise the demands of a situation as taxing or exceeding their coping resources. From this perspective, the key to understanding stress and coping is people's perceptions of demands and the sufficiency of their coping responses for dealing with demands (Hiebert, 1988).

An examination of the coping literature reveals two prominent themes. First, there is debate over the stability of coping attempts. Dispositional perspectives consider coping as a characteristic and stable set of actions used to meet a variety of different environmental demands (Carver, Scheier, & Weintraub, 1989; McCrae & Costa, 1986). In contrast, Lazarus and Folkman (1984) define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands" (p. 141). Therefore, situational perspectives focus on the ways in which individuals tailor their coping attempts to meet unique demand characteristics of situations (Folkman & Lazarus, 1980; Folkman, Lazarus, Gruen, & DeLongis, 1986; Parkes, 1986).

Both dispositional and situational perspectives have been offered to account for gender differences in coping. Although Folkman and Lazarus (1980) found no support for the hypothesis that men focus their coping attempts at dealing directly with the situation (problem-focused) while women focus their coping attempts at calming their emotional reaction to the situation (emotion-focused), other researchers appear unconvinced (Billings &

Moos, 1984; Endler & Parker, 1990a, 1990b; Pearlin & Schooler, 1978), reporting some gender differences in the way in which men and women tend to cope with different situations. Apart from cognitive factors, some authors postulate that gender differences may result from contextual factors influencing the appraisal of situations, the selection and availability of coping resources, and the similarity (or differences) and stability of demands faced by men and women working in similar environments (Astor-Dubin & Hammen, 1984; Levo & Biggs, 1989; Martin, Kuiper & Westra, 1989; Miller & Kirsch, 1987).

Another realm in which coping stability has been debated is in relation to age and developmental level. Folkman and Lazarus (1980) have suggested that apparent age differences in coping may be due to changes in age-relevant demands; however, others suggest an association between psychosocial adjustment and coping styles (McCrae & Costa, 1986) which is developed by late adolescence (Jorgensen & Dusek, 1990) and is responsible for age-related differences in coping. Again, contextual factors are centrally important in accounting for perceived demands and coping efforts at different ages (Belle, 1982; Lazarus & DeLongis, 1983; Pearlin, 1982).

A second theme found in the coping literature is the need for expanding the data base of coping investigations to include community-based samples and diverse populations (Folkman & Lazarus, 1980). The post-secondary population is seen as particularly important for it has undergone substantial demographic change at a time when societal change and institutional priorities also have been changing markedly. There are increasing numbers of female students, adult students, and students entering nontraditional fields (Chartrand, 1990). Younger students face the transition from high school to college in addition to the demands stemming from the adolescence to adulthood transition (Jorgensen & Dusek, 1990). Adult students experience role overload and role strain from balancing student roles with other adult demands (Bauer & Mott, 1990; Houser, Konstam & Ham, 1990). Shifting academic demands over the term (Grandy, Westerman, Mitchell, & Lupo, 1984) allow for the study of the extent to which coping efforts change across time in order to accommodate changes in demands and

academic success (Jorgensen & Dusek, 1990). These factors gave rise to the current study which examines the stability of perceived demands faced by post-secondary students and the nature of their attempts to cope with those demands.

The Current Study

The primary goal of this study is to address empirically the issue of coping stability over time and across situations. Additional goals of this study are to investigate a) characteristics which influence the appraisal of situations as demanding, b) characteristics which influence the process of coping with demands, and, c) characteristics of institutional resources which students find useful in coping with demands.

To address the issue of coping stability, a study was conducted which tracked the perceived demands and coping strategies reported by post-secondary students over one academic year. Standardized self-report measures and a researcher-constructed questionnaire were administered to students at four different times. The standardized measures provided normative data about participant's use of specified coping strategies and their experience of anxiety and depression. The researcher-constructed measure required participants to generate responses which described the nature of perceived demands, ways of coping with those demands, and their experience of stress. Participants were also asked to indicate which institutional-based resources were accessed and to describe the usefulness of resources for coping with specific demands.

In the remainder of this chapter, the rationale for and implications of this study will be described. In Chapter 2, the stability issue in coping will be expanded upon through a review of the literature pertinent to the current study. Subsequent chapters will include an outline of the research methodology (Chapter 3); present the results of the research study (Chapter 4); and provide a discussion of the results (Chapter 5).

Rationale for and Implications of the Study

In the past, studies often treated demands and coping attempts as static, taking a snapshot of subject demands and coping attempts at a single point in time and describing this snapshot as typical of a subject's usual experience. More recently, researchers have been focusing on the dynamic nature of demands and coping attempts by tracking them over time. This is consistent with the recommendations made by Folkman and Lazarus (1985) which include: a) considering the context of a specific situation appraised as stressful, b) asking subjects about their actual use as opposed to typical or potential use of coping strategies, and, c) using multiple assessments over different instances of a demanding situation in order to track changes in coping. This study attempts to recognize the essence of stress and coping as a changing, unfolding process by using methodology that is sensitive to demand and coping shifts over time (Folkman & Lazarus, 1985; Menaghan, 1982; Shinn & Krantz, 1981).

The present study has a number of implications for theory, methodology, and professional counselling practise. Through tracking the demands and coping strategies of post-secondary students across an academic year, this study contributes to the body of literature addressing the issue of coping stability. The degree to which students use similar coping strategies in similar situations and the extent to which different situations precipitate different coping strategies are investigated, extending to include age and gender comparisons.

Implications are also apparent for professional counselling practise. Counsellors in post-secondary settings work with a diverse student population. In order to offer appropriate preventive and remedial services, counsellors need to be aware of the demands faced by students, particularly at different points during the academic year. Gaining a better understanding of coping may help counsellors to assist students to deal with academic and nonacademic demands in ways that maximize their educational experience.

Summary

Past studies of coping have emphasized the stable properties of persons and the situations which they encounter. The transactional model of stress proposed by Lazarus and Folkman (1984) refutes the notion of coping stability, arguing that coping efforts shift over time and across situations, as a result of cognitive appraisal processes. The current study addresses the debate about coping stability by offering multiple assessments of students' perceived demands and their efforts to cope with those demands. The investigation into the stability of coping is extended through gender and age comparisons. The results of this study are considered to have important theoretical implications concerning the debate about coping stability, implications for the methodology used to study the process of coping, and practical implications for counsellors working with students in post-secondary school settings.

CHAPTER 2

Literature Review

The previous chapter outlined the general debate in the literature about whether coping is a stable set of actions determined by personality, or a process which shifts over time and across situations through the influence of cognitive mediation. The primary intent of this chapter is to synthesize literature which is pertinent to the stability debate in coping.

In examining the stability issue, this chapter pursues several goals. First, a review of dispositional and situational perspectives of coping is presented. The review will then turn to literature concerning gender influences in coping, highlighting studies which suggest coping is inherently influenced by stable gender characteristics and studies which look at alternative explanations for gender differences in coping. A third goal of this chapter is to examine the body of literature regarding age influences on coping. Again, the focus of this section will be to consider whether differences in coping can be explained on the basis of age alone, or whether changes in age-relevant demands must be taken into account. The fourth goal of this chapter is to outline key methodological issues such as how coping is measured and the ways in which coping effectiveness is defined.

The transactional model of coping (Lazarus, 1966; Lazarus & Folkman, 1984) will form the basis for developing empirical research questions regarding the nature of demands perceived by post-secondary students, the nature of coping responses by post-secondary students to deal with those demands, and the use of institutional resources to deal with those demands.

The Conceptualization of Stress and Coping

The influence of stress on psychological and physical health is well documented in the literature (Antonovsky, 1979; Billings & Moos, 1984; Moos, 1986; Rice, 1987). Earlier conceptual models took an environmental focus, arguing that stress resided in demanding situations (cf. Holmes & Rahe, 1967). However, researchers are beginning to agree that how people cope with demanding situations is an important causal factor in people's stressful

experiences (Hiebert, 1988; Lazarus & Folkman, 1984; Magnusson, 1982). Situational demands can be quite high, but if people perceive themselves as coping effectively with the demands, little stress will be experienced. Conversely, regardless of the nature or intensity of the demand, poor coping contributes to the experience of stress. There is general agreement that the interplay between demand and coping is central to people's experience of stress.

Despite widespread attention given to conceptual models of stress, there is relatively little known about the nature of coping (Matheny et al., 1986). As the focus of research changes from global descriptions of coping to investigating the distinctive features of coping processes, researchers are beginning to gain insight into the contextual variables that influence coping and the role that perception plays in determining the outcomes of demanding situations (Aldwin & Revensen, 1987; Folkman et al., 1986; Folkman, Lazarus, et al., 1986; Gmelch & Chan, 1992; McCrae & Costa, 1986; Menaghan, 1983).

The Transactional Model of Coping

One of the most influential theories in the field of stress and coping has been developed by Lazarus and associates (Folkman & Lazarus, 1980; Lazarus, 1981; Lazarus & Folkman, 1984; Lazarus, Kanner, & Folkman, 1980). Lazarus and Folkman (1984) have defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). According to the transactional model of stress and coping, whether or not a particular person-environment transaction is experienced as stressful depends on a two component process of cognitive appraisal. Cognitive appraisal is a process through which the individual evaluates the relevancy of a particular situation for personal well-being. In primary appraisal, the person makes an assessment of what, if anything, may be at stake in the encounter. Situations may be appraised as irrelevant, benign-positive, or stressful. When a situation is appraised as irrelevant, the individual has little attachment to its outcome. When a good or self-enhancing outcome is perceived, the situation is likely to be appraised as benign-positive. The characteristics of stressful appraisals can be classified according to threat, challenge, or

harm-loss. Whereas threat implies the anticipation of risk to well-being in the future (i.e. friendship, health, self-esteem), harm-loss reflects the experienced impact on personal well-being. Although challenge also involves the situational appraisal of stress, it implies the individual's assessment of potential growth, mastery, or gain.

While reflecting on the relevance of the situation to self, the individual concurrently considers personal coping resources and options for dealing with the demand. The essence of secondary appraisal is the evaluation of coping options. If the individual appraises personal coping resources as being adequate to meet the perceived demands of the situation, the degree of threat is diminished. However, error in appraising the extent of coping resources to meet an initially nonthreatening situation may result in the situation taking on new meaning through reappraisal at a later point in the encounter. In summary, primary and secondary appraisals converge to determine the relevance of the person-environment transaction, the coping resources available, and the nature of situations appraised as stressful. This duality in the appraisal process is the foundation for two of the central issues addressed in this study. The first concerns the nature of demands reported by students during their first year in a post-secondary program and the second concerns the ways in which students cope with perceived demands.

Person and situation factors influencing appraisal

Lazarus and Folkman (1984) have classified coping resources according to personal and environmental properties. Both person and situation factors act as antecedents to appraisal, "in terms of their meaning with respect to the balance between demands and resources within the person, within the environment, and between the person and the environment" (p. 114). Although processes within the person and processes within the environment are considered separately for descriptive clarity, their influence on appraisal are essentially interdependent. Further, person and environment variables can be both determinants and detriments of threat. This duality in appraisal processes is an overriding principle in the investigation of personal and environmental properties.

Commitments and beliefs are considered to be two key personal characteristics which influence appraisal (Lazarus & Folkman, 1984). Whereas commitments determine the appraisal of what is at stake in the encounter, beliefs are central to appraising situational meaning. Beliefs about the controllability of an event are considered in two ways: a) as a generalized belief about the outcome of a situation, and b) as a situational appraisal of control in a specific stressful encounter (Folkman, 1984). These person characteristics are used to account for individual differences in appraisal (Lazarus & DeLongis, 1983). In essence, there cannot be only one interpretation of a situation, rather, personal commitments and beliefs serve to influence idiosyncratic appraisals (Kirsch, Mearns, & Catanzaro, 1990). However, an account of appraisal processes through commitments and beliefs is incomplete without considering interdependent situational factors.

Rather than considering situations as normatively stressful, Lazarus and Folkman (1984) argue that it is the individual's appraisal of situational factors that determines the stress response. The imminence, duration, and uncertainty of events act as important temporal factors. Aspects of novelty, predictability, and the ambiguity of events are also key variables proposed to influence the individual's appraisal of the situation. The current study is concerned with what factors are related to students' experience of demands and to students coping in different ways. In particular, the investigation considers the relationships between length of time experiencing demands, perceived control, the stress associated with demands, and coping.

Actual versus perceived coping resources

Lazarus and Folkman (1984) point out that knowing a person's repertoire of coping resources is insufficient to predict coping. Rather, by attending to the factors which influence the use of coping resources, moderators of the stress-outcome relationship may be identified. Although the individual may have a multitude of personal and environmental resources available, there are also constraints which may inhibit the person from accessing coping resources.

People have a number of personal and environmental resources available to access when coping with situational demands. In viewing coping as a process which evolves from resources, a distinction can be made between available coping resources and resources that the individual perceives to be available. It may be the case that the individual is not aware of existing resources. In this case the resources are not constrained, rather the individual does not realize their existence. The use of perceived resources are influenced by factors which precede and influence ongoing coping attempts, thereby mediating the individual's experience of stress.

Lazarus and Folkman (1984) have outlined health and energy, positive beliefs, problemsolving, and social skills as key personal coping resources. Within the environment, resources may be either social or material. However, there are constraints on the use of potential resources and consequently the ways in which people deal with their environment may be restricted. Constraints may also be located in the person or in the environment. "Personal constraints refer to internalized cultural values and beliefs that prescribe certain types of action or feeling, and psychological deficits that are a product of the person's unique development. We also call these personal constraints "personal agendas" (Folkman & Lazarus, 1984, p. 165). How the individual construes coping resources is a central feature in determining whether or not the resource is used. The level of threat perceived in a situation may impact coping by: a) influencing the person's assessment of coping resources to meet particular situational demands, and b) influencing the person's use of coping resources. During situations of high threat appraisals, problem-focused coping tends to be restricted and greater use of emotion-focused coping used. Further, environmental resources may impose restraints on coping due to limited amounts of those resources or due to differential access to those resources. Although more emphasis has been placed on the inhibiting role of constraints, Lazarus and Folkman (1984) note that coping efforts may be redirected by constraints, thereby preventing the situation from deteriorating.

The use of coping resources is a particular focus in this study. The extent to which students demonstrate instrumental coping and access institutional resources is considered. Further, the extent to which students find campus resources useful in coping with demands, as well as the criterion on which evaluations of usefulness are based, are considered in the study.

Classification of coping strategies

According to the transactional model, coping involves both cognitive and behavioral dimensions. According to Folkman (1984), control can be conceptualized separately as a) a generalized belief held by the individual regarding outcomes of importance, and b) as a situational appraisal related to a specific stressful situation. Folkman acknowledges that few situations can be judged clearly as either controllable or uncontrollable. Through exploring the personal meaning of control, the perceived costs and benefits of maintaining control may be evaluated from the individual's perspective and not assumed by the researcher. Further, Folkman recommends a "goodness of fit" evaluation between appraisals of controllability by the individual, the actual characteristics of the situation, and an evaluation of the appraisal of control over the situation and strategies selected for coping. Folkman contends that there are multiple functions of personal control in any situational appraisal which subsequently impact the selection of coping strategies and resulting coping outcomes. The appraisal of control over demanding situations is one of the issues considered in this study in order to gain a better understanding of the factors that influence students to cope in different ways.

In summary, the transactional model of coping offers an alternative explanation for people's coping efforts across time and across situations through considering both situational and personal properties. In the next section of this chapter, the issue of stability in coping will be expanded.

The Stability Issue in Coping

The literature on coping can be divided into competing approaches regarding the issue of coping stability over time and across situations. According to Lazarus & Folkman (1984), "traditional models of coping tend to emphasize traits or styles, that is, achieved ego-

structures that once created, presumably operate as stable dispositions to cope in this way or that way over the life course" (p. 128). This approach considers coping as a function of personality disposition; a characteristic and stable set of actions and reactions used to meet a variety of different stressors located in the environment (Billing & Moos, 1983; Costa & McCrae, 1983; McCrae & Costa, 1986; Wheaton, 1983).

The notion that coping efforts are stable has been challenged by theorists who consider coping to be a dynamic, shifting process as the situation unfolds (Folkman, 1982, 1984; Folkman & Lazarus, 1980, 1981, 1985; Folkman et al., 1986; Folkman, Lazarus, et al., 1983; Lazarus & Folkman, 1984; Lazarus, Kanner, & Folkman, 1980). The equation of coping with personality has been challenged on the basis that coping efforts involve specific cognitions and behaviors to meet perceived situational demands.

Advocates of the situational approach investigate the ways in which individuals cope with situational demands appraised as stressful. Rather than viewing stress inherently in the person or inherently in the environment, it is the particular relationship between the person and the environment on a situational basis that is important for an understanding of stress and coping. The issue of coping stability is of particular interest in this study. Through this investigation, the extent to which coping strategies used by students are stable across time is addressed. In the next section of this chapter, explanations of coping stability from a dispositional approach will be presented.

Dispositional Perspectives

Costa and McCrae (1983) note that "since the writings of Allport (1937), traits have been defined as enduring dispositions which exert a consistent and pervasive influence on thoughts, feelings and behaviors" (p. 162). Although beyond the scope of this review, core assumptions of traditional trait approaches have been challenged by researchers who debate the specificity-consistency of personality traits (see Mischel (1973) for a review). Just as the pervasiveness of consistency in dispositional personality theory has been challenged by diversified research methods, a parallel trend is evident in the coping literature.

Carver et al. (1989) suggest two perspectives on the role of individual differences in coping. First, individuals bring stable coping dispositions or styles to situations. This means that individuals are equipped so as not to encounter each situation as a new one, rather, coping styles transcend time and circumstances. A second perspective suggests that individuals cope with situations using consistent ways because of the influence of specific traits or personality characteristics. This "predispositional view" assumes that personality plays the major role in the individual's selection of strategies to cope with stress.

Using the trait approach to coping, individual qualities and capacities are considered to influence the strategies the individual has available for managing stressful episodes (Parkes, 1986, p. 1278). The variety of personality dimensions studied as potential influences on coping lead McCrae and Costa (1986) to conclude that "coping researchers have adopted the strategy of examining the wide variety of existing personality scales and selecting those that seem appropriate to their particular research needs" (p. 386). A selection of research studies using a trait approach to study coping will be described in the next section of this chapter.

Optimism and pessimism. A number of researchers have studied coping with stressful life events from the position of personal optimism versus defensive pessimism. Scheier and Carver (1985, 1987) have considered dispositional optimism and pessimism as generalized outcome expectancies. As a stable personality characteristic, optimism effects well-being through the ways in which people regulate their actions. Cantor and Norem (1989) suggested that optimism and pessimism are strategies for dealing with specific situations, including "patterns of appraisal of tasks, the use of information, the deployment of attention and effort, and the post hoc reconstruction of performance" (p. 93).

In two separate studies of undergraduates, Scheier, Weintraub, and Carver (1986) compared the kinds of coping strategies used by optimists and pessimists. In Study 1, subjects were asked to describe the most stressful situation they had encountered in the previous 2 months, to indicate the extent to which they believed the event was controllable, and to indicate their manner of coping on a coping checklist. In Study 2, subjects were presented

scenarios of stressful situations that were defined by the researchers as potentially controllable. Subject generated responses were consequently coded, adding categories that did not conceptually match the dimensions of the coping checklist. In both studies, optimism positively associated with problem-focused coping, social support seeking, and focusing on the positive aspects of a stressful situation. In Study 1, optimism and acceptance/resignation positively correlated when the event was perceived as uncontrollable. Coping strategies associated with pessimism in Study 1 included denial and distancing, and with focusing on stressful feelings and goal disengagement in Study 2.

Scheier and Carver (1985) have distinguished between dispositional pessimism and defensive pessimism. Dispositional pessimism has been associated with socially isolating, self-defeating, and motivationally maladaptive coping strategies. Although defensive pessimism may include negative expectancy it is without the debilitating motivational consequences. By maintaining negative expectations in new situations, defensive pessimists appear to be able to capitalize on their fear and ensure success through increased effort. However, defensive pessimism appears to have long-term costs of increased elevated symptoms of stress. For example, in Cantor and Norem's (1989) study of first year college students, defensive pessimists reported less control over academic achievement and experienced more emotional reactions across their daily life situations than those reported by optimists. Three years later, pessimists reported greater academic difficulties, significantly more life stress symptoms, and less satisfaction with their lives.

Several authors have also examined the potential costs and benefits of optimism (Cantor & Norem, 1985; Scheier & Carver, 1985; Tennen & Affleck, 1987). In a study of undergraduates, over 4 weeks, Scheier and Carver (1985) noted that optimists' favorable expectancies creates a propensity towards active coping. However, optimists may fail to engage in precautionary or preventative behavior because of their tendency to believe in positive future outcomes. Under unrealistic conditions, optimists may persevere with active coping and facilitate excessive struggling. To the extent that optimists may be less sensitive to

and repress or avoid information that is negative towards their performance, they may miss cues or be slow to adapt to changes that will maintain an effective performance.

According to Cantor and Norem (1985), it is the individual's capacity to respond flexibly to situations that is crucial for coping with diverse situations. Whereas optimists are prone to confront and pursue adversity, pessimists are more apt to become emotionally upset and give up active coping. However, it appears that in the long run, optimists are less likely to be bothered by the introduction of new performance demands or the effects of accumulated stress, evidenced by fewer stress symptoms in comparison to the symptoms reported by pessimists.

Type A behavior. Vickers, Hervig, Rahe, and Resnman (1981) studied the relationship between Type A Behavior Pattern (TABP), coping (flexibility and appropriate, controlled affect), and defense (opposite characteristics to coping) in adult male twins. They found that job involvement was related to high coping scores and low defense scores, speed and impatience were related to high defensiveness, and hard driving was related to low coping scores. Results suggested that health risks of TABP may be associated with the combined effects of poor coping skills and excessively high defensiveness.

Vinverhoets and Flohr's (1984) sample of male subjects, classified according to Type A and Type B behavioral patterns, showed different tendencies in their self-report of general coping tendencies. The scores of Type A subjects were significantly lower on the coping factor of acceptance and significantly higher on factors of problem-solving/help-seeking and on self-blame than the scores of Type B subjects. Results suggest that Type A's are more prone to locate the source of problems internally as opposed to their environment and to use active problem-solving strategies to cope with stressful problems.

Based on a sample of male college students, Pittner and Houston (1980) explained that Type A's sustained efforts and lower negative affect was due to cognitive coping through denial. In response to both threat to self-esteem and threat of shock, Type A individuals used more suppression in cognitive coping and used more denial in response to threat to self-

esteem than was evidenced by Type B subjects. Conversely, the use of suppression by Type A's was associated with greater negative affect.

Other trait variables. In a longitudinal study following the occurrence of a natural disaster, Anderson (1977) examined the relationship between locus of control, coping behaviors, and performance with a sample of small business managers. At 8 months, subjects high on external control (Externals) perceived high stress, used few task-oriented behaviors, and used more coping behaviors to deal with their emotional reaction. The task-oriented coping behaviors of subjects high on internal control (Internals) was associated with more successful outcomes in dealing with the stressful event. High levels of stress were associated with defensive coping. The correlations between coping behaviors suggests that subjects tended to either use task- or emotion-based coping strategies rather than a combination of strategies. Results over a 3 year period suggested a reciprocal relationship between locus of control and performance primarily through the choice of task versus emotional coping strategies. In turn, performance outcomes operated as a feedback mechanism and subsequently influenced people's future locus of control orientation.

McCrae and Costa (1986) have argued for the classification of personality traits into a three domain model of personality represented by neuroticism, extraversion, and openness to experience. In two studies of community-dwelling adults, subjects who used more effective ways of coping generally reported higher life satisfaction and happiness; however, controlling for personality variables consistently reduced correlations between coping and well-being. Similarly, in a sample of first year college students, Denney and Frisch (1981) reported that both life stress and neuroticism independently predicted self-reported health problems. However, this study failed to confirm neuroticism as a moderator variable and no investigation of subject's coping efforts was made.

In a sample of community residents, Wheaton (1983) found that dispositional characteristics of low fatalism and low inflexibility were strong moderators of the impact of stress, particularly for symptoms of schizophrenia and depression. However, the stress-

modifying effects on anxiety were not significant. Relative flexibility appeared to increase in importance over time, implying that the ability to maintain a broad scope of coping strategies or alter coping may be more adaptive than maintaining high levels of concentrated coping efforts over time. Wheaton concluded that researchers need to delineate the nature of the stress (i.e., chronic or acute), and the type of symptom problem under investigation.

Lang and Markowitz (1986) studied the influence of personality dimensions and coping strategies on strain associated with role overload. In a sample of adult undergraduate evening students studied over 4 weeks, strong situational effects were evidenced by low test-retest reliabilities for coping, strain and the variability of perceived overload. Coping strategies of planned and reactive task management significantly predicted strain with planned task management reducing strain over time. Of the variables used to measure individual differences, including Type A behavior, alienation, and perfectionism, only alienation significantly moderated the relationship between overload and strain.

Miller, Omens, and Delvadia (1991) investigated personality and coping correlates of social competency. In a sample of undergraduate students, correlations between social competence and coping measures produced the following results: Self-complexity was not significantly related to any of the coping scales; functional flexibility showed a pattern of relationships indicating the unlikely use of passive coping strategies; high self monitoring positively correlated with both active coping and planning, and negatively correlated with behavioral and mental disengagement; concern for appropriateness and protective variability negatively correlated with positive reinterpretation and growth; protective social comparison and concern for appropriateness positively related with behavioral disengagement; and protective variability was negatively correlated with seeking emotional social support. No measures of coping outcomes were included in this study.

Kobasa (1979) introduced the concept of personal hardiness as a dispositional moderator of the effects of stress. Personal hardiness represents a constellation of three personal characteristics: Commitment, control, and challenge. In their sample of predominately male

executives, Kobasa and Pucetti (1983) found that personal hardiness was associated with lower stress symptomatology. Perceived supervisor support had a positive effect on decreased symptoms when stress levels were high, whereas perceived family support showed a negative effect on health by subjects low in hardiness. However, Scheier and Carver (1985, 1987) have identified two conceptual difficulties with the construct of hardiness. First, the multifaceted nature of the construct makes it difficult to assess what aspects of the composite are responsible for the effects. Second, the methods used to measure hardiness have varied between studies. As a result, it is difficult to distinguish the actual stress-buffering effects that are proposed to occur through personal hardiness.

Situational Perspectives

McCrae and Costa (1986) suggested that the association between coping and well-being may be causally explained by personality. Personality may influence the selection of coping strategies which subsequently impact well-being. In contrast, opponents of the dispositional approach argue that the treatment of coping as a trait or style variable represents a static, structural perspective (Lazarus & Folkman, 1984). The main criticism levied against the dispositional perspective is that it assumes a linear and unidimensional relationship between personality and well-being (Derogatis, 1982).

Structural approaches such as these do not provide information about whether and how a person actually copes, seeks, or uses social support, or actually feels supported in a particular stressful encounter. Furthermore, structural approaches cannot reveal changes in stress-related phenomena, including emotion, as a specific encounter unfolds or from encounter to encounter. (Lazarus & Folkman, 1984, p. 151)

Alternatively, the transactional model of stress and coping recognizes the dynamic and unfolding nature of coping processes.

The term coping processes refers to what the person actually thinks and does in a

particular encounter and to changes in these efforts as the encounter unfolds during a single episode or across episodes that are in some sense part of a common stressful encounter...(Folkman & Lazarus, 1980, p. 224)

Situational perspectives focus on the ways individuals tailor their coping attempts to meet unique characteristics of demanding situations (Folkman & Lazarus, 1980; Folkman, Lazarus, et al., 1986; Parkes, 1986). Despite situations that are experienced by many people as stressful, this perspective proposes that there are considerable individual differences in the appraisal of the demand characteristics of such situations and ways that people attempt to cope. In the next sections of Chapter 3, studies related to situational perspectives and the transactional model of coping will be reviewed.

Problem-focused versus emotion-focused coping. In Folkman and Lazarus' classic 1980 study, coping functions were broadly divided into emotion-focused coping and problem-focused coping. Emotion-focused coping refers to strategies used to regulate distressing emotions. When the individual appraises the situation as unchangeable, emotion-focused coping is expected to occur. Problem-focused coping refers to doing something to alter the problem creating the stress. Where situations are perceived as alterable, and thereby controllable, problem-focused coping is expected to be used more frequently. It is proposed that during appraisal of the controllability of a situation the individual evaluates the selection of problem-focused and emotion-focused coping strategies (Lazarus & Folkman, 1984).

Folkman and Lazarus (1980) studied the coping patterns of community dwelling adults, to examine "the relative proportions of problem- and emotion-focused coping used in a particular episode" (p. 229). While an association was found between coping patterns and perceived control over the situation, there was overwhelming evidence that both problem- and emotion-focused coping strategies were used by individuals when dealing with a single episode appraised as stressful.

In another study of community-residing adults, Folkman et al. (1986) investigated the relationships between primary appraisal, secondary appraisal, problem- and emotion-focused

coping, and coping outcomes. An intraindividual analysis compared the same person's responses over five stressful encounters. Relations between secondary appraisal of coping options and coping strategies showed the following patterns: In situations appraised as changeable, subjects used confrontational coping, positive reappraisal, and accepted more responsibility; in situations appraised as unchangeable, subjects used more distancing and escape-avoidance; in situations appraised as requiring more information, subjects sought social support, used self-control and problem-solving strategies; in situations appraised as requiring restraint, subjects used more confrontational coping, self-control, and escape-avoidance. This study demonstrated support for the theoretical premise that variability in coping is partially influenced by people's perceptions of the stakes involved in the situation, the resources available to cope, and that coping efforts impact the outcomes of stressful encounters.

In reference to the most distressing life event from the past 6 months, Forsythe and Compas (1987) found that college students used greater proportions of problem-focused coping when situations were appraised as controllable, however, emotion-focused coping did not differ according to control appraisals. The use of instrumental coping to try to change a situation appraised as uncontrollable led to higher indices of psychological symptoms than did coping through emotional expression when the situation was appraised as uncontrollable. In reference to the most distressing event during the previous 2 weeks, there was no significant difference in the proportion of problem- to emotion-focused coping as a function of students' appraisals of control. Further, results suggest that the "goodness of fit" between control appraisals and selected coping strategies may only impact symptoms of stress through the perceived impact of major life events over time.

Folkman and Lazarus (1985) also found that college students shifted their use of coping strategies in order to match changes in perceived demand characteristics over 3 stages of an examination period. For example, there was a significant decrease in problem-focused coping from Time 1 (anticipation stage) to Time 2 (waiting stage after the exam and prior to the announcement of grades), whereas distancing peaked at Time 2. From Time 2 to Time 3

(after grades were posted), wishful thinking and distancing decreased. At Time 3, students who received poorer grades used more emotion-focused coping than students who performed well on the exam, suggesting efforts to manage a disappointing performance. Shifts were also evident in the use of social support coping. When situational demands required task preparation, instrumental support coping was frequently used, however, when outcomes were no longer controllable, emotional support coping efforts increased, again illustrating the link between appraisals of control and corresponding coping efforts. In this study, change across a stressful encounter was reflected in multiple situational appraisals, the variety of emotional responses, and changes in the use of coping strategies at every stage, including the concurrent use of problem- and emotion-focused forms of coping.

Several researchers have been critical of the classification of coping according to the greater use of either problem- or emotion-focused strategies. For example, in a review of the Folkman and Lazarus (1980) study, Shinn and Krantz (1981) argued that insistence by researchers to classify coping efforts in this manner ignores the use of numerous strategies within the same category. Fleishmann (1984) has also suggested that the classification of coping into a problem- versus emotion-focused dichotomy is too broad and that the pattern of coping interrelationships are more complex than are apparent by a simple contrast of coarse categories. Therefore, classifying coping strategies into generalized coping patterns may obscure the variability of strategies actually used by the individual to deal with the situation (Folkman & Lazarus, 1988). Further, several of the studies reviewed have implied that appraisals of changing demand characteristics require the use of both problem- and emotion-focused strategies as a stressful encounter unfolds. As pointed out by Mitchell, Cronkite, and Moos (1981) and Wheaton (1983), a varied coping repertoire may be more important than any single coping strategy in dealing with stress.

The influence of emotional distress on coping is another issue pertinent to this study. In particular, the investigation is concerned with the influences of global stress, depression, and anxiety on the use of different types of coping. The investigation will consider the influence of

emotional distress on categories of coping, i.e., problem-focused, emotion-focused, disengagement coping, and on the use of specific coping strategies within each category.

Appraisal and coping. McCrae (1984) assessed the impact of appraisals of loss, threat, and challenge on the selection of coping strategies in a volunteer sample of community-residing adults. Across two studies in which, a) the investigator classified the stressor, and b) subjects selected a loss, a threat, and a challenge event, the type of stressor had a consistent and significant effect on subject's choice of coping strategies. The results suggest that no single form of coping may be the most useful mediator of stress. Consistent with results reported by Folkman et al. (1986), coping efforts were chosen to meet the appraised demands of the situation.

Krantz (1983) measured college student's appraisals 1 week prior to an exam. Students were asked to generate alternative coping strategies in the event of dissatisfaction with exam performance and to rate the feasibility of using problem-directed and information-seeking coping strategies. The appraisal of a large number of options prior to the exam was related to problem-directed coping measured 1 week following the event. Failure of coping cognitions to predict academic performance was accounted for through a weak relationship between goal-directed coping (exam performance) and the outcome of coping (exam outcome).

Krantz raised the issue of whether or not perseverance with problem-solving coping always leads to desired outcomes, or whether, there may be detrimental effects. For example, desired outcomes such as overconcern or persistent efforts to meet academic achievement may be at the expense of other life areas, possibly resulting in negative outcomes for students.

The transactional model of stress was applied to family caregivers of dementia patients by Haley, Levine, Brown, and Bartolucci (1987). Higher levels of caregiver depression was associated with caregiver's appraisals of patient's behavioral problems and disability as highly stressful. The weak relationship between the severity of objective caregiving stressors (medical indices of patient problems) and caregiver outcomes lends support for the importance of appraisal and coping responses as indicators of caregiver well-being.

Psychological, environmental resources, and coping. Pearlin and Schooler (1978) studied a community sample of households, their manner of coping with strains in various life areas, and the influence of psychological resources. An ordering of the attenuating effects of psychological resources emerged with self-denigration most important, mastery second in importance, and positive self-esteem ranked third. In general, results suggest that in situations where people face strain arising from situations where they perceive little direct control (i.e., work), psychological characteristics appear to play a greater role in moderating strain. However, in situations involving interpersonal relationships (i.e. marriage, parenting), the things people do (coping responses) attenuate strain more than who people are (coping resources). In a reanalysis of Pearlin and Schooler's (1978) data, Fleishmann (1984) concluded that situational factors had a greater influence than personality characteristics on subjects' methods of coping.

In order to investigate the relationships between appraisal, coping efforts, personality characteristics, and adaptational outcomes, Folkman, Lazarus, et al. (1986) studied community-residing couples during 5 different stressful encounters extending over 6 months. Of the personality traits measured, mastery and interpersonal trust significantly correlated with psychological symptoms even after controlling for appraisal and coping. The relationship between appraisal and health symptoms suggested that the more a person had at stake, the greater the number of symptoms that were reported. An exception in primary appraisal included having concern for a loved one's well-being; here a focus on others may have had a salutary effect. Notable correlations between coping and health symptoms included planful problemsolving which was negatively correlated with symptoms, whereas confrontational coping was positively correlated. Individual forms of emotion-focused coping did not contribute significantly to adaptational status through multivariate analysis. Across diverse encounters, more stability was found in the coping scales than in other variables, however, certain forms of coping showed more stability (i.e., emotion-focused coping, positive reappraisal), whereas others appeared strongly influenced by the situational context (i.e.,

problem-focused coping). Variability over time in primary and secondary appraisal processes also reflected sensitivity to environmental conditions. However, intraindividual analysis of coping from encounter to encounter reduced findings of variability, showing that subjects draw from a multitude of coping strategies over time.

In a study of first year female student nurses, Parkes (1986) found that individual differences, environmental factors, and situational characteristics were predictors of both general coping and the use of specific coping strategies (i.e., direct action and suppression). Both main and interactive effects contributed significantly to the explained variance in coping scores; however, the patterns of interaction were different for general and specific coping. Although the mediating role of cognitive appraisal was not assessed in this study, Parkes has argued for the interdependence of person and environmental factor in determining people's coping efforts. This position has been substantiated by Newton and Keenan's (1985) study where the nature of coping attempts made by engineering graduates was accounted for by patterns of individual characteristics, environmental influences, and situational appraisal factors.

Temporal factors and coping consistency. Killeen (1990) found that the length of time in a family caregiving role was associated with changes in coping strategies. Family members new to the caregiving role used greater numbers of problem-focused strategies and emotion-focused strategies were used more by those who had been caregivers longer. Consistent with principles of secondary appraisal, when an individual enters a new role, there may be greater expenditure of energy on trials of alternative action or ways to change the situation. However, over time, if the persons perceives the situation as less changeable, a shift to emotion-focused coping strategies may occur in an attempt to deal with situational constraints.

Cohen and Roth (1984) reported consistency over time in the use of avoidance and approach coping strategies by women preceding and immediately following an abortion procedure. However, the time period used to measure consistency was approximately only 5

hours. Further, Lazarus and Folkman (1988) have suggested that the studying of coping efforts according to avoidance and approach categories masks the idiosyncratic nature of coping attempts.

Carver et al. (1989) also reported moderate to strong correlations between subjects' reports of what they "usually do" to cope and what they "actually do" to cope in a particular situation. Measures were administered to undergraduate students at the beginning and end of 3 weeks. However, no controls were used for either a) differences in situations used as referents by subjects, or b) the stages of encounter with situations.

Dolan and White (1988) have argued that through defining the context of situations, the degree to which consistency in coping occurs may be more clearly defined. In a study of college graduate females over 7 weeks and a study of undergraduate males over 2 weeks, subjects were generally consistent in their use of coping strategies when context was taken into account. There was no main effect for context type. The only significant positive correlation between coping consistency and coping effectiveness was found in the work/school context of Study 1. At work or at school, females found that the regular application of specific coping strategies yielded more effective outcomes.

In Stone and Neale's (1984) study of married individuals, appraisals of the same problem over 3 weeks was associated with moderate correlations of within-subject consistency in coping. Although subjects tended to use at least one consistent coping method to deal with similar problems, this was in combination with a variety of other coping strategies across problem situations. Coping efforts on a daily basis showed that both problem-focused coping and emotion-focused strategies were used together to meet the demand characteristics of a problem.

A study of temporal and cross-situational consistency in causal attributions and coping was completed by Compas, Forsythe, and Wagner (1988). Over 4 weeks, undergraduates showed moderate consistency in their methods of coping in response to the same stressor over time and low consistency in coping attempts across two different types of stressors. Subjects were

moderately to highly consistent in their causal attributions to the same stressor over time, however, consistency in attributions diminished when different stressors were considered. There was considerable variation in the degree of coping consistency used by individuals in both contexts, with some individuals showing more stability in coping than others. However, greater consistency in coping was related to higher levels of negative affect. Collaborative findings by Mitchell et al.'s (1983) study of married community couples and couples in which one of the partners was clinically depressed also suggested that negative affect may be related to a restricted coping repertoire.

These studies provide support for the hypothesis that temporal consistency exceeds cross-situational consistency. In response to the same event, causal attributions and coping are characterized by consistency in coping; in response to different stressful situations, there tends to be variability in coping responses.

Coping and effectiveness. Several studies have attempted to isolate the factors which are linked to coping effectiveness. In a longitudinal study over 1 year, Coyne, Aldwin, and Lazarus (1981) delineated the coping strategies used by depressed and nondepressed middle-aged people. While depressed subjects made more appraisals of needing more information, and nondepressed made more appraisals of acceptance, the groups did not differ on appraisals of restraint or control. Overall, differences in coping strategies showed that depressed subjects scored higher on wishful thinking, seeking emotional support, and the mixed coping factor scale. No significant differences were found for scales of self-blame, problem-focused coping, or threat minimization. The relationships between appraisal and coping strategies were as follows: a) in situations appraised as changeable, depressed persons used more wishful thinking, mixed coping, and seeking of emotional support, b) there were no significant difference in coping in situations requiring acceptance or more information, and c) in situations appraised as requiring restraint, depressed persons utilized significantly more wishful thinking and more mixed coping. With respect to type of problem faced, in

comparison with nondepressed subjects, depressed subjects sought more emotional support at work, and used more wishful thinking, self-blaming, and mixed coping.

Billings and Moos (1984) also found that problem-solving and affective regulation coping strategies used by clinically depressed patients were associated with less severe depression, whereas emotional-discharge responses were linked to greater levels of depression. Similarly, Hovanitz (1986) reported that undergraduate students with elevated clinical scores used significantly less adaptive coping strategies such as cognitive restructuring and active problemsolving.

Schiffman (1984) studied the effectiveness of coping strategies reported by ex-smokers dealing with relapse temptations. Neither the quantity of coping strategies nor specific coping strategies were singly more effective, except that the use of willpower was significantly inferior to other cognitive responses, and self-punitive coping cognitions produced more relapse than other cognitive coping strategies. These results were replicated in Grilo, Shiffman, and Wing's (1989) study of dieters. Although both cognitive and behavioral coping was associated with maintenance of abstinence, combinations of both strategies significantly enhanced the maintenance of abstinence.

Heppner, Reeder, & Larson (1983) found that first year college students who perceived themselves as effective problem solvers used coping strategies that were more problem focused (task focused) and were less blameful than students who described themselves as ineffective problem solvers. Therefore, the appraisal of problemsolving effectiveness appeared to be related to student's use of self-regulatory coping strategies.

In Nolan and Wielgosz's (1991) sample of patients with acute myocardial infarction (AMI), the overuse of symptom distraction and individual-based relief-seeking, although providing acute symptom relief, was associated with greater health risks. Consistent with the recommendations of Mullen and Suls, (1982), Nolan and Wielgosz (1991) suggested that the temporal effects of coping through distraction need to be evaluated in terms of short-term versus long-term effectiveness.

Menaghan and Merves (1984) studied a large metropolitan sample over 4 years to determine the effectiveness of different ways of coping in dealing with occupational distress and occupational problems. Over time, occupational problems were influenced by the initial problem level, situational context, and job change. Whereas optimistic comparisons and restricted expectations affected ongoing feelings of occupational distress, they had little impact, either favorable or debilitating, for the work situation over time. Further, despite the initial benefits of selective ignoring and direct action as subjectively helpful responses, neither later occupational problems nor feelings of distress were impacted. Direct action tended to be associated with greater occupational problems later on, suggesting that occupational conditions may be more influential for long-term feelings of distress.

Summary. Situational perspectives have attempted to uncover both individual and environmental influences on people's coping efforts. Through considering the factors, from the individual's point of view, that restrict or enhance coping options, researchers have begun to articulate the link between appraisal processes and the use of particular coping strategies. One key factor influencing the choice of problem-focused versus emotion-focused coping is the individual's appraisal of control over situational demands. Further, researchers are beginning to delineate the types of factors that are linked to coping effectiveness. Results generally imply that a varied coping repertoire may be more beneficial for long term adaptation.

Advocates of the situational approach appear to agree about the importance of specifying the context of situational demands on two levels of investigation. First, the general contexts of situations requires delineation in order to substantiate meaningful comparisons of people's coping efforts. Second, researchers are beginning to account for changes in contexts within one stressful episode as shifts in idiosyncratic meaning occur. Results of the research reviewed suggest that when similar situational contexts are referenced, the coping efforts of individuals are likely to be consistent, whereas, when the nature of perceived demands vary, coping efforts are expected to change to meet demand characteristics. Several researchers

have argued that our understanding of the processes which influence people's coping efforts may be enhanced through investigating coping over time and across situations. In order to address the concern of coping stability, the coping strategies of students in this study are investigated across time, and in reference to same demand and different demand situations.

Factors Influencing the Stability of Coping

Two factors, sex and age, have been identified as potentially influencing the stability of people's coping attempts. Several researchers have maintained that coping is predetermined by sex or that changes in the ways people cope are inherently the result of age. An alternate position has been advocated by researchers who support a contextual interpretation. From this position, sex and age factors are integrated in both the personal and environmental contexts which influence people's coping efforts (Folkman, Lazarus, Pineal, & Novacek, 1987). In this section of the dissertation, research which addresses sex and age factors in the coping literature will be reviewed.

Gender and Coping

Dispositional and situational explanations have also been applied to gender influences on coping. From a dispositional perspective, inherent characteristics are proposed to underlie differences in the coping styles of men and women. The assumption is made that men emphasize instrumental, analytical, and problemsolving skills while women are more emotionally expressive. The dispositional explanation of gender differences in coping has only recently been challenged by researchers who consider both personal and environmental contexts in the coping process. For example, Jick and Mitz (1985) have argued that gender may influence the stress process in different ways and at different stages, including a) perceptions of the source of stress, b) the perception of stress, c) the selection of coping skills, and d) how stress is manifested. This chapter will now turn to research which addresses the influence of gender on coping.

Personality, gender, and coping. With a sample of college students in their last year of studies, Houtman (1990) found significant sex differences in the relationships between Type A

behavior and coping styles, and in the relationships between neuroticism, extraversion, anxiety, Type A behavior, and coping styles. Compared to males, females reported higher rates of seeking social support and significantly more coping through palliative efforts. Test-retest correlations over a 3 month period showed considerable stability in the ways in which subjects of both gender coped.

Martin et al. (1989) proposed that, given the unrealistic standards for performance characteristic of Type A individuals, the initial use of problem-focused coping efforts may be unsuccessful for achieving performance goals. Consequently, in an attempt to maintain positive self-worth, the use of emotion-focused coping is intensified. Martin et al. found that the use of emotion-regulation coping strategies by Type A females was consistent with the proposed model but only partially replicated for Type A males. Along with an increase in strategies such as wishful thinking, self-isolation, and positive reappraisal, males also increased problem-directed coping efforts such as seeking social support. The exclusive use of emotion-focused coping such as denial and isolation may account for Type A females' generally higher levels of reported stress and lower levels of self-esteem as compared to Type A males.

Conte, Plutchik, Picard, Galnter, and Jacoby (1991) found the following gender differences with alcoholic inpatients at 1 week following admission: In comparison to female residents, male alcoholics reported engaging in direct problem-solving behavior and reversal (acting the opposite of the way you feel) in anxiety and provoking situations, and made higher self ratings of assertive and accepting on personality measures, whereas women scored higher on dimensions of passivity, aggression, depression and conflict. Differences in personality and coping methods between alcoholics and a nonalcoholic control group were primarily accounted for by the coping responses of female alcoholics.

Holahan and Moos (1986) investigated stress-resistance factors of personality, coping, and family support in a community sample of families. Over a 1 year period, negative life change strongly predicted emotional and physical distress for both sexes, stress resistance predicted emotional and physical distress for women and was associated with emotional distress for

men. Self-confidence, an easy going disposition, a disinclination to use avoidance coping and the availability of family support appeared to mitigate the psychological reactions to stress for both sexes, and extend to physical symptoms of distress for women.

Gender and appraisal. Eisler, Skidmore, and Ward (1988) proposed that differences in gender-role development lead to differences in the appraisal of stressful events by men and women. Undergraduate students responses on a scale of masculine gender role stress (MGRS) showed that stressors associated with gender-role identification were sex specific as men scored significantly higher on MGRS than women. Men's scores were more highly correlated with anger, whereas women's scores were highly correlated with anxiety, showing that MGRS correlates with emotional distress are differentially expressed by men and women.

In a sample of undergraduate and graduate students, Nezu and Nezu (1987) also found that the masculinity dimension of gender roles produced significant differences in psychological distress, evidenced by the lower depression, state anxiety, and trait anxiety scores of high-masculine versus low-masculine subjects. High masculine subjects reported significantly lower scores on problem-solving measures, engaged in significantly more active-behavioral and problem-focused coping and significantly less emotion-focused and avoidance coping than low-masculine subjects. No significant differences were found in relation to the sex or femininity variables or regarding the use of active-cognitive coping reactions. When the variance due to coping was partialled out, the relationship between masculinity and distress was nonsignificant, implicating coping skills as the mediator between sex role relations and psychological distress.

Gender and coping strategies. Folkman and Lazarus (1980) tested the hypothesis that men utilize more problem-focused coping and women more emotion-focused coping in a sample of community-dwelling adults. Results showed little support for the expected gender differences in coping. Although men did use more problem-focused coping than women, this was isolated to work situations and situations appraised as requiring acceptance and more information.

Another important finding was that no gender differences were discovered in the use of emotion-focused coping.

Other research has tested this hypothesis using samples of undergraduate college students. For example, Hamilton and Fagot (1988) concluded that there were no significant gender differences in the use of instrumental versus emotion-focused coping. Astor-Dubin and Hammen (1984) reported that students used both behavioral and cognitive types of strategies, although male students employed mostly cognitive strategies. The latter finding contrasts Miller and Kirsh's (1987) investigation of gender differences in cognitive coping strategies. In a review of over 200 studies in six theoretical areas of cognitive categories, there was minimal support for the position of sex differences in cognitive coping with stress. A review of studies investigating problem-focused coping showed that males used more problem-focused coping than females in the context of work and when appraisals of uncontrollability and requiring more information were made. Further sex differences were found in females' higher self-monitoring through self-criticism and self-consoling. However, failure to specify the context of related events and appraisal variables make these generalizations tentative at best.

Other researchers have maintained that there are gender differences in the use of coping strategies. Hovanitz (1986) reported that undergraduate females used significantly more social support coping and males used more problem-focused coping. Women's greater use of emotion-focused and avoidance coping was also reported by Endler and Parker (1990), although no differences on instrumental coping was evident. Stone and Neale (1984) concluded that in a sample of married individuals, significantly more direct action coping was used by men, whereas women used more emotion-focused and social support seeking responses. The more frequent use of passive coping strategies than task-oriented or problem-focused coping strategies by women has also been noted by Billings and Moos (1984) and Pearlin and Schooler (1978).

Gender differences in response to stressful experiences were also reported by Labouvie-Vief, Hakim-Larson, and Hobart (1987). Women were more likely than men to cope by

turning against the self, seeking social support, and using escape-avoidance. The authors found some support for the premise that women use coping strategies that internalize stress, whereas men have a tendency to use strategies that externalize stress. However, there was no statistical significance for the differential use of planful problem-solving by men and women. It would seem then, that a more accurate conclusion for this study is that women used both internally and externally focused strategies, whereas men tended to rely on externally focused strategies.

In two studies, the relationships between depression, coping strategies, and gender were investigated. Kleinke, Staneski, and Mason (1982) found that depressed male college students were more likely to suppress depressive responses through isolation and escape coping, whereas depressed female college students tended to engage in self-blame, distraction through television, emotional discharge through crying, and to seek help from other people. Males who scored low on the BDI used humor and ignored the situation, whereas low BDI scoring females used more active coping such as cutting back activities and exercise.

In a sample of clinically depressed patients, Billings and Moos (1984) found that female patients made significantly greater use of information seeking, emotional discharge coping, and reported more numerous supportive social resources than men. Consistent sex differences on particular stressors indices showed that women were more effected by family strains and home environments and that work stressors were salient for men.

Gender and the context of coping. Long (1990) is critical of researchers who cite gender differences in coping when different contexts have been used (e.g., Billings & Moos, 1984; Pearlin & Schooler, 1978; Stone & Neale, 1984) because of the possible confounding effects of environmental factors. In a comparison study of male and female managers, Long (1990) noted that men scored higher on instrumentality and women scored higher on expressiveness, yet no gender differences were apparent in coping through active problem-solving. Compared to men, women made greater use of avoidance and problem-reappraisal coping. However, after the effects of sex were partialled out, coping scores were significantly predicted by sex-

typed traits, the work environment, and episode importance. An interesting finding was that, in comparison to men, women reported a greater proportion of interpersonal conflicts with regard to stress episodes and found the work environment to be more supportive, findings consistent with theories that emphasize the importance of the relationship context in women's experience (Gilligan, 1982; Surrey, 1984).

Gender and the experience of stress. Consistent with earlier research which cites gender differences in the subjective experience of stress (Miller & Kirsch, 1987), Jorgensen and Johnson (1990) found that in comparison to males, female undergraduate students appraised events as potentially more stressful and requiring more time to recover. No gender differences were found for the number of events rated as negative.

Belle (1987) reported that males had higher social support satisfaction associated with smaller numbers of negatively rated life events, whereas for females, high social support satisfaction was associated with high numbers of life events rated as negative. These findings are interpreted to suggest that males may benefit more from social support, whereas for women, social support may be linked to additional demand load during times of stress. Further, Belle (1987) has suggested that women's greater sensitivity to life events may allow them to develop a more realistic and accurate appraisal of the impact of life events. This may be functional in the sense of anticipatory coping and consolidating a sense of self-efficacy regarding personal coping resources (Schlossberg, 1984; Bandura, 1982; Lazarus & Folkman, 1984).

In contrast, Long and Gessaroli (1989) found that male elementary school teachers reported higher subjective stress than their female colleagues on measures of role stress, supervisory support, and life satisfaction. Although males and females both reported that problemsolving coping was more effective than coping through avoidance, females indicated problemsolving coping as more effective than did men, and men rated avoidance coping as more effective than did females.

Summary. There are contradictory findings in research regarding gender influences in coping. Rather than limiting an explanation of coping to differences inherent in disposition, several researchers have attempted to identify differences in the contexts of stress, and the differential access to personal and social resources.

Menaghan and colleagues (Menaghan, 1982, 1983; Menaghan & Merves, 1984), concluded that there was no evidence for the claim that women use less adaptive forms of coping, nor do coping efforts have different effects for men and women. Where findings suggest greater use of emotion-focused coping by women, caution is recommended about concluding that this represents less adaptive forms of coping. Further, some researchers have maintained that there are advantages to maintaining a focus on emotional regulation in situations appraised to be beyond the individual's control (Folkman, 1984, Lazarus & Folkman, 1984; Scheier et al., 1986). For example, Hiebert and Basserman (1986) reported that the most frequent coping strategy for school principals was "try harder" (active coping) and that there were virtually no back-up strategies to manage affect (palliative coping) if efforts to manage the demand were not successful. Findings that men use coping in situations that have to be accepted may imply gender differences in a) perseverance with particular coping strategies, b) greater perceived power to change the situation by men, or, c) greater actual power to change the situation by men. It may be that social expectations allow men and women different roles in which appraisals of control and subsequent coping efforts are influenced.

There are also contradictions in the literature regarding gender differences in the experience of stress. In a meta-analysis of studies completed between 1967 and 1987, Martocchio and O'Leary (1989) concluded that there were no sex differences in the symptoms associated with occupational stress. However, women's greater experience of psychological stress and men's greater experience of physiological stress were reported by Jick and Mitz (1985). One explanation is that women's willingness to acknowledge their experience of stress may account for a higher proportion of reported symptoms as compared to men (Astor-

Dubbin & Hammen, 1984). Alternatively, Magnusson (1982) has argued that meaningful research on gender differences in stress reactions requires further attention to situational properties. First, the characteristics of the situation under which behavior is studied needs to be controlled. Second, research is needed in a more varied set of stressful situations to examine sex by situation interactions. For example, researchers are beginning to account for gender differences according to the nature of the context of coping and the differential access to coping resources available to women and men (Lieberman, 1982). Consistent with the recommendations made by Folkman and Lazarus (1984), rather than limiting the study of gender and coping to dispositional factors, it is essential that researchers examine differences in sources of stress while investigating the influence of gender on coping. The debate over the influence of sex on coping lends itself to the current investigation of the factors that influence students coping in different ways.

A similar controversy is evident in the literature on age influences in coping. Whether coping is a function of age per se, or reflective of differences in changing perceptions about sources of stress over the life-span, is the focus of the next section of this chapter.

Age and Coping

The stability of coping has also been investigated from the perspective of age and developmental influences. Life-span perspectives used to explain coping and adaptation throughout adulthood have been reviewed by Labouvie-Vief et al. (1987). First, advocates of the dispositional perspective argue that personality characteristics developed early in life influence coping efforts and remain stable and unchanging throughout the adult years (i.e., Costa & McCrae, 1983; McCrae & Costa, 1986). Second, the situational perspective considers contextual properties throughout the life-span as more important than chronological age in determining coping processes (i.e., Lazarus & Folkman, 1984). A third perspective suggests that development transformations, which affect coping and defense processes, are bounded by age, (i.e. Gould, 1978; Levinson, 1978; Vaillant, 1977). A fourth position has been presented by Labouvie-Vief et al. (1987) which is not age bounded and accentuates the

influence of developmental maturity on cognitive or ego processes and subsequent coping efforts. The limited amount of research on age and developmental influences on coping will be reviewed in this section of the chapter.

Age, age related events, and coping. Lazarus (1966) proposed that "psychological-stress production and reduction" (p.22) will vary according to the developmental progression of the individual. According to this position, both the sources of stress and resources used to cope with stress change with age-associated developmental levels. Jorgensen and Dusek (1990) found that adolescent coping styles were related to developmental changes, confirming Newman's (1979) position that coping styles are consolidated during adolescence. Other research has suggested that there are significant age differences in the types of problems reported by adolescents but no differences in the coping strategies of younger and older adolescents (Stark, Spirito, Williams, & Guevremont (1989), yet adolescents have reported fewer coping resources in comparison to adult norms (Allen & Hiebert, 1991).

Labouvie-Vief et al. (1987) have argued that with increasing age, coping is less influenced by age and more influenced by developmental maturity in cognitive or ego process which effect coping efforts. In a high-income sample ranging in age from 10 to 77 years, a curvilinear trend for the influence of age on coping was evident, with a levelling effect during adulthood.

In two studies, McCrae (1982) investigated age differences and coping strategies in a cross-section of community volunteers divided into three age groups: 24 to 49 years, 50 to 64 years, and 65 to 91 years. Coping efforts in response to a recent life event were categorized by the researcher as threats, losses, or challenges. By controlling for events in two studies, differences in coping associated with age per se, as opposed to age-related events, were examined. Differences in coping strategies employed by older people appeared to be the result of differences in the nature of the stressor. However, regardless of the nature of stress, significant age differences were found between younger subject's greater use of hostile reaction and escapist fantasy in comparison to middle-aged and older persons. Data

from these two studies indicate no support for the proposition that older people use regressive forms of coping. Older people used many of the same coping strategies as younger people. When controlling for type of stressor, this research showed some support for the notion that with age, people become more selective and effective in their use of coping strategies.

Based on research with a sample of community residents aged 45 to 64, Folkman and Lazarus (1980) found no significant relationship between age and coping. This finding held for both 5-year and 10-year age groups, although the limited age spread may have obscured the relationship between age and coping. However, a trend was noted showing different sources of stress between older and younger participants. Therefore, it was concluded that as sources of stress change with advancing age, differences in coping may be reflective of those changes.

Age differences with respect to daily hassles and coping processes were investigated by Folkman, Lazarus, Pimley, and Novacek (1987) in a sample of younger (35 to 45) and older (65 to 74) community-dwelling adults interviewed monthly for 6 months. While the younger group reported more stressors in the areas of finances, work, home maintenance, personal life, and friends, the older group reported more health concerns, and there was an even distribution of family concerns. Another age-group difference was that younger subjects appraised their situations as significantly more changeable. Older subjects used a higher proportion of escape-avoidance coping in all contexts with the exception of health concerns where they used more confrontational coping than younger subjects. In all contexts, women used more positive reappraisal while men used more self-control; however, in all other respects, women and men showed essentially the same patterns of age differences in coping. In general, the coping patterns of younger subjects showed that they used proportionally more active, interpersonal, and problem-focused strategies while older subjects used proportionately more passive, intrapersonal, and emotion-focused ways of coping. The findings substantiate a developmental interpretation of age differences in coping. Coping efforts across diverse contexts generally matched the environmental concerns of subjects' life stage.

Summary. Lazarus and DeLongis (1983) contend that variability, as opposed to normative age-graded tendencies is more apparent in both the sources of stress and the ways of coping. "It is not age alone, but the significance of stressful events viewed within the continuity of a person's life that must be taken into account" (p. 246). The limited number of studies used to empirically investigate the stability of coping over the life-span appear to support this claim. Therefore, it is not aging per se; rather, it is change in the subjective meaning of events over time that is critical for understanding people's coping efforts. These findings suggest that age may be influential in either the appraisal of demands or in the selection of coping strategies. The influence of sex and age on coping is a central concern in the current investigation of factors related to students coping in different ways.

Discussion

Advocates of the dispositional approach to coping argue that the association between coping and well-being is causally explained by personality variables. One explanation is that personality influences the selection of adaptive and maladaptive coping strategies. An alternative explanation is that stress and well-being are not particularly affected by coping and it is the sole influence of personality that matters. The assumption behind trait measures of coping is that people's behavior is consistent across situations. However, critics of the trait approach argue that this perspective does not address the actual coping processes people engage in, and there has been very little predictive value between trait assessment and actual coping behavior (Folkman, 1982).

In a review of explanations of coping, Parkes (1986) suggested that intraindividual, environmental, and situational factors are all important determinants of people's coping responses. A similar position has been taken by Carver et al. (1987). "Taken as a group, the findings suggest the possibility that personality traits and coping dispositions both play roles in situational coping, roles that may be somewhat complimentary rather than competing" (p. 281). Rather than pursuing an inquiry which seeks to determine the sole influence of personality or situational influences on coping, an integrated model is called for. Based on the

results of the research studies reviewed, the transactional model of coping is supported in that interactions between situational properties of the person and the environment provide a more useful, systematic description of coping.

Methodological Issues

Folkman, Lazarus, et al. (1986) maintain that there is little evidence for the position that coping is independently determined by personality characteristics. However, the influence of personality characteristics may increase the degree of cross-situational stability when situations are highly ambiguous or when cognitive processing styles are inflexible (Lazarus & Folkman, 1984). Further, the transactional framework allows for the notion that people may have preferred ways of coping and cross-situational stability occurs when demand characteristics are repetitive over time.

Menaghan (1982) commented that "part of the apparent lack of coherence among findings in the coping literature results from the differing kinds of questions that researchers have posed" (p. 220). The few studies that have specifically investigated the issue of coping stability suffer from lack of conceptual clarity (Compas et al., 1988). Consistency in coping has been defined in a variety of ways, ranging from the proportion of problem- and emotion-focused coping to the frequency of use of particular coping strategies (Folkman & Lazarus, 1980; Stone & Neale, 1984). Yet, this approach has been criticized for ignoring the variability of strategies actually used by the individual (Fleishmann, 1984; Shinn & Krantz, 1981). For example, in the pivotal study by Folkman and Lazarus (1980), there was overwhelming evidence that both problem- and emotion-focused coping strategies were used by people when dealing with single situations. Insistence by researchers to classify coping efforts as either problem- or emotion-focused coping ignores the use of numerous strategies within the same category.

Variations also exist between the investigation of similar and divergent events, and the length of time used to measure temporal stability. Carver et al. (1989) noted the importance of controlling for the nature of the situation. Without homogeneous sources of stress (to the

extent that they exist) the measured influence of dispositional factors and differences in the use and effectiveness of coping strategies may be obscured. Further, variation in subjects' responses are likely to be influenced by differences in the stages of the stressful encounter at which measurement occurs. Variation in coping strategies over the course of a stressful transaction suggests that investigators need to consider both the nature and the stage of the transaction (Folkman & Lazarus, 1980). As suggested by Compas et al. (1988), failure to adequately distinguish between temporal and cross-situational consistency may partially account for contradictory results in the literature.

Measuring Coping

In order to move beyond a static, structural approach to coping, the use of "snapshot" measurements needs to be addressed. Currently, the majority of researchers utilize standardized questionnaire measures of specific traits and coping strategies (Carver et al., 1989; Endler & Parker, 1990a, 1990b; Folkman & Lazarus, 1980; Stone & Neale, 1984; Vitaliano, Russo, Carr, Maiuro, & Becker, 1985). Respondents are asked to identify a specific situation that they experience as stressful and to indicate the number and intensity of coping responses made at that time or that they usually use. Results derived from this method leave a number of coping processes uncovered. For example, how do individuals account for the use of one coping strategy over another? What accounts for the movement from one coping strategy to another across time? What are the factors, within the person or within the environment, that determine coping shifts? The literature reviewed suggests that research using static measures at single points in time does not capture the essence of stress and coping as an unfolding, changing process.

Trait measures typically examine coping using a single dimension. This method of research fails to explicate the multidimensional nature of the coping process.

If the assessment of coping traits really allowed us to predict what a person would actually do to cope in a specific stressful encounter, research would be a simple matter, since for all intents and purposes, traits could stand for process. If a person coped with

threat by avoidance, whenever he or she felt threatened we would expect avoidance to occur. The assessment of coping traits, however, has had very modest predictive value with respect to actual coping processes. (Lazarus & Folkman, 1984, p. 128.)

Methodology is needed that will uncover the unfolding nature of the coping process and that will be sensitive to coping shifts. Folkman and Lazarus (1980) acknowledged this deficit in their work, noting "(w)hat we do not have is a description of how the coping efforts are ordered in time or how they change in relation to shifts in the person-environment relationship" (p. 224). The use of open-ended measures was suggested to enrich our understanding of coping processes. Open-ended methods may be more sensitive to temporal or situational changes that impact people's attempts to cope with appraised demands.

A common limitation in the coping literature is the lack of research examining people's coping efforts over time (McCrae & Costa, 1986; Parkes, 1986; Uhlemann & Platter, 1990). Bretznitz and Goldberger (1982) argue that as long as we are unable to determine the impact of duration to stress exposure, our understanding of adaptation will be limited. In a similar vein, Payne, Jick, and Burke (1982) suggest investigating the ways in which temporal factors affect situational appraisal and subsequent coping adjustments.

Measuring coping over time permits investigation into changes in people's appraisals of stressful events and changes in people's attempts to cope with their experience. Lazarus (1991), McCrae and Costa (1986) have outlined the need for inter-individual as well as intra-individual comparisons in order to assess the degree of coping stability over time and across encounters. Repeated measures are favored over a snapshot approach because they present the opportunity to track both changes in the perceived nature of the stressful event and changes in people's coping efforts.

Coping Effectiveness and Adaptation

Another critical issue in the literature is the lack of agreement about how to define coping effectiveness. Lazarus and Folkman (1984) defined coping as efforts to manage stressful demands, independent of outcome. Folkman and Lazarus (1988) reiterated that ways of

coping are neither inherently adaptive nor maladaptive, "that the adaptive value of a coping process often depends on the context" (p. 473). Without considering the personal agenda of subjects, i.e. values, goals, commitments, beliefs, preferred styles of coping), definitions of effectiveness are imposed by the researcher and the personal meanings attached to coping outcomes are ignored (Folkman & Lazarus, 1984).

The way in which coping effectiveness has traditionally been assessed has been critiqued by Aldwin and Revenson (1987) and Parkes (1990). Typically, this entails correlating the frequency with which a particular coping strategy is used with a predetermined psychological or psychosocial outcome measure. However, Parkes cautions that higher scores do not necessarily equate to more effective coping. Whereas Pearlin and Schooler (1978) have suggested that a wider repertoire of coping strategies may be potentially advantageous in terms of personal flexibility, there is no research to compare the differences between follow through on fewer numbers of coping strategies versus partial or short-term use and alteration of greater numbers of coping strategies. It is assumed "that using the strategy will have uniform effects regardless of the qualitative aspects of the person, the situation, and the execution of the strategy" (Aldwin & Revenson, 1987, p. 339). Similar concerns have been discussed by McCrae and Costa (1986).

We may also question whether subjective well-being and psychological adjustment are the most appropriate adaptational outcomes to consider. Whether one is happy or unhappy at the end of a stressful episode may be less relevant than whether one has learned from the experience, or maintained social bonds, or accomplished a significant task. Perhaps the goals by which individuals assess their own coping adequacy differ as their value systems differ (p. 401).

In a number of studies, coping expectations and appraisals of self-efficacy have been linked to the choice of coping strategies and to coping effectiveness (Gmelch & Chan, 1992; Kirsch et al., 1990; Long & Gessaroli, 1989; Rippertoe & Rogers, 1987). The reference points used by individuals to evaluate their coping success require further articulation, particularly in light of

the emphasis on gender differences in the coping process. Qualitative factors such as level of effort and perceived competency in using coping strategies are critical factors in evaluating coping effectiveness.

Mullen and Suls (1982) have suggested that the effectiveness of coping strategies may be partially a function of temporal qualities. This implies that some strategies may be more or less effective in the short run but change in the degree of adaptiveness over time. Without following the course of a stressful encounter, the influence of temporal factors on appraisals of coping effectiveness cannot be addressed.

Summary

In summary, several key issues emerge from an examination of the literature representing dispositional versus situational explanations of coping. First, researchers from both perspectives have typically taken a single, snapshot measure of the individual's experience during a stressful encounter to represent their usual experience. Without considering qualitative factors that affect the appraisal of stress, the choice of coping strategies, and the ways in which coping effectiveness is perceived, a limited perspective of coping is offered. An investigation of the processes involved in coping requires methodology that will be sensitive to emerging changes throughout the individual's encounter with a stressful episode.

Research Questions

Based on the research which addresses dispositional and situational explanations of coping, the following research questions were developed as the basis of this investigation:

1. What are the demands reported by students during their first year of a post-secondary program?
2. What are the influences of perceived stress, control, and duration on student's experience of demands over time?
3. What are the coping strategies used by students during their first year in a post-secondary program?

4. What is the extent to which students utilize institutional resources as part of their coping strategies?
5. To what extent are coping strategies used by students stable across time?
6. What are the influences of general stress, depression, and anxiety on students' use of coping strategies across time?
7. What factors are related to students coping in different ways?

Summary

In this chapter, it was proposed that the field of coping with stress could be investigated through two competing perspectives. Dispositional perspectives focus on the influence of personality characteristics that may determine the choice of coping strategies or have direct effects on the outcome of coping. According to the dispositional perspective, coping efforts remain stable over time because they are driven by individual differences.

The dispositional perspective has been challenged by theorists who also consider the contributions of perceived situational factors as key elements in people's coping efforts. According to the transactional model of stress and coping by Lazarus and Folkman (1985), coping is affected by both situational and personal properties. Structural models represented by dispositional perspectives overlook the fundamental principle of coping as a process that changes over the course of a stressful encounter. Reviews of the empirical research suggest that when similar contexts are considered, there is a higher incidence of coping stability. However, within the framework of temporal influences, coping efforts change as demand characteristics are perceived to change. Also, when different contexts are considered, there is a high degree of variability in coping.

The literature on gender and coping has investigated the extent to which men and women differ in coping as the result of underlying dispositional factors. There is contradictory evidence regarding gender differences in the appraisal of situations, the use of coping strategies, and the experience of stress. More recently, researchers have investigated the differential access to social and personal resources which may affect the coping efforts of both

men and women. Similarly, investigators of age and coping are beginning to challenge the notion that early personality formation imprints coping throughout the lifespan in favor of explanations that point to changes in the type of situations appraised as stressful and related coping efforts of people as they age.

Several issues related to the study of coping emerge from the literature on dispositional and situational perspectives. First, the use of static, snapshot measures has been criticized for taking a singular assessment of a process that evolves over time. Second, failure to take into account the context of coping has resulted in comparisons of coping efforts without considering situational properties. Third, the lack of longitudinal research is identified as a key issue in studying the stability of coping efforts over time and across situations. Fourth, methodology is needed which will be sensitive to subjective factors that influence the individual's experience in coping. Fifth, the evaluation of coping effectiveness requires consideration of both standardized measures and the personal coping goals of the individual.

Based on the reviews of theory and research related to the stability of coping, and, in particular, the transactional model of Lazarus and Folkman (1985), research questions were developed to study the nature of demands and coping strategies used by students in their first year of a post-secondary program. The design and procedure used to investigate these questions will be the focus of Chapter 3.

CHAPTER 3

Design and Procedure

Chapter 2 outlined specific research questions related to the nature of demands faced by post-secondary students, the nature of students' coping strategies, and students' use of institutional resources. In Chapter 3, the research design used to investigate these questions is presented. This is followed by descriptions of the research participants, specific research procedures, instrumentation, the pilot study, and treatment of the data.

Research Design

The research design employed in this study was a three factor factorial design for repeated measures. Specifically, this was a 2 (gender) X 3 (age) X 4 (time) factorial design with repeated measures on the time factor.

Research Participants

The sample consisted of students enrolled in their first year of a 2 year program beginning in September, 1991, at the Southern Alberta Institute of Technology. Five different academic programs were chosen for the study based on, a) grade 12 prerequisite courses, and, b) at least a 70/30 gender ratio (taken from 1990/91 demographic data).

Participants were recruited during orientation week in August, 1991, through a verbal presentation and an information letter describing the project (Appendix A). At the end of the presentation, signed consent forms were collected from students who volunteered to participate in the research project (Appendix B). In return for participating in the project, students were offered a profile of their coping responses and skill training in identified areas of coping deficits.

A stratified random sampling procedure was used to select participants proportional to the number of volunteers from each of the five program areas, stratified by age and gender. A random numbers table was used to select 190 participants, males and females, from three age groups: 1) direct entry (ages 18-19), mature students (age 25 and older), and other students (ages 20-24).

At time 1, five students were absent from class and could not be contacted, and 33 subjects did not return questionnaires, therefore, a total of 152 students, 70 males and 82 females, completed the first set of questionnaires. Table 1 summarizes the demographic information obtained from questionnaires administered at Time 1.

Table 1

Description of 152 First Year Students at Time 1.

Demographic Variables	Age Groups					
	18-19		20-24		25+	
	M	F	M	F	M	F
Relationship Status						
Single	24	22	13	17	12	10
Cohabitation	1	2	4	9	4	2
Married	-	-	1	3	9	11
Separated/Divorced	-	-	-	-	2	5
Widowed	-	-	-	-	-	-
Children						
No children	25	24	18	26	18	16
1 child	-	-	-	2	3	5
2 children	-	-	-	1	2	4
3 children	-	-	-	-	3	2
4 or more children	-	-	-	-	1	1
Living Arrangements						
With parents	16	10	8	13	1	1
With spouse	-	1	2	2	9	10
With partner	1	1	2	9	5	3

Table 1 (contd.)

With other relatives	5 2	2 1	1 3
With roommate(s)	2 8	3 2	5 4
Living Alone	1 2	1 2	6 7
Hours Employed Per Week			
0	11 13	12 15	13 19
1-10	3 3	2 4	4 2
10-20	7 6	4 10	6 6
20-30	4 2	- -	4 1
Previous Education			
Less than grade 12	- -	1 2	4 2
High school diploma	20 19	5 12	5 9
Some postsecondary	5 5	12 13	13 9
Completed diploma/degree	- -	- 2	5 9
Completed Admission Requirements			
1991	6 14	1 7	5 5
1990	15 7	1 2	3 2
1985-1989	3 3	16 17	1 4
1980-1984	- -	- 3	12 10
Prior to 1980	- -	- -	6 8
Upgrading in Previous 2 Years			
Full-time (3courses or more)	2 4	9 6	8 6
Part-time	3 1	- 9	2 9
N/A	17 18	9 14	16 13

Specific Procedures

Students were given questionnaires during 4 designated weeks of the school year, 1) the third week of September, 1991, 2) the first week of November, 1991, 3) the first week of February, 1992, and 4) the first week of April, 1992. The first date was selected to fall within the initial adjustment period of the school year, Time 2 and Time 3 dates were selected immediately following the last date to withdraw from courses, and Time 4 was selected to capture demands at the end of the school year. Questionnaires were handed out during scheduled classes, however, participants were expected to complete the questionnaires outside of class time and return them either to a drop-off box placed in their academic department office or to the Student Counselling Centre. Students who did not return questionnaires within 1 week were given a telephone reminder.

A total of 94 students completed all questionnaires over the four data collection times. Participant attrition during the study was accounted for as follows: 31 students withdrew from their program for academic or personal reasons, 23 students did not return questionnaires, and 4 students improperly completed questionnaires.

Instrumentation

Four self-report questionnaires were used in this study, including, the COPE (Appendix C), the Beck Depression Inventory (Appendix D), the Beck Anxiety Inventory, (Appendix E), and the Inventory of Student Demands (Appendix F).

COPE. The COPE is a theoretically-based measure of coping with stress (Carver et al., 1989). The scale construction and psychometrics of the COPE are based on the responses of undergraduate students in three separate studies. Respondents are required to answer 60 items according to a 4-point Likert scale. Scale scores are derived through an unweighted sum of four responses that comprise each scale.

The COPE consists of 15 scales which are described in Appendix G. Five scales measure distinct aspects of problem-focused coping (Active Coping, Planning, Suppression of Competing Activities, Restraint Coping, Seeking Instrumental Social Support), five scales

measure different aspects of emotion-focused coping (Seeking Emotional Social Support, Positive Reinterpretation and Growth, Acceptance, Denial and Turning to Religion) and three scales that cannot be classified as either (Focusing on and Venting of Emotions, Behavioral Disengagement, and Mental Disengagement). The two remaining scales (Alcohol and Drug Use, Humor) were included in the latter category and are considered to be exploratory scales. Consistent with these categories, in this study the scales are grouped according to problem-focused coping, emotion-focused coping, and disengagement coping.

In situations in which active coping is required for positive outcomes, Active Coping, Planning, Suppression of Competing Activities, Positive Reinterpretation and Growth, and Restraint Coping measure tendencies proposed to be adaptive; Focus on and Venting of Emotions, Denial, and Mental Disengagement measure coping tendencies proposed to be maladaptive. Although less explicitly related to active coping, Seeking Instrumental Social Support, Seeking Emotional Social Support, and Religion are also proposed to measure adaptive coping tendencies. When the situation is uncontrollable, it is less clear which subscales represent adaptive coping tendencies.

Two polar-opposite and independent coping tendencies are represented in the scales. Denial is antithetical to Acceptance; Active Coping is antithetical to Behavioral Disengagement. Carver (1991) notes that the absence of one coping tendency does not imply the use of the other. Further, there is evidence to suggest that sometimes people utilize opposing strategies in their attempts to cope with stress.

Carver (1991) notes that the COPE has been used in three different formats, (a) asking respondents what coping strategies they usually or typically use when under stress (dispositional version), (b) asking respondents about what coping strategies they actually used during a period in the past (situational past focus), and (c) asking respondents about what coping strategies they actually have been using up to the present (situational present focus). This study used the third format, requiring participants to indicate their actual use of coping strategies in reference to current situations that are demanding.

In a factor analysis, the Social Support items loaded on a single factor and Planning and Active Coping loaded on a single factor, however, Carver et al. (1989) recommend maintaining separate scales at this point in the early stages of instrument development. Less is known about the scales of Alcohol/Drug Use and Humor and they are included as exploratory scales. In a second order factor analysis, using scale totals as the data and omitting the Alcohol/Drug scale, four factors emerged. The factors each clustered with the following three scales: 1) Active Coping, Planning, and Suppression of competing activities, 2) both scales of Social Support and Focus on Emotion, and 3) Denial, and both Mental and Behavioral Disengagement.

Cronbach alpha reliability coefficients were generally high, ranging from .45 to .92, with only mental disengagement falling below .6 (Carver, 1991). Over an 8 week period, the test-retest reliability coefficients ranged from .46 to .86. Low correlations between most of the COPE scales suggest that respondents use a wide range of coping strategies with dealing with stress. Moderate correlations between Active coping and Planning ($r=.67$), Seeking Instrumental Social Support and Seeking Emotional Social Support ($r=.69$), and Seeking Emotional Social Support and Focus on and Venting of Emotions ($r=.56$) suggest that some combinations of coping strategies are complimentary. Correlations between dispositional and situational versions of COPE scales ranged from .07 to .76.

Carver et al. (1989) have reported preliminary information about convergent and discriminant validity between the COPE scales and a variety of personality measures including optimism, control, self-esteem, internality, hardiness, Type A, monitoring, blunting, anxiety, and social desirability. Converging patterns link strategies postulated to be effective ways of coping with personality qualities considered to be desirable, i.e. active coping and planning positively associated with optimism ($r=.32, .25$), control ($r=.21, .14$), self-esteem ($r=.27, .22$), and hardiness ($r=.20, .17$). Inverse associations are reported between strategies considered as less effective ways of coping with desirable personality qualities, i.e. denial and behavior disengagement associated with optimism ($r=-.27, -.37$) and control ($r=-.19, -.20$). With

respect to discriminant validity, correlations between the COPE scales and a social desirability scale ranged from $-.27$ to $.17$. The range of correlations with measures of monitoring ($r = -.16$ to $.20$) and blunting ($r = -.09$ to $.09$) were also low. Correlations between the COPE scales and other personality variables were $.41$ or less.

Beck Depression Inventory. The revised version of the Beck Depression Inventory (BDI) is one of the most commonly used self-report measure of depression (Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G., 1979). The inventory is a 21 item self-report questionnaire with each item containing four choices which are graded on a scale of intensity. The BDI is interpreted through summing item scores and referencing the established cutoff scores for depression severity .

From a meta-analysis of research studies conducted between 1961 to 1986, Beck, Steer, and Garbin (1988) report an internal consistency mean coefficient alpha of $.86$ for psychiatric subjects and $.81$ for nonpsychiatric subjects. From 10 studies of test-retest stability over 1 week, correlations ranged from $.48$ to $.86$ for psychiatric subjects and from $.60$ to $.83$ for nonpsychiatric subjects.

Content validity was established by comparing the BDI against DSM-III (American Psychiatric Association, 1980) criteria. Concurrent validity in associations between the BDI and clinical ratings for psychiatric subjects produced a correlation coefficient of $.72$ for psychiatric subjects and $.60$ for nonpsychiatric subjects. Concurrent validity has been established between the BDI and various other depression measures (e.g., Hamilton Psychiatric Rating Scale for Depression, Zung Self-reported Depression Scale, MMPI Depression Scale, Multiple Affect Adjective Checklist Depression Scale) with coefficients ranging from $.60$ to $.80$. Tests of discriminant validity suggest that the BDI differentiates normal and psychiatric patients and that it distinguishes between depressive disorders. Studies addressing construct validity indicate that the BDI detects a number of significant relationships between depression and psychological, behavioral, and attitudinal variables. The results of factor analytic studies suggest that the BDI represents an underlying general

depression syndrome comprised of 3 primary factors described by negative attitudes, performance difficulties, and somatic complaints (Beck et al., 1988).

In a comparison study of undergraduate students, Lightfoot and Oliver (1985) found an internal consistency mean coefficient alpha of .87, test-retest reliability measured over 2 weeks was .90, concurrent validity using the original BDI as the criterion was .94, and the correlation between the level of depression measured by the two instruments was .94.

Beck Anxiety Inventory. The Beck Anxiety Inventory (BAI) was developed to address the need to reliably distinguish between symptoms of anxiety and depression in psychiatric patients (Beck, Brown, Epstein, & Steer, 1988). The item numbers, format, and scoring of the inventory are similar to the BDI. High internal consistency is reported with a Cronbach alpha of .92 and test-retest reliability over a 1 week period is reported as .75. The scale has high internal consistency reliability of .92, with item-total correlations ranging from .30 to .71.

A principal factor analysis produced an underlying dimension of somatic symptoms and a second factor was comprised of subjective anxiety and panic symptoms. Although the correlation between the BAI and BDI scores is moderately high at .48, Beck, Brown et al. (1988) note that this is a lower correlation than comparisons of other anxiety scales with the BDI typically reported in the literature.

Inventory of Student Demands. The Inventory of Students Demands (ISD) is a researcher-constructed questionnaire based on the theoretical premises of stress and coping described by Lazarus and Folkman (1985). Four major components of the theory were used to develop questions: a) the situational demand, b) appraisal of the demand and available coping resources, c) the experience of stress, and d) the process of coping. A list of demographic variables derived from the questionnaire appears in Table 1.

The development of the ISD involved several steps. First, other questionnaires examining stress and coping were reviewed with attention to open-ended questions and the format of rating scales. Second, pertinent items were formatted into a questionnaire and reviewed for readability and understanding by two other graduate students. A draft of the questionnaire

was then reviewed by three experts in the field for suggestions regarding modification. Formative student feedback regarding the format and content of the questionnaire was obtained from a pilot sample. Their suggestions were incorporated into subsequent drafts of the questionnaire. The final version of the questionnaire is presented in Appendix F.

The questionnaire consists of a series of open-ended and 6-point Likert-type questions. The open-ended questions require students to list and rank order five current demands and, for the one identified as most demanding, to indicate the following: (a) length of time experiencing the demand, (b) what it was about the situation they found demanding, (c) perceived consequences of the demand, (d) the main way they deal with the demand, (e) reasons for dealing with the demand in that way, (f) length of time dealing with the demand in that way, (g) how well coping efforts worked, (h) criteria used to determine the effectiveness of coping efforts, (i) desired results of coping, (j) intentions for coping with the demand in the future, (k) the most demanding situation anticipated in the next month, and (l) anticipated coping strategies to deal with that demand. Likert-type questions on the ISD require students to indicate the following: (a) degree of stress experienced generally, (b) degree of stress experienced in association with each reported demand, (c) perceived personal control over the demanding situation, (d) coping effectiveness, and (e) confidence in coping ability. In addition, the ISD contains a list of institutional resources requiring students to indicate: (a) use of resources through a yes/no format, (b) usefulness of those resources rated on a Likert scale, and (c) characteristics about the resources that students found useful/not useful.

Students initially listed five current demands and subsequently used their top ranked demand as the context for answering remaining questions on the researcher-constructed questionnaire and questions on the standardized measure of coping strategies. At each data collection time, students were asked again to list five current demands and to elaborate upon their top ranked demand. Then the top ranked demand from all previous data collection times was listed and, if it was different from their current top demand, students were asked to elaborate upon their recent experience of that demand. Thus, a list of demands was generated

at four different points during the academic year and students could potentially respond in depth to a total of four demands.

Pilot Study. A pilot study was conducted during May and June, 1991, in order to gather formative feedback regarding the ISD, as well as completion time for all questionnaires. During the Spring Academic Term, sixteen volunteers (9 males, 7 females) were randomly sampled from two academic programs. Students were given questionnaires at the end of the second week of classes and at the end of the second month. Student feedback was used to modify wording of instructions, items, and the order of the items on the questionnaire.

Data Aggregation. A content analysis was conducted on the open-ended questions of the ISD by three trained raters in order to develop a classification taxonomy representative of participant responses (emic categories) yet consistent with categories represented in the literature (etic categories) (Guba & Lincoln, 1981; Smith, 1987) (Appendix H). In order to maintain the integrity of the participants' perspectives, new categories were developed when responses did not align with descriptions found in the literature.

A method of constant comparison (Blase, 1986; Guba & Lincoln, 1981; Washburn, Hiebert, & Phillips, 1990) was then used to code individual responses. The basic premise followed was that each new response was compared to previously coded responses to determine similarity and difference. When a response did not fit into any previously developed category, a new category was developed. Then, previously coded data were re-examined to determine if they would more accurately fit into the new category. There was no attempt to set limits on the number of categories, the number of items within a category, or the scope of the categories.

At each data collection time, a random sample of 5 questionnaires was selected from all returned questionnaires. Each rater independently coded the 5 questionnaires, followed by a comparison of ratings between the 3 raters. Discrepancies in response coding were discussed until consensus was obtained and a new decision rule was made. Interrater reliability was established using Cohen's Kappa (Blakeman & Gottman, 1986; Cohen, 1960). A minimum

standard of .90 or higher for all response categories was established prior to and midway through coding each set of questionnaires to regulate drift (consistency) in coding. The range of Cohen's Kappa values obtained by the 3 pairs of coders is represented in Table 2.

Table 2

Cohen's Kappa Values for Questionnaires.

Coding Time	<u>Interrater Reliability of Coders</u>		
	1&2	1&3	2&3
Time 1			
Initial	.69	.70	.75
	.74	.75	.79
	.95	.96	.97
Midpoint	.75	.70	.72
	.90	.91	.88
	.91	.94	.95
Time 2			
Initial	.97	.92	.90
Midpoint	.88	.89	.90
	.92	.93	.94
Time 3			
Initial	.93	.92	.93
Midpoint	.93	.94	.92
Time 4			
Initial	.92	.95	.93
Midpoint	.96	.96	.95

Once the reliability standard was met, 10 different questionnaires were independently coded by the raters. Another random sample of 5 questionnaires was then coded and

compared, followed by calculations of Cohen's Kappa. This process was repeated until all questionnaires were coded.

In order to accommodate new categories created during independent coding, a procedure was developed. Any new categories were discussed until consensus was reached between the 3 coders and a new decision rule articulated. All previous responses were subsequently inspected to determine whether they would fit more appropriately into the new category.

A coding sheet was developed which contained all coded data and only the subject number as identifying information. Coding sheets were stored separately from returned questionnaires in order to protect subject identity and the confidentiality of responses. Once Time 4 questionnaires were received, all identifying information from the questionnaires were removed.

Summary

This study employed a 2 (gender) X 3 (age) X 4 (time) factorial design with repeated measures on the time factor. A stratified random sample was selected, comprised of student volunteers enrolled in five academic programs. At four predetermined times during the academic year, students completed self-report questionnaires. The measures included the COPE, the Beck Depression Inventory, the Beck Anxiety Inventory, and the Inventory of Student Demands. Completed data were obtained from 94 students. In the next chapter, the results of the main study will be presented.

CHAPTER 4

Results

This study was focused on the nature of demands and the coping efforts of students in their first year of a post-secondary program. The study was also concerned with the use of institutional resources by students to cope with perceived demands. The results of investigations into these three core issues are addressed in Chapter 4. In the first section of chapter 4, the descriptive results will be presented and, in the second section, the inferential results will be presented. Tables central to the discussion are presented in text whereas supplementary results are contained in the appendices.

Table 3 is a summary of the foregoing analysis which addresses each of the research questions. The table provides an overview and reference for the various analyses and areas of inquiry detailed in Chapter 4.

Table 3.

The Seven Research Questions and Associated Statistical Analyses.

Research Question	Statistical Analyses
1. What are the demands reported by students during their first year of a post-secondary program?	Frequency distributions of demands. Chi-Square Frequency Analysis of demands by sex and age. Pearson Product Moment Correlations between top ranked demands and actual demands.
2. What are the influences of perceived stress, control, and duration on students' experience of demands?	Pearson Product Moment Correlations between top demands, control, stress of demands, and length of time experiencing demands.
3. What are the coping strategies used by students during their first year in a post-secondary program?	Pearson Product Moment Correlations between COPE scales.
4. What is the extent to which students utilize institutional resources as part of their coping strategies?	Chi-Square Frequency Analyses of campus resources used by sex and age. Frequency Distributions of resource usefulness. Frequency Distributions of resource characteristics.
5. To what extent are coping strategies used by students stable over time?	Generalizability Coefficients calculated using Persons X Occasions ANOVA/ANCOVA procedures from the total sample, from age and sex subgroups and using combined covariates of general stress, depression, and anxiety. Chi-Square Frequency Analysis of COPE using same demand pairs and different demand pairs.

Table 3 (contd.)

6. What are the influences of general stress, depression, and anxiety on students' use of coping strategies across time?	Factor Analysis of stress, depression, anxiety, and COPE scales. Generalizability Coefficients using combined covariates. Repeated Measures MANOVA by sex and age for stress, depression, and anxiety. Repeated Measures MANOVA by depression and anxiety for COPE scales. MANCOVAS by general stress, depression, and anxiety for coping categories.
7. What factors are related to students coping in different ways?	Pearson Product Moment Correlations between control, stress of demands, length of time experiencing demands, length of time coping, and COPE scales. Pearson Product Moment Correlations between desired coping outcomes, confidence, and effectiveness. Repeated Measures MANOVA by sex and age for stress and COPE scales. Repeated Measures MANCOVA by control, sex, and age for coping categories. MANOVAS by control, sex, and age for coping categories. Repeated Measures MANCOVA by confidence, sex, and age for coping categories. MANOVAS by confidence, sex, and age for coping categories. MANCOVAS by effectiveness, sex, and age for coping categories. MANOVAS by effectiveness, sex, and age for coping categories. MANCOVA by length of time experiencing demands for coping categories. MANCOVA by length of time coping for coping categories. MANOVA by criterion and non-criterion coping for coping categories. Repeated Measures MANOVAS by demographic variables for COPE scales, including: Relationship status, children, living arrangements, employment, previous education, year completed required admission courses, and upgrading full-time or part-time.

Descriptive Results

Perceived Demands of Students.

At four times during the academic year, students were asked to list up to five current demands. From the student generated responses, a taxonomy of demands was developed, representing 12 categories: Academic, Relationships, Employment, Family, Health, Finances, Accommodation, Time Management, Role Conflict, Satisfying Personal Needs, Worrying, and Other. The subcategories of the taxonomy are listed in Appendix G.

Top Ranked Demands. At each data collection time, students were asked to rank order up to five current demands. The top ranked demand was used as a reference for completing the remaining questionnaire information. The frequencies of top ranked demands at Times 1, 2, 3, and 4 are shown in Appendix I.

Demand Categories. Frequency calculations of the student ranked demands were used to determine what situations students perceived to be most demanding, second most demanding, and what situations were ranked as third through fifth most demanding. (see Table 4). At each Time, Academic demands accounted for 66%, 68%, 58%, and 64% of the most frequently reported top demands by students from Time 1 through Time 4, respectively. Achievement and courseload/homework demands were particularly reported by students with higher frequencies. At Time 1, relationship and family demands combined were the second most frequently reported top demand. This may reflect the role adjustments required by students, their friends, and family members, to changes that are perceived in the first few months of the academic year. Finances was the third most frequently reported top demand, although it accounted for not more than 13% of the top ranked demands from Time 1 through Time 4. Academic demands were also the most frequently reported second ranked demand. Other demands that were ranked second with high noteworthy frequencies included family and relationships, financial, and employment demands.

Table 4

Percentages of Ranked Demands, Time 1 through Time 4.

	<u>Time 1</u>			<u>Time 2</u>			<u>Time 3</u>			<u>Time 4</u>		
<u>Ranked Demands</u>	1	2	3-5	1	2	3-5	1	2	3-5	1	2	3-5
Academic	66	31	8	68	30	6	58	37	9	64	40	10
Relationship & Family	13	26	41	5	22	41	11	24	39	10	21	39

Table 4 (contd.)

Finances	11	15	10	13	21	13	13	17	12	4	13	18
Employment	4	12	11	2	8	12	7	10	13	4	13	18
Other	6	16	30	12	19	28	11	12	28	12	9	24

Top ranked demands, sex, and age subgroups. In order to determine potential differences in the demands reported by different subsets of students, the percentages of top ranked demands were calculated for sex and age subgroups (see Table 5). Chi Square tests of independence (demand category compared by sex and age) indicated there were no significant differences in the types of demands reported by male and female students, and by students of different ages ($p > .05$).

Table 5

Percentages of Top Demands Time 1 to Time 4 by Sex and Age Subgroups.

	Time 1					Time 2					Time 3					Time 4				
	M	F	1	2	3	M	F	1	2	3	M	F	1	2	3	M	F	1	2	3
Academic	49	51	32	36	33	48	52	34	35	31	49	51	24	34	42	48	52	28	22	50
Rel./Fam	32	68	37	26	42	0	100	0	20	80	20	80	20	30	50	10	90	40	20	40
Finances	41	59	47	18	35	53	47	35	29	36	54	46	62	15	23	67	33	56	33	11
Employ	20	80	0	40	60	0	100	0	0	100	57	43	0	43	57	2	0	1	0	3
Other	44	56	22	33	44	30	70	0	24	76	34	66	19	45	36	75	25	10	0	90

Note. M=male, F=female, 1=age 18-19, 2=age 20-24, 3= age 25+.

Relationships between demands. In order to determine the relationships between the demands reported by students, a series of Pearson Product Moment Correlations were performed. First, a comparison between the top ranked Demands was made to determine the degree to which these demands remained constant across time. There were significant correlations between all pair-wise combinations of the top ranked Demand at different Times

(see Table 6). These significant and moderate correlations suggest that the top ranked demands of students remain constant throughout the academic year.

Expected versus actual demands. Students were asked to anticipate the most demanding situation they would face in the upcoming month. These anticipated top demands were correlated with the actual top ranked demands reported at the measurement Time (see Table 6).

Table 6

Correlations Between Expected Top Ranked Demands and Actual Top Ranked Demands.

	Atd1	Atd2	Atd3	Atd4	Etd1	Etd2	Etd3	Etd4
Atd1	1.00							
Atd2	.42**	1.00						
Atd3	.31**	.41**	1.00					
Atd4	.47**	.35**	.49**	1.00				
Etd1	.35**	.15	-.01	.02	1.00			
Etd2	.16	.32**	.02	.01	.19*	1.00		
Etd3	.05	.22*	.17	.12	.20*	.22*	1.00	
Etd4	.15	.02	.19	.28**	.21*	.15	.21*	1.00

Note. Etm1=Expected top demand reported at Time 1, Etm2=Expected top demand reported at Time 2, Etm3=Expected top demand reported at Time 3, Etm4=Expected top demand reported at Time 4, Atm1=Actual top ranked demand at Time 1, Atm2=Actual top ranked demand at Time 2, Atm3=Actual top ranked demand at Time 3, Atm4=Actual top ranked demand at Time 4, *p<.01, **p<.05.

There were low and significant correlations between the expected demands reported at consecutive Times. Generally, there were significant correlations between subjects' actual top demands and the expected demands reported at the same time. There were no significant correlations between expected demands from one time and the actual demand reported at the

next time. It appears that the situations students expected to be demanding did not turn out to be their most demanding situations.

Summary. The perceived demands of students in their first year of a post-secondary program were primarily academic in nature. Other frequently reported demands included financial, relationship and family, and employment demands. There were no significant differences in the types of demands reported by male and female or different age groups of students. The top ranked and expected demands of students remained moderately constant throughout the academic year. There was a significant relationship between the actual and expected demands at the same Time, however, the relationship between predicted demands and those that happened was not significant.

Factors that Influence Students' Experience of Demands

To explore the factors that influence students' experience of demands, students were asked to describe what it was about the situation that they found demanding. Secondly, the relationships between top demands, perceived stress of top demands, perceived control about dealing with demands, and length of time experiencing demands were investigated.

Nature of demands. The classification of students' responses regarding what it was about the situation that they perceived to be demanding is found in Appendix J. The idiosyncratic nature of demand appraisal can best be illustrated by the variety of responses associated with a specific demand. For example, at Time 1, Academic Demands were associated with reasons from all 10 categories. Although the majority of characteristics linked with Academic Demands involved quantitative overload, i.e., the amount of work required, students also reported personal performance expectations, level of difficulty of coursework, and their ability to understand the material with similar frequencies. Personal performance expectations included the students' own expectations as well as the perceived expectations of instructors and family regarding achievement standards. These examples illustrate that the variety of demand characteristics can be both externally and internally focused.

Demands, stress of demands, control, and Duration of time experiencing demands. The correlations between subjects' top ranked demands, ratings of stress associated with those demands, perception of control, and the length of time experiencing those demands are reported in Appendix K. At Time 1 there was a significant relationship between Demands and stress associated with the Demand ($r=.23, p<.01$). At all four Times, there were significant negative correlations between Demands and Control, ranging from $-.20$ to $-.34$, ($p<.05$). This suggests that the top ranked Demands of subjects were associated with a perceived lack of control over the situation. At Times 1, 2, and 3, there were significant negative correlations between Control and Stress, ranging from $-.27$ to $-.33$ ($p<.05$). This suggests that subjects feel more stressed in situations where they experience little control. Length of Time Experiencing Demands was positively correlated with both Demand ($r=.38, p<.01$) and Stress ($r=.16, p<.05$) at Time 1. It may be that the #1 ranked Demand at Time 1 was for many students a recently new experience. However the longer students experienced a lack of control over a demand, the more stressful they found it.

Summary. Students reported a wide variety of reasons for why they found situations demanding, reflecting the idiosyncratic nature of perceived demand characteristics. Perceived lack of control over top demands over time was associated with greater stress.

Ways of Coping

Students were asked to answer the COPE as it pertained to their top ranked demand at each time. The COPE scale means are reported in Appendix L. The rank order of COPE scale means reveals several interesting patterns over time. Throughout the academic year, Positive Reinterpretation and Growth was the way in which students coped the most, followed by Planning, Action, Acceptance, and Suppression of Competing Activities. For the total sample, then, there was consistency over time in the rank order of the top five ways of coping. This pattern generally was reflected by the distribution of coping scores by males and females. Age subgroups had a similar pattern of ranked coping with the exception that students age 18-19 reported Mental Disengagement as the fifth most frequently used way of

coping at Times 1, 3, and 4. There was some variation in the rank order of the remaining coping scales over time. The use of Denial, Religion, Behavioral Disengagement, and Alcohol/Drug Use were reported least frequently by students at all four Times.

Relationships Between COPE Scales. The relationship between different ways of coping was investigated through mean subscale scores (see Appendix M). All variables had significant ($p < .05$) positive correlations across four Times with the exception that Growth and Behavioral Disengagement between Times 1 and 3 were not significant. Coping scales that were significantly correlated with each other at all four Times included the problem-focused coping scales of Action, Planning, Suppression of Competing Activities, and Seeking Social Support - Instrumental ($r = .31$ to $.70$). Also significant at all four times were correlations between emotion-focused and problem-focused scales including, the Social Support scales ($r = .67$ to $.76$); Positive Reinterpretation and Growth, Action, and Planning ($r = .36$ to $.61$); and Denial and Planning ($r = -.17$ to $-.28$). There were additional significant correlations between emotion-focused scales of Venting Emotions and Seeking Social Support - Emotional ($r = .30$ to $.45$), and between the problem-focused and disengagement scales of Behavioral Disengagement and Action ($r = -.18$ to $-.41$), Behavioral Disengagement and Planning ($r = -.42$ to $-.24$), and Behavioral Disengagement and Restraint ($r = .21$ to $.32$). The coping scales that were significantly correlated with each other at three out of four Times included: Problem-focused scales of Restraint and Seeking Social Support - Instrumental ($r = .24$ to $.30$), emotion-focused scale of Positive Reinterpretation and Growth and problem-focused scales of Suppression of Competing Activities, Restraint, and Seeking Social Support - Instrumental ($r = .22$ to $.40$), and Acceptance and Restraint ($r = .20$ to $.39$). Other significant correlations at three out of four Times were between Mental Disengagement and Restraint ($r = .20$ to $.37$); between Acceptance and Positive Reinterpretation and Growth ($r = .25$ to $.31$); between Positive Reinterpretation and Growth and Behavior Disengagement ($r = .07$ to $-.40$); between Denial and Behavioral Disengagement ($r = .41$ to $.55$), Denial and Mental Disengagement ($r = .27$ to $.39$); and between Denial and Venting Emotions ($r = .29$ to $.36$). To

summarize, there was considerable consistency over time between the problem-focused coping scales, the scales of Seeking Social Support, and the scales constituting Disengagement coping. Significant and inverse relationships over time occurred between Disengagement coping and Problem-focused coping scales. There was also consistency over time in the relationships between Emotion focused coping scales of Positive Reinterpretation and Growth and Acceptance, and with the Problem-focused scales of Action, Planning, and Restraint.

There were also several other significant correlations that occurred at particular Times, as follows: Between Action and Acceptance ($r=.23$), and between Action and Venting Emotions ($r=.17$) at Time 1; between Action and Mental Disengagement ($r=-.28$ to $-.21$), and between Denial and Religion ($r=.24$ and $.25$) at Times 1 and 2 ; between Religion and Restraint ($r=.22$), and between Positive Reinterpretation and Growth and Humor ($r=.18$) at Time 2 ; between Restraint and Planning ($r=.31$) at Time 3 , between Seeking Social Support - Emotional and Restraint ($r=.32$), between Venting Emotions and Suppression of Competing Activities ($r=.21$), between Alcohol/Drug Use and Restraint ($r=.23$), between Growth and Denial ($r=-.29$), and between Acceptance and Behavioral Disengagement ($r=.28$) at Time 4 ; between Seeking Social Support - Emotional and Action ($r=.23$), and between Seeking Social Support - Emotional and Planning ($r=.24$) at Times 2 and 3 , between Restraint and Humor ($r=.22$ and $.27$) and Acceptance and Mental Disengagement ($r=.26$) at Time 2 and 4; and between Seeking Social Support - Emotional and Suppression of Competing Activities ($r=.22$ and $.33$) at Times 3 and 4.

Coping in Same Demand Situations versus Cross-Demand Situations

In order to address coping stability, the student-generated responses on the ISD were used to compare ways of coping in same demand versus different demand situations. Only Academic demands provided sufficient numbers of responses over all 4 times for these analyses. Subjects who reported the same demand on two different occasions were selected and their self-reported ways of dealing with that demand on the two occasions were compared

using Chi-square tests for independence. Conversely, subjects who reported two different demands on two different occasions were selected and their self-reported ways of dealing with those demands were compared. Inspection of the response frequencies for ways of dealing with demands indicated that the majority of responses fell into either action or planning. Therefore, when conducting the Chi-square analysis, the response categories for dealing with the demand were collapsed to three levels a) action, b) planning, and c) other. Results demonstrated that the same ways of coping were consistently used when students were dealing with the same demand type (see Table 7). However, students did not use the same coping methods with academic demands as they did with other demands

Table 7

Chi-Square Values for Ways of Coping with Same Demand and Different Demand Pairs.

Same Demand	χ^2	df	p.	Different Demands	χ^2	df	p
T1 & T2	10.94	4	.03	T1 & T2	4.10	4	.59
T1 & T3	4.24	4	.37	T1 & T3	4.71	4	.32
T1 & T4	12.45	4	.01	T1 & T4	7.47	4	.11
T2 & T3	12.69	4	.01	T2 & T3	2.83	4	.59
T2 & T4	12.40	4	.01	T2 & T4	1.76	4	.78
T3 & T4	7.32	4	.12	T3 & T4	1.10	4	.89

Note. T=Time.

General Stress, Depression, Anxiety and Coping. The relationships between stress, depression, anxiety, and coping were determined by correlating the measures of General Stress, BDI, BAI, and COPE scale, collapsed across time (see Table 8). A factor analysis using varimax rotation extracted four factors which accounted for 55% of the estimated

Table 8

Correlations between Stress, Depression, Anxiety, and Coping Scales.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.00																	
2	.58*	1.00																
3	.43*	.78*	1.00															
4	-.16	-.21*	.03	1.00														
5	-.01	-.03	.15	.73*	1.00													
6	.16	.15	.24*	.46*	.60*	1.00												
7	.04	.11	.09	-.22*	.04	.07	1.00											
8	-.10	-.05	.23*	.34*	.27*	.15	.17*	1.00										
9	.01	-.03	.16	.18*	.19*	.11	.18*	.79*	1.00									
10	-.14	-.21*	.07	.49*	.55	.37*	.25*	.31*	.24	1.00								
11	-.03	.03	.10	.13	.06	-.01	.45*	.09	.11	.33*	1.00							
12	.20*	.24*	.20*	-.33*	-.32*	-.20*	.20*	.15	.08	-.17	-.01	1.00						
13	.02	.01	-.11	-.22*	-.29*	-.02	.13	-.15	-.11	-.22*	.02	.02	1.00					
14	.35*	.43*	.54*	-.01	.03	.12	.11	.53*	.59*	.01	.13	.31*	-.01	1.00				
15	.25*	.43*	.29*	-.47*	-.42*	-.07	.38*	-.10	-.12	-.25*	.26	.55*	.12	.30*	1.00			
16	.10	.32*	.30*	-.36*	-.26*	-.11	.41*	.10	.07	.06	.31*	.40*	.08	.27*	.59*	1.00		
17	.16	.33*	.45*	-.05	.10	.13	.16	.15	.16	.11	.14	.24*	-.05	.27*	.29*	.31*	1.00	
18	-.20*	-.07	.08	-.14	-.06	-.04	.24*	.11	.14	.09	.21	.07	-.04	-.03	.27*	.48*	.16*	1.00

Note. 1=Stress, 2=Depression, 3=Anxiety, 4=Active Coping, 5=Planning, 6=Suppression of Competing Activities, 7=Restraint, 8=Seeking Social Support - Instrumental, 9=Seeking Social Support - Emotional, 10=Positive Reinterpretation & Growth, 11=Acceptance, 12=Denial, 13=Religion, 14=Venting Emotions, 15=Behavioral Disengagement, 16=Mental Disengagement, 17=Alcohol/Drug Use, 18=Humor, *p<.05.

true variance (see Table 9). Loadings of the scales were as follows: The scales of active coping, planning, suppression of competing activities, and positive reinterpretation and growth loaded on factor 1, problem-solving; the scales of stress, depression, and anxiety loaded on factor 2, emotional distress; the scales of acceptance, denial, behavioral disengagement, mental disengagement, alcohol and drug use, and humor loaded on factor 3, disengagement; and both instrumental and emotional support as well as venting emotions loaded on the fourth factor, social support. This pattern of loadings generally supports the theoretical model proposed by Carver et al. (1989). The notable differences are that positive reinterpretation had higher loadings on the problem-focused factor than on the emotion-focused factor, venting emotions had higher loadings with the support factor than with the emotion-focused factor, and scales associated with emotion-focused and disengagement coping loaded on the same factor.

Control, Stress of Demands, Length of Time Experiencing Demands, Length of Time Coping, and Ways of Coping. Correlations between ratings of control, stress of demands, length of time experiencing demands, and scores on the COPE scales are reported in Appendix N. Correlations between these specific factors and coping through Venting Emotions, Mental Disengagement, Alcohol/Drug Use, and Humor were significant. At Time 1, Venting Emotions was significantly correlated with control ($r = -.18$). Also at Time 1, there were significant relationships between stress and length of demand ($r = .16$) and between Humor and stress of demand ($r = -.24$). At Times 1, 2, and 4, there were significant relationships between length of time experiencing demands and length of time coping ($r = .58$ to $.76$). At Time 2 there was a significant relationship between Positive Reinterpretation and Growth and control ($r = .20$), between Venting Emotions and stress of demand ($r = .24$), and between Religion and length of time experiencing demands ($r = .22$). At Time 3, there was a significant relationship between Alcohol/Drug Use and both stress of demands ($r = .27$), and control ($r = -.23$). At Time 4, there were significant relationships between Mental Disengagement and stress of demands ($r = .35$), length of time

Table 9

Rotated Factor Matrix.

Variable	Problem-solving	Emotional Distress	Disengagement	Social Support
Genstrs	-.06	.61	-.07	-.01
BDI	-.07	.95	.06	-.03
BAI	.16	.82	.15	.18
Act	.79	-.13	-.17	.13
Plan	.90	.04	-.04	.07
Supcomp	.62	.21	.03	.01
Restraint	.01	.06	.61	.10
Supinst	.25	-.01	.13	.85
Supem	.14	.01	.06	.88
Growth	.65	-.18	.33	.14
Accept	.14	.01	.51	.04
Denial	-.38	.24	.31	.19
Religion	-.28	-.02	.02	-.09
Ventem	-.03	.48	.12	.64
Behdis	-.45	.39	.55	-.07
Mentdis	-.27	.26	.72	.08
AlcDrg	.08	.36	.32	.12
Humor	-.05	-.09	.55	.02

Note. Factor 1 had an eigenvalue of 3.28, accounting for 18 % of the true variance; factor 2 had an eigenvalue of 3.08, accounting for 17 % of the true variance; factor 3 had an eigenvalue of 1.93, accounting for 11 % of the true variance; factor 4 had an eigenvalue of 1.5, accounting for 8% of the true variance.

experiencing demands ($r = -.25$), and coping ($r = -.23$). Also at Time 4, there were significant relationships between coping through Restraint and both the length of time experiencing

demands ($r = -.25$) and coping ($r = -.25$). Generally, there appeared to be a strong relationship between the stress and control associated with demands and some forms of emotion-focused or disengagement coping. Initially, students were more likely to use emotional venting and humor to deal with the stress associated with demands. At the end of the year, they were more likely to use Mental Disengagement and Alcohol/Drugs and less likely to use Restraint to cope with longstanding demands.

Desired Coping Outcomes, Coping Confidence, and Coping Effectiveness. The relationships between the desired coping outcomes specified by students, their confidence in achieving those outcomes, and the effectiveness of their coping efforts are reported in Appendix O. At all four Times there were significant and moderate correlations between subjects' ratings of confidence about attaining their desired coping goals and their ratings of coping effectiveness ($r = .47$ to $.67$, $p < .01$). In general, if students were confident about attaining coping outcomes, they indicated that their ways of coping were effective, regardless of the nature of the specific outcome.

Summary. The coping strategies used by students during their first year in a post-secondary program reflected consistency across time, yet were related to a number of specific factors. The most frequent strategies used by students involved a combination of problem-focused and emotion-focused coping. The top 5 ranked coping strategies included Positive Reinterpretation and Growth, Planning, Action, Acceptance, and Suppression of Competing Activities. The least used coping strategies reported were Alcohol/Drug Use, Denial, Behavioral Disengagement, and Religion. There were consistent relationships across time between the problem-focused coping scales, the seeking support scales, and between some scales of both problem-focused and emotion-focused coping.

Although stress, anxiety, and depression were related to each other at all four Times and with the use of Denial and disengagement, they did not appear as a significant influence on problem-focused coping. When students were confident about attaining desired coping outcomes, they tended to perceive their coping efforts as effective, regardless of the nature of

the specific coping outcomes. Although there were fewer associations across time, students' perceptions of demand stress and control appeared to be related to the use of emotion-focused and disengagement coping. The length of time experiencing demands and length of time coping was salient at the beginning of the year for emotional expression, whereas at the end of the year, students were less likely to cope through restraint. A further elaboration of the factors related to students coping in different ways will be made in discussion of the inferential results.

Institutional Resources

Table 10 indicates the frequencies with which campus resources were accessed by students in attempts to cope with their current top demand.

Table 10

Resources used by Students According to Time, Sex, and Age.

Time	Resources	1	2	3	4	5	6	7	8	9	10	11	12
1 Sex	male	8	4	15	27	14	4	32	3	0	16	9	5
	female	4	5	15	18	18	2	27	1	0	12	2	4
Age	18-19	2	5	1	18	5	1	16	2	0	10	5	2
	20-24	1	0	11	13	8	1	18	0	0	10	3	2
	25+	9	4	18	14	19	4	25	2	0	8	3	5
Total		12	9	30	45	32	6	59	4	0	28	11	9

Table 10 (contd.)

2 Sex	male	4	2	12	27	15	2	34	2	1	5	4	3
	female	4	3	14	19	14	5	29	1	0	5	4	4
Age	18-19	2	1	1	18	4	2	17	1	0	3	3	1
	20-24	1	0	11	11	11	2	24	2	1	4	2	2
	25+	6	4	14	17	14	3	22	0	0	3	3	4
Total		8	5	16	46	29	7	63	3	1	10	8	7
3 Sex	male	11	6	16	21	16	3	30	0	0	8	2	3
	female	2	4	8	17	11	3	23	1	0	5	0	1
Age	18-19	1	2	8	15	6	3	16	0	0	4	2	2
	20-24	0	4	4	12	5	0	17	1	0	5	0	0
	25+	2	4	12	11	16	3	20	0	0	4	0	2
Total		13	10	24	38	27	6	53	1	0	13	2	4
4 Sex	male	2	16	13	23	14	2	25	0	0	5	2	2
	female	5	9	7	16	11	3	26	0	0	4	1	0
Age	18-19	2	4	4	19	8	3	13	0	0	2	2	2
	20-24	2	12	7	13	7	0	17	0	0	4	0	0
	25+	3	9	9	7	10	2	21	0	0	3	1	0
Total		7	27	20	39	25	5	51	0	0	9	3	2
TOTAL		40	59	100	168	113	24	226	8	10	60	24	11

Note. Resources: 1=Counselling Services, 2=Employment Services, 3=Learning Skills Centre, 4=Campus Recreation, 5=Learning Resources Centre, 6=Campus Health, 7=SAIT Instructors, 8=Residence Staff, 9=Chaplains, 10=Registrar's Office, 11=Student's Association, 12=Other.

Overall, students reported a total of 825 contacts with campus resources during efforts to cope with their top demands throughout the school year. When accounting for attrition, students at Time 4 slightly increased their use of school resources in comparison to Time 1.

Overall, the top five resources accessed were: Instructors, Campus Recreation, Learning Resources Centre, Learning Skills Centre, and the Registrar's Office.

Exploratory analyses were performed using Chi-square tests to compare resource use by age and sex subgroups. Due to the potential for Type I error, the level of significance (p) was set at .01. At Time 3, Males made significantly greater use of Instructors, $\chi^2=5.48$, $p<.01$. Students age 25+ made significantly greater use of the Learning Skills Centre at Time 1, $\chi^2=15.97$, $p<.01$, and at Time 2, $\chi^2=11.50$, $p<.01$. At time 4, students age 18-19 made significantly greater use of Campus Recreation, $\chi^2=10.61$, $p<.01$.

Perceived Usefulness of School Resources. Students rated the usefulness of resources on a 0-5 point scale (see Table 11).

Table 11

Mean Ratings of Resource Usefulness.

Counselling	3.00	3.00	4.33	4.17
Employment	3.38	2.60	2.30	3.24
Learning Skills	3.66	3.54	3.54	3.74
Campus Rec.	3.71	3.72	3.68	3.63
Learning Resources	3.59	3.32	3.44	3.17
Campus Health	3.00	2.71	3.67	4.20
Instructors	3.74	3.68	3.73	3.66
Residence	3.25	2.67	3.00	0
Chaplains	0	3.00	0	0
Registrar's	3.64	2.30	2.67	3.22
Student Assoc.	3.18	3.13	1.50	2.33
Other	3.88	3.33	2.00	2.50

Note. T1=Time 1, T2=Time 2, T3=Time 3, T4=Time 4.

Of the 467 resource contacts rated, 82% were rated by students as highly useful (3 - 5). Campus Resources that consistently received highly useful ratings included: Counselling Services, Learning Skills Centre, Campus Recreation, Learning Resources Centre, Instructors, Chaplains. All other resources were rated as highly useful at least twice. An exceptionally low mean rating of the Residence, Chaplains, and Student's Association was the result of low frequency of use.

Students were asked why they evaluated the resources the way they did. Reasons were given for a total of 542 resource contacts over the four data collection times. Table 12 shows that the most important criteria was the manner in which they were treated when accessing resources, i.e., the attitude (availability) and personal attention shown towards students. Many students were looking specifically for information to help them manage perceived demands, thus immediacy and helpfulness would be prominent in meeting this need.

Institutional Resources and Academic Demands. The evaluations of usefulness were also examined in reference to the most frequently reported demand. In coping with Academic Demands, Instructors, and Campus Recreation were listed as the most frequency accessed resources. Both were rated as highly useful by students who accessed these resources (see Appendix P). Other demands were not listed with sufficient frequencies to permit meaningful tabulation.

Summary. The extent to which students utilized campus resources as part of their coping strategies was generally quite high. The most frequently used campus resources included Instructors, Campus Recreation, the Learning Resources, and Learning Skills Centers. Students age 25+ made greater use of academic and personal support services in coping with their top demands whereas students age 18-19 utilized Campus Recreation. Regardless of demand type, students generally rated their use of campus resources as highly useful in coping with their top demands. The criterion most useful for students included the attitude of staff, personal attention, and information available when accessing services.

Table 12

Usefulness of Resources.

Characteristics of Resources	Frequencies	%
Reasons for Usefulness		
Problem-Solving	21	5
Skill Development	17	3
Stress Reduction	69	13
Availability	168	31
Helpful Attitude	139	26
Competence	33	6
Mental Disengagement	18	3
Other	17	3
Social Support	7	1
Total	489	91
Reasons for Unusefulness		
Hours/Waiting/Inconvenient	10	2
Obsolete or lack of information	13	2
Negative attitude	14	2
General	16	3
Total	53	9
TOTAL	542	100

Inferential Results

Stability of Coping

The extent to which students' coping strategies are stable across time is of particular interest in this study. Estimates of coping stability provide an index of the cross-situational generalizability of coping scores (Shavelson, Webb, & Rowley, 1989). Generalizability coefficients were calculated for the total sample and for the sex and age subgroups using the Means Squares estimates derived from Subjects by Occasions MANCOVA analyses (Algina & Crocker, 1986; Brennan, 1983). Further analyses were performed with general stress, depression, and anxiety as covariates in order to examine the influence of emotional states on reports of coping stability. Due to the similarity between the individual covariates and combined covariates (differences of .03 or less), the combined covariates are reported.

Total sample coping stability. The generalizability coefficients for the total sample reflect moderate stability on all coping scales, with a range of .53 to .69, however, the coefficients for age and sex subgroups reflect high stability, ranging from .56 to .97. Sex differences between estimated coefficients (calculated as a difference of .1 or greater) were apparent on the problem-focused coping scales of Suppression of Competing Activities, Restraint, and Seeking Social Support -Instrumental, with female scores showing a higher degree of coping stability. Age differences were also apparent on the following coping scales: On Restraint coping and Behavioral Disengagement, students 25+ had higher scores ($g=.80$) than both other age groups; on Seeking Social Support - emotional, where students age 18-19 had higher scores than students in both other age groups; and on Acceptance, where students age 20-24 had higher scores than both other age groups. Minimal sex or age differences were apparent on the remaining generalizability coefficients. Table 13 shows the generalizability coefficients for the total sample, sex, and age subgroups.

Table 13

Generalizability Coefficients for Total Sample, Sex, and Age Subgroups.

COPE	Total	Male	Female	18-19	20-24	25+
Act	.69	.78	.79	.79	.77	.77
Plan	.64	.74	.73	.69	.78	.69
Supcomp	.53	.56	.76	.66	.67	.67
Restraint	.54	.71	.81	.70	.61	.80
Supinst	.69	.64	.81	.78	.78	.76
Supem	.64	.83	.82	.90	.80	.81
Growth	.53	.77	.69	.67	.73	.76
Accept	.54	.75	.74	.59	.82	.74
Denial	.69	.73	.76	.73	.77	.70
Relig	.64	.94	.96	.93	.97	.95
Ventem	.53	.82	.83	.89	.84	.81
Behdis	.54	.80	.73	.65	.74	.80
Mentdis	.69	.84	.83	.79	.85	.76
AlcDrg	.64	.87	.91	.88	.89	.88
Humor	.53	.83	.81	.84	.79	.80

Coping stability with covariates stress, depression, and anxiety. Partialling out the effects of stress, depression, and anxiety resulted in an increase in the generalizability coefficients for the total sample (see Table 14). Increases of .1 or greater in the coefficients for the total sample were present on the coping scales of Suppression of Competing Activities, Restraint, Seeking Social Support - Emotional, Positive Reinterpretation and Growth, Acceptance, Religion, Venting Emotions, Behavioral Disengagement, Mental Disengagement, Alcohol/Drug Use, and Humor. The scales less effected by the covariates included Action, Planning, Seeking Social Support - Instrumental, and Denial. Sex differences on several

scales that represent Problem-focused coping were apparent as follows: On Planning, males had higher scores than females; while on Suppression of Competing Activities, Restraint coping, and Seeking Social Support - Instrumental, females had higher scores than males. On the emotion-focused coping scale of Positive Reinterpretation and Growth, males had higher scores than females.

Age differences were also apparent as follows: Students age 18-19 had higher scores on Planning, Seeking Social Support - Emotional, and on Venting Emotions than students in both other groups; students age 20-24 had lower scores on Restraint coping than students in both other age groups; and students age 25+ had lower scores on Acceptance and higher scores on Behavioral Disengagement than students in both other groups. The generalizability coefficients estimated for the remaining coping scales reflected marginal sex and age differences.

Figure 1 presents the corresponding generalizability coefficients for the total sample, sex and age subgroups listed in Table 13. Figure 2 presents the generalizability coefficients using the combined covariates, corresponding with Table 14. In order to aid interpretation, 95% confidence intervals were calculated for the total sample generalizability coefficients using Fisher's Z transformation statistics.

Table 14

Generalizability Coefficients with Stress, Depression, and Anxiety As Combined Covariates.

COPE	Total	Male	Female	18-19	20-24	25+
Act	.77	.77	.75	.80	.72	.76
Plan	.70	.75	.65	.90	.72	.64
Supcomp	.65	.51	.70	.89	.63	.63
Restraint	.71	.51	.70	.72	.57	.79
Supinst	.75	.65	.78	.77	.74	.75
Supem	.82	.81	.79	.90	.77	.77
Growth	.70	.76	.65	.63	.67	.74
Accept	.73	.74	.72	.72	.79	.67
Denial	.73	.72	.73	.72	.74	.64
Relig	.95	.93	.96	.93	.97	.95
Ventem	.81	.80	.77	.88	.80	.74
Behdis	.74	.77	.71	.61	.76	.80
Mentdis	.82	.83	.80	.76	.81	.72
AlcDrg	.87	.89	.86	.88	.86	.86
Humor	.80	.83	.77	.83	.78	.75

Summary. In order to investigate the extent to which coping strategies used by students are stable over time, generalizability coefficients were calculated for the COPE scales. The total sample showed moderate coping stability on all scales. Problem-focused coping was more stable for females than males, however, age differences on estimates of stability did not reflect a pattern in any of the coping categories. In general, partialling out the effects of emotional distress variables increased coping stability, particularly for emotion focused and disengagement coping scales. The problem-focused coping scales were less effected. Again, females showed more stability on problem-focused coping with the exception that males showed more stability on coping using Restraint. Age differences showed that coping was more stable for students age 18-19 in comparison to other students on several scales distributed throughout the categories of problem-focused, emotion-focused, and disengagement coping.

Influence of Sex and Age on Coping

MANOVA for repeated measures was used to investigate sex and age differences in General Stress and COPE scale scores from Time 1 through 4 as dependent variables. Where appropriate, univariate tests to determine the significant subscales and post hoc Scheffe' tests were used to determine cell differences. The number of subjects varies across analyses due to elimination of outliers on some variables to obtain adequate homogeneity of variance. Although the results of this analysis did not meet the level of significance established at $p < .01$, there were several trends in the influence of sex and age on coping.

There was a significant Age x Time interaction, $F(96,962)=1.30, p < .03$ for General Stress, $F(6,177)=2.11, p < .05$; Suppression of Competing Activities, $F(6,177)=2.31, p < .04$, and Venting Emotions, $F(6,177)=2.84, p < .01$ (see Table 15 and Figures 3, 4, and 5). On General Stress, students age 18-19 had significantly lower scores than other students at Time 1, at Time 4 students age 20-24 had significantly higher scores than students age 25+; on Suppression of Competing Activities at Times 1 and 4, students age 25+ had significantly higher scores than students age 18-19, at Time 2 students age 20-24 had significantly higher

scores than other students, and at Time 3, students age 20-24 had significantly lower scores than other students; on Venting Emotions, at Time 1, students age 18-19 had significantly higher scores than students age 20-24, at Time 3, students age 25+ had significantly lower scores than other students, and at Time 4, students age 20-24 had significantly higher scores than other students.

Table 15

Means for Age x Time Interaction.

Variable	n	Time 1	Time 2	Time 3	Time 4
Genstrs					
18-19	20	2.15	2.90	2.90	3.30
20-24	24	2.79	3.04	3.08	3.67
25+	22	3.29	3.14	3.00	3.14
Supcomp					
18-19	20	9.30	9.50	10.10	9.70
20-24	24	10.04	10.46	9.29	10.30
25+	22	10.52	9.57	10.86	10.81
Ventem					
18-19	20	9.45	8.85	9.15	8.65
20-24	24	8.63	8.42	9.38	9.92
25+	22	9.10	8.86	8.00	8.83

Figure 3. Means for General Stress on Age x Time Interaction.

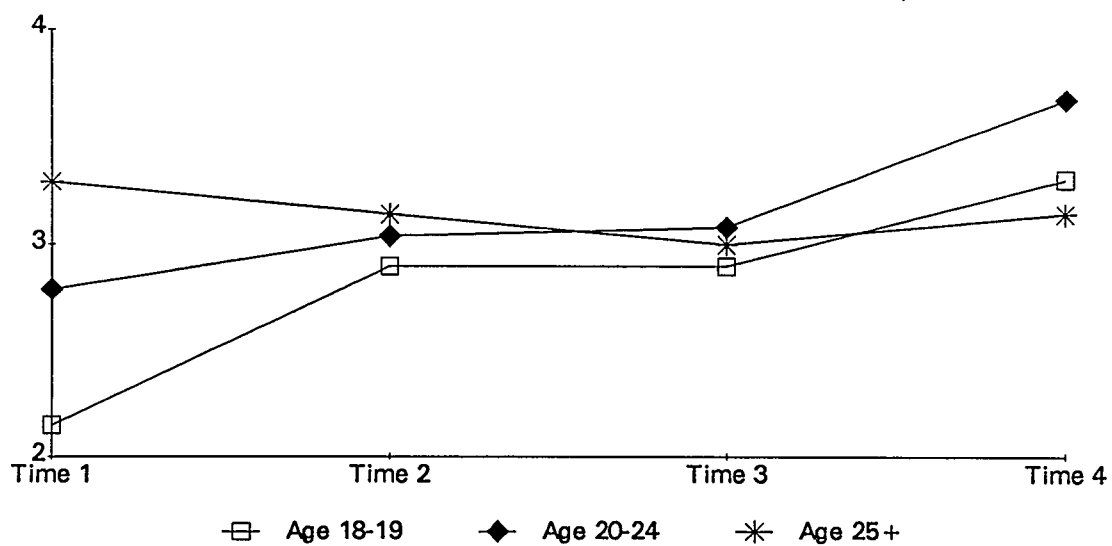


Figure 4. Means of Suppression of Competing Activities on Age x Time Interaction.

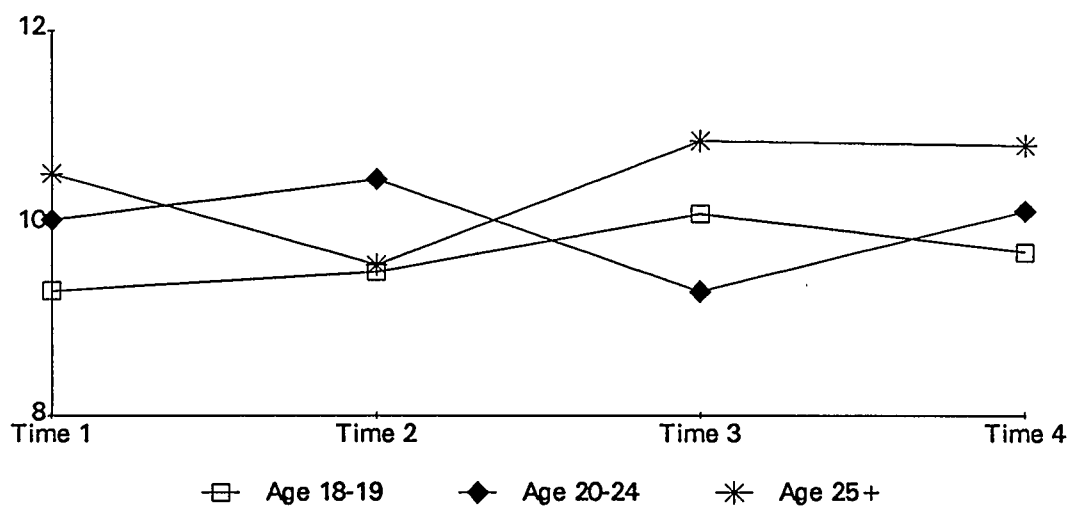
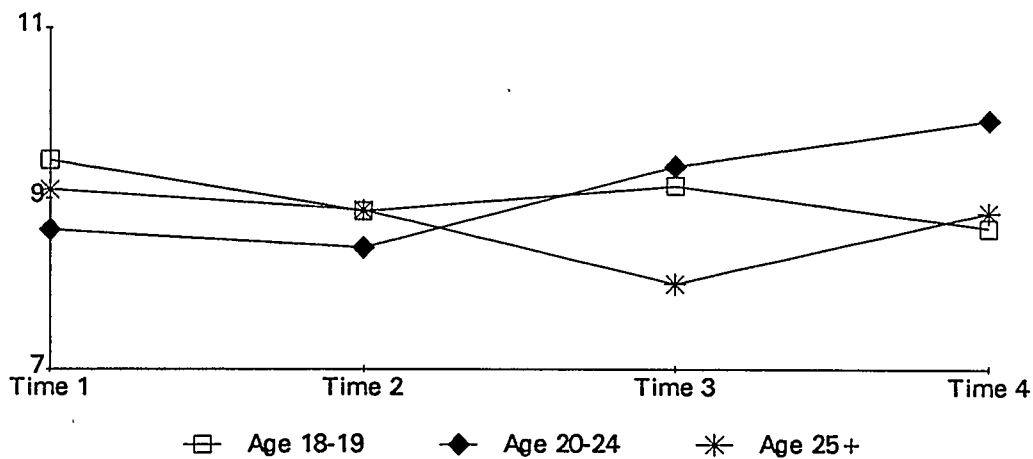


Figure 5. Means for Venting Emotions on Age x Time Interaction.



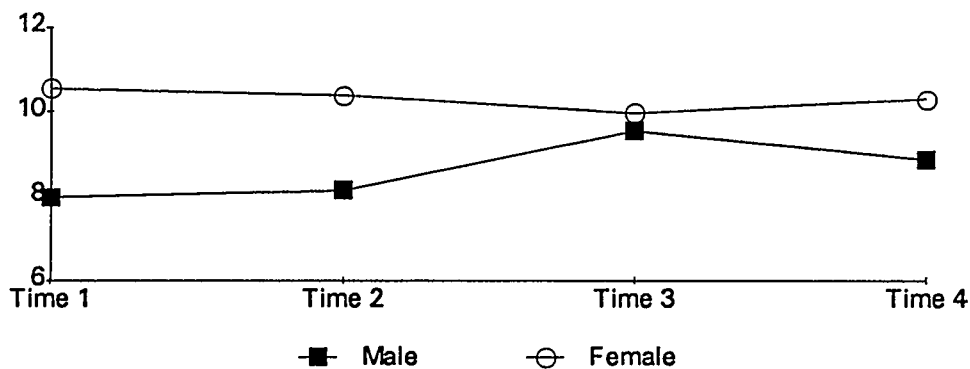
There was also a significant Sex x Time interaction, $F(48,483)=1.46, p<.03$ on Seeking Social Support - Emotional, $F(3,177)=3.51, p<.02$ (see Table 16 and Figure 6). At Times 1,2,and 4, females had significantly higher scores than males.

Table 16

Means for Sex x Time Interaction

Variable	n	Time 1	Time 2	Time 3	Time 4
Supem					
male	29	7.97	8.14	9.55	8.86
female	36	10.56	10.39	9.97	10.30

Figure 6. Means for Seeking Social Support - Emotional on Sex x Time Interaction.



There was also a significant main effect for Time, $F(48,483)=1.87, p<.001$, on General Stress, $F(3,177)=4.96, p<.003$; Acceptance, $F(3,177)=3.15, p<.03$; Behavioral Disengagement, $F(3,177)=4.47, p<.005$; and Denial, $F(3,177)=2.59, p<.05$ (see Table 17). On General Stress, students' scores at Time 4 were significantly higher than previous Times; on Acceptance, students' scores at Times 3 and 4 were significantly higher than scores at Times 1 and 2; on Behavioral Disengagement, students' scores were significantly higher at Time 1 than subsequent Times; and on Denial, student scores were significantly lower at Time 3 than Times 1 or 2.

Table 17

Means and Standard Deviations for Significant Time Effect.

Variable	n	Time 1	Time 2	Time 3	Time 4
Genstrs	65	2.75(1.34)	3.03(1.21)	3.00(1.30)	3.39(1.13)
Accept	65	11.46(2.85)	11.34(2.48)	10.59(2.47)	10.91(2.83)
Behdis	65	6.22(1.93)	5.52(1.98)	5.42(1.73)	5.59(1.78)
Denial	65	5.08(1.72)	5.11(2.02)	4.67(1.04)	4.83(1.60)

Summary. Several age and sex differences were noted. Early in the academic year, direct entry students, age 18-19, evidenced higher levels of stress and coping through Venting Emotions, whereas these results applied to students age 20-24 by the end of the academic year. Students age 25+ evidenced more coping through Suppression of Competing Activities at the beginning of the year, and students age 20 and older showed significantly higher scores on this way of coping by the end of the year. This suggests that older students may be dealing with multiple role demands which require them to prioritize activities in order to cope with their top demands. Noteworthy sex differences included more coping through seeking emotional support by females. At the beginning of the academic year, students used coping strategies that withdrew them, actively and mentally, from the demand situation. Although

stress levels peaked during the second half of the year, there was greater use of acceptance and less use of denial.

Emotional Distress and Coping

In order to investigate the relationship between emotional distress and student's coping efforts over time, a series of MANOVAs were conducted. The first MANOVA examined the influence of age and sex on stress, depression, and anxiety over time. The second MANOVA examined the influence of depression and anxiety on subjects' coping efforts over time. In these analyses, the level of significance was set at $p < .01$, however, univariate test results are reported if $p < .05$ in order to explore trends concerning the influence of emotional distress on coping.

Influence of sex and age on subject's experience of stress, depression and anxiety. The MANOVA which examined the influence of sex and age on stress, depression, and anxiety scores produced a significant main effect for Time, $F(9,620)=3.09, p < .001$, on General Stress, $F(3,21)=7.25, p < .001$, and BDI, $F(3,210)=3.25, p < .02$ (see Table 18). On General Stress, subjects' scores were significantly lower at Time 1 than subsequent Times. On BDI, subjects' scores were significantly higher at Time 4 than previous Times.

Depression and Coping. Using BDI scores as classification variables of low depression (scores of 9 or less) and high depression (scores higher than 9) (Lightfoot & Oliver, 1985) did not produce a significant interaction effect for BDI $\times$ Sex $\times$ Time. There was a significant main effect for Time, $F(42, 722)=1.74, p < .002$, Positive Reinterpretation and Growth, $F(3,255)=2.95, p < .03$, Acceptance, $F(3,255)=3.01, p < .03$, and Religion, $F(3,255)=3.22, p < .02$ (see Table 18).

There was no significant interaction effect between BDI $\times$ Age $\times$ Time. There was a significant main effect for Time, $F(42,704)=1.71, p < .004$, on Suppression of Competing Activities, $F(3,249)=2.85, p < .04$, Acceptance, $F(3,249)=2.86, p = .04$, and Religion, $F(3,249)=2.87, p < .04$ (see Table 18).

Table 18

Means and Standard Deviations for Time Effects - Stress, Depression, and Anxiety.

Variable	n	Time 1	Time 2	Time 3	Time 4
Genstrs	76	2.83(1.33)	3.09(1.19)	3.21(1.31)	3.47(1.17)
BDI	76	7.95(5.92)	7.80(6.67)	8.34(7.23)	9.63(8.23)
Supcomp	89	9.99(2.34)	9.93(2.30)	10.16(2.11)	10.40(2.14)
Growth	89	12.60(2.14)	12.29(2.37)	11.91(2.31)	12.01(2.29)
Accept	89	11.30(2.61)	11.19(2.42)	10.47(2.34)	10.67(2.80)
Religion	89	6.51(3.38)	6.00(3.05)	6.18(3.49)	5.99(3.06)

Differences over time for both analyses were as follows: On Suppression of Competing Activities, scores at Time 4 were significantly greater than scores at Times 1 and 2; on Positive Reinterpretation and Growth, scores were significantly greater at Time 1 than subsequent Times, and scores at Time 2 were significantly greater than scores at Time 3. On Acceptance, scores at Times 3 and 4 were significantly lower than scores at Time 1, and scores at Times 3 and 4 were significantly lower than scores at Time 2. On Religion, scores at Time 1 were significantly higher than subsequent Times.

Anxiety. Using BAI scores as classification variables of low anxiety (scores of 9 and less) and high anxiety (scores greater than 9) did not produce a significant BAI x Sex x Time interaction. There was a significant main effect of Time $F(42,713)=1.90, p<.001$, however, the univariate tests on Positive Reinterpretation and Growth, $F(3,252)=2.44, p<.07$, and Seeking Social Support - Instrumental, $F(3,252)=2.29, p<.08$ must be interpreted with caution due to the higher potential for Type I error. On Positive Reinterpretation and Growth, students had significantly lower scores at Time 3 than at Times 1 or 2. On Seeking Instrumental Support - Instrumental, students had significantly higher scores at Time 4 than Times 1 or 2, and significantly higher scores at Time 3 than at Time 2 (see Table 19).

Table 19

Means and Standard Deviations on Positive Reinterpretation and Growth and Seeking Social Support - Instrumental for Main Effect of Time.

Variable	n	Time 1	Time 2	Time 3	Time 4
Growth	90	12.57(2.14)	12.27(2.37)	11.89(2.31)	11.98(2.30)
Supinst	90	9.72(2.96)	9.61(3.09)	10.13(3.00)	10.17(3.12)

Summary. Regarding the influence of emotional distress on coping, there were no significant age or sex differences in students' experience of stress, depression, and anxiety over time and no significant interaction effects. The sample as a whole reported less stress in September than throughout the rest of the academic year, while depression was highest at the end of the year. Students coped using more Positive Reinterpretation and Growth, Acceptance, and Religion at the beginning of the school year than in the second semester, and coped using more Suppression of Competing Activities and Seeking Social Support - Instrumental at the end of the year. All students decreased their use of Positive Reinterpretation and Growth in February, in comparison to the first semester, suggesting, perhaps, that over time, students are less able to reframe the potential benefits of their top demands. Students coped more through accessing external resources in the second semester than was reported in the fall term.

Relationships between Student Attrition, Emotional Distress, and Coping

School records indicated that a substantial number of the students who left the study did so due to academic attrition. Differences between the group of students who completed the study and those who did not that may have contributed to them dropping out of the study was of interest. In order to investigate this, the sample was divided into two subgroups, those who completed the study and those who did not and a MANOVA was conducted using general stress, anxiety, depression, and COPE subscale scores at Time 1 as dependent measures. No significant differences were found, $F(18,127)=1.18$, $p<.29$.

Factors that Influence Coping Strategies

A series of MANCOVAs and MANOVAs were performed using several factors considered to potentially influence coping (Lazarus & Folkman, 1985) as classification variables. These included criterion coping (whether or not subjects had reasons for choosing particular ways of coping), the perceived stress of demands, control, confidence, and effectiveness. Because of cell size restrictions on the number of variables permitted in the MANCOVA, the COPE subscales were grouped into the three categories used in the previous analyses, namely, Problem-focused coping (PCOPE), Emotion-focused coping (ECOPE) and Disengagement coping (DCOPE). In the MANOVAs, the alpha level of significance was set at $p < .05$ in order to explore trends in coping at each measurement time.

Control. The MANCOVA with the covariate Control produced a significant main effect for Time, $F(9,734)=3.21, p < .001$. Subsequent univariate tests indicated a significant effect for ECOPE, $F(3,248)=4.22, p < .006$. Students at Times 1 and 2 had significantly higher ECOPE scores than subsequent Times. In order to further investigate the influence of Control on subject's reported coping behaviors, a series of MANOVAs were run at each Time and results are shown in Appendix Q. At Time 2, females used more coping through seeking support, Religion, and emotional expression. Generally, students with higher control used more action and emotional expression coping, whereas students with lower control coped using humor.

Confidence. The MANCOVA with the covariate Confidence produced a significant main effect for Time, $F(9,635)=3.61, p < .001$, with a significant univariate test on ECOPE, $F(3,215)=5.25, p < .002$. Students at Times 1 and 2 had significantly higher scores on ECOPE than subsequent Times. The results from the MANOVA analyses at each Time are found in Appendix R. Generally at Time 2, students with high confidence used more problem-focused coping whereas students with low confidence used more emotion-focused and disengagement coping. Students with high confidence age 20 and older used more Suppression of Competing Activities, and Positive Reinterpretation and Growth than students 18-19, whereas students in the latter age group with low confidence coped more through Restraint. At Time 4, students

18-19 used less Planning, but more Denial and Humor coping than students in both other age groups, and students age 25+ used more Mental Disengagement than other students. In general, students with low confidence age 18-19 used more Action, and Planning, but less Suppression of Competing Activities than other students. Students age 20 and older with high confidence used more coping through action, Planning, Suppression of Competing Activities, Seeking Social Support - Emotional than other students. Students with low confidence ages 18-19 and 20-24 coped more through using humor than other students.

Effectiveness. The MANCOVA with the covariate Effectiveness also produced a main effect of Time, $F(9,662)=3.14, p<.001$, with a significant univariate test on ECOPE, $F(3,244)=3.59, p<.02$. Scores on ECOPE at Time 1 were significantly higher than subsequent Times, and scores at Time 2 were significantly greater at Time 2 than Time 3. At Time 2, students with high coping effectiveness scores used more Positive Reinterpretation and Growth whereas students age 18-19 with low effectiveness scores used the most humor. When students rated their coping as highly effective, they used more problem-focused coping, and more Positive Reinterpretation and Growth. Students who rated their coping as less effective used more Venting Emotions, and coping through disengagement. The results from MANOVAs using Effectiveness as a classification variable at each Time are presented in Appendix S. The means and standard deviations for the significant main effects of Time for the covariates Control, Confidence, and Effectiveness are illustrated in Table 20.

Summary. Controlling for the effects of Control, Confidence, and Effectiveness produced significant Time effects on Emotion-focused coping. Students used significantly more emotion-focused coping in the first semester than later in the school year.

Table 20

Means and Standard Deviations on ECOPE Scales for Covariates Control, Confidence, and Effectiveness.

Covariate	n	Time 1	Time 2	Time 3	Time 4
Control	89	45.47(6.63)	44.51(6.41)	43.43(6.31)	43.57(6.63)
Confidence	78	45.58(6.38)	44.62(6.33)	43.49(6.09)	43.09(6.38)
Effectiveness	81	45.37(6.57)	44.17(6.33)	43.14(6.31)	43.62(6.73)

General Stress. Using General Stress as a covariate did not produce significant results at the established alpha level of $p < .01$. However, there was a trend evident in a main effect for Time, $F(9,617)=2.13, p < .03$, on ECOPE, $F(3,209)=3.66, p < .01$. Students' scores on ECOPE were significantly greater at Time 1 than Times 3 or 4.

Depression. Entering BDI scores as a covariate produced a significant regression effect $F(3,243)=12.94, p < .001$, on DCOPE, $F(1,245)=36.50, p < .001$ (see Table 21). At Time 1, females age 25+ had significantly lower scores than other female subjects. At Time 2, males age 25+ had significantly higher scores than other males, and females age 18-19 had significantly higher scores than other females. At Time 3, males age 20-24 had significantly higher scores than other females, and females age 18-19 had significantly higher scores than other females. At Time 4, females age 25+ had significantly lower scores than other females. There was also a main effect for Time, $F(9,725)=3.16, p < .001$, on ECOPE, $F(3,245)=4.67, p < .003$. At Times 1 and 2, subjects' scores were significantly greater than scores at subsequent Times.

Table 21

Means and Standard Deviations of DCOPE Scores for Depression as a Covariate.

Sex	n	Time 1	Time 2	Time 3	Time 4
Male					
18-19	11	23.46(4.76)	21.82(5.86)	22.55(5.24)	23.82(6.10)
20-24	12	23.42(6.60)	22.67(7.64)	24.17(6.82)	23.58(6.50)
25+	17	23.12(3.33)	23.59(4.27)	21.94(5.11)	23.35(6.62)
Total	40	23.30	22.83	22.78	23.55
Female					
18-19	16	27.56(5.51)	27.06(4.70)	25.75(6.33)	26.50(5.23)
20-24	18	25.17(4.87)	23.33(4.07)	22.94(5.76)	24.83(5.85)
25+	14	22.50(4.33)	22.14(3.61)	21.43(5.00)	21.93(6.29)
Total	48	25.19	24.23	23.44	24.54
TOTAL	88	24.33(5.09)	23.59(5.17)	23.14(5.76)	24.09(6.09)

Anxiety. Using BAI scores as the covariates produced a significant main effect for Time, $F(9,734)=3.12, p<.001$, on ECOPE, $F(3,248)=4.40, p<.005$. At Times 1 and 2, subject's scores on ECOPE were significantly higher than subsequent Times.

General Stress, Depression, and Anxiety. Entering the covariates of General Stress, BDI, and BAI together produced a significant regression effect, $F(9,593)=3.95, p<.001$, on DCOPE, $F(3,201)=9.68, p<.001$ (see Table 22). At Time 1, males 20-24 had significantly higher DCOPE scores than other males, whereas females age 25+ had significantly lower DCOPE scores than other females. At Time 2, males 18-19 had significantly lower scores than other males, and females age 18-19 had significantly higher scores than other females. At Times 3 and 4, males 20-24 had significantly higher scores than other males, females age 18-19 had significantly higher scores than other females, and females age 20-24 also had higher scores than females age 25+. There was also a significant main effect for Time, $F(9,593)=1.94$,

$p < .04$, on ECOPE (see Table 23). At Time 1, subjects' scores were significantly higher than subsequent Times.

Table 22

Means and Standard Deviations of DCOPE Scores for Combined Covariates.

Sex	n	Time 1	Time 2	Time 3	Time 4
Male					
18-19	10	22.80(4.47)	22.20(6.03)	22.50(5.52)	22.80(5.35)
20-24	11	24.27(6.18)	23.46(7.49)	24.91(6.63)	24.27(6.34)
25+	14	23.43(3.11)	23.57(4.36)	22.43(5.42)	23.79(7.08)
Total	35	23.51	23.14	23.23	23.66
Female					
18-19	14	27.21(4.92)	27.71(4.63)	26.93(5.58)	27.21(4.74)
20-24	14	25.29(5.11)	22.79(4.21)	23.50(6.31)	25.21(6.57)
25+	11	22.36(4.91)	22.18(3.95)	21.36(5.56)	22.36(7.10)
Total	39	25.15	24.38	24.13	24.43
TOTAL	74	24.38(4.95)	23.80(5.35)	23.70(5.95)	24.43(6.27)

Table 23

Means and Standard Deviations for Significant Time Effects of Covariates.

Covariate	n	Time 1	Time 2	Time 3	Time 4
Genstrs Stress	76	45.38(6.47)	44.43(6.46)	43.57(6.22)	43.43(6.76)
Depression	88	45.55(6.64)	44.40(6.29)	43.39(6.35)	43.51(6.71)
Anxiety	89	45.36(6.60)	44.43(6.32)	43.34(6.30)	43.36(6.63)
Combined	74	24.38(4.95)	23.80(5.35)	23.70(5.95)	24.43(6.27)

Summary. The influences of general stress, depression, and anxiety on students' use of coping strategies was pertinent for both emotion-focused and disengagement-focused coping.

Both depression and the combined three covariates were significant for Disengagement coping and the pattern of results was similar. The individual covariates and combined covariates produced significant Time effects on emotion-focused coping. Again, early in the academic year, students reported using more emotion-focused coping than they did in the second half of the school year.

Length of Time Experiencing Demands and Coping. Two separate MANCOVAS were run using length of time experiencing top demands and length of time coping as the covariates. The MANCOVA using Length of Time Experiencing Demand as a covariate produced a significant Time effect $F(9,716)=2.94, p>.002$ for ECOPE, $F(3,242)=4.34, p>.005$ (see Table 24). There was a significant decrease on ECOPE scores from Times 1 and 2 to Times 3 and 4.

The MANCOVA using Length of Time Coping as the covariate also produced a main effect for Time, $F(9,489)=2.72, p<.004$, on ECOPE, $F(3,203)=4.75, p<.003$ (see Table 24). Students' scores on ECOPE were significantly higher at Times 1 and 2 than subsequent Times.

Table 24

Means and Standard Deviations of ECOPE Scores Using Time Experiencing Demands and Time Coping as Covariates.

Covariate	n	Time 1	Time 2	Time 3	Time 4
Time Demanding	87	45.25(6.64)	44.41(6.40)	43.23(6.33)	43.17(6.58)
Time Coping	74	45.31(6.56)	44.26(6.51)	42.80(6.36)	43.24(6.50)

Summary. The Length of Time Experiencing Demand and Length of Time Coping were investigated as potential factors that influence students selection of coping strategies. Using these factors as independent covariates resulted in students showing greater use of emotion-focused coping in the first semester than in the second semester.

Criterion versus Non-Criterion Coping. Students were asked to list the reasons why they try to deal with their #1 ranked demand in the manner chosen. While many students had

reasons for their coping decisions, others gave reasons that were classified as "limited alternatives", such as "no reason", "my only alternative" or "do not know". Therefore, students were grouped according to whether or not they specified a criterion for their coping choices and criterion versus non-criterion coping was entered as a classification variable on a MANOVA. There were no interaction effects of Criterion x Sex at any of the four Times. Sample sizes were insufficient to investigate the interaction effects of Age x Criterion.

Summary. Whether or not students had specific coping criterion in mind did not appear to influence the use of specific coping strategies.

Demographic Subgroups and Coping Responses

In order to determine the influence of demographic membership on subjects' reports of coping behaviors, a series of MANOVAs were run using the COPE scales as dependent variables and demographics as classification variables. The demographic variables included Relationship Status, Children, Living Arrangements, Employment, Previous Education, Year Completed Required Admission Courses, and Upgrading Full-time or Part-time. Where sample size permitted, additional classification with sex and/or age were included in the analyses. There were no significant interaction effects using the classification variables of Relationship Status, Living Arrangements, Children, Years Entry Requirements were Met or Upgrading.

Working and Coping. There was a significant interaction effect for Work x Sex x Time, $F(51,434)=2.10, p<.001$ on General Stress, $F(3,162)=4.60, p<.004$; Positive Reinterpretation and Growth, $F(3,162)=6.51, p<.001$; Planning, $F(3,162)=2.60, p<.05$; and Suppression of Competing Activities, $F(3, 162)=6.11, p<.001$ (see Tables 25, 26, 27, 28 and Figures 7, 8, 9, 10). At Time 1, males who did not work had significantly higher stress scores than males who were working, whereas the opposite finding was apparent for females. Females who worked at Time 1 had significantly higher stress levels than males who worked. At Time 2, males who did not work had significantly higher stress scores than their female counterparts and subjects who worked. At Time 3, females who worked had significantly higher stress scores than

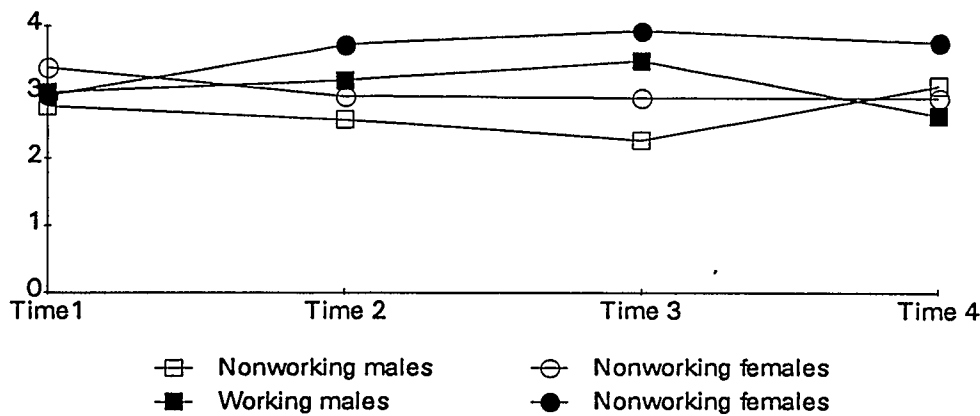
females who did not work, and working males had significantly higher stress scores than working females. At Time 4, males who did not work had significantly lower stress scores than all other subjects. In terms of shifts in stress scores over time, the scores of non-working females significantly peaked at Time 2 in comparison to Times 1 and 4, whereas nonworking males had significantly higher stress scores at Time 3 in comparison to Time 1 and at Time 4 in comparison to other Times. The stress scores of working males were significantly higher at Time 2 than Time 1 and at Times 3 and 4 in comparison to Times 1 and 2. The stress scores of working females were significantly higher at Time 4 in comparison to previous Times.

Table 25

Means and Standard Deviations of General Stress for Demographic Variable Work.

Work	Sex	n	Time1	Time2	Time3	Time4
Not Working						
	Male	19	2.79(1.32)	3.37(1.30)	3.00(1.41)	2.95(1.31)
	Female	17	2.59(1.28)	2.94(1.20)	3.18(1.29)	3.71(.99)
	Total	36	2.60	3.17	3.08	3.31
Working						
	Male	11	2.27(1.42)	2.91(1.04)	3.46(1.51)	3.91(1.04)
	Female	11	3.09(1.58)	2.91(1.14)	2.64(1.03)	3.73(1.10)
	Total	22	2.68	2.91	3.04	3.82
	TOTAL	58	2.69(1.37)	3.07(1.18)	3.07(1.37)	3.50(1.17)

Figure 7. Means for General Stress on Work x Sex x Time interaction.



On the coping scale Positive Reinterpretation and Growth, at Time 1 non-working males had significantly higher scores than working males; at Times 1, 2, and 4, working females had significantly higher scores than all other subjects; and at Time 3, working males had significantly higher scores than all other subjects and nonworking males also had significantly higher scores than working females. Significant changes over time in the use of Positive Reinterpretation and Growth were as follows: Nonworking males had significantly higher scores at Time 1 than subsequent Times; nonworking females had significantly higher scores at Time 1 than at Times 3 and 4, and significantly higher scores at Time 2 than Time 4; working males had significantly higher scores at Times 2 and 3 than Time 4; and working women had significantly higher scores at Times 1, 2, and 4 in comparison to scores at Time 3.

Table 26

Means and Standard Deviations of Positive Reinterpretation and Growth for Demographic Variable Work.

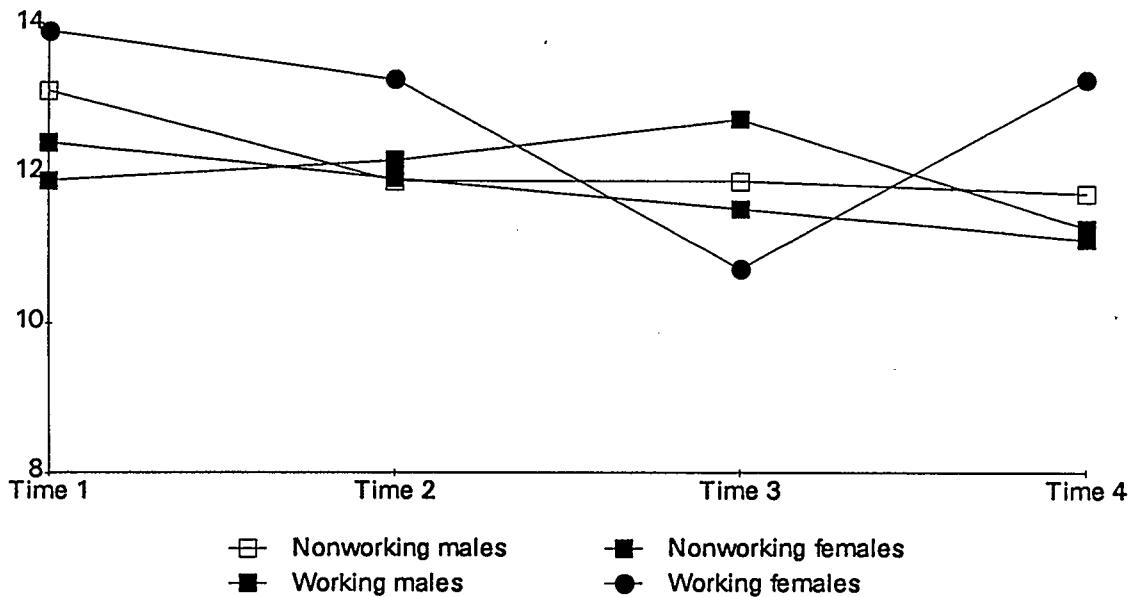
Work	Sex	n	Time 1	Time 2	Time 3	Time 4
Not Working						
	Male	19	13.11(1.91)	11.90(1.88)	11.90(2.28)	11.74(2.38)
	Female	17	12.41(1.84)	11.94(2.63)	11.53(2.00)	11.12(2.29)
	Total	36	12.78	11.92	11.72	11.44

Table 26 (contd.)

Working

Male	11	11.91(2.47)	12.18(1.89)	12.73(1.19)	11.27(2.24)
Female	11	13.91(1.58)	13.27(2.72)	10.73(2.45)	13.27(1.79)
Total	22	12.91	12.73	11.73	12.27
TOTAL	58	12.83(2.02)	12.22(2.29)	11.72(2.12)	11.76(2.30)

Figure 8. Means on Positive Reinterpretation & Growth for Work x Sex x Time Interaction.



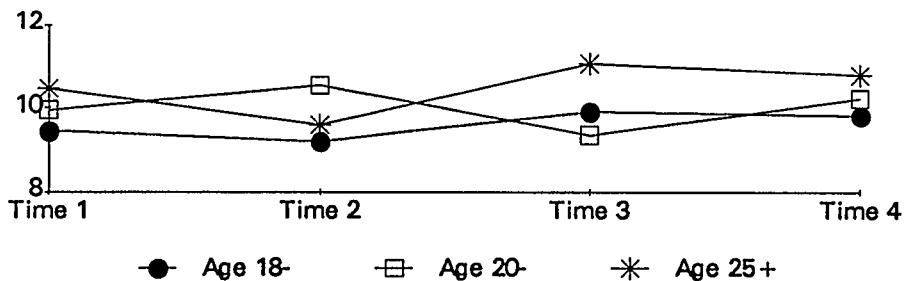
On coping utilizing Planning, at Time1, non-working males had significantly higher scores than both non-working and working females while working males had significantly higher scores than non-working females. At Time 2, working males had significantly higher scores than non-working males. At Time 3, working males had significantly higher scores than all other subjects; and at Time 4, working females had significantly higher scores than nonworking females. Significant differences over time in coping through Planning were as follows: Non-working males used significantly more Planning at Time 1 than Times 2 and 4; working females used significantly more Planning at Time 4 than at Time3.

Table 27

Means and Standard Deviations of Planning for Demographic Variable Work.

Work	Sex	n	Time1	Time2	Time3	Time4
Not Working						
	Male	19	12.63(2.43)	11.47(2.37)	11.90(1.45)	11.58(2.43)
	Female	17	11.29(2.52)	11.71(2.00)	11.65(2.18)	11.18(2.65)
	Total	36	12.00	11.58	11.78	11.39
Working						
	Male	11	12.46(2.42)	12.46(1.44)	13.00(1.10)	11.73(1.74)
	Female	11	11.46(3.05)	11.55(2.77)	10.46(2.38)	12.27(2.49)
	Total	22	11.95	12.00	11.73	12.00
	TOTAL	58	11.98(2.59)	11.74(2.17)	11.76(1.96)	11.62(2.37)

Figure 9. Means on Planning for Work x Sex x Time Interaction.



In regard to coping through Suppression of Competing Activities, at Time 1, non-working males had significantly higher scores than all other subjects; at Time 2, non-working males had significantly higher scores than their female counterparts; at Time 3, working females had significantly lower scores than all other subjects; and at Time 4, working males had significantly higher scores than all other subjects. Significant changes over time in the use of Suppression of Competing Activities were as follows: Non-working males had significantly higher scores at Time 1 than subsequent Times; non-working females had significantly higher

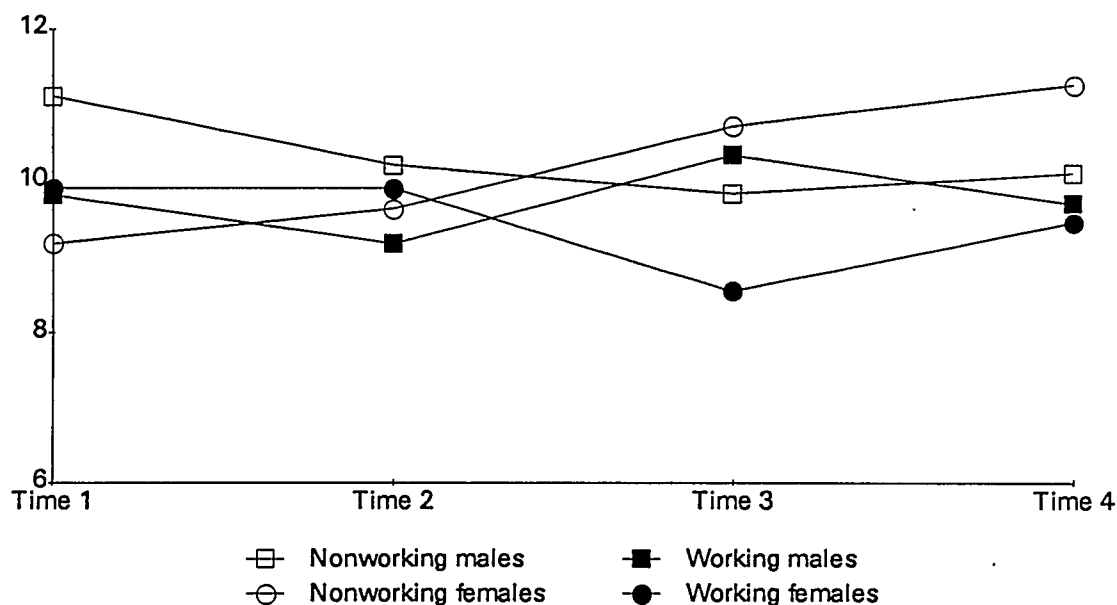
scores at Time 2 than Time 3; working males had significantly higher scores at Time 3 and 4 than scores at Times 1 and 2; and working females had significantly lower scores at Time 3 than all other Times.

Table 28

Means and Standard Deviations of Suppression of Competing Activities for Demographic Variable Work.

Work	Sex	n	Time1	Time2	Time3	Time4
Not Working						
	Male	19	11.11(1.94)	10.21(2.59)	9.84(2.17)	10.11(2.05)
	Female	17	9.82(2.30)	9.18(1.88)	10.35(1.73)	9.71(1.93)
	Total	36	10.50	9.72	10.08	9.92
Working						
	Male	11	9.18(2.52)	9.64(2.11)	10.73(1.62)	11.27(1.96)
	Female	11	9.91(2.47)	9.91(1.97)	8.55(1.70)	9.46(2.81)
	Total	22	10.14(2.32)	9.74(2.18)	9.91(1.96)	10.09(2.20)
	TOTAL	58	11.98(2.59)	11.74(2.17)	11.76(1.96)	11.62(2.37)

Figure 10. Means on Suppression of Competing Activities for Work x Sex x Time Interaction.



There was also a significant main effect of Time $F(51,434)=1.70$, $p<.003$ on General Stress, $F(3,162)=9.70$, $p<.001$; Positive Reinterpretation and Growth, $F(3,162)=6.51$, $p<.001$; and Acceptance, $F(3,162)=4.93$, $p<.003$ (see Table 29). On General Stress and Depression variables, students had significantly higher scores at Time 4 than previous Times; on Positive Reinterpretation and Growth, students had significantly higher scores at Times 1 and 2 than subsequent Times; on Religion, scores at Time 1 were significantly higher than subsequent Times; on Acceptance, scores were significantly higher at Times 1 and 2 than Times 3 or 4.

Table 29

Means and Standard Deviations for Significant Time Effect on Demographic Variable Work.

Variable	n	Time1	Time2	Time3	Time4
Genstrs	58	2.69(1.37)	3.07(1.18)	3.07(1.32)	3.50(1.17)
BDI	58	6.98(4.87)	7.28(5.89)	7.12(6.46)	8.31(6.78)
Growth	58	12.83(2.02)	12.22(2.29)	12.72(2.12)	11.76(2.30)
Relig	58	5.64(2.55)	5.26(2.08)	5.31(2.39)	5.16(1.89)
Accept	58	11.56(2.68)	11.14(2.40)	10.31(2.36)	10.45(2.71)

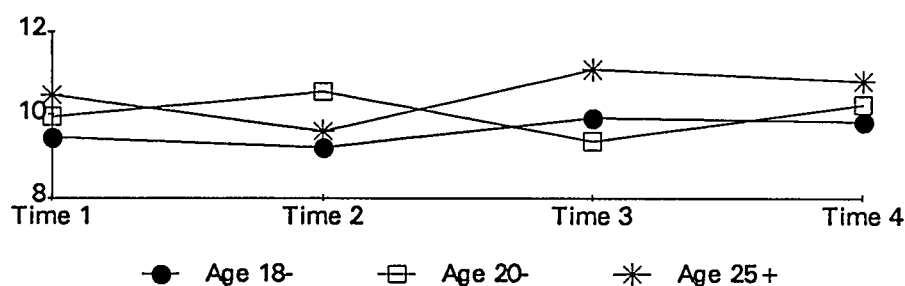
The interaction of Work x Age x Time was not significant. There was a significant interaction of Age x Time, $F(102, 1118)=1.35$, $p<.01$ on Suppression of Competing Activities, $F(6,204)=2.78$, $p<.01$ (see Table 30 and Figure 11). At Times 1 and 4, students age 25+ had significantly higher scores than students age 18-19; at Time 2, students age 20-24 had significantly higher scores than other students; and at Time 3, students age 25+ had significantly higher scores than other students.

Table 30

Means for Age x Time Interaction on Suppression of Competing Activities.

Age	n	Time 1	Time 2	Time 3	Time 4
18-19	24	9.46	9.21	9.92	9.83
20-24	25	9.96	10.56	9.36	10.24
25+	25	10.48	9.60	11.08	10.80

Figure 11. Means for Suppression of Competing Activities on Age x Time Interaction.



There was also a significant effect for Time $F(51,560)=1.69, p<.003$ on General Stress, $F(3,204)=7.73, p<.001$; Depression, $F(3,204)=3.01, p<.03$; Positive Reinterpretation and Growth, $F(3,204)=3.6, p<.01$; and Acceptance, $F(3,204)=2.9, p<.04$ (see Table 31). Students at Time 4 had significantly greater scores on both General Stress and Depression than previous times; students at Time 1 had significantly greater scores on Positive Reinterpretation and Growth than scores at subsequent Times; and students' scores on coping through Acceptance were significantly lower at Time 3 than previous Times and significantly lower at Time 4 in comparison to scores at Time 1.

Previous Education and Coping. There were no significant interaction effects for Previous Education x Sex x Time, although there was a main effect for Time, $F(51,578)=1.52, p<.01$ on General Stress, $F(3,210)=5.95, p<.001$; Depression, $F(3,210)=2.72, p<.05$; Acceptance, $F(3,210)=3.28, p<.02$; and Positive Reinterpretation and Growth, $F(3,210)=4.28, p<.01$ (see Table 31). On General Stress, Time 3 scores were significantly greater than Time 1 scores and Time 4 scores were significantly greater than previous Times. On Depression, Time 4 scores were significantly greater than previous Times. On Religion, Time 1 scores were significantly higher than subsequent Times and Time 3 scores were significantly higher than scores at Time 4. On both Positive Reinterpretation and Growth and Acceptance, Time 1 scores were significantly higher than subsequent scores and Time 2 scores were significantly higher than scores at Time 3.

Table 31

Means and Standard Deviations of Significant Univariate Tests for Work and Previous Education, Main Effect of Time.

Variable	n	Time1	Time2	Time3	Time4
Genstrs	74	2.85(1.33)	3.12(1.18)	3.23(1.30)	3.53(1.11)
BDI	74	8.15(5.87)	7.99(6.66)	8.41(7.25)	9.66(8.25)
Growth	74	12.73(2.14)	12.20(2.35)	11.82(2.33)	12.00(2.32)
Accept	74	11.47(2.60)	11.23(2.26)	10.61(2.32)	10.89(2.73)

Summary. Several demographic differences were observed in students' use of coping strategies. Students' previous education produced significant time effects for stress, depression, and coping through Positive Reinterpretation and Growth, and Acceptance. Results suggests that in order to cope with emotional distress at the beginning of the school year, students used more coping through these strategies than at later points in the year..

The demographic variable of working had considerable influence on students' use of coping strategies. Overall, nonworking students used more Suppression of Competing activities in the first semester, however, working students had the highest scores by the end of the year. Working students reported high stress at the end of the school year in comparison to non-working students. Non-working students coped more through Mental Disengagement at the beginning of the year and used more Seeking Social Support - Instrumental at the end of the year, in comparison to working students. In general, working students reported more stress than non-working students. All students, regardless of their working status, tended to cope more through Positive Reinterpretation and Growth in the first half of the academic year. Working students evidenced the most coping through Planning as the year progressed. Nonworking students used more Suppression of Competing Activities and Mental Disengagement coping in the fall, and more Seeking Social Support - Instrumental in the second semester. Working students also reported more coping through Suppression of

Competing Activities in the second semester. The most apparent age difference was that students age 20 and older coped more through Suppression of Competing Activities than did younger students.

Chapter Summary

In order to assist reader understanding, the foregoing results are summarized below according to the specific research question they address. In order to provide an organizational overview, Table 32 highlights the main results associated with each research question.

Research Question 1. Demands of Students

Throughout their first year in a post-secondary program, the most common demands reported by students were academic demands. The second and third ranked demands across all four times were finances and combined family and relationship demands. There were no significant differences in types of demands reported by students of different sex or different ages. There was consistency between the top ranked demands across time and a significant relationship between expected demands and actual demands at the same time. However, the situations students expected to be demanding did not turn out to be their most demanding situations. The nature of top demands was distributed over 10 different student-generated categories. In reference to top demands, there was considerable variation in students' perceptions regarding why a situation was demanding. For example, although most students found academic demands to be taxing due to the volume of work, other students indicated qualitative factors such as difficulty understanding material, performance standards, time management concerns, the financial burden and the perceived impact on family members. Variations in the characteristics reported by students illustrate the idiosyncratic nature of perceived demands.

Table 32

The Research Questions and Associated Findings.

Research Question	Summary of Research Findings
1. What are the demands reported by students during their first year in a post-secondary program?	Top ranked demands: Academic, family & relationship, financial, employment. Top ranked demands consistent across time, considerable variation in demand characteristics.
2. What are the influences of perceived stress, control, and duration on students' experience of demands?	Top ranked demands related to lack of control. More lack of control, more stress. More time experiencing demand, more stress.
3. What are the coping strategies used by students during their first year in a post-secondary program?	High use of Positive Reinterpretation and Growth, Planning, Action, Suppression of Competing Activities. Low use of Alcohol/Drugs, Denial, Religion, Behavioral Disengagement. Scales within problem-focused, support-seeking, and disengagement coping were related across time. Disengagement and problem-focused coping scales were inversely related across time. High use of Positive Reinterpretation & Growth, Seeking Social Support - Emotional, Venting Emotions, and Denial in first semester. High use of Seeking Social Support - Instrumental, Planning, Acceptance, Suppression of Competing Activities, and low use of Restraint in second semester. High use of Mental Disengagement, Venting Emotions by students age 18-19. High use of Venting Emotions, Seeking Social Support - Emotional by females in first semester.
4. What is the extent to which students utilize institutional resources as part of their coping strategies?	More access of Instructors, Campus Recreation, Learning Resources Centre, Learning Skills Centre.

Table 32 (contd.)

	More access of resources across academic year.
	More access of academic and personal support services by students age 25+
	More attitude, personal attention, and information characteristics rated as useful.
5. To what extent are coping strategies used by students stable over time?	Generally, high stability, greater stability for students age 18-19, greater stability for females on problem-focused scales.
	Greater stability in response to same top demand pairs.
	Greater variability in response to different top demand pairs.
6. What are the influences of general stress, depression, and anxiety on students' coping strategies across time?	More stress and more depression in second semester.
	Emotional distress influenced emotion-focused and disengagement coping, not problem-focused coping.
7. What factors are related to students in different ways?	More control, confidence, and effectiveness associated coping with more use of emotion-focused coping in first semester.
	More confidence related to more coping effectiveness.
	More stress and more lack of control associated with top demands, high use of emotion-focused and disengagement coping.
	New demands and high use of emotional expression, high use of disengagement, restraint and instrumental coping.
	Longer time experiencing demands and coping and high use of restraint, disengagement, acceptance, and instrumental coping.
	More use of emotion-focused coping by females.
	High use of Suppression of Competing Activities by students age 25+.
	More stress all year, high use of Planning and Suppression of Competing Activities by working students in second semester.
	High use of Suppression of Competing Activities and Mental Disengagement in first semester, low use of instrumental coping by nonworking students in second semester.

Research Question 2. Influences of Perceived Stress, Control, and Duration of Demand on Students' Experience of Demands

The top ranked demands of students were associated with a perceived lack of control over the situation. When students experienced a lack of control over their top demands, they also rated the demand as stressful. The length of time experiencing demands was related to top ranked demands only at Time 1. It appeared that demands experienced over time were experienced as more stressful by students.

Research Question 3. Coping Strategies of Students

Several coping strategies were consistently the most frequently reported by students across time. These included Positive Reinterpretation and Growth, Planning, Action, and Suppression of Competing Activities. Students reported coping the least using Alcohol/Drugs, Denial, Religion, and Behavioral Disengagement. There was considerable consistency across time in the relationships between problem-focused coping scales, the support seeking scales, disengagement coping, and an inverse relationship between disengagement coping and problem-focused coping. Positive Reinterpretation and Growth was also consistently related with Acceptance, Planning and Restraint.

There were also some patterns in the use of particular coping strategies during the academic year. At the beginning of the year, students tended to utilize more emotion-focused coping and the specific strategies of Positive Reinterpretation and Growth, Seeking Social Support- Emotional, Venting Emotions, and Denial. Students demonstrated lower use of these strategies at the beginning of the second semester but made a noticeable increase in their use at the end of the school year. In the second semester, there was an increase in the use of Seeking Social Support - Instrumental, Planning, Acceptance, and Suppression of Competing Activities, and less use of Restraint. In September, students age 25+ had higher scores on Religion and, throughout the year, students age 18-19 used more Mental Disengagement coping. In the initial months of their school program, females coped more through emotional expression, including Venting Emotions and Seeking Social Support - Emotional.

Research Question 4. Coping Through Use of Institutional Resources.

The campus resources most frequently utilized by students throughout their first year included Instructors, Campus Recreation, the Learning Resources Centre, and the Learning Skills Centre. Students increased their use of resources over the course of the year. Students age 25+ made greater use of the academic and personal support services available on campus. The overwhelming majority of contacts with campus resources were rated as highly useful. Characteristics that influenced students' ratings of the usefulness of these coping resources primarily pertained to attitude, personal attention, and information presented through the services.

Research Question 5. Stability of Coping Strategies.

The coping strategies used by students showed high stability across the academic year. Covarying out the effects of emotional distress particularly increased coping stability on emotion-focused and disengagement coping. Coping tended to be more stable for direct entry students, age 18-19. Females evidenced more stability on problem-focused coping; however, age differences in coping stability were less conclusive. In reference to similar demands, coping also remained the same. However, coping in reference to different demands was varied, highlighting the importance of considering the context of coping in response to perceived demands.

Research Question 6. Influences of Stress, Depression, and Anxiety on Coping.

Stress, depression, and anxiety were highly correlated across time. Students reported higher levels of stress in the second semester and depression levels peaked at the end of the school year. Emotional distress did not influence problem-focused coping, however, it appeared to influence the use of emotion-focused and disengagement coping. Depression in particular was associated with greater use of disengagement coping and the specific use of coping through Denial and Venting Emotions. Both depression and anxiety were related to students coping through both Mental and Behavioral Disengagement as well as Alcohol/Drug Use. Whereas students with low anxiety tended to use more Planning, Suppression of

Competing Activities, and Humor in the first semester, students with high anxiety increased their use of Planning and Suppression of Competing Activities in the second semester.

Research Question 7. Factors Related to Coping in Different Ways.

The characteristics of control, effectiveness, and confidence about coping each influenced the greater use of emotion-focused coping in the first semester as compared to the coping efforts of students in the second semester. Regardless of the nature of specific desired coping outcomes, when students felt confident about attaining those outcomes, they rated coping as effective. Students' perceptions about the stress and control associated with top demands was associated with emotion-focused and disengagement coping. When demands were newly experienced at the beginning of the academic year, students' coping strategies reflected more emotional expression and less use of Mental Disengagement, Restraint, and Seeking Social Support - Instrumental. However, as demands and coping strategies extended over the course of the academic year, there was less use of coping through Restraint and increased use of coping through Mental Disengagement, Seeking Social Support - Instrumental, and Acceptance.

Female students tended to cope more through Venting Emotions and Seeking Social Support - Emotional. Students age 25+ reported the most coping through Suppression of Competing Activities.

Whether or not students had criteria in mind when they selected coping strategies did not produce a significant relationship with the use of particular coping strategies. Of all of the demographic factors, the employment status of students had the most influence on coping. Nonworking students reported using more Suppression of Competing Activities and Mental Disengagement coping in the first semester and increased their use of Seeking Social Support - Instrumental in the second semester. Working students generally reported higher levels of stress and increased their use of Planning and Suppression of Competing Activities in the second semester. Both nonworking and working students used more coping through Positive Reinterpretation and Growth in the first semester.

CHAPTER 5

Discussion

The first portion of the discussion contains a review and elaboration of the significant results addressing the research questions. Within this discussion, current results are linked with theoretical perspectives and empirical research related to coping. Subsequent to that section, the implications of the results are discussed, followed by a presentation of the limitations of the current study and the directions for future research. In the final section, applications of the results are explored, with particular attention to practical programming, instructional, and counselling areas of student services. The main points of the results are summarized in the conclusion.

The main findings of the study were that students generally perceived academic situations to be their most demanding across time, however, the nature of demand characteristics varied considerably. Whether or not students found demands to be stressful was associated with the length of time experiencing demands and perceived control. While students' top demands remained stable as did coping in general, when different demands were compared, students adjusted their coping efforts, therefore providing support for a situational explanation of coping. Positive reinterpretation paired with problem-focused coping were most frequently used by students throughout the academic year. Although emotional distress did not appear to influence the use of problem-focused coping, higher levels of distress were associated with the use of emotion-focused and disengagement coping. Students generally rated their contacts with campus resources as highly useful in coping with demands, particularly due to the attitude, attention, and information provided.

Students in their first year of a post-secondary program perceived academic situations to be their greatest demand. When asked to elaborate the reasons why they perceived academic situations demanding, students provided a variety of responses. Although the sheer volume of work was overwhelming for most students, students also reported

reasons that reflected both internal and/or external standards and concerns about the impact of academic demands on significant others, including family and friends. This variety in the meaning of academic demands has also been discussed by Grites (1979) and Grandy, Westerman, Mitchell, and Lupo (1984). As early as the third week of classes, financial concerns were ranked as the second most demanding situation. Similar to Higgins' (1985) results, the combination of relationship and family demands was the third most frequently reported concern of students. The finding that perceived stress of demands was particularly influenced by students' appraisals of control over the situation and the length of time experiencing demands closely parallels previous studies by Folkman and Lazarus (1985), Forsythe and Compas (1987) and Killeen (1990). Similar to the study by Krantz (1983), students' expectations about upcoming demands did not turn out to be their actual demands.

Given the variety in the nature of demands reported by students, it is interesting to consider how students were coping. There was considerable consistency throughout the academic year, regardless of the nature of demands, in the use of Positive Reinterpretation and Growth, Planning, Action, Acceptance, and Suppression of Competing Activities. Problem-focused coping scales were related across time, as were combinations of coping strategies, thereby substantiating Folkman and Lazarus' (1980) findings. Students who were confident about their use of coping strategies viewed their efforts as effectively meeting demand characteristics, supporting Rippoe and Roger's (1987) proposal that efficacy expectations are linked to appraisals of coping effectiveness.

The issue of coping stability was of particular interest in this study. In general, students' top demands and ways of coping were highly stable across time. With the exception of problem-focused coping, stability was higher when controlling for the effects of emotional distress. However, in a comparison of coping between same demands and different demands, there was considerable evidence indicating the variability of coping efforts. In reference to different demands, students used different ways of coping, as was

reported in other studies of undergraduates by Dolan and While (1988), Folkman et al. (1986) and Compas, Forsythe, and Wagner (1988).

Student's experience of stress, depression, and anxiety showed a strong relationship over time. Stress levels increased over the academic year and students reported the most depression at the end of the year. As previously reported by Coyne, Aldwin, and Lazarus (1981) and Folkman and Lazarus (1986), emotional distress had considerable influence on the use of emotion-focused and disengagement coping, but not the use of problem-focused coping. When students were distressed, they continued to utilize problem-focused coping, increased their use of emotion-focused coping and used strategies that may be antithetical to adaptive coping in situations that called for action. This contrasts with the results of Compas, Forsythe, and Wagner (1988) and Mitchell et al. (1983) who found that high levels of affect impacted both emotion-focused and problem-focused coping.

When the sample was divided into different demographic subgroups, interesting differences in coping emerged between subgroups and for the same subgroup across time. Whether or not students were employed while full-time students had considerable impact on both their experience of stress and their coping efforts at different times during the academic year. As implied by the work of Buetall and O'Hare (1987) and Chartrand (1990), it may be that students who juggle both work and school need different coping options during the year than students who are able to focus their attention on the student role.

There were no significant differences in the types of demands reported by male or female students or students in different age subgroups, unlike previous research by Billings and Moos (1964) and Jorgensen and Johnson (1990). However, sex differences were most apparent in the heightened experience of global stress and use of emotion-focused coping by females in comparison to males, similar to findings by Houtman (1990) and Martin et al. (1989). For female students, the availability of coping resources from which to draw emotional support and understanding appears paramount to dealing with demands

(Belle, 1987). However, no evidence of sex differences in the use of problem-focused coping closely resembles previous reports by Nezu and Nezu (1987) and Endler and Parker (1990). The coping efforts of direct entry students, age 18-19, showed greater use of both emotion-focused and disengagement coping, as well as greater stability across time. As suggested by Folkman (1984) and Scheier et al. (1986), this group of students may be appropriately responding to situations over which they appraise little control, however, younger students may lack coping strategies that are more effective for directly engaging in demand resolution.

Given that the mandate of most campus resources is to meet the learning and personal needs of students, the ways in which students utilized and evaluated those services to cope with demands was of particular interest (Lazarus & Folkman, 1984). The increased frequency in use of Seeking Social Support - Instrumental in the second half of the year is consistent with students' reports of accessing campus resources to cope with demands. Students generally perceived their contact with campus resources as a highly useful way of coping. Students noted the personal attention, information, and attitude shown towards them as key criterion in their evaluations of the usefulness of resources.

Implications

The overriding goals of this study were to investigate the nature of demands perceived by students during their first year in a post-secondary program, the strategies used to cope with those demands, and the extent to which students utilized institutional resources in their efforts to cope with demands. The results summarized above parallel Staik and Dickman's (1988) findings that the highest ranked concerns of students are academic, financial, and relationships. Other studies that corroborate the classifications of academic and nonacademic demands include Peros (1983), Stern and Zevon (1990), and Stark, Spirito, Williams, and Guevremont (1989). The consistency with which academic situations were ranked as demanding may be explained by students' experience in a new role. Lazarus and Folkman (1984) have noted that the novelty of a situation is a

determining factor in the appraisal of situations as demanding. The relationships between demands and the perceived stress associated with demands suggest that many subjects were inadequately prepared for the student role.

The most frequently used coping strategy was Positive Reinterpretation and Growth, making the best of the situation by viewing it in a more favorable light, or growing from it (Carver et al., 1989). This strategy, paired with the use of problem-focused coping, indicates that students develop a mental set which enables them to take action to cope with demands (Scheier & Carver, 1985). Taylor and Brown (1988) have suggested that a positive outlook may be especially beneficial to enhance motivation, persistence, and performance, criterion essential for academic success. Despite adversity, so long as students are able to use positive reappraisal they are more apt to initiate and/or continue problem-focused coping (Carver et al., 1989; Lazarus & Folkman, 1984). Thus, the ability to see positive aspects of a situation may impact both the initial appraisal of demands and the ability to sustain coping efforts.

The results of this study substantiate the concurrent use of different types of coping, as proposed by Carver et al., (1989) and Lazarus and Folkman (1985). Further, as suggested by Fleishmann (1984) and Shinn and Krantz (1981), the coping efforts of students demonstrated the variability of strategies used within each category. However, similar to Forsythe and Compas' (1987) and Folkman and Lazarus' (1985) studies of college students, there was evidence that younger students, age 18-19, had a propensity towards emotion-focused coping, suggesting that they appraised their inability to alter demand characteristics and resorted to emotional regulation (Folkman & Lazarus, 1980, Hiebert, 1988). Although intended to alleviate stress, Carver et al. (1989) argue that focusing on emotions over time may exacerbate distress and distract students from active coping efforts in dealing with the demands and movement towards demand resolution. A further implication derived from the works Cantor and Norem (1985), McCrae (1984), Pearlin and Schooler (1978) and Wheaton (1983) is that without a varied coping repertoire that

includes both self and situation management strategies, younger students may lack essential flexibility to cope with demands.

Appraisals of control and confidence about attained desired coping outcomes were key factors influencing the strategies selected by students. Lack of control over situational demands was linked to higher levels of stress, the subsequent greater use of palliative coping, and less use of coping strategies that would directly impact the demand, as predicted by Folkman (1984). Similarly, students who rated coping efforts as less effective used more emotional venting and disengagement coping. Students who rated their coping as highly effective tended to use more problem-focused coping and were able to maintain positive appraisals of demand characteristics. These findings are consistent with recent explanations of stress and coping which emphasize the link between appraisals of the situation as unchangeable, the experience of stress, and coping efforts directed towards regulation of emotion (Hiebert, 1988; Lazarus & Folkman, 1985). The results underscore the importance of exploring aspects of the situation over which students' perceive a lack of control, in order to determine areas where coping assistance is required. Conversely, through attending to aspects of the situation over which the student feels a sense of control, coping efforts may be focused on dealing directly with demand characteristics.

The results also substantiate Parkes (1990) and Kirsch, Mearns and Catanzaro's (1990) position that the personal agenda of subjects must be considered when assessing coping effectiveness. There was a positive relationship between students' assessment of their coping abilities and their appraisals of coping effectiveness. In other words, coping effectiveness was strongly influenced by student's impression of their coping efficacy as proposed by Gmelch and Chan (1992), Kirsch et al. (1990), Long and Gessaroli (1989), and Rippoe and Rogers (1987). Magnusson and Redekopp (1992) have suggested that additional attention is merited in the assessment of coping efficacy. Research reported by Heppner, Reeder, and Larson (1983) indicates that coping efficacy relates to evaluations

of coping effectiveness and also determines whether or not students enact the coping efforts that would potentially result in desired coping outcomes.

The results of this study have implications for the debate over coping stability. Multiple assessments of demands and coping over time in this study generally reflected moderate stability. The results are consistent with other studies that have taken situational contexts into account (Dolan & White, 1988; Lazarus & Folkman, 1985; Stone & Neale, 1984). In reference to different demands, coping efforts shifted to meet the perceived characteristics of the demanding situations. As concluded by Compas et al. (1988), when the specific contexts of demands are taken into consideration, coping efforts are likely to show consistency in response to the same stressor over time, however, in response to different types of stressors, coping efforts show low consistency. This supports Menaghan's (1982) recommendation that research regarding coping stability requires that the context of demands be considered and that coping efforts be studied in relationship to specific demands.

The results of this study generally did not support previous research by Folkman, Lazarus, Pimley, and Novacek (1987) that found gender and age differences in the appraisal of situational demands. However, the central focus on academic pursuits and the limited age spread of this sample may have obscured the relationships between sex, age, and the differential appraisal of demands (Folkman and Lazarus, 1980).

Female students did exhibit higher levels of global stress and used more emotion-focused coping than men, corroborating findings by Billings and Moos (1984), Endler and Parker (1990), Jick and Mitz, (1985), and Labouvie-Vief et al. (1987). One interpretation is that female students appraised demands to be beyond their control and, therefore, appropriately responded with palliative coping (Folkman, 1984; Lazarus & Folkman, 1984). The absence of sex differences in the use of problem-focused coping in specific demand contexts and the finding that females have greater coping stability on problem-focused coping in general supports researchers who have challenged the assumptions of a

purely dispositional explanation of coping (Long, 1990; Miller & Kirsch, 1987). The female students in this sample demonstrated a fuller range of coping strategies which, according to Hiebert and Basserman (1986) may leave them better equipped to deal with both changeable and unchangeable demands.

Students age 20 and older used more Suppression of Competing Activities, an active coping strategy essential to cope with competing role demands (Beutall & O'Hare, 1987). It may be that, in comparison to direct entry students, older students have multiple roles to balance. An alternative explanation has been offered by McCrae (1982). This suggests with the additional life experience that accompanies age, students are more selective about matching the use of particular coping strategies to meet demand characteristics. The latter may explain why younger students age 18-19 were more consistent in their use of all categories of coping and used several emotion-focused and disengagement coping strategies more often students in the other age groups. According to Patterson and McCubbin's (1987) discussion of the acquisition of coping skills, the lack of experience may leave the late adolescent less flexible in coping because of limited repertoire of skills from which to access. If so, the student population comprising direct entry students age 18-19 appear to be ideal candidates for skill training in the areas of problem-solving and/or social skills in order to enhance their repertoire of coping strategies (Magnusson & Redekopp, 1992).

Previous research has suggested that emotional distress, particularly anxiety and depression, has a moderating effect on coping (Endler & Parker, 1990). The position advocated by Aldwin and Revenson (1987) and Folkman and Lazarus (1985), that people who experience higher levels of stress, anxiety, or depression use more maladaptive coping, was substantiated in this study. Consistent with studies involving depressed persons (Barnett & Gotlib, 1988; Billings & Moos, 1984; Billings, Cronkite & Moos, 1983; Coyne, Aldwin, & Lazarus, 1981; Hovanitz, 1986), there was a strong association between higher levels of emotional distress and students' selection of palliative coping and

strategies that disengaged them from the situation. Coping through disengagement and humor may provide temporary relief for students, however, on a long-term basis may postpone dealing with demands directly and potentially add to the demand load (Carver et al., 1990). However, contrary to previous research, depression did not detract students from problem-focused coping. In general, students with low anxiety engaged in more planning and suppression of competing activities, the antithesis of avoidance coping expected of subjects with higher anxiety (Endler & Parker, 1990).

The results of this study suggest that services on campus can be of vital importance for students coping with a wide variety of academic and nonacademic demands. Less is known about the reasons why many students did not access school resources. One possibility may be that students were not aware of the services provided on campus or that students felt constrained in accessing those resources (Lazarus & Folkman, 1985). Another reason maybe that students used other ways of coping with demands. However, the lower use of instrumental coping, particularly in the first semester, may indicate that additional encouragement to utilize resources is needed. To the extent that resources are organized around student needs, early use of those resources may potentially influence both the impact and duration of perceived demands through bolstering students actual coping resources (Lazarus & Folkman, 1985). Through information services, students can gain knowledge about the variety of campus resources available. Yet, students may require additional assistance to overcome both personal and external factors that constrain the use of resources. For example, in response to recent life changes, adults new to the student role often report a sense of personal inadequacy and a high degree of threat to personal competency (Brundage & Macheracher, 1980; Cross, 1981). Suggesting the use of a coping resource that is unfamiliar may add to the student's sense of lack of control. Therefore, staff need to assist students to increase their sense of efficacy about actually using resources. It is crucial that staff explore how students are construing the resources

available and what it means for them to cope through using these resources (Lazarus & Folkman, 1984).

To summarize, the demands and coping strategies of students are influenced by the context of demands, the appraisals of demand characteristics, and the coping resources students perceive to meet demands. The appraisal process is influenced by factors such as control, stress, and confidence about attaining desired coping outcomes. Students' experience of emotional distress has a particular influence on the use of palliative and disengagement coping strategies. Although there were no sex differences in the use of problem-focused coping, female students used more emotion-focused coping than male students. Implications were discussed regarding the importance of a varied coping repertoire, particularly in reference to the higher coping stability and greater use of emotion-focused and disengagement coping by direct entry students. Finally, services on campus were considered as essential resources to assist students in their efforts to cope with academic and nonacademic demands.

Strengths and Limitations

The strengths of this study are found in the ways in which coping was investigated. Collecting data at four time points extending over the entire academic year permitted an investigation of the nature of demands and coping over time. Multiple assessments provided the opportunity to examine the role of cognitive appraisal factors which influenced students' evaluations of situations as demanding as well as changes in stress-related factors, including emotion. Further, tracking demands and coping over time allowed for an investigation into the stability of coping over time and across situations. Consistent with the recommendations of Lazarus and associates (Lazarus, 1991, Lazarus & Folkman, 1985) and McCrae and Costa (1986), both inter-individual as well as intra-individual comparisons were used to evaluate demands and coping. Comparisons investigating potential age and sex differences considered coping in general and in reference to specific demand contexts.

A second strength of the research is in the methodology used to collect and synthesize the data. The standardized measures provided normative data regarding the experiences of a post-secondary population. The researcher constructed questionnaire contained open-ended questions which encouraged student-generated responses and thereby enriched the qualitative nature of the results. This was particularly important in extending knowledge about the nature of demands and the factors that influence students' appraisals. Through the method of constant comparison outlined in Chapter 3, careful attention was paid to the development of a coding scheme that accurately reflected the responses of students without forcing their responses into a predetermined structure. Further, the procedure used to monitor coding drift provided assurance of the reliability of the coded data. Therefore, research results incorporated existing theoretical knowledge while representing the actual experiences of students. The use of generalizability coefficients to investigate the stability of coping over multiple situations is also considered to be a strength of the study. Coefficients of stability provided measures of the cross-situational generalizability of coping scores.

One limitation of the study is that the number of dependent measures used in the study presses the sample size required in the MANOVA analyses. Another limitation is the number of analyses performed to investigate the coping strategies used by students and, in particular, students' use of institutional resources. The possibility of Type I error must be acknowledged.

A second limitation of the study is the way in which the employment status of students was derived. All demographic information was collected in September and assumed to represent students' status throughout the year. For some variables, such as employment, there may have been changes in the number of hours worked, or shifts between working and not working. The influence of employment on coping in this study may be reflective of changes that were not accounted for.

Future Research Considerations

The outcomes of this study are conducive to several considerations for future research. Multiple assessments are an essential feature of research addressing the issue of coping stability across time and across situations. Both Folkman and Lazarus(1980) and Carver et al. (1989) have noted the importance of controlling for the nature of the situation. It is imperative that researchers be able to determine demand consistency as a precondition for investigations of coping consistency. Through the retention of open-ended methodology, researchers will be able to uncover the nature of specific demands and coping efforts in a depth prohibited by global descriptions. One consideration is the assessment of student responses on a more frequent basis or with less time between measurement occasions. This may hold potential for identifying in finer detail the influencing factors on students' appraisal of demanding situations.

Further research on sex and age differences in coping requires that the situational properties of demands be considered. Examinations of demands or coping globally as reports of subjects "usual" experience has little potential for contributing to existing knowledge. As recommended by Magnusson (1982), researchers need to attend to the characteristics of the situations under investigation, and research is needed in a more varied set of situations. It is essential that researchers consider potential differences in the sources of stress and differential access to coping resources while investigating the influence of sex or age on coping (Lieberman, 1982).

The results from this study clearly indicate the need for further research regarding the impact of emotional distress on students' experience of demands and ways of coping. In particular, depression appears to be linked with disengagement forms of coping. Withdrawing from demanding situations may have grave consequences for students' academic and personal success. The impact of depression on students' first year experience warrants future attention to both research and intervention programs.

The strong associations between perceived control, stress, and coping require additional clarification. Folkman (1984) has suggested that control may influence coping either as a generalized belief about control over outcomes of importance, or as a situational appraisal of the possibilities for control in a specific situation. Without further articulation, our understanding of the role of control in stress and coping is likely to stay at these broad categories. Future research could attend to the specific characteristics of a situation that the individual uses as the reference points for control appraisals, and investigate the basis on which the individual reaches conclusions about control efficacy. In this way, research may extend beyond broad conceptualizations of control (or lack of it) and uncover salient features of control appraisals.

Finally, the issue of coping adaptiveness is one frequently mentioned but rarely investigated in the literature. Evidence from this study suggests that certain cluster of coping strategies were used at different points during the academic year, and that students who were confident in their coping efforts regarded those efforts as effective. However, the relationships between demand characteristics, particular coping strategies, and coping outcomes require further delineation.

Conclusions and Implications for Practise

The results from this study also have practical implications for educators who plan and deliver services in a post-secondary setting.

Administrators

Educators responsible for educational programs on campus need to consider the types of support services that will enhance student success. Adult students require assistance to cope with the wide variety of academic and nonacademic demands that are associated with the transition into post-secondary education. There are three recommendations that stem from the results of this research. First, it is apparent that most students were overwhelmed by the rigors of their academic program, the demands on their time for classes, homework, assignments, and studying, and that many students found that past

expectations for performance were inappropriate in this new context. Other common issues for adult students was the impact of their education on important relationships and the strain on financial resources that was associated with educational costs. In order to assist socialization to the student role, orientation programs are needed which outline some of the more typical experiences of students and ways that students have previously found effective in coping with perceived demands. That way, students may have increased opportunities to anticipate and prepare for the changes associated with the student role. In addition, given the perceived impact of academic demands on relationships, it may be useful to include spouses and/or other family members in orientations or host sessions aimed at topics relevant for significant others.

The finding that stress and depression levels increase during the year suggests that additional programs are required to assist students to cope with demands. Given the evidence that different demands require different coping strategies, a wide variety of services is essential. The timing of workshops or psychoeducational programs requires flexible scheduling, recognizing that student needs arise and shift at varying times during the academic year, and being considerate not to add to the existing demand load of students.

A third recommendation has to do with the delivery of academic programs. Many students commented that they felt overtaxed by the academic load. It may be that the inclusion of instruction regarding coping strategies within the classroom curriculum would be an effective mode of service delivery. Many students are ill-equipped in the first semester in topics such as study skills, planning, time-management, and stress management techniques that are essential for academic and personal success. This recommendation implies that curriculum contain both academic content and attention to the processes that lead to successful management of the academic role. Programs that include instruction about essential coping skills and resources would undoubtedly support students' academic success.

Counsellors and Instructors

Instructors and counsellors can assist students to effectively cope with specific demands that arise during the course of the academic year. First, the presenting demands of students deserve inquiry regarding the specific nature of students' concerns. It is important not to assume what students find demanding; rather, the idiosyncratic meanings attached to demands by students are central for understanding. Second, the resources available to the student, including those which have already been utilized, require assessment. It is important to distinguish between the existing resources available to the student, the appropriateness of those resources, and any obstacles that may be preventing students from accessing suitable resources. Third, intervention strategies need to be considerate of the existing strengths of students and careful not to deplete the individual's existing coping strategies. Students often seek assistance when they are already feeling overtaxed. Recommendations that exceed current competency levels may only represent an additional demand to the individual who is already feeling stressed. Therefore, professionals need to do more than suggest alternatives or refer students to coping resources. Effective intervention requires assessment of the nature of the demands, the existing coping repertoire, and training to enhance the coping efforts of students.

The relationship between emotional distress and coping deserves additional mention. Students who exhibit symptoms of emotional distress, and in particular depression, may be restricting their use of coping strategies to emotional regulation or strategies that disengage them from the demand situation. Without first attending to excessive affect and/or the use of destructive disengagement coping strategies, students may be impaired in the use of more action oriented or problem-focused coping and at risk for further deterioration of their perceived demands. Counsellors need to assess the level of students' emotional distress and assist them with strategies to reduce levels of affect that may interfere with the use of adaptive forms of coping.

In summary, the principle findings of this study were that the demands reported by students were primarily academic in nature yet varied considerably according to perceived demand characteristics; that coping tends to be stable on a global basis but shifts in response to different situational properties; and that coping was influenced by the factors of control, confidence, emotional distress, and use of institutional resources. There was little support for a dispositional explanation of coping, particularly regarding the influence of sex or age on coping.

This study offers substantial support for a situational explanation of coping. Although students' top ranked demands remained consistent, there was considerable variation in subject's reports of the characteristics of demands. Shifts in both situational demands and coping efforts over time and across situations were evident. When investigating coping in general or in the context of same demands, coping reflected high stability across time. However, different situational demands precipitated different coping responses by students across time.

The use of institutional resources by students has important implications for program planning and service delivery. By attending to attitude, information, and availability factors that students perceive as useful in coping, services can maximize assistance offered to students. However, students may require assistance to link with campus resources, particularly early in the academic year. By educating students about how to access resources, educators can assist in equipping students with an essential competency to cope with future demands.

In conclusion, the demands and coping efforts of students are varied across their first year of post-secondary education. However, the findings from this study suggest that by attending to the factors that influence the appraisal process, our understanding of the coping process will be enriched, as will our interventions to enhance students' coping efforts.

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Appendix A

Information Letter

Dear SAIT student,

Every year, students attending SAIT deal with demands that are part of their academic program as well as demands that arise from home, family, work, financial, and community responsibilities. Some of these demands students take in stride while others become sources of considerable stress. A research project is being developed for the 1991/92 academic year about the ways in which SAIT students cope with stress.

WE NEED YOUR ASSISTANCE! The best way to understand the experiences of students is to involve students. We need 168 SAIT STUDENTS to participate in a study of **COPING WITH STRESS**. It involves filling out 2 questionnaires regarding the demands in your life and how you cope with them. The questionnaires will be sent to your home at 4 different times during the year. The average student takes approximately 60 minutes to fill out the questionnaires. That is 4 hours of your time this year to help us with the project.

WHAT INFORMATION IS REQUIRED? The questions ask you to list the demands you are currently facing in your life and the ways in which you cope with those demands. All information is **CONFIDENTIAL** and in no way impacts your academic grades. Your name is kept on the questionnaires until the 4th time and then we change all names to number codes. No identifiable names are kept. You are free to withdraw from the study at any time throughout the year.

WHAT IS IN THIS FOR YOU? The main thing you get is a chance to **VOLUNTEER EXPERIENCE** which will help counsellors understand ways in which to help students. At the end of the information collection, each student may obtain a profile of the ways in which they cope with demands in their life. Further, interested students can receive skill training in areas where coping deficits have been identified. This program will be tailored to meet each individual's needs. Both of these are optional.

WHO IS DOING THIS STUDY? As a psychologist with Student Counselling at SAIT, I am particularly interested in the ways in which students cope with stress. As part of my PH.D. program at the University of Calgary, I wanted to do a research project that would potentially benefit SAIT students. My supervising professor at U. of C. and 3 Master's students are working together on the project. However, I am the contact person for the project and would be glad to discuss it with you at any time.

CAN WE COUNT ON YOUR PARTICIPATION? If you are interested in participating, please read and sign the attached consent form. A letter will be forwarded to you in the next 3 weeks regarding the project.

THANKS FOR YOUR INTEREST!!

Sincerely

Nancy Arthur
Psychologist
Counselling Services

Appendix B

Consent Form

By signing this consent form, I am agreeing to participate in the COPING WITH STRESS study during the 1991/92 academic year.

I understand that at 4 times during the year, I will be asked to fill out questionnaires related to life demands and coping. At any time during the study, I may contact the principal researcher, Nancy Arthur, at SAIT Counselling Services, Heritage Hall, M331 for further information. Further, I understand that my participation may discontinue for any reason during the year. I have been advised that no identifiable records will be kept and that my participation has no bearing on academic standings while enrolled at SAIT.

As of September 1, 1991, my age is 18 years or older.

Please print name

Please sign name

Name of academic program

Telephone number

Current Mailing Address

Appendix C

COPE

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This questionnaire asks you to indicate what you are doing and feeling in response to demanding situations. Please response to each of the following items by considering your current #1 ranked demand.

CURRENT #1 RANKED DEMAND: _____

Circle a number from 1 to 5 on this sheet for each of the following items. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully and make your answers as true FOR YOU as you can. Please answer every item. There are no right or wrong answers, so choose the most accurate answer for YOU, not what you think most people would say or do in the demanding situation.

1. I don't do this at all
 2. I do this a little bit
 3. I do this a medium amount
 4. I do this a lot
-
- | | | | | |
|--|---|---|---|---|
| 1. I try to grow as a person as a result of the experience. | 1 | 2 | 3 | 4 |
| 2. I turn to work or other substitute activities to take my mind off things. | 1 | 2 | 3 | 4 |
| 3. I get upset and let my emotions out. | 1 | 2 | 3 | 4 |
| 4. I try to get advice from someone about what to do. | 1 | 2 | 3 | 4 |
| 5. I concentrate my efforts on doing something about it. | 1 | 2 | 3 | 4 |
| 6. I say to myself "this isn't real". | 1 | 2 | 3 | 4 |
| 7. I put my trust in God. | 1 | 2 | 3 | 4 |
| 8. I laugh about the situation. | 1 | 2 | 3 | 4 |

- | | | | | |
|---|---|---|---|---|
| 9. I admit to myself that I can't deal with it,
and quit trying. | 1 | 2 | 3 | 4 |
| 10. I restrain myself from doing anything too quickly. | 1 | 2 | 3 | 4 |
| 11. I discuss my feelings with someone. | 1 | 2 | 3 | 4 |
| 12. I use alcohol or drugs to make myself feel better. | 1 | 2 | 3 | 4 |
| 13. I get used to the idea that it happened. | 1 | 2 | 3 | 4 |
| 14. I talk to someone to find out more about the situation. | 1 | 2 | 3 | 4 |
| 15. I keep myself from getting distracted by other
thoughts or activities. | 1 | 2 | 3 | 4 |
| 16. I daydream about things other than this. | 1 | 2 | 3 | 4 |
| 17. I get upset, and am really aware of it. | 1 | 2 | 3 | 4 |
| 18. I seek God's help. | 1 | 2 | 3 | 4 |
| 19. I make a plan of action. | 1 | 2 | 3 | 4 |
| 20. I make jokes about it. | 1 | 2 | 3 | 4 |
| 21. I accept that this has happened and that
it can't be changed. | 1 | 2 | 3 | 4 |
| 22. I hold off doing anything about it until the
situation permits. | 1 | 2 | 3 | 4 |
| 23. I try to get emotional support from friends
or relatives. | 1 | 2 | 3 | 4 |
| 24. I just give up trying to reach my goal | 1 | 2 | 3 | 4 |
| 25. I take additional action to try to get rid of the problem. | | | | |
| 26. I try to lose myself for a while by drinking
alcohol or taking drugs. | 1 | 2 | 3 | 4 |
| 27. I refuse to believe that it has happened. | 1 | 2 | 3 | 4 |
| 28. I let my feelings out. | 1 | 2 | 3 | 4 |
| 29. I try to see it in a different light, to make it | | | | |

seem more positive.	1	2	3	4
30. I talk to someone who could do something concrete about the problem.	1	2	3	4
31. I sleep more than usual.	1	2	3	4
32. I try to come up with a strategy about what to do.	1	2	3	4
33. I focus on dealing with this problem, and if necessary let other things slide a little.	1	2	3	4
34. I get sympathy and understanding from someone.	1	2	3	4
35. I drink alcohol or take drugs, in order to think about it less.	1	2	3	4
36. I kid around about it.	1	2	3	4
37. I give up the attempt to get what I want.	1	2	3	4
38. I look for something good in what is happening.	1	2	3	4
39. I think about how I might best handle the problem.	1	2	3	4
40. I pretend that it hasn't really happened.	1	2	3	4
41. I make sure not to make matters worse by acting too soon.	1	2	3	4
42. I try hard to prevent other things from interfering with my efforts at dealing with this.	1	2	3	4
43. I go to movies or watch TV, to think about it less.	1	2	3	4
44. I accept the reality of the fact that it happened.	1	2	3	4
45. I ask people who have had similar experiences what they did.	1	2	3	4
46. I feel a lot of emotional distress and I find myself expressing those feelings a lot.	1	2	3	4
47. I take direct action to get around the problem.	1	2	3	4
48. I try to find comfort in my religion.	1	2	3	4

- | | | | | |
|---|---|---|---|---|
| 49. I force myself to wait for the right time to do something. | 1 | 2 | 3 | 4 |
| 50. I make fun of the situation. | 1 | 2 | 3 | 4 |
| 51. I reduce the amount of effort I'm putting into solving the problem. | 1 | 2 | 3 | 4 |
| 52. I talk to someone about how I feel. | 1 | 2 | 3 | 4 |
| 53. I use alcohol or drugs to help me get through it. | 1 | 2 | 3 | 4 |
| 54. I learn to live with it. | 1 | 2 | 3 | 4 |
| 55. I put aside other activities in order to concentrate on this. | 1 | 2 | 3 | 4 |
| 56. I think hard about what steps to take. | 1 | 2 | 3 | 4 |
| 57. I act as though it hasn't event happened. | 1 | 2 | 3 | 4 |
| 58. I do what has to be done, one step at a time. | 1 | 2 | 3 | 4 |
| 59. I learn something from the experience. | 1 | 2 | 3 | 4 |
| 60. I pray more than usual. | | | | |

Appendix D

Beck Depression Inventory

(Reprinted with permission of the authors)

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the **past week, including today**. Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. **Be sure to read all statements in each group before making your choice.**

1. 0 I do not feel sad.
 - 1 I feel sad.
 - 2 I am sad all the time and I can't snap out of it.
 - 3 I am so sad or unhappy that I can't stand it.
2. 0 I am not particularly discouraged about the future.
 - 1 I feel discouraged about the future.
 - 2 I feel I have nothing to look forward to.
 - 3 I feel that the future is hopeless and that things cannot improve.
3. 0 I do not feel like a failure.
 - 1 I feel I have failed more than the average person.
 - 2 As I look back on my life, all I can see is a lot of failures.
 - 3 I feel I am a complete failure as a person.
4. 0 I get as much satisfaction out of things as I used to.
 - 1 I don't enjoy things the way I used to.
 - 2 I don't get real satisfaction out of anything anymore.
 - 3 I am dissatisfied or bored with everything.

- 5 0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.
- 6 0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.
- 7 0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.
- 8 0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.
- 9 0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.
- 10 0 I don't cry any more than usual.
1 I cry more now than I use to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.

- 11 0 I am no more irritated now than I ever am.
- 1 I get annoyed or irritated more easily than I used to.
 - 2 I feel irritated all the time now.
 - 3 I don't get irritated at all by the things that used to irritate me.
- 12 0 I have not lost an interest in other people.
- 1 I am less interested in other people than I used to be.
 - 2 I have lost most of my interest in other people.
 - 3 I have lost all of my interest in other people.
- 13 0 I make decisions about as well as I ever could.
- 1 I put off making decisions more than I used to.
 - 2 I have greater difficulty in making decisions than before.
 - 3 I can't make decisions at all any more.
- 14 0 I don't feel I look any worse than I use to.
- 1 I am worried that I am looking old or unattractive.
 - 2 I feel that there are permanent changes in my appearance that make me look unattractive.
 - 3 I believe that I look ugly.
- 15 0 I can work about as well as before.
- 1 It takes an extra effort to get started at doing something.
 - 2 I have to push myself very hard to do anything.
 - 3 I can't do any work at all.
- 16 0 I can sleep as well as I used to.
- 1 I don't sleep as well as I use to.
 - 2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
 - 3 I wake up several hours earlier than I used to and cannot get back to sleep.

17 0 I don't get more tired than usual.

1 I get tired more easily than I used to.

2 I get tired from doing almost anything.

3 I am too tired to do anything.

18 0 My appetite is no worse than usual.

1 My appetite is not as good as it used to be.

2 My appetite is much worse now.

3 I have no appetite at all anymore.

19 0 I haven't lost much weight, if any, lately.

1 I have lost more than 5 pounds.

I am purposely trying to lose weight

2 I have lost more than 10 pounds.

be eating less. Yes ____ No ____

3 I have lost more than 15 pounds.

20 0 I am no more worried about my health than usual.

1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.

2 I am very worried about physical problems and it is hard to think of much else.

3 I am so worried about my physical problems that I cannot think about anything else.

21 0 I have not noticed any recent change in my interest in sex.

1 I am less interested in sex than I used to be.

2 I am much less interested in sex now.

3 I have lost interest in sex completely.

Appendix E

Beck Anxiety Inventory

(Reprinted with permission of the authors)

Below is a list of common symptoms of anxiety. Please read each item in the list carefully. Indicate how much you have been bothered by each symptom during the past week, including today by placing an X in the corresponding space in the column next to each symptom.

	Not at all	Mildly, it did not bother me much	Moderately, it was very unpleasant but	Severely, I could barely stand it
Numbness or tingling				
Feeling hot				
Wobbliness in legs				
Unable to relax				
Fear of worst happening				
Dizzy or lightheaded				
Heart pounding or racing				
Unsteady				
Terrified				
Nervous				
Feelings of choking				
Hands trembling				
Shaky				
Fear of losing control				
Scared				
Indigestion or discomfort in abdomen				
Faint				
Face Flushed				
Sweating (not due to heat)				

Appendix F

Inventory of Student Demands

INVENTORY OF STUDENT DEMANDS - September, 1991

Name _____

Telephone _____

SAIT Program _____

Personal Data

Please try to answer all questions. CIRCLE the number that represents your response, only one response for each question. Thank you.

Example: 1. Place of residence. <table> <tr> <td>1. Fort McMurray</td> <td>5. Medicine Hat</td> </tr> <tr> <td>2. Edmonton</td> <td>6. Lethbridge</td> </tr> <tr> <td>3. Red Deer</td> <td>7. Other</td> </tr> <tr> <td>4. Calgary</td> <td></td> </tr> </table> This respondent lives in Calgary.	1. Fort McMurray	5. Medicine Hat	2. Edmonton	6. Lethbridge	3. Red Deer	7. Other	4. Calgary	
1. Fort McMurray	5. Medicine Hat							
2. Edmonton	6. Lethbridge							
3. Red Deer	7. Other							
4. Calgary								

1. Sex.

- 1. Male
- 2. Female

2. Age _____

3. Relationship Status

- 1. Single
- 2. Cohabitation
- 3. Married
- 4. Separated/Divorced
- 5. Widowed

4. Children

- 1. No children
- 2. 1 child
- 3. 2 children
- 4. 3 children
- 5. 4 children or more

5. Living Arrangements

- 1. With parents
- 2. With spouse
- 3. With partner

4. With other relatives
 5. With roommate(s)
 6. Living Alone
6. Hours employed per week while attending SAIT
1. 0 hours - not employed
 2. 1-10 hours
 3. 10-20 hours
 4. 20-30 hours
7. Previous Education
1. Less than grade 12
 2. High school diploma
 3. Some postsecondary education
 4. Completed postsecondary diploma or degree
8. In what year did you complete the required courses for SAIT admission?
1. 1991
 2. 1990
 3. 1984-1989
 4. 1980-1985
 5. Prior to 1980
9. If you upgraded for SAIT entrance through adult education courses or attended another post-secondary school in the previous 2 years, was it
1. Full-time (taking 3 courses or more at school)
 2. Part-time (taking less than 3 courses at once)
 3. Not applicable
10. Experience since leaving high school. For this question, circle as many responses that are applicable to you. Indicate the length of time spent in that category by circling the appropriate number in the corresponding right hand column, according to the following:
1. 0-6 months
 2. 6 months - 1 year
 3. 1-2 years
 4. 2-5 years
 5. 5 years or more
- | | | | | | |
|--------------------------------|---|---|---|---|---|
| 1. Employed part-time | 1 | 2 | 3 | 4 | 5 |
| 2. Employed full-time | 1 | 2 | 3 | 4 | 5 |
| 3. Travelled | 1 | 2 | 3 | 4 | 5 |
| 4. Educational upgrading | 1 | 2 | 3 | 4 | 5 |
| 5. Parented full-time | 1 | 2 | 3 | 4 | 5 |
| 6. Unemployed | 1 | 2 | 3 | 4 | 5 |
| 7. Other: Please specify _____ | | | | | |

25. Indicate with an "X" whether or not you have used any SAIT resources to deal with the demand. In the column on the right, please rate the usefulness of each resource that you used, on a 0 (low) - 5 (high) scale.

SAIT RESOURCES	YES	NO	USEFULNESS					
1. Counselling Services			0	1	2	3	4	5
2. Employment Services			0	1	2	3	4	5
3. Learning Skills Center			0	1	2	3	4	5
4. Campus Recreation			0	1	2	3	4	5
5. Learning Resources Centre			0	1	2	3	4	5
6. Campus Health			0	1	2	3	4	5
7. SAIT Instructors			0	1	2	3	4	5
8. Residence Staff			0	1	2	3	4	5
9. Chaplains			0	1	2	3	4	5
10. Registrar's Office			0	1	2	3	4	5
11. Student's Association			0	1	2	3	4	5
12. Other (please specify			0	1	2	3	4	5

26. What specifically about the resources did you find useful / not useful?

SAIT RESOURCE # _____ CHARACTERISTIC THAT MAKES IT USEFUL/NOT USEFUL

27. In the next month, what do you anticipate will be the most demanding situation in your life?

28. In what way(s) are you going to try to deal with this demanding situation?

Appendix G

COPE Scales

The COPE is made up of the following scales:

1. Active Planning: Taking action, exerting efforts, to remove or circumvent the stressor.
2. Planning: Thinking about how to confront the stressor, planning one's active coping efforts.
3. Seeking Instrumental Social Support: Seeking assistance, information, or advice about what to do.
4. Seeking Emotional Social Support: Getting sympathy or emotional support from someone.
5. Suppression of Competing Activities: Suppressing one's attention to activities in which one might engage, in order to concentrate more completely on dealing with the stressor.
6. Religion: Increased engagement in religious activities.
7. Positive Reinterpretation and Growth: Making the best of the situation by growing from it, or viewing it in a more favorable light.
8. Restraint Coping: Coping passively by holding back one's coping attempts until they can be of use.
9. Acceptance: Accepting the fact that the stressful event has occurred and is real.
10. Focus on and Venting of Emotions: An increased awareness of one's emotional distress, and a concomitant tendency to ventilate or discharge those feelings.
11. Denial: An attempt to reject the reality of the stressful event.
12. Mental Disengagement: Psychological disengagement from the goal with which the stressor is interfering, through daydreaming, sleep, or self-distraction.
13. Behavioral Disengagement: Giving up, or withdrawing effort from the attempt to attain the goal with which the stressor is interfering.
14. Alcohol/Drug Use: Turning to the use of alcohol or other drugs as a way of disengaging from the stressor.
15. Humor: Making jokes about the stressor.

Appendix H

Coding Taxonomy

In the next month, what do you anticipate will be the most demanding situation in your life:

- 01 Academic
 - 011 Unspecified (includes education)
 - 012 Achievement
 - 013 Time
 - 014 Exams
 - 015 Courseload/Homework/Studying/Schoolwork
 - 016 Adjustment/Adaptation to student role
 - 017 Program/Career choice
- 02 Relationships
 - 021 Unspecified (Who)
 - 0211 Unspecified (What)
 - 0212 Time
 - 022 Significant Other
 - 0221 Unspecified (What)
 - 0222 Time
 - 0223 Ex-Significant Other/Current breakdown
 - 023 Spouse
 - 0231 Unspecified (What)
 - 0232 Time
 - 0233 Ex-Spouse/Current breakdown
 - 024 Friends
 - 0241 Unspecified
 - 0242 Time (Includes Socializing)
 - 025 Other Acquaintances (e.g., roommates, coworkers)
 - 0251 Unspecified (What)
 - 0252 Time
 - 0253 Offering Assistance
- 03 Employment
 - 031 Unspecified
 - 032 Seeking
 - 033 Job responsibilities
- 04 Family
 - 041 Unspecified
 - 042 Time
 - 043 Children's needs

- 044 Family member's employment
- 045 Family pressures - nonacademic
- 046 Parents
- 047 Siblings
- 048 Grandparents
- 049 Death of family member
- 05 Health
 - 051 Unspecified
 - 052 Mental Health/happiness
 - 053 Physical Disability
- 06 Finances
 - 061 Unspecified
 - 062 Having sufficient funds/paying bills/savings
 - 063 Providing for family
- 07 Accomodation
 - 071 Unspecified
 - 072 Household duties
 - 073 Seeking
 - 074 Moving/adjusting to new home/leaving old home
- 08 Time Management
 - 081 General
 - 082 Competing Activities
- 09 Role Conflict
 - 091 Unspecified
- 10 Satisfying Personal Needs
 - 101 Unspecified
 - 102 Recreation
 - 103 Physical fitness
 - 104 Leisure and socializing
 - 105 Sleep/insomnia
 - 106 Time for self/time alone
 - 107 Dieting
 - 108 Independence
- 11 Worrying
 - 111 Unspecified
 - 112 Future
- 12 Other
 - Unspecified

What is it about the situation that you find demanding:

- 01 Academic
 - 011 Quantitative overload (includes pacing and scheduling)
 - 012 Qualitative (Level of difficulty/Understanding/Competitiveness/Boring)
 - 013 Achievement - external standards
- 02 Personal Expectations
 - 021 Performance - internal standards (any role not just academic)
 - 022 Motivation
 - 023 Self-confidence
- 03 Time
 - 031 Leisure/Time Alone
 - 032 Studying (Insufficient time to study/Time Mgt. issue)
 - 033 Family/Friends/Significant Others
 - 034 Commuting /Travel
 - 035 Time Management
- 04 Worry
 - 041 Health
 - 042 Family
 - 043 Future
 - 044 Significant Other
 - 045 Stress/Sense of control
 - 046 Decision-making
- 05 Finances
 - 051 Paying bills/Debts/Getting a loan/Lack of funds
 - 052 Supporting family/children
 - 053 Unemployment
 - 054 Accommodation
 - 055 Affording Education
 - 056 Affording personal wants/luxuries
 - 057 Budgeting
- 06 Other
 - 061 Unspecified
 - 062 Do not know
 - 063 Nothing/Demand resolved

07 Family Pressures

- 071 Parents
- 072 Relationship Breakdown (Own or someone else)
- 073 Others
- 074 Spouse/Significant Other
- 075 Children's problems

08 Employment (current)

- 081 Qualifications
- 082 Availability/Seeking
- 083 Qualitative Factors

09 Lack of Social Support

- 091 Age Differences
- 092 New friends
- 093 No family/Away from family

10 Personal Differences/Conflict

- 101 Living Arrangements
- 102 Significant other

If this situation is not resolved what are the consequences:

- 01 Academic
 - 011 Failure to pass
 - 012 Program/Course withdrawal
 - 013 Quantitative overload
 - 014 Repeat courses/Take evening classes
 - 015 Low grades
 - 016 Miss classes
 - 017 Lack of understanding/comprehension
- 02 Future
 - 021 Goals
 - 022 Change plans
- 03 Relationships
 - 031 Deterioration/Break-up/Inadequate social life
 - 032 Other's behavior
 - 033 Disappointing/hurting others
- 04 Health
 - 041 Stress (depression or loneliness), Mental Health
 - 042 Physical (includes death)
- 05 Personal
 - 051 Failure (internal standards)
 - 052 Disappointment
 - 053 Withdrawal/Rejection
 - 054 Self esteem/Identity
 - 055 Moodiness
- 06 Finances
 - 061 Debt incurred
 - 062 Lack of funds for school expenses
 - 063 Fewer purchases
 - 064 Lower standard of living
- 07 Time
 - 071 Competing Priorities (including giving something up)
- 08 Accommodation
 - 081 Homeless
 - 082 Moving
- 09 None

- 091 Unspecified (including situation was resolved)
- 092 Ambiguity - does not matter

10 Employment

- 101 Dissatisfaction
- 102 Termination
- 103 Secure employment

11 Other

- 111 Legal

Length of Time

- 1. 0-2 weeks
- 2. 2-4 weeks
- 3. 1-3 weeks
- 4. 3-6 months
- 5. 6-9 months
- 6. 9-12 months
- 7. Over 1 year

Describe the main way that you try to deal with this situation:

In what way(s) are you going to try to deal with this demanding situation:

How do you intend to deal with this demanding situation in the near future:

01 Satisfying Personal Needs

- 011 Exercise
- 012 Rest and Relaxation
- 013 Find new challenges
- 014 Unspecified

02 Planning

- 021 Time management
- 022 Unspecified
- 023 Budget/finances
- 024 Organization
- 025 anticipation of demand
- 026 Saving money
- 027 Career

03 Active Coping

- 031 Unspecified (One step at a time)
- 032 Secure/seek employment or increase hours
- 033 SAIT resources
- 034 Studying (or study harder)
- 035 Confrontive problem-solving
- 036 Seeking accommodation
- 037 Socializing/Recreation
- 038 Upgrading education
- 039 Non-SAIT resources

04 Acceptance

- 041 Unspecified
- 042 Live with it
- 043 Unpleasant situation

05 Mental Disengagement

- 051 Unspecified
- 052 Avoidance/ignoring
- 053 Reduce worry
- 054 Diversion/Distraction

- 06 Suppression of Competing Activities
 - 061 Unspecified
 - 062 Terminating employment/Decrease hours
 - 063 Reduce socializing or recreational time
 - 064 Decrease workload/Change courses
- 07 Seeking Social Support for Instrumental Reasons
 - 071 Unspecified
 - 072 Family assistance
 - 073 Friends
 - 074 Other students
 - 075 Instructors/Tutors
 - 076 Boss
 - 077 Finances
 - 078 Spouse/Partner
- 08 Restraint
 - 081 Wait and see
- 09 Stress Reduction
 - 091 Exercise
 - 092 Take a vacation/break
 - 093 Unspecified
- 10 Mental Engagement
 - 101 Commitment (Increase effort/try harder)
 - 102 Concentration
 - 103 Positive Self-Talk
- 11 Seeking Social Support for Emotional Reasons
 - 111 Unspecified
 - 112 Spouse/Partner
 - 113 Family
 - 114 Friends
- 12 Positive Reinterpretation and Growth
 - 121 Readjust Expectations
 - 122 Social Comparison
 - 123 Unspecified
- 13 Wishful Thinking
 - 131 Hope
- 14 Other
 - 141 Unspecified

142 Does not know/Nothing

15 Religion

151 Faith in God

152 Prayer

16 Alcohol/Drug Use

161 Alcohol

162 Smoking

163 Quitting

List the reasons why you try to deal with the situation in this way:

- 01 Personal
 - 011 Unspecified
 - 012 Revitalization
 - 013 Maintaining a positive attitude (motivation/initiative)
 - 014 Self-esteem
- 02 Limited Alternatives
 - 021 Only alternative
 - 022 Best alternative/Effective alternative
 - 023 Unspecified
- 03 Time
 - 031 Unspecified
 - 032 Relaxation
 - 033 Self
 - 034 Time Management/Making time to study
- 04 Relationships
 - 041 Maintaining quality
 - 042 Support
 - 043 Avoid upsetting others/Decrease tension
- 05 Goal Achievement
 - 051 Academic
 - 052 Financial
 - 053 Employment/career
 - 054 Personal life
- 06 Challenge
 - 061 Unspecified
 - 062 Personal Meaning/Importance/Priorities
 - 063 Fear of challenge
- 07 Stress Reduction (including references to anxiety)
 - 071 Unspecified
 - 072 Gaining control
- 08 Mental Disengagement
 - 081 Unspecified
 - 082 Distraction/Diversion
 - 083 Avoidance

09 Financial

- 091 Security
- 092 Lower costs
- 093 Flexibility in paying bills
- 094 Afford necessities

10 Recommendation/Referral

- 101 Unspecified

11 Other

- 111 Unspecified

12 Mental Engagement

- 121 Concentration

Describe the results that actually happened in dealing with this demand:

- ***1 Less than desired outcome
- ***2 Same as or met desired outcome
- ***3 Exceeded desired outcome
- ***4 Undetermined/Unspecified
- ***5 Other outcome - negative
- ***6 Other outcome - positive

*** refers to the three digit code from Question #10: Desired outcome.

Describe the criteria you used to determine the effectiveness of your attempts to deal with the demanding situation:

- 01 Academic
 - 011 Grades
 - 012 Knowledge
 - 013 Skill improvement
- 02 Personal Well-Being
 - 021 Motivation
 - 022 Happiness
 - 023 Attitude
 - 024 Ability to concentrate
 - 025 Physical Health
 - 026 Self-concept/Self-esteem
 - 027 Sense of control/Stress level
 - 028 Amount of worrying
 - 029 Quality of Sleep
- 03 Relationship
 - 031 Quality
 - 032 Time
- 04 Other People
 - 041 Behavior
 - 042 Opinions
 - 043 Feelings
- 05 Employment
 - 051 Unemployment
 - 052 Maintaining responsibilities
 - 053 Securing employment
 - 054 Quality of job
- 06 Other
 - 061 Unspecified
 - 062 None - no criteria
- 07 Financial
 - 071 Obtain more money/Amount of money
 - 072 Affordability
 - 073 Responsibility use of money/staying on budget
- 08 Time
 - 081 Academic pursuits/activities

082 Personal Leisure/Activities

09 Mental Disengagement

091 Distraction

10 Accommodation

Suitability

What result do you want to have happen with this demand:

- 01 Academic
 - 011 Good Grades
 - 012 Graduation
 - 013 Knowledge and comprehension/skills
 - 014 Motivation/Enthusiasm
- 02 Stressor Management
 - 021 Time less restricted
 - 022 Time management
 - 023 Task completion
- 03 Family
 - 031 Well-being
 - 032 Successful marriage
 - 033 Support
 - 034 Time
 - 035 Others less dependent/demanding
- 04 Finance
 - 041 Reduced debt-lad (including financial security)
 - 042 Student loan
 - 043 Affordability (cost or price)
- 05 Stress Management
 - 051 Stress reduction (including control)
 - 052 Relaxation
- 06 Employment
 - 061 Future career
 - 062 Secure a job
 - 063 Change in hours worked
 - 064 Job satisfaction
- 07 Accommodation
 - 071 Securing
 - 072 Finding a roommate
- 08 Other
 - 081 Unspecified
- 09 Personal Satisfaction
 - 091 Proving something (to self or others)
 - 092 Obtaining something

10 Relationships

- 101 Getting involved (Intimacy/Significant other)**
- 102 Resolving problems/conflict**
- 103 Make new friends**
- 104 Break up**

Useful characteristics of SAIT Resources:

- 01 Problem-solving
 - 011 Unspecified
- 02 Skill Development
 - 021 Study Skills
 - 022 Work experience/skills
 - 023 Athletic skills
- 03 Stress Reduction
 - 031 Relaxation
 - 032 Unspecified
- 04 Availability/Access
 - 041 Personal attention
 - 042 Information
 - 043 Unspecified
 - 044 Expanding social circle/new relationships
- 05 Helpful Attitude
 - 051 Unspecified
 - 052 Understanding
- 06 Competence
 - 061 Unspecified
- 07 Mental Disengagement
 - 071 Unspecified
- 08 Other
 - 081 Unspecified
- 09 Social Support
 - 091 Peers/students
- 10 Not effective
 - 101 Unspecified
 - 102 Hours/Waiting (Inconvenient)
 - 103 Insufficient feedback
 - 104 Obsolete or lack of information
 - 105 Negative attitude
 - 106 Lack of facilities

Appendix I

Frequencies of Top Ranked Demands: Time 1 and Time 2

	<u>Time 1</u>							<u>Time 2</u>						
	Total	M	F	1	2	3	TOTAL	Total	M	F	1	2	3	TOTAL
ACADEMIC							98							89
Unspecified	59	29	30	21	20	18		39	17	22	15	15	9	
Achievement	18	8	10	7	8	3		17	8	9	6	4	7	
Time	1	1	0	0	0	1		1	1	0	0	0	1	
Exams	1	0	1	0	1	0		3	3	0	3	0	0	
Courseload/studying	17	9	8	3	7	7		26	14	12	7	11	8	
Adjustment to role	2	1	1	0	2	0		0	0	0	0	0	0	
Instructors	0	0	0	0	0	0		2	0	2	0	2	0	
Admin/bureaucracy	1	1	0	1	0	0		0	0	0	0	0	0	
RELATIONSHIPS							9							2
UNSPECIFIED(WHO)														
Unspecified (What)	3	3	4	2	0	0		1	1	0	1	0	0	
Time	0	0	0	0	0	0		1	0	0	0	1	0	
SIGNIFICANT OTHER														
Unspecified (What)	5	1	4	1	4									
Unspecified (What)	1		1		1									
EMPLOYMENT							5							3
Unspecified	3	1	2	0	0	3		2	0	2	0	0	2	
Seeking	2	1	1	1		1		1	0	1	0	0	1	

Appendix I (contd.)

Frequencies of Top Ranked Demands: Time 1 and Time 2

	Total	M	F	1	2	3	TOTAL	Total	M	F	1	2	3	TOTAL
	<u>Time 1</u>							<u>Time 2</u>						
WORRYING							1							2
Future	1	0	1	0	1	0		2	2	1	0	3		
OTHER							1							1
Unspecified	1	0	1	0	0	1		1	0	1	0	1		
	<u>Time 3</u>							<u>Time 4</u>						
ACADEMIC							59							60
Unspecified	30	12	18	11	10	9		23	10	13	8	7	8	
Achievement	13	9	4	3	5	5		7	3	4	1	1	5	
Time	1	1	0	0	0	1		0	0	0	0	0	0	
Exams	2	1	1	0	1	1		7	3	4	2	4	1	
Courseload/studying	13	6	7	5	4	4		21	12	9	5	10	6	
Admin/bureaucracy	0	0	0	0	0	0	0	1	1	0	1	0	0	
Program choice	0	0	0	0	0	0	0	1	0	1	0	1	0	
RELATIONSHIPS							3							5
UNSPECIFIED(WHO)														
Time	1	0	1	0	1	0		0	0	0	0	0	0	
Significant Other	2	1	1	0	1	1		5	0	0	5	2	3	
FRIENDS							1							0
Unspecified	1	0	1	0	1	0		0	0	0	0	0	0	
EMPLOYMENT							7							3
Unspecified	4	2	2	0	1	3		0	0	0	0	0	0	
Seeking	3	2	1	0	2	1		3	1	2	1	1	1	

Appendix I (contd.)

Frequencies of Top Ranked Demands: Time 3 and Time 4

	Total	M	F	1	2	3	TOTAL	Total	M	F	1	2	3	TOTAL
FAMILY							5							3
Unspecified	3	1	2	0	0	3		2	0	2	1	0	1	
Children's needs	2	1	1	0	0	3		0	0	0	0	0	0	
HEALTH							3							6
Unspecified	1	0	1	0	1	0		4	2	2	1	1	2	
Mental health	2	1	1	1	0	1		1	0	1	0	1	0	
Physical Disability	0	0	0	0	0	0		1	1	0	0	1	0	
FINANCES							13							9
Unspecified	10	6	4	6	1	3		6	3	3	4	1	1	
Sufficient funds	3	1	2	1	2	0		3	3	0	1	2	0	
ACCOMMODATION							0							2
Moving/new home	0	0	0	0	0	0		1	1	0	0	1	0	
TIME MANAGEMENT														
Competing activities	3	0	3	0	1	2		2	1	1	0	0	2	
PERSONAL NEEDS							0							1
Unspecified	0	0	0	0	0	0		1	1	0	0	1	0	
Sleep/insomnia	1	0	1	0	1	0		0	0	0	0	0	0	
WORRYING							1							0
Unspecified	1	1	0	0	1	0		0	0	0	0	0	0	
OTHER							3							2
Unspecified	3	1	2	1	0	2		1	0	1	0	0	1	

Appendix J

Characteristics of Top Demands: Time 1 to Time 4

	<u>Time 1</u>	<u>Time 2</u>	<u>Time 3</u>	<u>Time 4</u>
ACADEMIC				
Quantitative overload	35	49	34	38
Qualitative overload	26	16	6	7
Achievement	4	18	12	11
Instruction	2	4	2	0
PERSONAL EXPECTATIONS				
Performance	29	14	9	13
Motivation	4	2	4	2
Self-confidence	5	3	2	2
TIME				
Leisure	11	3	8	3
Studying	16	23	20	16
Significant Others	7	3	4	8
Commuting	1	0	1	0
Time Management	8	12	4	1
WORRY				
Health	0	0	2	2
Family	1	2	2	2
Future	3	6	2	4
Significant Other	3	0	2	3
Stress	0	8	7	4
Decision-making	0	4	1	1

Appendix J (cont.)

	<u>Time 1</u>	<u>Time 2</u>	<u>Time 3</u>	<u>Time 4</u>
FINANCES				
Paying bills	8	11	9	10
Supporting family	3	0	0	0
Unemployment	0	0	0	0
Accommodation	2	0	0	0
Affording education	4	1	0	2
Affording luxuries	4	4	4	3
Budgeting	3	2	1	0
OTHER				
Unspecified	5	0	1	1
Do not know	0	1	0	0
Nothing/resolved	0	0	1	0
FAMILY PRESSURES				
Parents	4	1	2	0
Relationship breakdown	1	0	1	0
Others	3	2	0	0
Spouse/Sig. other	2	2	2	0
Children	0	0	1	0
EMPLOYMENT				
Qualifications	1	2	0	1
Availability	1	0	4	0
Qualitative factors	3	1	3	3

Appendix J (cont.)

	<u>Time 1</u>	<u>Time 2</u>	<u>Time 3</u>	<u>Time 4</u>
LACK OF SOCIAL SUPPORT				
Age differences	1	0	0	1
New Friends	2	0	1	0
Family	1	0	0	1
PERSONAL DIFFERENCES/CONFLICT				
Living arrangements	1	2	0	0
Significant other	3	0	1	2

Appendix K

Correlations between Top Ranked Demands, Stress of Demand, Control, and Length of TimeExperiencing Demands: Time 1

	Demand	Stress	Control	LngDem
Demand	1.00			
Stress	.23**	1.00		
Control	-.20	-.27**	1.00	
LngDem	.25**	.16*	-.07	1.00

Correlations between Top Ranked Demands, Stress of Demands, Control, and Length ofTime Experiencing the Demands: Time 2

	Demand	Stress	Control	LngDem
Demand	1.00			
Stress	-.01	1.00		
Control	-.23*	-.23*	1.00	
LngDem	.38**	.02	-.06	1.00

Correlations between Top Ranked Demands, Stress of Demands, Control, and Length ofTime Experiencing the Demands: Time 3.

	Demand	Stress	Control	LngDem
Demand	1.00			
Stress	-.03	1.00		
Control	-.29**	-.33**	1.00	
LnDem	.07	-.10	.05	1.00

Appendix K (contd.)

Correlations between Top Ranked Demands, Stress of Demands, Control, and Length of
Time Experiencing the Demands: Time 4.

	Demand	Stress	Control	LngDem
Demand	1.00			
Stress	.10	1.00		
Control	-.34**	-.02	1.00	
LngDem	.13	.03	.17	1.00

Appendix L

Means and Rank Order of COPE scales: Time 1

	<u>Sex</u>					<u>Age</u>						
	T	R	M	R	F	R	1	R	2	R	3	R
Act	11.24	3	11.23	3	11.25	4	10.69	4	11.20	3	11.78	3
Plan	11.83	2	12.03	2	11.66	2	11.19	2	11.57	2	12.63	2
Supcomp	10.08	5	10.13	5	10.04	7	9.42	9	9.89	5	10.83	5
Restrnt	9.40	9	9.06	8	9.70	9	9.10	11	9.44	8	9.63	6
Supinst	9.58	6	9.33	7	9.79	8	10.06	6	9.44	9	9.27	9
Supem	9.55	7	8.67	9	10.32	6	9.63	7	9.63	7	9.41	8
Growth	12.34	1	12.26	1	12.41	1	11.92	1	11.91	1	13.07	1
Accept	11.09	4	10.81	4	11.33	3	10.77	3	11.00	4	11.44	4
Denial	5.66	14	5.65	14	5.67	14	6.08	14	5.39	14	5.50	14
Relig	6.83	12	6.23	13	7.34	12	6.70	13	6.20	13	7.29	12
Ventem	9.36	10	8.01	11	10.53	5	9.50	8	9.15	10	9.42	7
Behdis	6.56	13	6.38	12	6.72	13	6.94	12	6.70	12	6.11	13
Mentdis	9.41	8	9.59	6	9.25	10	10.33	5	9.76	6	8.31	10
AlcDrg	5.16	15	5.17	15	5.15	15	5.71	15	4.98	15	4.83	15
Humor	8.37	11	8.45	11	8.29	11	9.38	10	8.22	11	7.59	11

Note. T=Total, R=Rank Order, M=Male, F=Female, 1=18=19, 2=20-24, 3=25+

Appendix L (contd.)

Means and Rank Order of COPE Scales: Time 2

	<u>Sex</u>					<u>Age</u>						
	T	R	M	R	F	R	1	R	2	R	3	R
Act	11.33	3	11.16	3	11.47	3	10.84	4	11.45	3	11.62	3
Plan	11.65	2	11.57	2	11.71	2	10.97	3	11.88	2	12.00	2
Supcomp	9.98	5	9.75	5	9.79	5	9.27	8	10.13	5	9.87	5
Restrnt	8.89	9	8.57	8	9.15	8	8.84	10	8.80	10	9.00	8
Supinst	9.44	7	8.46	9	10.27	9	9.24	9	9.50	6	9.56	6
Supem	9.48	6	8.16	10	10.59	10	9.38	6	9.50	6	9.53	7
Growth	12.06	1	11.82	1	12.26	1	11.89	1	11.98	1	12.27	1
Accept	11.03	4	11.09	4	10.97	4	11.49	2	10.58	4	11.04	4
Denial	5.67	14	5.66	13	5.68	13	6.11	15	5.30	14	5.64	14
Relig	6.24	12	5.57	15	6.80	15	6.41	13	6.00	12	6.31	12
Ventem	8.75	10	7.86	11	9.50	11	8.41	11	8.98	8	8.82	9
Behdis	6.04	13	6.20	12	5.91	12	6.27	14	6.00	12	5.89	13
Mentdis	9.24	8	9.39	6	9.11	6	10.68	5	8.88	9	8.38	10
AlcDrg	5.35	15	5.59	14	5.15	14	6.32	12	4.95	15	4.91	15
Humor	8.35	11	8.64	7	8.11	7	9.38	6	8.00	11	7.82	11

Note. T=Total, R=Rank Order, M=Male, F=Female, 1=18-19, 2=20-24, 3=25+

Appendix L (contd.)

Means and Rank Order of COPE Scales: Time 3

	<u>Sex</u>					<u>Age</u>						
	T	R	M	R	F	R	1	R	2	R	3	R
Act	11.79	3	11.78	3	11.79	2	11.58	4	11.39	3	12.31	3
Plan	11.63	2	11.78	1	11.50	3	11.03	2	11.36	2	12.29	2
Supcomp	10.08	5	10.30	4	9.89	7	9.68	10	9.23	6	11.17	4
Restrnt	8.94	8	9.15	8	8.75	9	8.94	8	8.07	10	9.69	8
Supinst	10.02	6	9.59	6	10.40	5	10.39	5	9.71	5	9.97	7
Supem	9.73	7	9.33	7	10.08	6	9.97	7	9.10	7	10.06	6
Growth	11.79	1	11.78	1	11.79	1	11.58	1	11.39	1	12.31	1
Accept	10.51	4	10.04	5	10.92	4	10.94	3	9.77	4	10.78	5
Denial	5.14	15	5.57	15	4.77	15	5.74	14	4.58	15	5.11	15
Relig	6.15	12	5.85	13	6.42	12	6.58	12	5.65	12	6.22	12
Ventem	8.69	10	8.02	11	9.29	8	8.77	11	9.10	7	8.28	9
Behdis	5.56	13	5.87	12	5.29	13	5.68	15	5.58	13	5.44	13
Mentdis	8.83	9	9.11	9	8.58	10	10.00	6	8.87	9	7.78	11
Alcdrg	5.51	14	5.74	14	5.31	14	6.45	13	5.00	14	5.14	14
Humor	8.26	118.46	10	8.08	11	9.39	9	7.45	11	7.97	10	

Note. T=Total, R=Rank Order, M=Male, F=Female, 1=18=19, 2=20-24, 3=25+

Appendix L (contd.)

Means and Rank Order of COPE scales: Time 4

	<u>Sex</u>					<u>Age</u>						
	T	R	M	R	F	R	1	R	2	R	3	R
Act	11.46	3	11.19	3	11.69	3	11.00	2	11.67	3	11.64	3
Plan	11.65	2	11.37	2	11.88	2	10.79	4	12.40	1	11.69	2
Supcomp	10.37	5	10.49	4	10.28	7	9.79	7	10.27	5	10.92	5
Restrnt	9.02	10	8.93	8	9.10	10	9.04	9	8.97	10	9.06	8
Supinst	10.09	6	9.40	6	10.67	5	10.21	6	10.60	4	9.56	7
Supem	9.62	7	8.77	9	10.33	6	9.21	8	9.87	7	9.72	6
Growth	11.99	1	11.54	1	12.37	1	11.39	1	12.37	2	12.14	1
Accept	10.62	4	10.28	5	10.90	4	10.89	3	9.97	6	10.94	4
Denial	5.17	15	5.49	15	4.90	15	5.96	14	4.63	15	5.00	15
Relig	6.12	13	5.79	13	6.39	12	6.57	12	5.40	12	6.36	12
Ventem	9.03	9	8.44	10	9.53	8	9.00	10	9.70	8	8.50	9
Behdis	6.58	12	5.95	12	5.45	13	6.04	13	5.30	13	5.72	13
Mentdis	9.18	8	9.23	7	9.14	9	10.32	5	9.33	9	8.17	10
Alcdrg	5.37	14	5.56	14	5.22	14	5.96	14	4.70	14	5.47	14
Humor	8.11	11	8.14	11	8.08	11	8.75	11	8.43	11	7.33	11

Note. T=Total, R=Rank Order, M=Male, F=Female, 1=18-19, 2=20-24, 3=25+

Appendix M

Correlations between COPE Scales: Time 1

	Act	Plan	Supc	Restr	Supi	Supem	Grow	Accep	Denial	Relig
Act	1.00									
Plan	.70**	1.00								
Supcomp	.47**	.55**	1.00							
Restrnt	-.06	.03	.12	1.00						
Supinst	.36**	.31**	.21*	.01	1.00					
Supem	.14	.12	.06	.03	.67**	1.00				
Growth	.36**	.41**	.26**	.24**	.24**	.26**	1.00			
Accept	.09	.14	.15	.39*	.09	.13	.31**	1.00		
Denial	-.13	-.17*	-.09	.13	.07	.03	.31**	-.05	1.00	
Relig	.04	.04	.12	.14	-.04	-.13	.07	.01	.24	1.00*
Ventem	.17*	.07	.11	.01	.30**	.33**	-.03	.13	.29**	.06
Behdis	-.18*	-.24**	-.14	.23**	-.07	-.16	-.06	.07	.55**	.13
Mentdis	-.21*	-.14	.10	.16	.10	-.02	-.03	.09	.27**	.04
Alcdrg	-.02	.02	-.03	.10	.04	.07	-.02	.10	.09	-.14
Humor	.03	-.07	-.02	.08	-.01	.03	.15	.04	.06	-.06
	Vent	Behd	Mentd	Alcdrg	Humor					
Act	.17*	-.18*	-.21*	-.02	.03					
Plan	.07	-.24**	-.14	.02	-.07					
Supco	.11	.14	-.10	-.03	-.02					
Restraint	.01	.23**	.16	.10	.08					
Supinst	.30**	-.07	.10	.04	-.01					

Appendix M (contd.)

	Vent	Behd	Mentd	Alcdrg	Humor
Supem	.33**	-.16	-.02	.07	.03
Growth	-.03	-.06	.03	.01	.15
Accept	.13	.07	.09	.10	.04
Denial	.30**	.55**	.27**	.09	.06
Relig	.06	.13	.04	-.14	-.06
Ventem	1.00	.26**	.06	.16*	-.03
Behdis	.26**	1.00	.28**	.19*	.14
Mentdi	.07	.28**	1.00	.17*	.37**
Alcdrg	.16*	.19*	.17*	1.00	.15
Humor	-.03	.14	.37**	.15	1.00
Note. **p<.01, *p<.05					

Appendix M (contd.)

Correlations between COPE Scales: Time 2.

	Act	Plan	Supc	Rstrnt	Supinst	Supem	Grow	Accept	Denial	Relig
Act	1.00									
Plan	.61**	1.00								
Supcomp	.47**	.47**	1.00							
Restrnt	.01	.13	.16	1.00						
Supinst	.36**	.32**	.18*	.30**	1.00					
Supem	.24**	.25**	.11	.15	.76**	1.00				
Growth	.50**	.61**	.40**	.22*	.31**	.22*	1.00			
Accept	.01	.09	.13	.20*	.08	-.06	.28**	1.00		
Denial	-.12	-.23*	-.04	.20*	.15	.07	.20*	.07	1.00	
Relig	-.01	-.06	.02	.22*	.02	.05	-.12	-.10	.25**	1.00
Ventem	.06	.07	.12	.17	.44**	.52**	.08	.09	.36**	.04
Behdis	-.33**	-.42	-.15	.21*	-.02	-.16	-.40**	.03	.55*	.16
Mentdis	-.28**	-.18	-.06	.20*	-.06	-.04	.05	.26**	.28**	.18
Alcdrg	-.11	-.03	.01	.07	.06	.08	.01	.14	.15	-.09
Humor	-.15	-.03	-.02	.22	.09	-.06	.18*	.26**	.13	-.10
	Vent	Behd	Mentd	Alcdrg	Humor					
Act	.06	-.33**	.28**	-.11	-.15					
Plan	.07	-.42**	-.18	-.03	-.03					
Supcomp	.12	-.15	-.06	.01	-.02					
Restraint	.17	.21*	.20*	.07	.22*					
Supinst	.44**	-.21*	-.06	.06	.09					

Appendix M (contd.)

	Vent	Behd	Mentd	Alcdrg	Humor
Supem	.52**	-.02	-.04	.07	-.08
Growth	.08	-.12	.05	.01	.18*
Accept	.09	-.40**	.26**	.14	.26**
Denial	.34**	.03	.28**	.15	.13
Relig	.04	.55**	.18	-.09	-.10
Ventem	1.00	.16	.12	.15	.01
Behdis	.21*	.21*	.24**	.04	.09
Mentdis	.12	1.00	1.00	.21*	.44**
Alcdrg	.15	.24**	.21*	1.00	.19*
Humor	.01	.04	.44**	.19*	1.00

Note. **p<.01, *p<.05

Appendix M (contd.)

Correlations between COPE Scales: Time 3.

	Act	Plan	Supc	Rstrnt	Supin	Supc	Grow	Accep	Denial	Relig
Act	1.00									
Plan	.65**	1.00								
Supcomp	.48**	.42**	1.00							
Restraint	.17	.31**	.17	1.00						
Supinst	.33**	.35**	.21*	.24*	1.00					
Supem	.30*	.23*	.22*	.11	.48**	1.00				
Growth	.61**	.64**	.40**	.35**	.32**	.17	1.00			
Accept	.23*	-.01	.05	.11	.06	-.11	.17	1.00		
Denial	-.12*	.28**	.02	.17	-.03	.02	-.11	-.07	1.00	
Relig	-.02	-.10	.19	.06	.01	.02	.02	.03	.02	1.00
Ventem	.02	-.09	.18	.16	.33**	.47**	-.11	.11	.15	.08
Behdis	-.41**	-.36**	-.06	.27**	-.16	-.15	-.22*	.16	.41**	.02
Mentdis	-.17	-.10	.23*	.14	.08	-.07	.06	.27**	-.03	.34**
Alcdrg	-.07	-.01	.03	.06	-.04	.06	-.06	.08	.18	-.12
Humor	-.09	-.09	-.04	.05	.01	.03	-.02	.13	.2**	-.01
	Vent	Behd	Mentd	Alcdrg	Humor					
Act	.02	-.41**	-.17	-.07	-.09					
Plan	-.09	-.36**	-.10	-.01	-.09					
Supcomp	.18	-.06	-.01	.03	-.04					
Restraint	.16	.27**	.23*	.06	.05					
Supinst	.33**	-.16	.14	-.04	.01					

Appendix M (contd.)

	Vent	Behd	Mentd	Alcdrg	Humor
Supem	.47**	-.15	.08	.06	.03
Growth	.11	-.22*	-.07	-.06	-.02
Accept	.11	.16	.06	.08	.13
Denial	.15	.41**	.27**	.18	.33
Relig	.08	.02	-.03	-.12	-.01
Ventem	1.00	.25*	.34**	.11	.08
Behdis	.25*	1.00	.46**	.16	.25*
Mentdis	.34**	.46**	1.00	.32**	.29**
Alcdrg	.11	.16	.32**	1.00	.32**
Humor	.08	.25*	.29**	.32**	1.00

Note. **p<.01, *p<.05

Appendix M (contd.)

Correlations between COPE Scales: Time 4.

	Act	Plan	Supc	Rstrnt	Supi	Supem	Grow	Accept	Denial	Relig
Act	1.00									
Plan	.68**	1.00								
Supc	.51**	.54**	1.00							
Rstrnt	.10	.12	.18	1.00						
Supinst	.40**	.36**	.33**	.30**	1.00					
Supem	.17	.27**	.33**	.32**	.71**	1.00				
Grow	.46**	.55**	.35**	.13	.14	.14	1.00			
Accept	.04	-.02	-.03	.29**	-.08	.04	.25*	1.00		
Denial	-.35*	-.26*	-.03	.08	.07	.11	.29**	-.14	1.00	
Relig	.02	-.09	.04	.13	.10	.09	.04	.09	.07	1.00
Ventem	.01	.10	.21*	.15	.45**	.56**	-.02	.02	.23*	.01
Behdis	-.30**	-.30**	-.03	.32**	-.11	-.05	.07**	.28**	.50**	-.01
Mentdis	-.19	-.13	-.07	.37**	.09	.19	.02	.26*	.39**	-.02
Alcdrg	.02	.06	.16	.23*	.09	.12	-.04	.14	.15	-.10
Humor	.01	.03	.08	.27**	.12	.09	.04	.32**	.01	-.04
	Vent	Behd	Mentd	Alcdrg	Humor					
Act	.01	-.30**	-.19	.02	.01					
Plan	.10	-.30**	-.13	.06	.03					
Supcomp	.21*	-.03	-.07	.16	.08					
Restraint	.15	.32**	.37**	.23*	.27**					
Supinst	.46**	-.11	.09	.09	.12					

Appendix M (cont.)

	Vent	Behd	Mentd	Alcdrg	Humor
Supem	.56**	-.05	.19	.12	.09
Growth	-.02	-.27**	.02	-.04	.04
Accept	.02	.28**	.26*	.14	.32**
Denial	.23*	.50**	.39**	.15	.01
Relig	.01	-.01	-.02	-.10	-.04
Ventem	1.00	.32**	.38**	.24*	.10
Behdis	.32**	1.00	.51**	.36**	.18
Mentdis	.38**	.51**	1.00	.35**	.36**
Alcdrg	.24*	.36**	.35**	1.00	.13
Humor	.10	.18	.36**	.13	1.00

Note. **p<.01, *p<.05.

Appendix N

Correlations between Control, Stress of Demand, Length of Time Experiencing Demands,Length of Time Coping, and COPE Scales: Time 1.

	Control	Stress	Lngdem	Lngcop
Control	1.00			
Stress	-.27**	1.00		
Lngdem	-.07	.16*	1.00	
Lngcop	-.01	.14	.62**	1.00
Act	-.01	-.10	.01	-.06
Plan	.08	.03	-.02	.04
Supcomp	.07	-.01	-.11	-.02
Restrnt	-.09	-.09	-.07	-.08
Supinst	.08	.07	.02	-.05
Supem	.03	-.12	-.03	-.05
Growth	.10	-.04	-.10	-.12
Accept	-.10	-.01	.03	.05
Denial	-.10	.03	.15	.17
Relig	-.06	.07	.11	.09
Ventem	-.18*	.19	.03	.07
Behdis	-.07	.07	.09	.12
Mentdis	-.05	-.01	-.01	.12
Alcdrg	-.02	-.01	-.01	.05
Humor	-.04	-.24**	-.09	.02

Appendix N (contd.)

Correlations between Control, Stress of Demand, Length of Time Experiencing Demands,
Length of Time Coping, and Subjects' Scores on COPE Scales: Time 2.

	Control	Stress	Lngdem	Lngcop
Control	1.00			
Stress	-.24**	1.00		
Lngdem	-.06	.02	1.00	
Lngcop	-.06	.05	.58**	1.00
Act	.17	-.02	-.05	.09
Plan	.11	-.06	-.05	.04
Supcomp	.05	.05	-.01	.07
Restrnt	-.03	.03	.08	.15
Supinst	.11	.01	.06	.12
Supem	.07	.05	-.01	-.01
Growth	.20*	.06	-.06	.03
Accept	.12	.08	.06	.09
Denial	-.04	.11	.14	.16
Relig	-.02	-.03	.22*	.08
Ventem	-.08	.24**	.17	.12
Behdis	-.06	.10	.13	.06
Mentdis	.02	.15	.06	-.11
Alcdrg	-.12	.04	.07	-.06
Humor	.01	.01	-.08	-.12

Appendix N (contd.)

Correlations between Control, Stress of Demand, Length of Time Experiencing Demand,
Length of Time Coping, and Subjects' Scores on COPE Scales: Time 3.

	Control	Stress	Lngdem	Lngcop
Control	1.00			
Stress	-.33**	1.00		
Lngdem	.05	-.10	1.00	
Lngcop	.02	-.04	.46	1.00**
Act	.13	-.01	-.11	.11
Plan	.09	.05	-.02	.09
Supcomp	-.08	.19	-.07	-.08
Restrnt	.08	.03	.06	.04
Supinst	.23*	-.17	.07	.13
Supem	.04	-.05	.03	.11
Growth	.25*	-.06	.13	.17
Accept	-.13	.01	.13	.04
Denial	.04	.20	-.01	.05
Relig	-.11	.18	-.08	.03
Ventem	-.19	.18	-.01	-.07
Behdis	-.19	.16	.02	-.15
Mentdis	-.02	.13	.01	-.08
Alcdrg	-.23*	.27**	.04	-.14
Humor	-.12	.10	-.13	-.05

Appendix N (contd.)

Correlations between Control, Stress of Demand, Length of Time Experiencing Demand,

Length of Time Coping, and Subjects' Scores on COPE Scales: Time 4.

	Control	Stress	Lngdem	Lngcop
Control	1.00			
Stress	-.01	1.00		
Lngdem	.17	-.05	1.00	
Lngcop	.12	-.04	.76**	1.00
Act	-.06	.11	-.03	.01
Plan	-.05	.10	-.01	-.05
Supcomp	.08	.27*	.04	-.01
Restrnt	-.13	.18	-.25*	-.25*
Supinst	.04	.22*	-.13	-.05
Supem	.17	.18	-.10	-.07
Growth	-.02	.04	.02	.04
Accept	-.18	.03	.06	.07
Denial	.14	.13	.02	-.07
Relig	.04	-.05	.12	.20
Ventem	.11	.43**	-.17	-.15
Behdis	-.01	.18	-.10	-.12
Mentdis	-.10	.34**	-.25*	-.23*
Alcdrg	-.10	.07	-.06	-.05
Humor	-.23*	.07	-.19	-.10

Note. *p<.05, **p<.01.

Appendix O

Correlations between Desired Coping Outcomes, Confidence, and Effectiveness: Time 1

	Outcome 1	Outcome2	Outcome3	Confidence	Effectiveness
Outcome 1	1.00				
Outcome 2	.06	1.00			
Outcome 3	.04	-.17	1.00		
Confidence	-.07	-.03	.90	1.00	
Effectiveness	-.05	-.09	.53	.47**	1.00

Correlations between Desired Coping Outcomes, Confidence, and Effectiveness: Time 2.

	Outcome 1	Outcome2	Outcome3	Confidence	Effectiveness
Outcome 1	1.00				
Outcome 2	.02	1.00			
Outcome 3	.15	.20	1.00		
Confidence	-.25**	-.03	.22	1.00	
Effectiveness	-.17	-.16	.67	.62**	1.00

Correlations between Desired Coping Outcomes, Confidence, and Effectiveness: Time 3

	Outcome 1	Outcome2	Outcome3	Confidence	Effectiveness
Outcome 1	1.00				
Outcome 2	.23	1.00			
Outcome 3	.30	-.51	1.00		
Confidence	-.16	.40*	.30	1.00	
Effectiveness	-.01	.37*	.01	.67**	1.00

Appendix O (contd.)

Correlations between Desired Coping Outcomes, Confidence, and Effectiveness: Time 4

	Outcome 1	Outcome2	Outcome3	Confidence	Effectiveness
Outcome 1	1.00				
Outcome 2	.10	1.00			
Outcome 3	-.58	-.86**	1.00		
Confidence	-.14	-.11	-.83	1.00	
Effectiveness	-.32**	-.04	-.69	.55**	1.00

Appendix P

Frequencies of Resources and Mean Usefulness Ratings for Academic Demands.

Resource	T1	T2	T3	T4	Total	Usefulness
	n=91	n=89	n=59	n=60		
Counselling	8	6	2	4	20	4.3
Employment	6	2	3	16	27	3.3
Learning Skills	25	21	17	16	79	3.5
Campus Rec.	33	39	25	28	125	3.7
Learning Resources	26	22	19	21	88	3.7
Campus Health	5	5	3	1	14	3.1
Instructors	52	51	35	37	175	3.5
Residence	3	3	0	0	6	3
Chaplains	0	1	0	0	1	2.8
Registrar's	22	8	6	7	43	3.1
Student's Assoc	7	6	1	1	15	2.5
Other	6	6	3	2	17	3.6

Note. N=number of students who rated resources at that Time.

Appendix Q

MANOVA Results Using Control as Classification Variable

Time 1	Time 2	Time 3	Time 4
<u>Cont x Age(n.s.)</u>	<u>Cont x Age(n.s.)</u>	<u>Cont x Age(n.s.)</u>	<u>Cont x Age(n.s.)</u>
<u>Cont x Sex(n.s.)</u>	<u>Sex</u>	<u>Cont x Sex(n.s.)</u>	<u>Cont x Sex(n.s.)</u>
	Supinst f>m		
	Supem f>m		
	Relig f>m		
	Ventem f>m		
	<u>Cont x Sex</u>		
	Act		
	Lm<Hm,LfHf		
	Ventem		
	Hf<Lm,Hm		
	Lf<Hm		
	Humor		
	Lm>Lf		

Appendix R

MANOVA Results Using Confidence as Classification Variable

Time 1	Time 2	Time 3	Time 4
<u>Conf x Age</u>	<u>Conf</u>	<u>Conf x Age(n.s.)</u>	<u>Age</u>
<u>Conf x Sex</u>	Act H>L	<u>Conf x Sex(n.s.)</u>	Plan 2,3>1
	Plan H>L		Denial 1>2
	Supcomp H>L		Mentdis 3>1,2
	Rstrnt L>H		Humor 1>3
	Growth H>L		<u>Conf x Age</u>
	Accept H>L		Act
	Behdis L>H		L1,H2,3>L3,H1
	Mentdis L>H		Plan
	<u>Conf x Age</u>		H2>L1,L2,L3,H1
	Supcomp		L3>L1,L2,H1
	H2,3>all		L1,L2>H1
	Rstrnt		Supcomp
	L1>h1,2;L2>H1		H3>H1,H2,L1,L2
	Growth		L1<H2,H3
	H3>all;H2>L2		Supem
	L2<L1,H1,2,3		H1<L1,L3,H2,H3
	<u>Conf x Sex(n.s.)</u>		H3>L2
			Humor
			L3>H1,H3,L1,L2
			L2>H2,H3,L3
			<u>Conf x Sex(n.s.)</u>

Appendix S

MANOVA Results Using Effectiveness as Classification Variable

Time 1	Time 2	Time 3	Time 4
<u>Effect x Age(n.s.)</u>	<u>Effect x Age</u>	<u>Effect x Age(n.s.)</u>	<u>Effect x Age(n.s.)</u>
Age	Growth(.09)	Age	Age
Act 3>1	HE3>LE1,2,3	Plan 3>1,2	Plan 2,3>1
Plan 3>2,1	HE2>LE2,3	Supcomp 3>1,2	Supcomp 3>1
Supcomp 3>2,1	HE1>LE2	Rstrnt 3>2	Denial 1>23
Growth 3>2,1	Humor	Accept 2<1,3	Mentdis 3<1,2
Mentdis1>2,3	LE1>all	Denial 1>2	<u>Effect(n.s.)</u>
Humor1>2,3	<u>Effect</u>	Mentdis 1,2>3	<u>Effect x Sex(n.s.)</u>
<u>Effect(n.s.)</u>	Act H>L	Humor 1>2,3	<u>Sex(n.s.)</u>
<u>Effect x Sex</u>	Plan H>L	<u>Effect</u>	<u>Effect(n.s.)</u>
Supem F>M	Supcom H>L	Growth H>L	
Relig F>M	Supinst H>L	Vent L>H	
Vent F>M	Growth H>L	Behdis L>H	
	Ventem L>H	Mentdis L>H	
	Behdis L>H	<u>Effect x Sex(n.s.)</u>	
	MentdisL>H	<u>Effect</u>	
	<u>Effect x Sex(n.s.)</u>	Growth H>L	
	<u>Sex</u>	Vent L>H	
	Restrnt F>M	Behdis L>H	
	Supinst F>M	Mentdis L>H	
	Supem F>M		
	Relig F>M		
	Vent F>M		

Appendix S (contd.)

MANOVA Results Using Effectiveness as Classification Variable

Time 1	Time 2	Time 3	Time 4
<u>Effect x Age(n.s.)</u>	<u>Effect</u>	<u>Effect x Age</u>	<u>Effect x Age</u>
<u>Effect x Sex(n.s.)</u>	<u>Act H>L</u>	<u>Effect x Sex</u>	<u>Effect x Sex</u>
	<u>Plan H>L</u>		
	<u>Supcomp H>L</u>		
	<u>Supinst H>L</u>		
	<u>Growth H>L</u>		
	<u>Vent L>H</u>		
	<u>Behdis L>H</u>		
	<u>Mentdis L>H</u>		
	<u>Effect x Age</u>		
	<u>Growth</u>		
	<u>HE>LE1,2,3</u>		
	<u>HE2>LE2,3</u>		
	<u>HE1>LE2</u>		
	<u>Humor</u>		
	<u>LE1>all</u>		

Note. Effect=Effectiveness, n.s.=Not Significant, H=high, L=low, 1=18-19, 2=20-24, 3=25+, f=female, m=male p.<05.