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AN INVESTIGATION OF THE RELATIONSHIP
BETWEEN IDENTITY ACHIEVEMENT
AND COPING WITH STRESS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
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* * * * *

The Ohio State University
1985

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ACKNOWLEDGEMENTS

I wish to thank, first and foremost, my husband, Ofer, daughter, Gali, and my parents; their love, support, and patience were, and remain, invaluable to me. Many thanks, as well, to Ofer, for the hours of 'consulation' offered at 'no charge', and for sharing so willingly the breadth and depth of his knowledge.

A special word of thanks is due to Keith Kilty, whose genuine interest and concern were a major source of support to me during the past three years. Many thanks, as well, for his professional advice, which has been indispensable to the conception and completion of this project.

A word of thanks is due, as well, to Bev Toomey and Ginny Richardson, for their interest and support throughout.
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Chapter I
INTRODUCTION

Since its inception in the late nineteenth century, the field of social work has seen increased growth, accompanied by both variation and diversity in the field (Gordon, 1968). Although a positive development, this process has negative implications, as well; as Gordon (1968) points out, increase in size and diversity — whether in an organism, organization, or profession — produces strains towards subgrouping, and often results in fragmentation, as the subgroups vie for resources and power. Growing evidence exists regarding the development of such strains in the field of social work; one example lies in the generalist-specialist debate prominent in the social work literature (Leighninger, 1980).

Efforts to facilitate integration and unity in the field of social work have resulted in movement towards the formulation of a unified conceptualization of social work practice (Gordon, 1965). Based in general systems theory and the ecological perspective, this approach focuses primarily upon the relations between organisms and their environment,
and suggests that it is through transactions, which involve the mutual and reciprocal exchange of resources between the individual and the environment, that each is able to fulfill its needs and meet its goals (Germain, 1973, 1978; Germain and Gitterman, 1976; Gordon, 1965; Gordon and Schutz, 1977).

According to this perspective, the primary goal for the individual is the realization of human potential (Gordon and Schutz, 1977). Essential to the realization of human potential is the development of psychosocial resources, such as coping capacities, which appear to emerge as a product of the processes of growth and development (Germaine, 1973). It is these adaptive capacities which enable the individual to negotiate, or modify, the environment, in pursuit of the resources necessary for the realization of human potential.

In his theory of psychosocial development, Erik Erikson (1950, 1959, 1968) presents a developmental framework which incorporates the notions described above. According to Erikson, human development is a product of transactions between the individual and the environment. Erikson distinguishes eight stages, or crises, of development which span the entire life cycle; each stage is characterized by a developmental task to be mastered, which is then inte-
grated into the personality of the individual. How the individual masters these tasks is a function both of genetic endowments and of opportunities provided by the environment.

According to Erikson (1950, 1959, 1968), the nature of the resolution of each developmental task impacts upon the ability of the individual to successfully master subsequent tasks; each developmental task is perceived by Erikson as a "psychosocial strength" (1950, p. 271). Erikson further suggests that the nature of the resolution of the task of identity achievement, characteristic of the fifth stage of development, impacts not only upon the ability of the individual to master the subsequent developmental task, but upon the overall psychosocial functioning of the individual as an adult. Thus, according to Erikson, the successful mastery of developmental tasks, and the achievement of identity in particular, provides the individual with the psychosocial resources necessary for effective psychosocial functioning as an adult; according to Germain (1973), the potential would then exist, as well, for the realization of human potential.

In his theoretical formulation, Erikson uses broad and abstract terms, which are difficult to operationalize. Numerous attempts have been made to operationally define
the identity construct and to measure its relationship with various dimensions of psychosocial functioning, such as academic achievement (Cross and Allen, 1970), locus of control (Waterman, Buebel, and Waterman, 1970), and psychosocial adjustment (La Voie, 1976). Significant empirical evidence has been found which demonstrates the existence of a relationship between identity achievement and adult psychosocial functioning.

Although the relationship between identity achievement and functioning has been the subject of substantial research efforts, one area which has received little attention is that of the ability to cope with stress. According to Lazarus (1966) and Folkman (and Lazarus, 1980; in press), coping is a two-dimensional process, involving the cognitive appraisal of an event as stressful or not, and the cognitive and behavioral efforts made to cope with the stressful event. Coping efforts may be problem or emotion-focused; problem-focused coping involves the management of the person-environment relationship which is the source of stress, and emotion-focused coping involves the regulation of stressful emotions.

Although his model is primarily a cognitive model, Lazarus (1966) suggests that one factor which may impact upon the appraisal and coping processes is personality vari-
ables. In his review of the coping process, Antonovsky (1979) suggests that the ability of the individual to mobilize coping resources is affected by a sense of coherence and stability over time, which emerges specifically as a function of identity achievement. Thus, according to these theorists, a relationship may exist between identity achievement and the process of coping with stress, and it is upon this relationship that this study will focus.

In the following chapters, a research project conducted to investigate the relationship between identity achievement and coping with stress is presented. The first chapter focuses upon the identity construct; theoretical and empirical literature are reviewed, in an attempt to gain greater understanding of the process of identity achievement and of its relationship with adult psychosocial functioning. A section is devoted, as well, to the operationalization of the identity construct, and to the age of identity achievement. The second chapter focuses upon the cognitive-phenomenological approach to coping. Chapter two describes this theoretical model of coping, the determinants of the coping process, and the relationship between identity achievement and coping with stress. The measurement of coping is reviewed and discussed in this chapter, as well.
The third chapter begins with a problem statement, and a delineation of the research questions investigated in this study. The second half of this chapter describes the research methodology of this study, and includes the conceptual and operational definitions of major concepts, and a discussion of the instrumentation, sampling, and administration of the study. Chapter four describes the data analysis conducted in this study; the concluding chapter (chapter five) reviews, summarizes, and discusses major findings and implications of this study, and describes recommendations for additional research.
Chapter II
IDENTITY ACHIEVEMENT: THE PROCESS AND ITS IMPLICATIONS

The purpose of this study is to investigate the relationship between identity achievement and the ability to cope with stress. In the following two chapters, theoretical and empirical literature related to these two topics will be reviewed. Chapter one will focus upon the process of identity achievement, and its implications for psychosocial functioning. Chapter two will focus upon the cognitive-phenomenological approach to coping with stress, its relationship with personality variables in general, and identity achievement in particular. Methodological issues, regarding the operationalization and measurement of the concepts of identity achievement and coping will be reviewed, as well.

I. ERICKSON'S THEORY OF PSYCHOSOCIAL DEVELOPMENT

The concept of identity achievement was first introduced by Erik Erikson (1950) thirty five years ago, with the formulation of his psychosocial theory of development.
According to Erikson, the basis of growth is the epigenetic principle, which states that "anything that grows has a ground plan...out of... (which) the parts arise, each part having its time of special ascendancy, until all parts have arisen to form a functioning whole..." (Erikson, 1968, p. 92). All growth follows this pattern, including that of the human personality, which develops epigenetically, and as a product of interactions with the social environment. As Erikson suggests, "personality can be said to develop according to steps predetermined in the human organism's readiness to be driven toward, to be aware of, and to interact with, a widening radius of significant individuals and institutions" (Erikson, 1968, p. 93).

According to Erikson (1950, 1959, 1968), personality development involves progression through stages sequentially related to each other; the content of each stage and their sequence are determined by the ground plan of personality development. Each stage is characterized by a developmental task, and as development unfolds epigenetically, the manner in which the individual masters, or resolves, the task posed by the stage of his epigenetic development is influenced by his encounters with, and the demands of, the environment. Resolution of the developmental task may be either adaptive or maladaptive. However, these stages are cumulative in nature; each stage serves as the building
block of the following stage, and the ability to deal with the tasks of each stage is related to the successful resolution of the previous stage (Vander Zanden, 1978).

Erikson (1950, 1959, 1968) distinguishes eight stages of development; the fifth, corresponding to adolescence, is called "identity versus identity diffusion", and the major developmental task of this stage is that of identity achievement. Identity begins to be shaped early in life. In the course of development, children tend to identify with significant others; they may be individuals, such as parents, teachers, peers, or even folk heroes, or groups, racial, cultural, or generational in nature (Conger and Petersen, 1984). Identity develops out of the gradual synthesis and integration of some (and rejection of others) of these identifications into a coherent, consistent and unique whole; this whole is greater than the sum of its parts.

Identity is equated with a sense of wholeness, of self-consistency and unity of self. It reflects the ability of individuals to see themselves as separate and distinctive individuals, who may share values and interests with others, without losing a sense of individuality. Identity refers to self-integrity, which implies both of these characteristics: separateness from others and unity of the

Identity reflects a sense of continuity over time, of continuity between that which individuals have come to be during childhood and that which they promise to be in the future. Identity also involves a sense of psychosocial reciprocity, of consistency between that which individuals perceive themselves to be and that which they perceive others to see in them and to expect of them. Identity is the product of social interactions, and is tied to social reality; as Erikson points out, societal or individual rejection can seriously impair the chances of an individual to achieve a strong sense of identity (Conger and Petersen, 1984; Erikson, 1950, 1959, 1968).

Identity is experienced as a sense of psychosocial well-being; it involves acceptance of and a sense of comfort with one's physical self, a sense of direction, and an inner assuredness of anticipated recognition from those who count. Lastly, identity achievement involves decision making, regarding such issues as occupation, ideological commitment (moral, religious, philosophical), and sexuality (Erikson, 1950, 1959, 1968).

Successful, adaptive resolution of this stage results in identity achievement; maladaptative resolution results in
identity diffusion, the failure to achieve a consistent, coherent, and integrated identity.

Erikson's concept of ego identity is central to his theory of ego development. According to Erikson (1950, 1959, 1968), maladaptive resolution of the task of identity achievement will not only affect the ability of the individual to master the subsequent developmental task, i.e. intimacy versus isolation, but also the general psychosocial functioning of the individual as an adult. As Erikson states, "identity denotes certain comprehensive gains which the individual, at the end of adolescence, must have derived from all of his preadult experience in order to be ready for the tasks of adulthood" (1959, p. 101).

II. IDENTITY ACHIEVEMENT AND INTERPERSONAL RELATIONSHIPS

According to Erikson (1950, 1959, 1968), successful mastery of each developmental task is dependent upon resolution of the previous developmental task. Empirical support for this contention is provided in a study conducted by Waterman, Buebel, and Waterman (1970). In this study, using male college students, the authors hypothesized that the degree of resolution of the identity task in their subjects would correlate with differential resolution of earlier developmental tasks. Using Constantinople's Inventory
of Psychosocial Development (1969), which consists of items reflecting successful and unsuccessful resolution of each of the first six stages of development, these authors reported significant correlations between successful resolution of the identity task and successful resolution of each of the previous developmental tasks, i.e. trust, autonomy, initiative, and industry. These results indicate that a relationship exists between resolution of early developmental tasks and identity achievement.

Significant research has been conducted, as well, regarding the relationship between identity achievement and the subsequent developmental task, i.e. intimacy. According to Erikson (1950, 1959, 1968), identity achievement is a critical factor in the establishment of intimacy in interpersonal relationships. He states that "it is only after a reasonable sense of identity has been established that real intimacy with the other sex (or for that matter, with any other person or even with oneself) is possible" (1959, p. 95). Empirical research provides support for this contention, and a number of these studies will be reviewed below.

The first systematic study of intimacy within the Eriksonian framework was conducted by Yufit, in 1956. In his study, Yufit distinguished between two types of individu-
als: the intimate and the isolate. Using a questionnaire, which assessed sociability and warmth, to differentiate between these two extremes, Yufit found differences between the intimate and the isolate regarding self-esteem, impulse acceptance and expression, trust, autonomy, and identity. He also found that successful resolution of the intimacy task was most dependent upon successful resolution of three of the previous developmental tasks: trust, autonomy, and identity.

In a study conducted with male college students, Orlofsky, Marcia, and Lesser (1973) hypothesized that subjects closest to identity achievement would form relationships that best fulfilled specified criteria for intimacy (e.g., openness, closeness, mutuality, and commitment in significant relationships). Identity achievement was measured using Marcia's Ego Status Interview (1966), which distinguishes between four statuses of identity; each reflects the presence or absence of two variables: crisis - the active search for an identity - and commitment - decisions regarding religion, occupation, and politics. Intimacy was measured with a semi-structured interview developed by these authors, and which distinguished between five intimacy statuses (or levels of resolution of the intimacy task). The results of this study indicated that subjects high on identity scored significantly higher on intimacy than sub-
jects with lower identity scores, suggesting that a positive relationship exists between the degree of identity resolution and degree of intimacy in interpersonal relationships.

In a second study conducted by Orlofsky (1978) with male college students, the Constantinople Inventory of Psychosocial Development (1969) was used to investigate the relationship between intimacy status and the outcome of previous stages of development. Orlofsky focused primarily upon three developmental stages: trust/mistrust, autonomy/shame-doubt, and identity achievement/identity confusion. His results indicated that isolates scored lowest on the trust, autonomy, and identity scales, suggesting that optimal resolution of the intimacy/isolation crisis is related to positive resolution of earlier developmental tasks.

In a longitudinal study conducted by Fitch and Adams (1983), male and female college students were interviewed on two occasions, one year apart. In the initial interview identity was measured, using Marcia's semi-structured interview (1966); in the second interview, conducted the following year, intimacy status was measured, using Orlofsky's interview (1973). Results indicated that subjects categorized as higher in identity achievement were generally higher in intimacy level, whereas subjects categorized
as low on identity were generally lower in intimacy level, as well. These results suggest that a relationship exists between identity achievement and resolution of the intimacy task.

In a study conducted by Tesch and Whitbourne (1982), the relationship between identity achievement and resolution of the intimacy task was investigated using a sample past college age; it was suggested by these authors that as a task of early adulthood, the issue of intimacy may not even be confronted by college students. Using both male and female subjects between the ages of 21 and 35, the authors used both the Marcia Identity Status Interview (1966) and Orlofsky's Intimacy Status Interview (1983) (adapted by Tesch for adults) to measure both identity and intimacy status. Results indicated that men and women in the intimacy status were more likely to be identity achieved, whereas men and women who were identity diffused were more likely to be low on intimacy. However, identity diffusion did not preclude the possibility of intimacy; many of the men weak on identity were nevertheless found to be capable of intimacy.

The impact of the resolution of developmental tasks upon subsequent developmental tasks has been the subject of significant empirical research. Substantial research has
focused specifically on the relationship between identity achievement and resolution of the intimacy task. Research findings consistently indicate that such a relationship exists. Thus, we can conclude not only that identity achievement impacts upon the development of intimacy in interpersonal relationships, but that development is, in fact, a cumulative process, in which each stage is systematically related to, and dependent upon, earlier stages.

III. IDENTITY ACHIEVEMENT AND ADULT PSYCHOSOCIAL FUNCTIONING

According to Erikson (1950, 1959, 1968), identity achievement is crucial not only for the development of intimate interpersonal relationships, but impacts upon the effectiveness of overall adult psychosocial functioning, as well. Numerous studies have been conducted which investigate empirically the relationship between identity achievement and psychosocial functioning; a number of these studies will be reviewed below. These studies will be divided into three categories, reflecting different dimensions of psychosocial functioning: academic and cognitive performance, personality attributes, and adjustment (psychological and college).
A. Academic and Cognitive Performance

In a study conducted with college students, Cross and Allen (1970) investigated the relationship between identity and academic achievement. Using Marcia's Identity Status Interview (1966), the authors found a strong relationship between identity achievement and GPA: their results indicated that college students with a strong identity performed better in college, were more likely to be task-oriented, and found their work to be more meaningful to them. Marcia and Friedman (1970), who also investigated college students, discovered that students with a higher identity are found in more difficult college majors.

Hummel and Roselli (1983) found results similar to those obtained by Cross and Allen, in a study conducted with female high school seniors. Identity was measured with Marcia's Identity Status Interview (1966); academic achievement was measured based upon grade point average and scores on the National Educational Development Test, given to the students as freshmen. Based upon these scores, subjects were divided into two groups: high achievers and underachievers. The results obtained by these authors indicated that subjects high on identity were high academic achievers, whereas all identity diffusion subjects were low achievers.
Waterman and Waterman (1974) investigated the relationship between identity achievement and cognitive style, in a study conducted with college students. Identity was measured using Marcia's Identity Status Interview (1966); cognitive style was measured using the Matching Familiar Figures Test (Kagan et al., 1964), and specific attention was paid to one aspect of cognitive style—reflexivity, as opposed to impulsivity, in a problem-solving task. Results indicated that high identity subjects were significantly more reflective in problem-solving, whereas identity diffused subjects were typically impulsive.

Schenkel (1975) focused specifically upon college women, in an investigation of the relationship between identity achievement and field independence. Identity was measured with Marcia's Identity Status Interview (1966); field independence and dependence was measured with the Embedded Figures Test (Witkin et al., 1962), and human figures drawings. The results indicated that identity achieved subjects were the most field independent; identity diffused subjects were the least field independent.

The results described above suggest that a positive and significant relationship exists between identity achievement and academic and cognitive performance. On certain
cognitive tasks, and with certain measures of academic performance, high identity clearly facilitates better academic and cognitive performance.

**B. PERSONALITY ATTRIBUTES**

In a study conducted with male college students, Waterman, Buebel, and Waterman (1970) investigated the relationship between identity achievement and locus of control. Identity was measured using Marcia's Identity Status Interview (1966); locus of control was measured using Rotter's Internal-External Control Scale (1966). Results indicated that subjects with high identity exhibited the greatest degree of internal locus of control, whereas subjects with low identity were the least internal.

Marcia and Friedman investigated the relationship between identity achievement and anxiety in college women (1970). Identity was measured using Marcia's Identity Status Interview (1966); anxiety was measured using the Welsh Anxiety Scale (1956). The results indicated that identity diffused subjects had significantly higher anxiety scores than the other subjects.

Marcia (1967) also investigated the relationship between identity achievement and self-esteem. Identity was measured using Marcia's Identity Status Interview (1966); self-
esteem was measured using the DeCharms and Rosenbaum Self-Esteem Questionnaire (1960). In this study, self-esteem was manipulated experimentally through the use of positive and negative feedback regarding the subject's intellectual ability. Results indicated that regardless of type of feedback (positive or negative), subjects with higher identity exhibited significantly less variability in self-esteem in response to feedback, and that subjects with low identity changed more consistently in the direction of the feedback.

In a study conducted with male college students, Podd (1972) investigated the relationship between identity achievement and moral reasoning. Identity achievement was measured with Marcia's Identity Status Interview (1966); moral reasoning was measured using four out of Kohlberg's nine standard moral dilemmas (1964). The results of this study indicated that identity achievers performed at significantly higher levels of moral reasoning than other subjects; in addition, significantly more identity diffused subjects performed at the lowest level of moral reasoning.

The results of this research suggest that a positive relationship exists between identity formation and certain personality attributes; subjects with high identity appear
to have higher and more stable self-esteem, to have an internal locus of control, to be less anxious than subjects with low identity, and to have higher levels of moral reasoning.

C. PSYCHOLOGICAL ADJUSTMENT AND ADJUSTMENT TO COLLEGE

In a study conducted with naval recruits participating in an intensive, highly structured training program, Rasmussen (1964) hypothesized that recruits with a higher identity would demonstrate more effective psychosocial adjustment in the training situation. Identity was measured using Rasmussen's Ego Identity Scale (1964). Using peer reviews to obtain an assessment of the military, group, interpersonal, and intrapersonal effectiveness of the recruits, Rasmussen found that individuals judged to be more effective recruits exhibited a higher ego identity than those judged to be average or below average recruits.

Neuber and Genthner (1977) investigated the relationship between identity achievement and both intrapersonal and interpersonal psychological adjustment, in a study conducted with both undergraduate and graduate university students. Identity was measured using the Marcia Identity Status Interview (1966); intrapersonal adjustment was measured using Genthner's Personal Responsibility Scale, and interpersonal adjustment was measured using Carkhuff's
scale (1969) for levels of facilitation. Results indicated that identity achieved subjects had significantly higher ratings on both the personal responsibility and the levels of facilitation scale than identity diffused subjects. These results provide empirical evidence that higher identity subjects exhibit higher levels of intrapersonal and interpersonal adjustment than persons low in ego identity.

In a study conducted with male and female high school students, La Voie (1976) investigated the relationship between identity formation and psychosocial adjustment. Identity was measured with Marcia's Identity Status Interview (1966), and identity integration was measured with Constantinople's Measure of Personality Development (1969). Psychosocial adjustment was measured using the Tennessee Self Concept Scale (Fitts, 1964), which assesses both self-concept and psychological adjustment. Results indicated that adolescents high on ego identity were better adjusted than adolescents low on identity on measures of defensiveness, general maladjustment, personality disorder, neurosis, and personality integration. These results suggest that individuals with a higher identity are more adaptive and better adjusted psychologically than those with a lower identity.
Wilkerson, Protinsky, Maxwell, and Lentner (1982) investigated the relationship between identity formation and alienation, in a study conducted with high school students. Identity was measured using the Rasmussen Ego Identity Scale (1964); alienation was measured by the Mackey and Ahlgren alienation scale (1977). The alienation scale looks at three dimensions of alienation: personal incapacity - the feeling that one does not have the necessary skills for success; cultural estrangement - rejection of societal criteria for evaluating success; and guidelessness - rejection of societal means for achievement of success. Results indicated that a significant relationship exists between degree of identity formation and all three dimensions of alienation.

In a study conducted with college students, Mandell (1979) investigated the relationship between identity and ability to cope with the demands of college life. Identity was measured using Marcia's Identity Status Interview (1966); coping potential was measured with the Student TAT, developed by Coelho, Silber, and Hamburg (1962). Results indicated that identity is positively associated with coping potential. This led her to conclude that the establishment of a positive ego identity is of crucial importance to the process of coping with the psychosocial demands of college life.
The results of this research suggest that a positive relationship exists between identity achievement and psychological adjustment. These results reflect a relationship between identity achievement and general adjustment, interpersonal and intrapersonal adjustment, and the ability to cope with stress.

Numerous studies have been cited, which suggest that a significant relationship exists between identity achievement and psychosocial functioning. Several dimensions of psychosocial functioning were discussed, and the results of this research clearly and consistently substantiate Erikson's contention that identity achievement is a critical factor in adult psychosocial functioning.

**IV. IDENTITY ACHIEVEMENT: WHEN DOES IT OCCUR?**

According to Erikson (1950, 1959, 1968), the process of identity achievement occurs during adolescence. Erikson does not suggest a timetable of ages at which the identity issue is most likely to arise and be resolved; yet, chronologically, adolescence may begin as early as twelve years of age and conclude well into the twenties, depending upon individual and cultural variations (Muuss, 1982).
Numerous studies have been conducted in an effort to establish when the identity issue is resolved, and a number of these studies will be reviewed below. The studies will be divided into three categories, based upon the age of the subject pool: high school years, college years, and post college years.

**A. HIGH SCHOOL YEARS (AND EARLIER)**

In a study conducted with subjects aged 5, 8, and 11, Ciaccio (1971) found that only 8.2% of the eleven year old subjects, and none of the other subjects, were concerned with the identity issue. In this study, Ciaccio used a projective instrument, (developed in 1964 by Boyd, and revised by Ciaccio to make the coding system more appropriate for children), which provides a measure of the degree of preoccupation of subjects with each of the first five developmental tasks described by Erikson.

In a study conducted with male and female high school sophomores, juniors, and seniors, La Voie (1976) found that although ego identity became more positive with age, the increase was non-significant. In this study, identity was measured with the Marcia Identity Status Interview (1966). Howard (1960), who compared sophomore and senior high school students, similarly found a non-significant increase in identity scores from the sophomore to the senior sub-
jects. In her study, identity was measured by a self-developed multi-dimensional scale, which reflected issues such as sexual identity, and anticipation of achievement.

In a longitudinal study conducted with a small sample of black and white male high school students from a low socioeconomic background, Hauser (1971) measured identity using a Q-sort instrument developed by Wessman and Hicks (1966). His results for the white subjects reflected a pattern of progressive identity formation. During the early years, the subjects frequently changed their self-concept; however, as high school graduation approached, the consistency and stability of their self-concept increased. A pattern of progressive identity formation was not found, however, for the black subjects. Their results reflected a general stability over time, indicating developmental problems.

In a study conducted with college bound males age 12, 15, and 18, Heilman (1979), too, found that whereas the youngest group was primarily low on identity achievement, the oldest group had more instances of identity achievement. Identity was measured in this study using the Marcia Identity Status Interview (1966).
The identity issue does not appear to be resolved during the high school years; however, identity resolution does appear to increase with age. In all the studies cited, older subjects were more identity achieved than younger subjects, although in a number of studies, the differences were not significant.

B. COLLEGE YEARS

In a study conducted with female college students and their mothers, Dignan (1965) compared college freshmen and sophomores on their identity scores. Identity was measured using the Dignan Ego Identity Scale (1963). Results indicated that sophomores achieved a higher identity score than freshmen; these differences were found to be significant.

In a longitudinal study carried out at a large state university, Constantinople (1969) compared college freshmen, sophomores, juniors, and seniors cross-sectionally on their identity scores; two follow ups were then conducted, and identity was remeasured one, and then two, years subsequently. Identity was measured using the Inventory of Psychosocial Development created by Constantinople, based upon Wessman and Rick's Q-sort instrument (1966). The results of this study indicated a consistent increase in successful identity resolution with increasing age; these results were obtained both cross-sectionally, across subjects, and longitudinally, within subjects.
In a longitudinal study conducted with male students at a technical college, Waterman and Waterman (1971) assessed changes in identity status over the course of the freshman year. Identity was measured with Marcia's Identity Status Interview (1966); measurements were taken during the first five weeks of the fall term and repeated during the last eight weeks of the spring semester.

The authors hypothesized that over time, there would be a progression towards greater identity achievement. The results indicated that there was significant movement toward greater identity achievement in the area of occupational commitment; however, in the area of ideological commitment, there was a significant increase in identity diffusion. This led the authors to suggest that in the identity formation process, only a limited number of areas can be focused upon simultaneously.

These authors also found that 75% of the subjects changed their identity status during the year, and that there was no more stability for those who had begun the year with a higher degree of identity than for those who had begun with a lower degree of identity. This led them to conclude that early resolution of the identity crisis, i.e. in high school, must be regarded as tentative.
Waterman, Geary, and Waterman (1974) conducted a follow-up study when the freshmen subjects described above were seniors; identity status was measured again, using Marcia's Identity Status Interview (1966). The results reflected an increase in the frequency of subjects who were identity achieved for both occupation and ideology. These results indicated that there was a strong, positive, developmental shift from the end of the freshman to the senior year.

In a study in which she compared two groups of subjects, high school students aged thirteen and fourteen and college students aged nineteen through twenty four, Protinsky (1975) found that age was the most significant variable in determining the level of ego identity, with the older subjects exhibiting greater integration. In this study, identity was measured with Rasmussen's Ego Identity Scale (1964). Stark and Traxler (1974) conducted a similar study, in which they divided college students into two groups, one aged seventeen through twenty and the other aged twenty one through twenty four. As hypothesized, they found that subjects within the age span of seventeen through twenty reported significantly more ego diffusion than the older subjects. In this study, identity was measured using Dignan's Ego Identity Scale (1963).
Numerous studies have been conducted with college age subjects regarding identity achievement; results consistently indicate that as the student progresses through his college career, higher identity scores are obtained.

**Post College Years**

In a follow up study conducted by Whitbourne and Waterman (1979), Constantinople's Inventory of Psychosocial Development (1969) was used to remeasure the identity level of subjects from her original identity study (1969). Data was also collected cross-sectionally from students currently attending the university in which her original study was conducted, with representatives from all four grades. The longitudinal results indicated significant increases in identity and intimacy scores; the cross-sectional results indicated that the alumni were higher on both identity and intimacy. These results were not, however, significant.

In another follow up study, Marcia (1976) used his Identity Status Interview (1966) to measure the identity of 30 men interviewed by him six years earlier as college students. The results indicated that identity was relatively stable over time; this led the author to suggest that the adults years are a period for strengthening identity, but not a time when new identity issues are raised or when novel possibilities are considered.
The results of these post college studies appear to suggest that identity crystallizes during the college years; subsequent years may be used to strengthen identity, but are apparently not used for resolution of the identity crisis.

Empirical research suggests that identity is pursued during the college years; the research cited exhibits significant differences between freshmen and seniors in identity achievement, and suggests that stabilization of identity occurs after graduation from college. Chickering (1969), however, suggests that identity achievement may occur into the mid to late twenties. According to Chickering, as society has become increasingly complex, with evidence in the number of jobs requiring specialized skill and training, and with the universalization of higher education, a new developmental period has appeared. Extending from age 17-18 through the mid to late twenties, this period represents the last opportunity for change before increased stability is engendered by fixed social, interpersonal, and occupational roles and responsibilities; as a result, identity may still be actively pursued during this period.
In an attempt to verify this conception, Erwin (1978) conducted two studies, one in which he compared identity scores of junior and senior high school students with college freshmen and seniors, and one in which he compared identity scores of high school students with graduate students. In the first study, differences in identity achievement were found between the high school students and college freshmen, but not between the college freshmen and seniors. The second study was conducted to investigate the possibility that change in identity might occur earlier or later than predicted by Chickering. In this study, significant differences were found between high school students and graduate students. However, when these results were compared with the results of the college freshmen and seniors from the previous study, the results of the earlier study were substantiated. Major differences emerged between high school students and college freshmen, but not among the other age groups, introducing the possibility that major changes in identity formation occur in the freshman year of college, or prior to the senior year of college.

These results contradict those cited earlier, which suggest that identity is pursued throughout the college years, with substantial gains made between the freshman and senior years. A positive relationship between identity formation
and age has been clearly established. However, it is unclear what age is most crucial to this process. Chickering suggests that identity formation occurs into the mid-twenties, a finding substantiated by Stark and Traxler (1974), who found significant differences in identity between subjects aged 17-20 and those aged 21-24. The results of Erwin’s studies suggest that this is not the case; however, it is important to note that identity was measured in Erwin’s studies with an identity scale devised from the work of Chickering, rather than Erikson’s theory of identity achievement, which is the basis of the other studies cited above.

Contradictory findings have been found in research regarding the age at which identity is achieved; additional research is necessary to clarify this issue.

V. OPERATIONALIZATION OF THE CONCEPT OF IDENTITY ACHIEVEMENT

In his discussion of the identity concept, Erikson describes an abstract construct, one which is "richly associative, without being precisely specified" (Waterman, 1982, p. 341). The absence of definitive boundaries has posed serious problems for researchers attempting to operationally define the concept of identity. Numerous attempts
have been made to operationalize this concept, and several of the instruments will be described below. These instruments will be divided into three categories, based upon their primary focus: total life-span development, identity in its totality, and identity formation as a process.

**A. TOTAL LIFE-SPAN DEVELOPMENT**

Several instruments have been developed which measure resolution of the first six developmental stages described by Erikson. Each of these instruments is composed of several subscales; each subscale consists of ten to twelve items reflecting successful or unsuccessful resolution of the developmental tasks of each stage. The basic premise behind these instruments is that identity must be viewed within the context of the total life-span development.

One of the earliest instruments used to measure identity achievement within the context of the total life-span was developed by Rasmussen (1964), and is called the Ego Identity Scale. This instrument consists of subscales designed to measure the degree of resolution of the first six developmental stages described by Erikson. Each subscale consists of twelve items, six of which are associated with positive task resolution and six of which are associated with negative task resolution.
A similar questionnaire was developed by Constantinople (1969), and is called the Inventory of Psychosocial Development. This instrument is based upon a Q-sort measure, devised by Wessman and Ricks (1966). The Q-sort consists of 60 items. Each of the first six developmental stages is represented by ten items; five reflect successful resolution and five unsuccessful resolution of each developmental stage. In her instrument, the Inventory of Psychosocial Development, Constantinople has substituted a 7-point scale for the Q-sort format; subjects are asked to rate each item on the scale in terms of how characteristic or uncharacteristic it is of him/her.

Another instrument which focuses upon the total life-span has been used by Ciaccio, and is in projective, rather than questionnaire, form. This instrument was first developed by Boyd (1964) as an interview; he then developed a projective instrument for use with children. This instrument consists of projective pictures, each of which portrays a basic aspect of one of the first five stages of development. Coding is the same for adults and children, and it was Ciaccio (1971) who later revised the coding scale, so as to be more appropriate for children.

More recently, an instrument similar to that of Rasmussen and Constantinople was developed by Rosenthal, Gurney,
and Moore (1981). This instrument is composed of six, Likert subscales consisting of twelve items each; half of the items reflect successful and half unsuccessful resolution of the developmental task associated with each developmental stage. As in the case with the other instruments described above, this instrument reflects the belief of its authors that identity must be studied within the context of total-life-span development.

B. IDENTITY IN ITS TOTALITY

Several instruments have been designed which measure identity in its totality; although identity is perceived by the authors as a multi-dimensional entity, it is measured integratively. Scores on these instruments reflect degree of overall identity achievement.

One of the earlier instruments designed to measure overall identity achievement was developed by Dignan (1963), and is based upon the conceptualization of identity in terms of self-referent images. In her definition of identity, Dignan (1963) introduces seven dimensions of personality which she perceives as relevant to ego identity, and which she seeks to tap in the ego identity scale which she devised. Each of these dimensions is defined, as well, from the perspective of self-perceived images.
Sense of self refers to "an image" central to one's being, one which embraces the past" (p. 10); uniqueness is concerned with an image of the present, in terms of how one differs from others. Self-acceptance refers to the evaluation of one's images in the light of one's culture and society; interpersonal role expectations refers to the images held by an individual which correspond to the various roles which he assumes. Stability refers to "the permanence of the core of the gradually evolving sense of self" (p. 10); goal directedness refers to knowledge of where one is going in the future. Lastly, interpersonal relations refers to how one thinks of oneself as relating to people in general.

In a study conducted with college freshman and sophomore females, Dignan (1963) developed an identity scale called the Ego Identity Scale, which reflects these seven personality dimensions. The scale consists of 50 items, and the subject is asked to report whether each of the items is true or not for himself/ herself. This scale provides a measure of overall identity achievement, and allows for rating of subjects on a continuum of identity achievement.

In her study, Dignan also developed a multi-dimensional instrument, with which she measured her subjects separately on five of the personality dimensions described earlier.
sense of self, uniqueness, self-acceptance, interpersonal role expectations, and stability. The results on these scales were then correlated with ratings on the Ego Identity Scale. The results exhibited a significant positive correlation between sense of self and self-acceptance and ratings on the identity scale for all subjects; uniqueness showed a similar positive and significant relationship with ratings on the identity scale for freshman subjects only, and no significant relationship was found with interpersonal role expectations and stability.

Another questionnaire developed more recently by Baker (1971), and designed to measure overall identity, consists of both a Likert type scale and incomplete sentence blanks. This scale measures four aspects of ego identity, derived directly from Erkison's writings: knowing who one is, knowing where one is going, perceiving oneself as having inner sameness and continuity, and being certain about the way one's perception of self compares to the perceptions of others. Results reflect overall identity achievement.

The two instruments described above measure identity integratively. The researchers who designed these instruments do not deny the multi-dimensionality of the identity construct; however, identity is measured as a total unit,
which reflects the multiple dimensions involved. However, it is interesting to note that Dignan supplemented the results on her Ego Identity Scale with scales designed to measure the personality dimensions of identity separately; this may indicate the need for both integrative and multidimensional measurement of the identity concept.

C. IDENTITY FORMATION AS A PROCESS

The instrument most utilized in identity research was developed by James Marcia (1964, 1966); it appears in interview form and is called the Identity Status Interview. This instrument is based upon Marcia's interpretation of Erikson's work, which suggests that there are two psychosocial criteria for determining degree of identity formation: the experience of crisis, which involves experimentation with alternative roles and ideals, and the act of making a commitment towards self-definition.

In his instrument, all individuals are rated in terms of the existence of crisis and commitment in relation to three issues: occupation, religion, and politics. Identity has been divided into four statuses, which may be viewed as a continuum of identity formation. Identity achievement refers to the state in which a person has both experienced a crisis and achieved a commitment; identity diffusion refers to the state in which a person experiences neither a
crisis nor a commitment. Moratorium refers to the state in which crisis is experienced, but commitment has not yet been achieved; foreclosure refers to the state in which commitment is achieved without crisis.

This instrument is unique in that it measures not only the degree of identity achievement, but the identity formation process. An individual is scored based upon his progress towards identity achievement; his score reflects the degree to which he has undergone the typical process of crisis and commitment, and defines his present status.

The Identity Status Interview has been widely used in identity research. Its primary advantage lies in its ability to distinguish between four levels of identity formation, based upon clearly defined criteria of evaluation. Its limitation lies in the conceptualization of identity in term of crisis and commitment, to the neglect of other dimensions described by Erikson, and included in other instruments.

Numerous attempts have been made to operationally define the concept of identity achievement. Each of the instruments described above have been utilized in identity
research, although Marcia's instrument has been most widely used. Each instrument reflects the conceptualization of its author of the concept and process of identity achievement, and this is the basis upon which most researchers select the instrument which they will use in their own research.

VI. SUMMARY

The concept of identity formation was first introduced by Erikson (1950) thirty five years ago. In his theory of psychosocial development, Erikson suggests that personality evolves by progression through eight sequential stages of development. Each stage is characterized by a developmental task to be mastered, and the resolution of each stage is dependent upon successful resolution of prior stages of development (Erikson, 1950, 1959, 1968).

In his theoretical formulation, Erikson focuses specifically upon the developmental task characteristic of the fifth stage of development, i.e. identity achievement. Identity is defined as self-integrity, as a sense of distinctiveness and of wholeness; it reflects a sense of continuity over time, and of psychosocial reciprocity. Identity is equated with psychosocial well-being and involves decision making regarding such issues as occupation, ideology, and sexuality (Erikson, 1950, 1959, 1968).
According to Erikson (1950, 1959, 1968), resolution of the identity achievement task impacts not only upon the subsequent developmental stage (the ability to form intimate interpersonal relationships), but upon general psychosocial functioning as an adult. Significant empirical research has been conducted based upon Erikson's theoretical work, and findings demonstrate the existence of a positive relationship between identity achievement and psychosocial functioning.

Empirical research has focused upon several dimensions of psychosocial functioning, such as the ability to form intimate relationships (Orlofsky, Marcia, and Lesser, 1973), academic achievement (Cross and Allen, 1970), cognitive style (Waterman and Waterman, 1974), locus of control (Waterman, Buebel, and Waterman, 1970), self-esteem (Marcia, 1967), and psychological adjustment (Neuber and Genthner, 1977). Results of this research consistently demonstrate that higher identity achievement is associated with more effective psychosocial functioning.

As stated earlier, identity achievement is defined by Erikson as characteristic of the adolescent stage of development. Erikson does not define adolescence, or the age range within which identity is achieved. Research indicates that during the high school years, identity becomes
stronger with progression to higher grades (Hauser, 1971; Meilman, 1979). This process continues during the college years, with significant differences found between college freshmen and seniors (Constantinople, 1969; Waterman, Geary, and Waterman, 1974), and even between students aged 17 through 20 and others aged 21 through 24 (Stark and Traxler, 1974), with stabilization occurring after completion of college (Marcia, 1976). Yet, other research contradicts these findings and suggests that identity is achieved by the end of the freshman year of college (Erwin, 1979). This issue remains unresolved and in need of clarification.

Substantial research has been conducted regarding identity achievement. An abstract construct, numerous attempts have been made to operationalize this concept; these attempts can be divided into three categories: total life-span development (e.g. Rasmussen, 1964; Constantinople, 1979), identity in its totality (e.g. Dignan, 1963), and identity formation as a process (Marcia, 1964, 1966). Choice of instrumentation for research reflects the conceptualization of the identity concept by the author of the research; each type of instrument has its liabilities and its strengths, to be assessed by each individual author prior to the conduct of research.
Chapter III
COPING WITH STRESS: A PROCESS APPROACH

A prominent issue in psychological and psychiatric literature over the past thirty five years has been that of stress, and its relationship to physiological and psychological symptomatology (Rabkin and Struening, 1976). Although early research perceived of stress in terms of a homeostatic model, in which all demand for change was considered stressful (Selye, 1956), recent research suggests that "change per se may be neither necessary nor sufficient for the experience of stress. Rather, stress occurs to the extent that there is some mismatch - actual or perceived - between the person and his or her environment. Environmental demands tax or exceed the adaptive capacities or resources of the person, and/or environmental opportunities constrain the satisfaction of the individual's needs" (Menaghian, 1983).

A review of the stress literature indicates that numerous approaches exist to understanding the concept of stress, within the context of the person-environment interaction. Three predominant models have been identified, and will be discussed below.
The stimulus-oriented model perceives of stress as residing within the stimulus properties of the organism's environment. Stress is imposed upon the individual by those aspects of the environment that are demanding or disorganizing for them. Each person has an innate capacity to withstand environmental stressors; when cumulative stress exceeds that capacity, the individual begins to experience a deterioration in functioning, i.e., a reaction to the stress. Measurement of stress from this perspective focuses upon the characteristics of the individual's environment, and often takes the form of life event scales (Derogatis, 1982).

The response-oriented model suggests that the presence of stress is defined by the response of the individual to environmental events; stress is evaluated in terms of the pattern and amplitude of the individual's emotional responses. This response pattern is perceived as a precursor, or as instrumental to, the development of functional disorganization and disease. Measurement of stress from this perspective focuses upon disorganized functioning, and often takes the form of psychological symptom inventories (Derogatis, 1982).

The interactional perspective suggests that the characteristics of the organism are the major mediating mechanism
between the stimulus characteristics of the environment and the responses which they invoke. Individual differences in response to the environment are the product of the perceptive, cognitive, psychological, and physiological characteristics of the individual, which go beyond the innate capacities discussed in the stimulus-oriented theories. In addition, not only does the individual mediate the impact of environmental stimuli upon responses; the individual's characteristics can affect, and become a significant part of, the environment. Transactional in nature, this approach to stress is difficult to measure; attempts have been made to use sequential measures in order to capture the dynamic, transactional nature of the process (Derogatis, 1982).

Substantial research has been conducted based upon each of the stress models described above. This research has resulted in a growing conviction that how people cope with stress plays a prominent role in their physical, psychological, and social well-being (Folkman and Lazarus, 1980). Coping has been identified as a mediating variable, or resource, in dealing with stress, and it has been suggested that "people typically confront stress-provoking conditions with a variety of behaviors, perceptions, and cognitions that are often capable of altering the difficult conditions or of mediating their impact" (Pearlin et al., 1981, p. 340).
Like the concept of stress, coping is a broad and general concept, which has been approached from different theoretical perspectives. Three broad categories of coping variables have been identified, and will be described below.

Coping resources are generalized attitudes and skills, that may be advantageous to the individual in a variety of situations. They include attitudes regarding the self—such as self-esteem, attitudes regarding the world—such as sense of coherence, or belief in mastery or control of external situations, intellectual skills—such as knowledge and intellectual ability, and interpersonal skills—such as communication skills. Coping styles refer to generalized coping strategies, which reflect habitual preferences and tendencies in the approach to problem-solution. Withdrawal, denial, and self-blame, when used habitually to deal with problems, would reflect coping styles. This typology assumes cross-sectional consistency and stability in problem-resolution. Coping efforts refer to specific actions, taken in specific situations, for the purpose of stress-reduction or problem-solution. Problem-appraisal, inhibition of emotions, help-seeking, or refusal to think about the problem would reflect coping efforts (Menaghan, 1983).
Significant empirical research has been conducted regarding the issues of stress and coping. One researcher, who has gained prominence in the field, is Richard Lazarus, who with a number of colleagues has developed the cognitive-phenomenological approach to coping. This approach defines stress interactionally, and perceives of coping in terms of efforts taken, in specific situations, to reduce stress. However, although primarily an effort-oriented model, this approach integrates coping resources, as well, into its perception of the coping process. This model is transactional in nature. It reflects the basic tenets of the unified conceptualization of social work practice described earlier, tenets which are reflected, as well, in the work of Erikson. This approach will be the primary focus of this chapter.

I. THE COGNITIVE-PHENOMENOLOGICAL APPROACH TO COPING

The cognitive-phenomenological approach, introduced by Lazarus in 1966, views coping from a transactional perspective; the person and environment are perceived within the context of an ongoing, reciprocal relationship. Coping is defined as the "process of managing demands (external or internal) that are appraised as taxing or exceeding the resources of the person" (Lazarus and Folkman, 1984, p.283). This definition focuses upon coping as a process,
rather than as a style or an individual trait; this process involves the mobilization of effort, for the purpose of demand management. Emphasis is placed upon management, as opposed to mastery, in recognition of the fact that many human problems, such as aging or illness, cannot be mastered; instead, they are redefined, tolerated, endured, or accepted. Finally, coping involves the process of appraisal, psychological mediation which implies an evaluation process (Lazarus and Folkman, 1984).

Coping implies the existence of stress. It is distinguished by the mobilization of effort, which occurs only when a person cannot routinely handle the demands or requirements of everyday living (Lazarus and Folkman, 1984).

The relationship between the individual and the environment is mediated by two processes: appraisal and coping (Folkman and Lazarus, 1980; Folkman, 1984; Lazarus, 1966; Lazarus and Folkman, 1984). Appraisal refers to the cognitive process by which an event is evaluated, in terms of what is at stake (primary appraisal) and what coping resources and options are available for managing potential or actual harm (secondary appraisal). Primary appraisal includes three possible judgements: that a specific transaction with the environment is irrelevant to the well-being
of the individual; that the transaction is benign-positive, signifying a positive state of affairs; and that a transaction is stressful (Folkman, Schaefer, and Lazarus, 1979; Holroyd and Lazarus, 1982).

Stressful transactions can take three forms: harm-loss, threat, and challenge. Harm-loss refers to a transaction in which damage has already occurred; the assessment that harm has been done is defined by a person's values and commitments. Harm can be temporary, long-term, or permanent. In the event of harm, coping would be required to overcome the damage, to prevent it from becoming worse, to come to terms with the situation, or to reinterpret what has happened. Threat refers to a situation in which damage is anticipated; in the event of threat, coping would be anticipatory in nature. It would require an evaluation of what will happen, when it will happen, and how bad it will be. It would also involve an estimation of the possibilities of preventing or tolerating the event, and of the chances to recoup should the event actually occur. Challenge refers to a situation in which there is potential for both harm and mastery; coping with a challenge would involve a focus of attention upon what could be gained, rather than lost, from a given event. Degree of stress depends primarily upon the appraisal of how much appears to be at stake in the transaction, and the relative power of the environmen-
tal demand to harm persons, as opposed to their ability to manage or prevent such harm (Lazarus and Folkman, 1984).

Secondary appraisal involves the evaluation of what coping resources and options are available. It is influenced by the similarity of previous experiences, generalized beliefs about oneself and one's environment, and the availability of personal and environmental resources (Holroyd and Lazarus, 1982).

Coping refers to "cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them" (Folkman and Lazarus, 1980: p. 223). Coping efforts serve two main functions; to manage or alter the person-environment relationship which is the source of stress, called problem-focused coping, and to regulate stressful emotions, called emotion-focused coping.

Problem-focused coping involves efforts directed at doing something constructive about the conditions that harm, threaten, or challenge. It may be used to prevent stressful events from occurring, or to enable the person to avoid or resolve difficulties that do occur. Emotion-focused coping involves efforts directed at the regulation of emotion; these efforts may focus upon behavior and expression, physiological disturbance, subjective distress,
or all three. The same coping mechanisms may serve both
 coping functions, either on different occasions or even
 simultaneously (Holroyd and Lazarus, 1982; Lazarus and
 Folkman, 1984).

According to Folkman and Lazarus (1980; in press), coping
 with stress involves both problem and emotion-focused
coping. In a study conducted with 100 men and women, aged
45 to 64, each subject was interviewed monthly for a period
of a year, regarding stressful encounters and coping strat-
egies. Of 1,332 coping episodes analyzed, less than 2%
involved the use of only one type of coping (Folkman and
Lazarus, 1980). These results were repeated in a study
conducted with college students during exam time: 94% of
the sample used both problem and emotion-focused coping to
deal with the exam situation (Folkman and Lazarus, in
press). These results were supported, as well, in the work
of Billings and Moos (1981).

II. DETERMINANTS OF COPING

According to Lazarus and Folkman (1984), "coping is sen-
sitive to situational requirements, constraints, and avail-
able resources, and is affected also by person factors.
Such influences interact in shaping the mediating process
of appraisal, which in turn, influences the choice of cop-
ing activity" (p. 292). In the following section, situation and person factors which affect the coping process will be examined.

Situation factors may be either formal or substantive. Formal factors include such issues as the degree and imminence of harm; the frequency and duration of the stressful encounter; and ambiguity regarding whether harm will occur, and regarding coping options. Substantive factors include such issues as the nature of the harm, e.g. psychological or physical; the availability of personal resources, such as skills and stamina; and the availability of environmental resources, such as social support (Lazarus and Folkman, 1984).

Person factors involve motivational, cognitive, and emotional factors which affect human behavior and experience. Lazarus (1966) identifies three personality factors that impact upon appraisal: motivational characteristics of the individual, which determine what will be regarded as harmful and what as beneficial by the individual; belief systems concerning transactions with the environment, such as beliefs about one's ability to master and control the environment; and intellectual resources, education, and sophistication, capacities which enable the individual to infer that a particular stimulus will cause harm, and which per-
mit better recognition of those factors which might mitigate the harm.

Personality factors influence not only the appraisal process, but the coping process, as well. This influence may occur via the appraisal process, by affecting how the situation is appraised, or directly upon the coping process. Lazarus (1966) identifies four personality factors that affect the coping process: patterns of motivation; ego resources, such as ego strength and impulse control; coping dispositions, such as the tendency to use defenses when threatened, the tendency to aggressive anxiety, or conformity to group pressure; and general beliefs about the environment, regarding such issues as what is right and wrong, effective and ineffective, and how the environment will respond to certain types of action.

Stress research provides evidence of the influence of both situation and personality factors upon the coping process, as well as upon stress reactions and symptomatology. In his research on false alarms, Breznitz (1976) showed that uncertainty increases when warnings regarding destructive storms or military attacks prove false; after these experiences, people are less willing to accept the reality of the danger, and less likely to take protective actions. These results suggest that if consequences are ambiguous,
people are less willing to take actions that are preventive or protective in nature. Shalit (1977) suggests that coping effectiveness is based upon the ability to resolve ambiguity. According to Shalit, ambiguity is dependent upon the structural complexity of the situation; complexity involves the number of possibilities that are perceived for interpretation, the relative ease with which these possibilities can be rank-ordered, and the emotional loading of the possibilities. Shalit concludes that the ability of the person to rank-order the possibilities, thereby reducing ambiguity, has the most impact of the three factors upon coping effectiveness.

Billings and Moos (1981) found that quality of social supports moderate the effects of negative life events upon psychosocial functioning; these results were supported by Pearlin et al (1981), who found that in the case of job loss, social supports help the job loser to avoid erosion of a positive self-concept. Weisman and Worden found (1975) that terminal cancer patients who maintained social relationships, and who were able to accept support from others without alienating them, lived longer than patients who withdrew.

Situation factors were also found to affect choice of coping strategies. Folkman and Lazarus (1980) found that
problem-focused coping is used more often in work situations, whereas more mixed coping is used in health situations. Billings and Moos (1981) found that more problem-focused coping is used in illness situations than in any other type of situation; death situations elicited the least amount of problem-focused coping.

Substantial evidence exists regarding the relationship between demographic variables and coping. Rutter (1981) found that boys are more vulnerable to stress than girls, and suggests that this may be due to the fact that parents respond negatively to the distress reaction of boys, and are often less supportive of their attempts to cope with changing life circumstances. Pearlin and Schooler (1978) noted a profound imbalance between the sexes in their use of effective coping mechanisms. Men were more likely to employ coping responses that inhibit the stressful outcomes of their life problems; women were more likely to employ coping responses that exacerbate, rather than moderate stress. Billings and Moos (1981) similarly found that women engage more than men in less effective, emotion-focused coping. On the other hand, Folkman and Lazarus (1980) found no significant difference between the coping strategies of men and women; they did find that men used more problem-focused coping than women, but only in situations that had to be accepted, and could not be solved.
Folkman and Lazarus (1980) found no relationship between age and coping, although they suggest that this may be due to the restricted age range of their sample. Pearlin and Schooler (1978) also found no difference in efficacious coping based upon age. They did, however, find that socioeconomic status affects coping: not only were life-problems distributed unequally among the statuses, but so were coping abilities. However, the authors suggest that members of higher socioeconomic groups may have better access to more effective coping techniques because of their privileged status. Billings and Moos (1981) found a relationship between coping and both education and income. Subjects with higher education and higher income used more active cognitive, and more problem-focused, coping strategies. Rutter (1981) also found a relationship between intelligence and coping effectiveness; children with above average intelligence had slightly lower rates of psychiatric disorder. In addition, in the presence of chronic psychosocial adversity, high intelligence and academic achievement had a protective effect on the children.

Personality characteristics have been the subject of stress research, as well. Kobasa (1979) describes three personality attributes that contribute to effective coping: belief in one's ability to control life events; orientation towards challenge and novelty of experience; and a sense of
commitment and meaningfulness of life. These attributes, or what Kobasa et al (1981) call the "hardy personality", when coupled with social support systems and a hardy constitution, enable certain people to face stress without becoming ill. Johnson and Sarason (1978) report that another significant moderator variable is locus of control. In a study in which they examined the relationship between both positive and negative life changes and depression and anxiety, negative change was found to be significantly correlated with measures of depression and trait anxiety for people with external locus of control. Therefore, they suggest that individuals experiencing a high degree of life changes, and who feel that they have no control over their life events, would be most susceptible to the effects of life stress.

Additional support has been found for the relationship between sense of control and stress. Hammen, Krantz, and Cochran (1981) report that subjects depressed over starting college perceived that they had less control over the occurrence of the event than non-depressed individuals. Janoff-Bulman (1979) distinguishes between two types of self-blame: characterological and behavioral. In characterological self-blame, persons blame their character for negative events that have occurred to them; in behavioral self-blame, persons blame their behavior. According to
this author, what distinguishes these two types of self-blame is perceived controllability; characterological self-blame makes the future seem uncontrollable, whereas behavioral self-blame makes the future seem controllable. In a study conducted with college students, Janoff-Bulman (1979) found that depressed students blame themselves more characterologically than behaviorally. Peterson, Schwartz, and Seligman (1981) also found depressive symptoms to be positively associated with characterological blame. These results suggest that a relationship exists between sense of control and depression.

Worden and Sobel (1978) suggest that an important aspect of an individual's overall adaptive resources is "ego strength", which describes the effectiveness of an individual's capacity for adaptation, mastery, and coping. Using an ego strength scale with newly diagnosed cancer patients, these authors found that greater ego strength is associated with less vulnerability, mood disturbance, and symptomatology, and better problem-resolution.

Pearlin and Schooler (1978) describe three psychological resources found to be effective in vitiating stress: freedom from negative attitudes toward one's self; a sense of control, or mastery, over events and experiences; and the presence of favorable attitudes towards the self. Pearlin
et al (1981) found that elevated economic strains are closely associated with the decline of self-esteem and mastery, and that this erosion of positive self-concept is related to an increase in depression. Tyler (1978) reports that favorable self-attitudes, such as a sense of self-worth and self-efficacy, and optimistic trust in the world are correlated with an active coping orientation, high initiative, realistic goal setting, and forebearance in goal pursuit.

Substantial research has been cited which suggests that a relationship exists between both situation and personality variables and coping and stress reactions. Self-esteem, sense of efficacy and worth, and sense of mastery or control over events and experiences, all seem to contribute to the effectiveness of coping strategies, and to freedom from stress-related symptomatology (e.g. anxiety, depression). Another factor which impacts upon coping strategies is the appraisal process itself.

Folkman and Lazarus (1980) found that in situations appraised as having few possibilities for beneficial change, the person is more likely to employ emotion-focused modes of coping (e.g. wishful thinking and threat minimization); in situations appraised as having the potential for amelio-
ration by action, the person is more likely to employ problem-focused modes of coping. McRae (1984) conducted a study with elderly subjects, and found that coping responses differed based upon appraisal of events as harmful (losses), as threats, and as a challenge. In events classified as a challenge, a wide variety of coping mechanisms were used. In events classified as a threat, more concrete actions were taken, such as seeking outside help and perseverance, whereas in events classified as a loss, the subject was more likely to express feelings. These results were replicated in a second study, with the same population. In addition, Folkman and Lazarus (in press) found, in a study conducted with college students, that certain types of emotions (e.g. emphasizing the positive) are more highly correlated with problem-focused coping, while others may serve to impede this process (e.g. self-blame, wishful thinking). These results support their contention that emotion-focused coping mechanisms can facilitate problem-focused coping, if they are used to manage emotions that might otherwise impede problem-focused efforts (Folkman and Lazarus, in press).

To summarize, the cognitive-phenomenological approach to coping defines coping as the process by which demands that
are perceived as in excess of an individual's resources are managed. Coping is a mediating variable, which moderates or controls the effect of stress upon the physiological and psychological well-being of the individual. Coping includes a cognitive dimension, in which the individual appraises events in terms of their potential for harmful outcomes, and of the availability of resources to control and manage the events. Management efforts follow this cognitive process.

Several factors have been identified, which influence both the appraisal and actual coping processes. Situational and psychological variables, such as self-esteem, sense of mastery, social support systems, and ambiguity affect both appraisal and coping efforts. Impact upon the coping process may be direct, or via the appraisal process; thus, appraisal has been identified as a third variable which impacts upon the coping process. Empirical research has been cited which provides evidence for the impact of these three variables on coping, and upon stress-related symptomatology.
III. THE RELATIONSHIP BETWEEN IDENTITY AND COPING WITH STRESS

As was stated above, research indicates that a relationship exists between personality characteristics and the ability to cope with stress. One personality variable which may be related to coping with stress is identity achievement. According to Antonovsky (1979), the ability to cope with stress is facilitated by a "sense of coherence", a psychological orientation toward the world consisting of three parts: comprehensibility, the degree to which the individual finds the world to be consistent and orderly; managability, the sense that one can cope with events through active use of their own resources, or with outside help; and meaningfulness, the feeling that life's demands are worthy of commitment, that they make sense emotionally. Sense of coherence is "a global orientation that expresses the extent to which one has a pervasive, enduring - though dynamic - feeling of confidence that one's internal and external environments are predictable, and that there is a high probability that things will work out as well as can reasonably be expected" (p. 123).

A strong sense of coherence emerges as the product of life experiences; the more consistent these experiences, and the greater the participation of the individual in the
shaping of their outcome, the greater the sense of coherence. Life experiences are affected by generalized resistance resources, resources which develop as a product of childrearing patterns, social roles, and other idiosyncratic factors. It is these resources which provide the individual with meaningful, consistent life experiences, and hence, with a sense of coherence. Generalized resistance resources may be physical, emotional, cognitive, valutative, or relational in nature; included in these resources are such variables as knowledge, intelligence, social support, and ego identity (Antonovsky, 1979).

According to this model, sense of coherence is both a dependent and an independent variable. Facilitated in its development by generalized resistance resources, the sense of coherence also serves to mobilize these resources in response to stressors. Such responses are perceived as coping efforts; these efforts fulfill three functions: the avoidance of stress; control over the meaning of the situation; and stress reduction.

According to Antonovsky (1979), ego identity, which has been identified as a generalized resistance resource, "may well... be a decisive, or even necessary, precondition for a strong sense of coherence" (p. 110). Formation of a sense of coherence begins in childhood; from birth, one is con-
fronted continuously with situations of challenge, stress, tension, and resolution. If these experiences are characterized by consistency and participation in shaping the outcome, the child begins to perceive the world as coherent and predictable; however, these perceptions remain tentative. During adolescence and early adulthood, identity is formed; decisions are made regarding occupation, interpersonal relationships, and ideology, and one's sense of coherence is re-enforced. With the formation of a stable identity, and with the selection of a life style comes permanence, and hence, a definitive sense of coherence is attained (Antonovsky, 1979). Thus, identity would appear to be a crucial factor for the development of a sense of coherence; in addition, as a generalized resistance resource, identity might be mobilized, or affect the response to stressors, as well.

Little empirical evidence exists regarding the relationship between identity achievement and coping with stress, although the evidence which is available suggests the existence of a positive, significant relationship between these two variables. In a study of college students, Mandell (1979) found that ego identity was positively associated with coping, defined as adolescent competence in problem-solving in specific, potentially stressful, college situations. In a study which was also conducted with college
students, Erwin (1978) found that students who scored higher on identity also tended to perceive situations as under their personal control, a variable which Folkman and Lazarus (1980) suggest is related to choice of coping activities. Given these results, additional research regarding the relationship between identity achievement and coping with stress is indicated.

IV. MEASUREMENT OF COPING

Traditional approaches to measurement of coping are based upon three theoretical perspectives about coping: coping as an ego process; coping as a personality trait; and situation-specific coping. In a comprehensive and critical review of coping research, Folkman and Lazarus (1980; Lazarus and Folkman, 1984) discuss the limitations of these approaches; these will be discussed briefly below. In addition, an alternative model for the measurement of coping is introduced by Folkman and Lazarus (1980), and this, too, will be presented below.

The first approach views coping as a defensive process, whose purpose is to reduce tension and restore emotional equilibrium. Defenses can be hierarchically organized on an evaluative continuum; some are positively valued, while others are considered pathogenic (Haan, 1977; Vaillant,
The emphasis of this approach is upon tension-reduction; actions aimed at altering, managing, or solving a troubled person-environment relationship (i.e. problem-solving efforts) are ignored (Lazarus and Folkman, 1984).

According to Folkman and Lazarus (1980; Lazarus and Folkman, 1984) research from this perspective contains some major flaws. First, process and outcome are often confounded, since certain coping processes are by definition considered neurotic or immature (i.e. maladaptive). In addition, it is difficult to attain adequate interrater reliability in assigning labels to defense mechanisms. Lastly, this perspective suggests that coping is a unidimensional process, involving only the regulation of emotions; research indicates, however, that coping involves both emotion-focused and problem-solving activities (Folkman and Lazarus, 1980).

The second approach views coping as a personality trait; this perspective overlaps with the first approach, since the content of coping traits is often defensive in nature. Traits differ, however, from defensive processes in that "they do not refer to a defensive response per se, but to the personality or dispositional attributes that lead to the response" (Folkman and Lazarus, 1980, p. 221). Trait measures assume that people are consistent across situ-
ations; however, these measures are not usually used to assess coping in different stressful situations, and as such provide no evidence of consistency in cross-situational coping (Lazarus and Folkman, 1984). In addition, in their research, Folkman and Lazarus (1980) found coping consistency across situations to be only moderate to low, which indicates that coping may, in fact, be situation-related.

According to Folkman and Lazarus (1980), coping is a shifting process, in which a person relies on different strategies as the status of the situation changes. At certain times a person may rely on one type of coping strategy, and at other times on another coping strategy; this dynamism is not reflected in static measures of personality traits (Lazarus and Folkman, 1984).

The third approach describes how people cope with specific situations (e.g., cancer, Weisman and Worden, 1975). The major disadvantage of this approach is that it identifies coping strategies utilized in unusual situations, and as such, tends to be situation-specific; consequently, findings cannot be generalized to other contexts. However, this perspective provides a more inclusive and comprehensive description of coping than is provided by the first two approaches (Folkman and Lazarus, 1980).
Although results of situation-specific coping research can not be generalized, one exception to this rule lies in the research of Pearlin and Schooler (1978; and Pearlin et al., 1981). In their research, several life strains that are commonly experienced were identified; these were related to four social roles: parent, spouse, worker, and breadwinner. Subjects were asked about the coping repertoires which they employ in dealing with these strains; thus, their reports reflected typical responses to stressful life events, rather than to unusual life experiences. In addition, data was obtained for multiple stress situations. It is interesting to note that the results indicated that although certain coping strategies were consistent across situations, others were used in only one context. The major strength of this study lies in its investigation of multiple (cross-situational) and typical life strains; its major flaw lies in the fact that respondents were asked how they usually cope with general sources of stress, rather than how they actually coped with a specific situation (Lazarus and Folkman, 1984).

According to Lazarus and Folkman (1984), each of the approaches to coping described above contain major flaws. Lack of generalizability, measurement of typical, rather
than actual coping responses, and the measurement of coping as a unidimensional process are major liabilities; in an attempt to resolve these issues, these authors have developed their own instrument for the measurement of the coping process, based in the cognitive-phenomenological approach to coping.

According to the cognitive-phenomenological approach (Lazarus, 1966; Folkman and Lazarus, 1980; Lazarus and Folkman, 1984), coping involves two dynamic processes: cognitive appraisal and coping activities. In addition, this approach suggests that healthy coping involves both problem- and emotion-focused coping efforts. The instrument developed by these authors (1980) reflects both the dynamic quality of the coping process and its multiple dimensions; in addition, it is used cross-situationally, and is based upon actual coping responses, and allows for the generalization of its results.

Their questionnaire, called the "Ways of Coping Checklist", describes a broad range of behavioral and cognitive coping strategies that may be used in a particular stressful situation. Subjects are asked to respond to the questionnaire in terms of specific stressful events that have occurred during a specified period of time; with this approach, subjects are able to report actual behaviors,
related to multiple, and diverse situations, rather than a self-analysis of typical responses, or responses to specific situations. This checklist also allows the subject to share the complexity of their coping response, which often includes a number of thoughts and actions. Both problem and emotion-focused coping is measured, reflecting the multi-dimensionality of the coping process. Despite its shortcomings, particularly those related to the use of self-report, as opposed to observational or inferential techniques (in which such influences as social desirability are minimized), these authors suggest that their instrument, coupled with their theoretical perspective towards coping, resolves many of the problems identified in other approaches to coping; they suggest that it may well facilitate the resolution of many of the perplexing questions about stress (Folkman and Lazarus, 1980).

One final measurement issue to be discussed involves the identification of stressful incidents to be used for analysis. Folkman and Lazarus (1980) asked their respondents to think of the most stressful event which had occurred in a specified period of time, and to answer all questions in relation to this event. Another method by which stressful events can be elicited is through the use of the life event scale.
Life event scales are checklists, composed of items which represent fairly common situations arising from family, personal, occupational, and financial events, that require or signify change in ongoing adjustment (Babkin and Struening, 1976). The most widely used scale was developed by Holmes and Rahe (1975), although a scale which is more relevant for use with college students has been developed by Sandler and Lakey (1982). Another scale, to be used specifically with adolescents, has been developed, as well (Forman et al, 1983; Yeaworth et al, 1980). Generally used to demonstrate a temporal association between the onset of illness and a recent increase in the number of events requiring socially adaptive responses, life event scales can be used, as well, as a simple reflection of the amount and type of stressful events experienced by an individual over a given period of time. When used for this purpose, life event scales may be utilized in conjunction with the "Ways of Coping Checklist". McRae (1984) describes a study in which subjects were asked to fill out a life events scale for events which occurred in the previous year; out of the events reported by these subjects, several were then selected as the target for coping questions. Both the "Ways of Coping Checklist" and another coping questionnaire were used to measure coping efforts.
A multitude of instruments have been designed to measure coping with stress; each reflects the theoretical orientation of its author on coping. Coping as a cognitive-phenomenological process can be measured by the "Ways of Coping Checklist", and according to Folkman and Lazarus (1980), this instrument best reflects the dynamic, transactional, multi-dimensional nature of the coping process.

V. SUMMARY

Several approaches exist with regard to the concept of stress (Derogatis, 1982) and coping (Menaghan, 1983). The primary focus of this chapter is upon the cognitive-phenomenological approach to coping, first introduced by Lazarus in 1966; this model defines stress interactionally, and perceives of coping as efforts taken to reduce stress in specific situations.

According to this model (Lazarus, 1966; Folkman and Lazarus, 1980; in press; Lazarus and Folkman, 1984), coping refers to the process by which demands appraised as in excess of the individual's resources, are managed. The relationship between the individual and the environment is mediated by two processes: appraisal and coping. Appraisal refers to the cognitive process by which the harm, threat, or challenge inherent in a given event are evaluat-
Coping refers to the efforts taken to master, tolerate, or reduce demands.

Coping efforts serve two main functions: to manage or alter the person-environment relationship which is the source of stress (problem-focused coping), and the regulation of stressful emotions (emotion-focused coping). Coping involves both emotion and problem-focused coping efforts, although their proportions may vary (Folkman and Lazarus, 1980; in press).

Two factors affect the appraisal process: situation factors, such as frequency and duration of the stressful encounter, and ambiguity regarding whether harm will occur; and person factors, such as motivational characteristics of the individual, and beliefs about one's ability to master or control the environment. Situation and person factors, as well as the appraisal process itself, impact upon the coping process (Lazarus, 1966; Lazarus and Folkman, 1984). Research findings provide empirical support regarding these relationships (e.g. Breznitz, 1976; Shalit, 1977; Billings and Moos, 1981; Pearlin and Schooler, 1978).

One person issue which has received little attention in the literature is identity achievement. According to Antonovsky (1979), the ability to cope with stress is facilitated by a sense of coherence, which is affected by identi-
Identity achievement is identified as a crucial factor in the development of a sense of coherence, and as a coping resource, as well. Mandel (1979) found empirical evidence which demonstrates the existence of a relationship between identity achievement and coping with stress; additional research is indicated.

Measurement of coping is based upon the theoretical perspective of the author; Folkman and Lazarus (1980; in press) suggest that numerous flaws exist in traditional measurement methods, and offer an alternative based upon the cognitive-phenomenological approach to coping. This instrument best reflects the dynamic, transactional, and multi-dimensional nature of the coping process and as such, is most useful for coping research.
Chapter IV

PROBLEM FORMULATION AND RESEARCH METHODOLOGY

I. PROBLEM FORMULATION

In his theory of psychosocial development, Erik Erikson (1950, 1959, 1968) suggests that personality development evolves epigenetically, following a ground plan of eight sequential stages extending throughout the entire life span. Each stage is characterized by a developmental task to be mastered or resolved; resolution may be either adaptive or maladaptive, and the nature of this resolution impacts upon the ability of the individual to master the subsequent stage of development.

The fifth stage of development, which occurs during adolescence, has been the major focus of Erikson’s work (1950, 1959, 1968). The developmental task to be mastered during this stage is identity achievement, described by Erikson as a sense of distinctiveness and self-consistency; continuity of self over time; and a sense of psychosocial reciprocity. According to Erikson, successful mastery of this developmental task is crucial not only for the mastery of the sub-
sequent developmental task, but for overall psychosocial functioning as an adult. (see figure 1)

Mastery of age-specific > ability to master developmental tasks > subsequent tasks

Identity achievement >

a. mastery of subsequent developmental task - "intimacy" in interpersonal relationships
b. adult psychosocial functioning
e.g. academic achievement, cognitive style, psychological adjustment

Figure 1: Impact of successful mastery of identity achievement task

Empirical investigation of the relationship between identity achievement and psychosocial functioning indicates that a positive and significant relationship exists between identity achievement and the ability to form intimate interpersonal relationships (Orlofsky, Marcia, and Lesser, 1973; Orlofsky, 1978; Fitch and Adams, 1983). A relationship has been established, as well, between identity
achievement and such aspects of psychosocial functioning as academic achievement (Cross and Allen, 1970), cognitive style (Waterman and Waterman, 1974), locus of control (Waterman, Buebøl, and Waterman, 1970), and psychological adjustment (Neuber and Gentner, 1977; Wilkerson, Protinsky, Maxwell, and Lentner, 1982). Limited research has been conducted regarding the relationship between one area of psychological adjustment, coping with stress, and identity achievement (Mandell, 1979), and it is upon this relationship that this study has focused.

According to Erikson (1950, 1959, 1968), identity formation occurs during adolescence; however, Erikson does not identify the age span included in the adolescent period. Empirical research indicates that high school students in the upper grades manifested a higher (although insignificant) degree of identity achievement than students in the lower grades (La Voie, 1976; Meilman, 1979). College seniors exhibited a significantly higher degree of identity achievement than freshmen (Waterman, Geary, and Waterman, 1974); subjects who were remeasured six years after college graduation, exhibited no significant difference in identity achievement from scores obtained as seniors (Marcia, 1976). Other researchers have reported, however, that major changes still occur in identity achievement between the ages of twenty one and twenty four (Protinsky, 1975; Stark and
Traxler, 1974), and Chickering (1969) suggests that identity achievement can occur well into the twenties. Additional research is required regarding this issue, and this study will focus upon the age range for identity achievement, as well.

Several instruments designed to measure identity achievement were described earlier (e.g. Baker, 1971; Constantinople, 1969; Marcia, 1966). One instrument of particular interest was designed by Dignan (1963). Dignan identifies seven personality dimensions that can be considered relevant to the identity construct; her instrument provides a unitary score of identity achievement, based upon these multiple dimensions. In addition, Dignan devised supplementary scales, which measure each of these dimensions separately. In her study, Dignan (1963) correlated each of the personality dimensions with scores on her identity scale. Only two dimensions, sense of self and self-acceptance, showed significant positive correlations with scores on the identity scale. In this study, Dignan's identity scale will be used, to obtain a unitary score of identity achievement. In addition, the two scales which correlated most strongly with identity scores will be used as a supplement to the identity scale, in an effort to obtain information regarding the importance of specific dimensions of identity achievement for psychosocial functioning.
Several approaches to the understanding and measurement of coping with stress have been described (coping as a defense, coping as a personality trait, and situation-specific coping; Folkman and Lazarus, 1980). Major flaws have been identified, and an alternative model of coping, the cognitive-phenomenological approach (Lazarus, 1966), has been discussed. This model resolves some of the major liabilities of the other approaches, and it is upon this model that this study has been based. In addition, the instrument developed by these authors for the measurement of coping as a cognitive-phenomenological process has been utilized.

According to Lazarus (1966), coping is a two-dimensional process; it involves: appraisal - which refers to the cognitive process by which an event is evaluated, in terms of what is at stake and what coping resources and options are available, and coping - which refers to cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them. Coping efforts serve two main functions: management of the person-environment relationship which is the source of stress (problem-focused coping), and regulation of stressful emotions (emotion-focused coping). Stress arises as a function of the appraisal process, and is determined by the evaluation of what is at stake and what coping resources are available.
According to Folkman and Lazarus (in press), coping with stress involves both problem and emotion-focused coping. Predominance of one type of coping over the other is a function of the appraisal process; events which are appraised as having few possibilities for beneficial change are more likely to induce emotion-focused modes of coping, while events which are appraised as having the potential for amelioration by action are more likely to induce problem-focused modes of coping. Folkman and Lazarus (in press) also note that certain emotions correlate highly with problem-focused activities, whereas others appear to impede problem-focused activities.

Two factors which impact upon the appraisal process are situational and personality variables. (see figure 2) Some situational factors which may affect the appraisal process are ambiguity and social support networks; some personality variables which may affect the appraisal process are patterns of motivation and personal control (Lazarus and Folkman, 1984). Situational and personal variables may also affect the coping process; according to Folkman and Lazarus (1980), people tend to use more problem-focused coping in work situations, whereas in health situations, mixed coping appears to predominate. (see figure 2) These authors also noted that although coping is more variable than stable (across situations), people appear to have
preferences for coping strategies both within and across situations, which may be a reflection of personality characteristics.

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1. COPING =
   APPRAISAL + COPING (EMOTION / PROBLEM-FOCUSED) ACTIVITIES

2. PERSONALITY VARIABLES >
   SITUATIONAL VARIABLES >

3. APPRAISAL
   SITUATION
   PERSONALITY VARIABLES >

**Figure 2:** COGNITIVE-PHENOMENOLOGICAL APPROACH TO COPING

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One personality variable which may be related to the coping process is identity. According to Antonovsky (1979), a crucial factor in the coping process is a sense of coherence; this sense emerges as a function of life experiences, which, in turn, are influenced by generalized resistance resources. These may be physical, emotional, cognitive, valuative, or relational in nature. Generalized
resistance resources not only facilitate the development of a sense of coherence, but are, in turn, remobilized by the sense of coherence in response to stressful experiences. (see figure 3)

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**Figure 3**: THE RELATIONSHIP BETWEEN IDENTITY AND COPING WITH STRESS

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One of the generalized resistance resources described by Antonovsky (1979) is identity achievement; it is during the identity formation process, that the sense of coherence is stabilized. According to this model, identity is not only
a precursor of the development of a sense of coherence, but may facilitate the coping process, as well. This study attempts to establish whether identity achievement does, in fact, impact upon the coping process.

To summarize, in his theory of psychosocial development, Erikson suggests that identity formation facilitates adult psychosocial functioning. In his cognitive-phenomenological model of coping, Lazarus suggests that personality variables contribute to the coping process, both in terms of appraisal and of coping activities, and Antonovsky points specifically to the relationship between identity achievement and the coping process. Little research has been conducted regarding the relationship between identity achievement and the ability to cope with stress, although the available research indicates that a positive relationship exists between these two variables. Mandell (1979) discovered that a relationship exists between identity formation and coping; Erwin (1978) notes that students who score higher on identity tend to perceive situations as under their personal control. This study investigates the relationship between identity achievement and the process of coping with stress; it attempts, as well, to determine the relationship between coping and specific dimensions of identity, and to gain greater insight into coping as a dynamic process.
In this study, the following research questions are investigated:

1. What is the relationship between identity achievement and
   a. appraisal of a situation as capable, or not, of being changed.
   b. the predominance of problem-focused coping activities
   c. the predominance of emotion-focused coping activities
   d. the type of emotion-focused coping activities (facilitative or not of problem-focused activities) utilized by the individual?

2. What relationship exists between two dimensions of identity, sense of self and self-acceptance, and
   a. appraisal of situations as capable, or not, of being changed
   b. the predominance of problem-focused coping activities
   c. the predominance of emotion-focused coping activities
   d. the type of emotion-focused coping activities (facilitative or not of problem-focused activities) utilized by the individual?

3. What is the relationship between age and identity achievement?

4. Does age have an impact upon the coping process?
II. RESEARCH METHODOLOGY

A. DEFINITION OF TERMS

The major concepts of this study were defined as follows:

Identity - "the complex of self-referent images achieved through social interactions, by which the self is delineated" (Dignan, 1963, p. 26).

Sense of self - an image central to one's being, reflecting continuity with one's past and knowledge of what one is in reality (Dignan, 1963).

Self-acceptance - assessment of oneself, based upon one's own standards and those of society, and acceptance of oneself as evaluated (Dignan, 1963).

Appraisal - cognitive process by which an event is evaluated in terms of what is at stake and what coping resources and options are available (Lazarus, 1966).

Coping - cognitive and behavioral efforts made to master, tolerate, or reduce stress arising in response to the appraisal process (Lazarus, 1966).

Problem-focused coping activities - efforts made to manage or alter the person-environment relationship which is the source of stress (Lazarus, 1966).

Emotion-focused coping activities - efforts made to regulate distressing emotions (Lazarus, 1966).
This study was conducted using a survey design (Selltiz, Wrightsman, and Cook, 1976). Subjects were administered a questionnaire composed of four instruments: Ego Identity Scale (Dignan, 1963); Adjective Check List (Dignan, 1963); College Student Life Events Scale (Sandler and Lakey, 1982); and Ways of Coping Checklist (Folkman and Lazarus, in press). Demographic information was collected, as well. The scales utilized in this study were standardized scales, whose reliability and validity were established by their authors. Reliability was reassessed in this study, as well, using Cronbach's alpha coefficient (1970).

In the following section, the instruments administered in this study will be described. The reliability and validity of these measures will be reported, as well, both as established by the authors of these instruments, and based upon the reassessment conducted in this study.

**Demographic information** - this section included such variables as age, sex, marital status, race, department and educational level of the respondents, and educational level, occupation, and income level of parents. (see appendix, part I)
Ego Identity Scale (Dignan, 1963) - this scale consists of 50 items; subjects were asked to indicate whether each of these items is true or false as applied to them. In its original form, subjects could select one of four alternative responses: "agree", "agree but not completely", "disagree but not completely", and "disagree". Selection of "agree" or "agree but not completely" was scored as a yes response, and selection of "disagree" or "disagree but not completely" was scored as a no response. In this study, the response options were dichotomous in form; subjects could either agree or disagree with each item. (see appendix, part III)

This scale yields a maximum score of 50; higher scores reflect a higher degree of identity achievement. Each item has a weight of one and in its original form, directionality (i.e. which response was indicative of higher identity achievement) was specified by judges selected by the author of the scale. This information was unavailable for this study; consequently, three judges were selected to assess the directionality of each item in the scale. Two of these judges were professors at the Ohio State College of Social Work, and one was a professor in the department of psychology at Ohio State University. All three judges were familiar with the identity issue and the work of Erikson. Items were scored based upon agreement between two out of the
three judges; support for this procedure was found in the work of Selltiz, Wrightsman, and Cook (1976), who in their discussion of observational research note that "the most basic meaning in observational research is the degree to which two or more observers agree on their observations" (p. 287).

According to Selltiz et al (1976), interobserver reliability can be measured with the following formula:

\[
\text{number of agreements} \div \text{number of agreements + disagreements}
\]

Interobserver (or interjudge) agreement was obtained for 39 items; disagreement occurred on 11 items. Based on the formula described above, interobserver reliability was .78. (1) Interobserver reliability was calculated, as well, by including items, regarding which the dissenting judge expressed uncertainty, in the number of agreements. Based upon this calculation, interobserver agreement was obtained for 44 items; disagreement occurred on 6 items only. Interobserver reliability based upon these figures was .86.

(1) According to Reid and Smith (1981), "satisfactory reliability is largely a matter of judgement. For example, a correlation coefficient of .80 or a percentage of agreement of 75 may be quite acceptable, or again, it might not be" (p. 198). In their discussion of observational techniques used to assess interaction between marital couples, Weiss and Margolin (1977) suggest that the minimum acceptable figure is 70%; based upon this criterion, the reliability of this scale is acceptable.
The validity of this scale was determined by the author in five ways. Content validity was established by submitting a pool of 163 pre-tested items to five judges, who were asked to indicate which items tap identity. Of these items, 50 were selected as relevant to identity by 80-100% of the judges (100% agreement existed for one third of these items), and were used by the author. Three additional validity checks were incorporated into the experimental design. In the first, scores on the identity scale were correlated with scores on an identity trait scale (for 83 freshmen and 96 sophomores); the correlation coefficient for freshmen was .34 and for sophomores was .50, both of which were significant beyond the .01 level. In the second, scores on an adjective checklist designed to tap five personality dimensions (sense of self, uniqueness, self-acceptance, interpersonal role expectations, and stability) were correlated with scores on the Ego Identity Scale; for freshmen, sense of self, self-acceptance, and interpersonal role expectations correlated significantly (beyond the .01 level) with the Ego Identity Scale, but for sophomores, only sense of self and self-acceptance correlated significantly with the Ego Identity Scale. In the third, ego-identity scores were correlated with counselor ratings of identity traits of the subjects; the coefficient was .11 for 124 freshmen and .19 for 115 sophomores, and although
the latter was significant at the .05 level, the former was not. Construct validity was determined by correlating ego identity scores with manifest anxiety scores; for freshmen, these correlations were -.48 and for sophomores were -.46, both of which were significant beyond the .01 level (Dignan, 1963).

The reliability of this scale was determined in two ways. The odd-even coefficient, corrected by the Spearman-Brown formula, was .74 for 130 freshmen and .64 for 115 sophomores; the test-retest coefficient (for an interval of one week) was .72 for 83 freshmen and .78 for 96 sophomores (Dignan, 1963).

Reliability was reassessed in this study, using Cronbach's alpha coefficient (1970). Three reliability scores were calculated. The first measured the reliability of all 50 items on the scale; reliability was .76. The second score measured reliability for the 39 items regarding which all three judges agreed; reliability was .78. The third score measured reliability for 44 items; these included the 39 items regarding which all three judges agreed and an additional 5 items regarding which the dissenting judge expressed uncertainty. Reliability was .78. Data analysis was conducted with the complete 50-item scale; these results indicate that the reliability of the complete scale
was only .02 less than either of the other two configurations.

**Adjective Check List** (Dignan, 1963) - this scale consists of 20 pairs of adjectives, which describe a trait and its opposite; each pair is rated on a six-point scale. Scores on each pair of adjectives range from one to six; higher scores are generally associated with a more positive self-description. This scale was used in this study to tap scores on two personality dimensions related to identity: sense of self and self-acceptance. The same scale was used each time; however, its administration was different. In addition, although higher scores are generally associated with a more positive self-description, a lower score on the self-acceptance scale reflected greater self-acceptance. (see appendix, part II, IV, VII)

Scoring information was unavailable for this scale, as well. Consequently, the judges described earlier were asked to assess each item, and to determine which adjective from each pair was reflective of higher identity achievement. Agreement was obtained in 18 out of the 20 items; interobserver reliability, when calculated based upon the formula described above, was .90.
This scale is based upon Cattell's factor analysis of Allport and Odbert's (1934) list of adjectives (Fiedler, Hutchins, and Dodge, 1959). Fiedler, Hutchins, and Dodge (1959) report a split-half reliability coefficient of .93 for self-ratings on this checklist, when corrected by the Spearman-Brown formula (Dignan, 1963).

Reliability was reassessed in this study, using Cronbach's alpha coefficient (1970). Sense of self was measured by completing the adjective checklist based upon specified instructions; reliability for this scale was .80. Self-acceptance was measured by completing the checklist twice, based upon different instructions, and subtracting one score from the other; reliability for the two scales was .71 and .80, respectively.

In her results, Dignan (1963) reports a significant correlation between the ego identity score and sense of self (r=.31 for freshmen, and .47 for sophomores, both significant at the .01 level), and between ego identity score and self-acceptance (r=.42 for freshmen and .44 for sophomores, significant at the .01 level). These results were re-evaluated in this study. (see table 1 and 2) The correlation (across grades) between ego identity scores and self-acceptance scores was -.36, at the .001 significance level; for freshmen, the correlation was -.25 (p < .001),
for seniors, it was -.36 (p < .001), and for graduate students, it was -.43 (p < .001). (2) The correlation (across grades) between ego identity scores and sense of self scores was -.58, at the .001 significance level; for freshmen, the correlation was .60 (p < .001), for seniors, it was .53 (p < .001), and for graduate students, it was .56 (p < .001). Dignan also measured intercorrelations between the scales; the correlation between sense of self and self-acceptance was .42 for freshmen and .56 for sophomores. These results were significant at the .01 significance level. This relationship was re-evaluated in this study, as well. The results indicated a correlation (across grades) of -.46 (p < .001) between these two scales; for freshmen, the correlation was -.39 (p < .001), for seniors it was -.48 (p < .001), and for graduate students, it was -.48 (p < .001). These results support those reported by Dignan.

\textit{College Student Life Events Schedule} (Sandler and Lakey, 1982) - this scale consists of 111 items; these were selected from an initial sample of over 1500 items, elicited from reports by 200 students regarding high-impact events which had occurred to them in the past year. In its original form, subjects are asked to respond to each item.

(2) As stated earlier, lower self-acceptance scores reflect a higher level of identity achievement; consequently, these correlations were found to be negative.
Table 1

CORRELATIONS BETWEEN THREE IDENTITY SCALES (ACROSS GRADE)

<table>
<thead>
<tr>
<th></th>
<th>SELF-ACCEPTANCE</th>
<th>SENSE OF SELF</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDENTITY SCALE</td>
<td>- .36*</td>
<td>.58*</td>
</tr>
<tr>
<td>SELF-ACCEPTANCE</td>
<td>- .46*</td>
<td></td>
</tr>
</tbody>
</table>

*=p < .001

in terms of whether it occurred in the past year and whether the event was positive, neutral, or negative for them. The weighted sum of all subjectively rated negative events is used as a measure of life stress. In this study, 50 negative items were selected from the original scale; subjects were asked to indicate whether each of the items had occurred to them in the past year, and whether they believed that they could change the event in a way which would be more beneficial, or less harmful, to them. The scale was not used as a measure of life stress, but rather as a simple checklist. (see appendix, part V)

Based upon this scale, an appraisal score was calculated, in order to obtain a measure of the tendency of the
Table 2

CORRELATION BETWEEN THREE IDENTITY SCALES (BY GRADE)

<table>
<thead>
<tr>
<th></th>
<th>SELF-ACCEPTANCE</th>
<th>SENSE OF SELF</th>
</tr>
</thead>
<tbody>
<tr>
<td>F#</td>
<td>-0.25*</td>
<td>0.60*</td>
</tr>
<tr>
<td>S#</td>
<td>-0.37*</td>
<td>0.53*</td>
</tr>
<tr>
<td>GS#</td>
<td>-0.43*</td>
<td>0.56*</td>
</tr>
<tr>
<td>IDENTITY SCALE</td>
<td>-0.39*</td>
<td>-0.48*</td>
</tr>
<tr>
<td>SELF-ACCEPTANCE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*=p < .001
#F=freshmen
#S=seniors
#GS=graduate students

individual to appraise stressful events as capable, or not, of being changed. It was calculated by obtaining a percentage of all stressful events occurring to the individual which were perceived as capable of being changed (i.e. (number of events perceived as capable of being changed / total amount of stressful events occurring to the individual) * 100).

Reliability was measured by the author of this scale. Test-retest reliability (with a two day interval), was .92
for the total event score, .92 for the positive event score, and .89 for the negative event score. The negative events score was also found to correlate positively with measures of psychological disorder (such as the Life Experience Scale, Sarason, Johnson, and Siegel, 1978; r=.62) (Sandler and Lakey, 1982).

Ways_of_Coping_Checklist (Folkman and Lazarus, 1980) - this checklist consists of 67 items, describing a broad range of both cognitive and behavioral coping strategies that may be used in a specific stressful episode. This checklist must always be completed in terms of a specific event. The checklist was first introduced in 1980 (Folkman and Lazarus); in 1983 (Folkman and Lazarus, in press), a revised form was presented. The revision involves both the response format and the deletion, or rewording, of several items.

When completing this checklist, subjects are asked to indicate their use of specific coping strategies in relation to a stressful episode. Events were selected from the life event schedule which was completed by the subjects first. For the purposes of this study, subjects were asked to complete the checklist two times: once based upon an event which they believed they could change so as to be more beneficial to them, and once based upon an event which
they did not believe could be changed. (see appendix, part VI)

In its original form, subjects were asked to indicate whether they had used the strategy or not; in its revised form, subjects were asked to indicate the degree of use on a four point Likert scale (0=does not apply and/or not used; 3=used a great deal). Items in the original questionnaire were divided into two broad subscales: problem-focused (consisting of 24 items) and emotion-focused (consisting of 40 items); in addition, eight subscales were identified based upon factor analysis. In its revised form (Folkman and Lazarus, in press), eight subscales were identified, as well; these differ somewhat from the original classification due to item revision. In this study, both the original, dichotomous classification and the eight subscales identified after the revision, were utilized for data analysis. (see appendix for a description of the subscales)

According to the authors of this scale, scores are calculated by summing the ratings (Folkman and Lazarus, 1980). In this study, multiple scoring methods were utilized. The first method followed the original scoring instructions described by the authors of the scale; scores for each item were simply summed. The second method was designed to
measure the predominance of problem-focused coping (as defined in the dichotomous classification described above); scores involved the calculation of the percentage of all coping mechanisms utilized which were problem-focused in nature (i.e. \( \frac{\text{number of problem-focused coping mechanisms}}{\text{total number of coping mechanisms utilized}} \times 100 \)). The same procedure was used to measure the predominance of emotion-focused coping, as well. The third method was designed to measure the average intensity of coping mechanisms. The summed rating score reflects two pieces of information: how many coping mechanisms were utilized and the intensity of their use. However, an individual who utilizes only a few mechanisms, but with great intensity, may obtain the same score as an individual who uses many coping mechanisms, but with weak intensity. The percentage scoring method provides a simple measure of how many coping mechanisms were utilized; the third scoring method measures their average intensity. This score is calculated by dividing the summed score by the total number of coping mechanisms utilized.

In order to determine whether these scores reflect different dimensions of the coping process, correlations were calculated between the three scoring methods. The results suggest that two methods of scoring, average intensity and summed score, appear to tap the same dimension of the cop-
ing process. This relationship is logical, since the summed score includes in its intensity of use of coping mechanisms. Based on these findings, only two scoring methods were used in the data analysis: summed score and \% scores. (see table 3)

The internal consistency of the original classification of items was evaluated by several methods. First, an interdisciplinary group of judges classified each item as either problem or emotion-focused; agreement was 91\%. Second, in an experimental study, subjects were presented with three vignettes describing stressful situations, and asked to mark each item on the checklist in terms of whether it would be used to deal with the problem itself, or the emotional response to the problem. Seventy eight percent of the items were identified as having the function which agreed with their scale membership (p < .05). Third, factor analysis was used to determine if the items correlated with the category in which they were classified; 78\% of the items classified as problem-focused and 68\% of the items classified as emotion-focused were found to correlate more strongly with their identified category. Fourth, using the alpha coefficient (Cronbach, 1970), the internal consistency of the scales was examined, and results indicated a .80 coefficient for the problem-focused scale and a .81 coefficient for the emotion-focused scale. Lastly, the correla-
Table 3

**CORRELATIONS BETWEEN SCORING METHODS (COPING CHECKLIST)**

*PROBLEM-FOCUSED COPING*

<table>
<thead>
<tr>
<th>%</th>
<th>AV. INTENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>Y$</td>
<td>.36</td>
</tr>
<tr>
<td>SUM</td>
<td>---</td>
</tr>
<tr>
<td>N$</td>
<td>---</td>
</tr>
<tr>
<td>Y%</td>
<td></td>
</tr>
<tr>
<td>N%</td>
<td></td>
</tr>
</tbody>
</table>

*EMOTION-FOCUSED COPING*

<table>
<thead>
<tr>
<th>%</th>
<th>AV. INTENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>Y$</td>
<td>.36</td>
</tr>
<tr>
<td>SUM</td>
<td>---</td>
</tr>
<tr>
<td>N$</td>
<td>---</td>
</tr>
<tr>
<td>Y%</td>
<td></td>
</tr>
<tr>
<td>N%</td>
<td></td>
</tr>
</tbody>
</table>

*=not significant
#*=p < .039  *=p < .026
all other correlations were significant at the .001 level
Y$=incidents appraised as capable of being changed
N$=incidents appraised as not capable of being changed
tion between the two scales was measured; in three administrations, correlations were .35 (n=81), .52 (n=63), and .44 (n=83). A relationship between the two scales was expected, since they both measure processes which are used together in normal coping; however, although the mean correlation was .44, only 19% of the variance was explained by the two scales together, suggesting that independent use of these two scales is justified (Folkman and Lazarus, 1980).

Using factor analysis on data collected three times from a sample of 108 subjects, eight subscales were identified in the original checklist; the alpha coefficients of these scales ranged from .59 to .88. In the revised form, reliability of the subscales was measured using the alpha coefficient, as well; alpha scores averaged across three situations ranged from .56 to .85. (For greater detail, see table 4.)

Reliability was reassessed in this study, using the alpha coefficient (Cronbach, 1970). As stated earlier, subjects were asked to complete the checklist twice; reliabilities were calculated for each type of incident. Reliability was first calculated for the dichotomous classification; the alpha coefficient for the problem-focused coping subscale in regard to the incident which could be changed was .81; the alpha coefficient for the problem
focused coping subscale in regard to the incident which could not be changed was .86. Reliability for the emotion-focused coping subscale (3) in regard to the incident which could be changed was .88. Reliability for the emotion-focused coping subscale in regard to the incident which could not be changed was .89.

Reliability was reassessed, as well, for the eight subscales. Reliability scores ranged from .35 to .85. Scales were included in data analysis if the alpha coefficient was above .56 (which is lower than the minimum cutoff point indicated earlier); this figure was selected because Folkman and Lazarus, too, used all scales with an alpha coefficient of .56 or above. One scale attained a reliability score below .56; this scale was discarded from the data analysis. (see table 4)

(3) This scale consisted of only 33 of the original items; seven items were lost in the revision of the scale. Twenty one of the original items from the problem-focused scale were available in the revised scale.
Table 4

**COMPARISON OF RELIABILITY SCORES OF COPING SUBSCALES**

<table>
<thead>
<tr>
<th>Original Author</th>
<th>Present Author</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Y</strong></td>
<td><strong>N</strong></td>
</tr>
<tr>
<td>PROBLEM-FOCUSED</td>
<td>.80</td>
</tr>
<tr>
<td>EMOTION-FOCUSED</td>
<td>.81</td>
</tr>
<tr>
<td>PROBLEM-FOCUSED</td>
<td>.85</td>
</tr>
<tr>
<td>WISHFUL THINKING</td>
<td>.84</td>
</tr>
<tr>
<td>DISTANCING</td>
<td>.71</td>
</tr>
<tr>
<td>SEEKING SOCIAL SUPPORT</td>
<td>.81</td>
</tr>
<tr>
<td>EMPHASIZING POSITIVE</td>
<td>.65</td>
</tr>
<tr>
<td>SELF-BLAME</td>
<td>.75</td>
</tr>
<tr>
<td>TENSION-REDUCTION</td>
<td>.56</td>
</tr>
<tr>
<td>SELF-ISOLATION</td>
<td>.65</td>
</tr>
</tbody>
</table>

* Y=incidents that could be changed
N=incidents that could not be changed
+=this scale was not utilized in the data analysis

---

**C. OPERATIONAL DEFINITIONS**

The major concepts of this study were operationally defined in the following manner:

**Identity** - score on the Ego Identity Scale.
Sense of self - score on the Adjective Check List when completed from the perspective of "as only the inner self sees you".

Self-acceptance - discrepancy score derived from the difference between completion of the Adjective Check List "as you ordinarily think about yourself" and "as you would like to change yourself in a realistic manner".

Appraisal - subjects' perceptions regarding whether or not specific stressful events were capable of being changed.

Problem-focused coping - sum of ratings of problem-focused activities employed by the individual in a specific stressful episode.

Emotion-focused coping - sum of ratings of emotion-focused activities employed by the individual in a specific stressful episode.

D. SAMPLING

As stated earlier, this study utilized a survey design. Sampling was purposive (Smith, 1981). All subjects were students at Ohio State University, and they represented three age groups: 17-19 (college freshmen); 21-22 (college seniors); and 24-29 (graduate students). (4) These groups

(4) The age range for graduate students was originally 24-26; this was expanded early in the study due to difficulty in finding graduate students in that age range. It was difficult to find graduate students who fit into the expanded age range, as well. Some students were too young, but the greater majority of graduate students approached were over 30.
were selected so that the impact of age upon identity achievement could be measured.

College freshmen were obtained through University College. Most freshmen are enrolled in a subunit of the university, called University College, until their junior year, at which time they are accepted into specific departments of the university. As freshmen, they are required to enroll in a mini-course designed to familiarize them with the university system. Permission was granted by University College to the researcher to enter several sections of this course and to solicit volunteers to participate in the study. College seniors were located through senior seminars in several of the departments of the university. It was difficult to find courses given specifically for seniors; the primary sources were professional programs, such as physical therapy, engineering, social work, education, and journalism, who require their students to take specific courses in a specified sequence. Graduate students were obtained through graduate level courses. Students represented a variety of departments, such as nursing, journalism, social work, agriculture, political science, and psychology. All subjects were volunteers.

Students were approached in class, with the permission of their instructors. The research study was described
briefly, and students were asked if they would volunteer to participate in the study. All volunteers were handed a questionnaire in a self-addressed envelope, and asked to return the questionnaire through campus mail to the researcher. The response rate was approximately 40%; of about 820 questionnaires distributed, approximately 320 were returned. Of these 320, only 271 questionnaires could be included in the data analysis; 51 questionnaires were discarded due to missing data. This issue is treated in greater detail in the missing data section of this chapter.

Possible explanations for the low response rate are the fact that subjects were volunteers who were offered no incentive, and the length and complexity of the questionnaire (it took approximately 1 hour to complete, and was 28 pages long). In addition, follow-up was difficult due to the quantity of courses in which the study was presented, and the anonymity of the respondents (and potential respondents, i.e. those students who took the questionnaire but did not complete and return it). The response rate does not, however, affect the representativeness of the study, since sampling was purposive and generalization to the population impossible.

The sample consisted of 105 (38.7%) freshmen, 85 (31.4%) seniors, and 81 (29.9%) graduate students. The average
(mean) age of freshmen was 18, of seniors 21.4, and of graduate students 26.4. Of the graduate students, 52 (64.2%) were masters students, 24 (29.6%) were PhD students, and 3 (3.7%) were dental students. Most of the graduate students were in their first or second year of studies. Ninety (33.2%) subjects were male and 181 (66.8%) female. Of the male subjects, 38 (48.2%) were freshmen, 24 (26.6%) were seniors, and 28 (31.1%) were graduate students. Of the female subjects, 67 (37.0%) were freshmen, 61 (33.7%) were seniors, and 53 (29.3%) were graduate students. Two hundred and twenty nine (84.5%) subjects were never married; 40 (14.8%) were married, and 3 (.7%) were currently separated. Seventy nine percent of the married and separated students were graduate students. Two hundred and fifty five (94.1%) subjects were white, 9 (3.3%) were black, 2 (.7%) hispanic, 3 (1.1%) oriental, and 2 (-7%) belonged to other categories (e.g. Indian).

The average (mode) educational level of both fathers and mothers of subjects was high school education (n=75', 98 respectively). Twenty seven percent of the fathers and 25.5% of the mothers were college graduates (n=73', 69 respectively); 15.9% of the fathers and 22.9% of the mothers (n=43', 62 respectively) had some college education. One hundred and sixty seven (61.6%) mothers and 242 (89.3%) fathers are employed outside of the home. The average
(mean) income of the families as their child was growing up was between $20,000 and $30,000.

E. ADMINISTRATION OF THE STUDY

Administration of the questionnaire involved the following format. As stated earlier, the researcher entered classes and after describing the purpose and nature of the study, asked students if they would volunteer for the study. Volunteers were asked to complete the questionnaire and return it as quickly as possible; instructors were asked to remind the volunteers to complete the questionnaire. Subjects completed the questionnaire in their homes, at their leisure.

The questionnaire was composed of four instruments (described earlier), and a demographic section. (see appendix for a copy of the questionnaire) Demographic information was collected first; subjects were then asked to complete the Ego Identity Scale. The Adjective Checklist was completed from three perspectives: "as you ordinarily think of yourself"; "as only the inner self sees you"; and "as you would like to change yourself in a realistic way". The three versions were interspersed throughout the questionnaire. Subjects completed the College Student Life Events Schedule, checking off which items occurred to them in the past year, and whether they perceived of these items
as capable, or not, of being changed. The subjects were then asked to select two items: the ones which they felt could most, and least, be changed; the Ways of Coping Checklist was completed in reference to these two events.

MISSING DATA

Several methods may be utilized for the handling of missing data (Babbie, 1983). One option is the exclusion of cases with missing data; this method is recommended when there are relatively few such cases. A second option involves the retention of cases with missing data for the purpose of analysis; this method is suggested when analysis of the missing data can yield an interpretation of their meaning. A third option involves the assignment of values to missing data, so that the cases may be included in the analysis. Babbie (1983) indicates three values that may be assigned: the middle value (of several possible responses), measures of central tendency, and random values. The assignment of values to missing data is a conservative solution, particularly when measures of central tendency are assigned to replace missing data. The substitution of measures of central tendency pulls group scores away from extremes, and consequently, make it more difficult to find the relationship being sought in the study. This option is most appropriate when there is a substantial amount of missing data.
In this study, each of the methods described above was utilized. Approximately 50 questionnaires (16%) were omitted from the analysis; some were due to the age of the respondent but most of the questionnaires were missing significant portions of their data. The primary problem was the completion of the Ways of Coping Checklist, without indicating which incident from the Life Event Schedule was being described. When the incident was not recorded, it was not possible to determine whether the respondent had appraised it as capable, or not, of being changed, which was a crucial variable for the data analysis.

Several of the subjects were unable to complete the Ways of Coping Checklist two times, as requested; one respondent had encountered only one stressful incident in the past year (from the list available), and others had appraised all of their incidents as being either capable, or not, of being changed. Twenty three such cases were identified: 1 freshman, and 2 graduate students had appraised all incidents as not capable of being changed, and 1 freshman, 8 seniors, and 11 graduate students had appraised all incidents as capable of being changed. In these cases, missing data was coded as "not applicable", rather than as missing, so that additional analysis could be conducted. However, due to the small number of the cases, no additional analysis was attempted.
Measures of central tendency were used to replace all other missing data in the identity and coping scales. These measures were calculated for the three educational levels: freshmen, seniors, and graduate students, and were substituted accordingly.

For the Ego Identity Scale, which consists of nominal level variables, the mode value was utilized. Only a small number of items were overlooked by respondents and required substitution. All other scales in the questionnaire were at the ordinal level; consequently, median scores were substituted for missing data. If the median score was not an integer, it was rounded out to the nearest whole number. On the Sense of Self Scale, one freshman and one senior did not complete the scale, at all; in addition, a small number of items were overlooked by respondents. The Self-Acceptance Scale consisted of two scales. On the first scale, one senior did not complete the scale at all; on the second scale, three freshmen and one senior did not complete the scale. A small number of additional items were overlooked, as well. As stated above, all missing data were replaced by the median value.

On the Ways of Coping Checklist, respondents were asked to complete the checklist twice: once in reference to an incident which they believed they could change, and once in
reference to an incident which they did not believe they could change. Several respondents completed both checklists in relation to incidents of the same type; i.e., either two incidents which they believed they could change, or two incidents which they did not believe they could change. For these subjects, only one incident could be included in the analysis; for the other incident, median scores were substituted. For the incident appraised as capable of being changed, 1 freshman, 1 senior and 4 graduate students required the substitution of data. For the incident appraised as not capable of being changed, 5 freshmen, 6 seniors, and 3 graduate students required the substitution of data. For each educational level, less than 10% of the cases had mode or median scores included in their data.
Chapter V
DATA ANALYSIS

The following chapter consists of a description of the data analysis conducted in this study and a report of its findings. This chapter is divided into five sections. The first four sections are organized around the four research questions investigated in this study. A final section focuses upon supplementary analyses, unrelated to the original research questions, which were included in this study.

A. RESEARCH QUESTION #1: IDENTITY AND COPING

The first research question investigated in this study focuses upon the relationship between overall identity achievement (i.e. score on the Ego Identity Scale), appraisal, and the type of coping mechanisms utilized in dealing with stressful life events. This question deals specifically with the following issues:

WHAT IS THE RELATIONSHIP BETWEEN IDENTITY ACHIEVEMENT AND:

1. APPRAISAL OF A SITUATION AS CAPABLE, OR NOT, OF BEING CHANGED?
2. THE PREDOMINANCE OF PROBLEM-FOCUSED COPING ACTIVITIES?

3. THE PREDOMINANCE OF EMOTION-FOCUSED COPING ACTIVITIES?

4. THE TYPE OF EMOTION-FOCUSED COPING ACTIVITIES (FACILITATIVE OR NOT OF PROBLEM-FOCUSED ACTIVITIES) UTILIZED BY THE INDIVIDUAL?

Data analysis for this research question involved both Pearson correlations and t-tests. (1)

The first part of this research question focuses upon the relationship between identity achievement and appraisal. For this analysis, a Pearson correlation was computed between scores on the Ego Identity Scale and appraisal scores (i.e. number of events perceived as capable of being changed / total number of stressful events occurring to the individual * 100). An insignificant correlation of .05 (p < .199) was found, suggesting that no relationship exists between identity achievement and the tendency to appraise stressful life events as capable, or not, of being changed.

The second part of this research question focuses upon the relationship between identity achievement and the predominance of problem-focused coping mechanisms. This analysis was conducted using two scoring methods for the coping

(1) All statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS) (Norusis, 1983; SPSS Inc., 1983).
scale. The first method is a measure of predominance; a percentage score was computed for problem-focused coping mechanisms, which calculated the percentage of coping mechanisms used which were problem-focused in nature. This score was correlated (using Pearson's correlation) with scores on the Ego Identity Scale. (2)

For the event appraised as capable of being changed, a weak, but significant correlation of .23 (p < .001) was found between scores on the Ego Identity Scale and predominance of problem-focused coping mechanisms. For the event that could not be changed, a marginally significant correlation of .10 (p < .063, marginally significant) was found. These results suggest that a relationship exists between identity and predominance of problem-focused coping.

The second scoring method used in this analysis is based upon the original instructions provided by Folkman and Lazarus (1980); this score is calculated by summing ratings for each item, and it includes both the number of coping mechanisms used by the individual and the intensity of their use. Summed scores on the problem-focused subscale were correlated with identity scores. For the event

(2) All analyses were conducted separately for the events appraised as capable of being changed, and those appraised as not capable of being changed; in addition, this analysis was based upon Folkman and Lazarus's dichotomous classification of the items on the checklist into problem (24 items) and emotion-focused subscales (1980).
appraised as capable of being changed, an insignificant correlation of .00 ($p < .469$) was found; for the events appraised as not capable of being changed, an insignificant correlation of -.05 ($p < .228$) was found. These results indicate that a relationship does not exist between identity and amount or intensity of use of problem-focused coping mechanisms. However, as stated above, a relationship does exist between identity and predominance of problem-focused coping mechanisms; thus, it would appear that the crucial issue is not how many problem-focused coping mechanisms are utilized, but the proportion (or percentage) of all mechanisms used which are problem-focused in nature. (see table 5)

The third part of this research question focuses upon the relationship between identity achievement and the predominance of emotion-focused coping mechanisms. The predominance of emotion-focused coping mechanisms was scored in the same manner as the predominance of problem-focused coping mechanisms; the number of emotion-focused coping mechanisms was divided by the total amount of coping mechanisms and multiplied by 100. This score is simply a reverse score of the predominance of problem-focused coping score. Correlation scores were the inverse of each other (a positive correlation became a negative correlation, and vice versa). Thus, the correlation between identity and
Table 5

CORRELATION BETWEEN IDENTITY AND PROBLEM-FOCUSED COPING SCORES

<table>
<thead>
<tr>
<th>IDENTITY ACHIEVEMENT</th>
<th>Z_PROBLEM-FOCUSED_COPING</th>
<th>SUM_OF_PROBLEM-FOCUSED_COPING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Y*/</td>
<td>-23+</td>
</tr>
<tr>
<td></td>
<td>N**/</td>
<td>.10</td>
</tr>
<tr>
<td></td>
<td>Y/</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>N/</td>
<td>-.05</td>
</tr>
</tbody>
</table>

Y*=event appraised as capable of being changed
N**=event appraised as not capable of being changed
+=p < .001
-=p < .07 (marginally significant)

Emotion-focused coping for the incident appraised as capable of being changed was -.23 (p < .001), and for the event appraised as not capable of being changed was -.10 (p < .063, marginally significant). These results suggest that the higher the identity score, the less emotion-focused mechanisms were used.

Pearson correlations were computed, as well, with summed scores on the emotion-focused coping scale. For the event
assessed as capable of being changed, a significant negative correlation of \(-.26\) (\(p < .001\)) was found; for the event assessed as not capable of being changed, a significant negative correlation of \(-.16\) (\(p < .005\)) was found. These results indicate that for both types of incidents, the higher the identity score, the lower the score on the emotion-focused scale. These results provide partial support for those found in the analysis of the relationship between identity and the predominance of problem-focused coping. It would appear that the higher the identity, the more predominant the problem-focused-coping mechanisms, and the less predominant the emotion-focused coping mechanisms. In addition, the higher the identity score, the lower the absolute number and intensity of emotion-focused coping mechanisms used. (see table 6)

The final part of this research question deals with the correlation between identity achievement and the types of emotion-focused activities found to facilitate problem-focused coping. This analysis is based upon the 8-subscale classification of the Ways of Coping Checklist (Folkman and Lazarus, in press). According to Lazarus and Folkman (in press), certain types of emotion-focused coping mechanisms "can facilitate problem-focused coping if they are used to manage emotions that would otherwise impede problem-focused activity" (p. 25). In their study, they note a strong cor-
Table 6

CORRELATION BETWEEN IDENTITY AND EMOTION-FOCUSED COPING SCORES

<table>
<thead>
<tr>
<th>IDENTITY ACHIEVEMENT</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>% EMOTION-FOCUSED COPING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y*</td>
<td>-23+</td>
</tr>
<tr>
<td>N**</td>
<td>-10-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUM OF EMOTION-FOCUSED COPING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y/</td>
<td>-26+</td>
</tr>
<tr>
<td>N/</td>
<td>-16#</td>
</tr>
</tbody>
</table>

Y* = event appraised as capable of being changed
N** = event appraised as not capable of being changed
+=p < .001
#=p < .005
-=p < .07, marginally significant

Relation between problem-focused coping and emphasizing the positive (r=.58) and seeking social support (r=.64). This relationship was reassessed in this study; correlations are presented in Table 7.

These results indicate that a higher correlation was found with the seeking social support and focusing on the positive subscales than the other subscales. For the inci-
Table 7

**CORRELATION BETWEEN PROBLEM AND EMOTION-FOCUSED COPING SCALES**

<table>
<thead>
<tr>
<th></th>
<th>PROBLEM-FOCUSED COPING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Y</strong>*</td>
<td></td>
</tr>
<tr>
<td>WISHFUL THINKING</td>
<td>0.32</td>
</tr>
<tr>
<td>DETACHMENT</td>
<td>0.18</td>
</tr>
<tr>
<td>SEEKING SOCIAL SUPPORT</td>
<td>0.54</td>
</tr>
<tr>
<td>FOCUSING ON THE POSITIVE</td>
<td>0.57</td>
</tr>
<tr>
<td>SELF-BLAME</td>
<td>0.26</td>
</tr>
<tr>
<td>KEEP TO SELF</td>
<td>0.16+</td>
</tr>
<tr>
<td><strong>N</strong>**</td>
<td></td>
</tr>
<tr>
<td>WISHFUL THINKING</td>
<td>0.33</td>
</tr>
<tr>
<td>DETACHMENT</td>
<td>0.24</td>
</tr>
<tr>
<td>SEEKING SOCIAL SUPPORT</td>
<td>0.52</td>
</tr>
<tr>
<td>FOCUSING ON THE POSITIVE</td>
<td>0.49</td>
</tr>
<tr>
<td>SELF-BLAME</td>
<td>0.56</td>
</tr>
<tr>
<td>KEEPING TO SELF</td>
<td>0.22+</td>
</tr>
</tbody>
</table>

**Y***=event appraised as capable of being changed
**N****=event appraised as not capable of being changed
+=p < 0.005
all other correlations - p < 0.001
+-only seven subscales were included in the analysis; one was excluded because of low reliability scores.

dent which could not be changed, a high correlation was found, as well, with the self-blame subscale. These results support those reported by Lazarus and Folkman (in press).
A Pearson correlation was computed between identity achievement and each of the above subscales in an attempt to assess whether a relationship exists between identity and choice of coping mechanisms, particularly those which facilitate problem-focused coping efforts. The results of this analysis are reported in table 8.

<table>
<thead>
<tr>
<th><strong>Y</strong>*</th>
<th>IDENTITY SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBLEM-FOCUSED SUBSCALE</td>
<td>.06</td>
</tr>
<tr>
<td>WISHFUL THINKING SUBSCALE</td>
<td>-.33+</td>
</tr>
<tr>
<td>DETACHMENT SUBSCALE</td>
<td>-.12#</td>
</tr>
<tr>
<td>SEEKING SOCIAL SUPPORT SUBSCALE</td>
<td>.06</td>
</tr>
<tr>
<td>FOCUS ON POSITIVE SUBSCALE</td>
<td>-.02</td>
</tr>
<tr>
<td>SELF-BLAME SUBSCALE</td>
<td>-.25+</td>
</tr>
<tr>
<td>KEEP TO SELF SUBSCALE</td>
<td>-.27+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>N</strong>**</th>
<th>IDENTITY SCORES</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBLEM-FOCUSED SUBSCALE</td>
<td>-.03</td>
</tr>
<tr>
<td>WISHFUL THINKING SUBSCALE</td>
<td>-.27+</td>
</tr>
<tr>
<td>DETACHMENT SUBSCALE</td>
<td>-.11#</td>
</tr>
<tr>
<td>SEEKING SOCIAL SUPPORT SUBSCALE</td>
<td>.09-</td>
</tr>
<tr>
<td>FOCUS ON POSITIVE SUBSCALE</td>
<td>-.00</td>
</tr>
<tr>
<td>SELF-BLAME SUBSCALE</td>
<td>-.08-</td>
</tr>
<tr>
<td>KEEP TO SELF SUBSCALE</td>
<td>-.21+</td>
</tr>
</tbody>
</table>

Y*=event appraised as capable of being changed
N**=event appraised as not capable of being changed
+=p < .001
#=p < .05
-=marginal significance, p < .06
For events that could be changed, a significant negative correlation was found between ego identity score and four emotion-focused coping subscales: wishful thinking, detachment, self-blame, and keep to self. The higher the identity, the less likely was the individual to use these coping mechanisms. However, no correlation was found with the other two subscales, which had been found to be most strongly correlated with the problem-focused coping subscale. For events that could not be changed, a significant negative relationship was found between ego identity score and three emotion-focused subscales: wishful thinking, detachment, and keep to self. A marginally significant negative correlation was also found with the self-blame subscale; in addition, a marginally significant positive correlation was found with the seeking social support subscale. These results are similar to those reported for events that could be changed. Thus, it would appear that no relationship exists between identity and use of coping mechanisms which are facilitative of problem-focused coping; (a marginally significant relationship was found with seeking social support for events that could not be changed); a negative relationship does, however, exist between identity and coping mechanisms which are not facilitative of problem-focused coping. The higher the identity, the less use was made of these coping mechanisms.
In the analyses reported above, identity achievement was calculated as a continuous (interval level) variable; additional analyses were conducted in which identity was categorized as an ordinal level variable. Three levels of identity were identified: low, medium, and high; low included the lower (in terms of scores on the Ego Identity Scale) 25% of the subjects, high included the upper 25% of the subjects, and medium included the middle 50% of the subjects. The t-test procedure was utilized to assess the relationship between high and low identity and the different coping scales. The results are reported in tables 9 and 10.

The results indicate that a significant relationship was found with the following scale and subscales: emotion-focused coping summed for incidents that could be changed, percent of problem and emotion-focused coping in both types of incidents, wishful thinking for both types of incidents, detachment and self-blame for incidents that could be changed, and keep to self for both types of incidents. These results support those which were found in earlier analyses, in which identity was calculated as a continuous variable. In those analyses, a significant relationship was found with percent of problem and emotion-focused coping, amount and intensity of emotion-focused coping, and the wishful thinking, detachment, self-blame and keep to self subscales.
Table 9

T-TEST RESULTS FOR IDENTITY AND COPING (Y*)

<table>
<thead>
<tr>
<th></th>
<th>M#/L</th>
<th>M##/H</th>
<th>T-TEST</th>
<th>DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMED PROBLEM-FOCUSED SCORE</td>
<td>19.7887</td>
<td>20.22899</td>
<td>-0.31</td>
<td>138</td>
</tr>
<tr>
<td>SUMMED EMOTION-FOCUSED SCORE</td>
<td>39.0282</td>
<td>27.7391</td>
<td>5.06+</td>
<td>138</td>
</tr>
<tr>
<td>% PROBLEM-FOCUSED COPING</td>
<td>34.0357</td>
<td>40.8854</td>
<td>-4.70+</td>
<td>138</td>
</tr>
<tr>
<td>% EMOTION-FOCUSED COPING</td>
<td>65.9643</td>
<td>59.1146</td>
<td>4.70+</td>
<td>138</td>
</tr>
<tr>
<td>PROBLEM-FOCUSED SUBSCALE (8)</td>
<td>12.4789</td>
<td>13.6522</td>
<td>-1.26</td>
<td>138</td>
</tr>
<tr>
<td>WISHFUL THINKING</td>
<td>7.8873</td>
<td>3.8551</td>
<td>5.95+</td>
<td>138</td>
</tr>
<tr>
<td>DETACHMENT</td>
<td>4.8873</td>
<td>3.7971</td>
<td>2.17++</td>
<td>138</td>
</tr>
<tr>
<td>SEEK SOCIAL SUPPORT</td>
<td>8.5493</td>
<td>8.6232</td>
<td>-0.09</td>
<td>138</td>
</tr>
<tr>
<td>FOCUS ON POSITIVE</td>
<td>4.6056</td>
<td>4.2609</td>
<td>0.73</td>
<td>138</td>
</tr>
<tr>
<td>SELF-BLAME</td>
<td>4.3380</td>
<td>2.4203</td>
<td>4.70+</td>
<td>130.99</td>
</tr>
<tr>
<td>KEEP TO SELF</td>
<td>3.1408</td>
<td>1.9710</td>
<td>3.22++</td>
<td>138</td>
</tr>
</tbody>
</table>

Y*=event appraised as capable of being changed
M#/L=mean score for low identity subjects
M##/H=mean score for high identity subjects
+=p > .01
++=p > .05
<table>
<thead>
<tr>
<th>N**/</th>
<th>M#/L</th>
<th>M##/H</th>
<th>T-TEST</th>
<th>DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUMMED PROBLEM-FOCUSED SCORE</td>
<td>16.0735</td>
<td>16.6833</td>
<td>-0.32</td>
<td>126</td>
</tr>
<tr>
<td>SUMMED EMOTION-FOCUSED SCORE</td>
<td>38.3382</td>
<td>33.0500</td>
<td>1.84</td>
<td>126</td>
</tr>
<tr>
<td>% PROBLEM-FOCUSED COPING</td>
<td>28.3849</td>
<td>33.0869</td>
<td>-2.46++</td>
<td>126</td>
</tr>
<tr>
<td>% EMOTION-FOCUSED COPING</td>
<td>71.6151</td>
<td>66.9131</td>
<td>2.46++</td>
<td>126</td>
</tr>
<tr>
<td>PROBLEM-FOCUSED SUBSCALE (8)</td>
<td>10.2353</td>
<td>11.0000</td>
<td>-0.67</td>
<td>126</td>
</tr>
<tr>
<td>WISHFUL THINKING</td>
<td>7.9265</td>
<td>4.9500</td>
<td>3.89+</td>
<td>126</td>
</tr>
<tr>
<td>DETACHMENT</td>
<td>6.4559</td>
<td>5.8000</td>
<td>1.09</td>
<td>126</td>
</tr>
<tr>
<td>SEEK SOCIAL SUPPORT</td>
<td>8.1324</td>
<td>9.0167</td>
<td>-0.98</td>
<td>126</td>
</tr>
<tr>
<td>FOCUS ON POSITIVE</td>
<td>4.4265</td>
<td>4.7500</td>
<td>-0.63</td>
<td>126</td>
</tr>
<tr>
<td>SELF-BLAME</td>
<td>1.9265</td>
<td>1.6167</td>
<td>0.75</td>
<td>126</td>
</tr>
<tr>
<td>KEEP TO SELF</td>
<td>2.9118</td>
<td>2.0500</td>
<td>2.27++</td>
<td>126</td>
</tr>
</tbody>
</table>

N**=event appraised as not capable of being changed
M#/L=mean score for low identity subjects
M##/H=mean score for high identity subjects
+=p > 001
++=p > .05
These results clearly indicate that the higher the identity, the higher the percentage of problem-focused coping mechanisms used, the lower the percentage of emotion-focused coping mechanisms used, and more specifically, the less use is made of emotion-focused coping mechanisms which may hinder problem-focused coping efforts.

**B. RESEARCH QUESTION #2: SELF-ACCEPTANCE AND SENSE OF SELF AND COPING**

The second research question focuses upon the relationship between two dimensions of identity achievement, sense of self and self-acceptance, appraisal, and the type of coping mechanisms utilized in dealing with a stressful life event. This question focuses specifically on the following issues:

**WHAT IS THE RELATIONSHIP BETWEEN SENSE OF SELF AND SELF-ACCEPTANCE AND:**

1. **APPRAISAL OF SITUATIONS AS CAPABLE, OR NOT, OF BEING CHANGED?**

2. **THE PREDOMINANCE OF PROBLEM-FOCUSED COPING ACTIVITIES?**

3. **THE PREDOMINANCE OF EMOTION-FOCUSED COPING ACTIVITIES?**

4. **THE TYPE OF EMOTION-FOCUSED COPING ACTIVITIES**
Data analysis was correlational in nature; the Pearson correlation was utilized to correlate scores on the self-acceptance and sense of self scales with appraisal and coping scores.

The first part of this question looks at the relationship between sense of self and self-acceptance and appraisal of events as capable or not of being changed. The correlation found between self-acceptance scores and appraisal was .01 (p < .463); the correlation found between sense of self scores and appraisal was .00 (p < .492). Neither of these correlations was significant, which suggests that no relationship exists between these two dimensions of identity and appraisal of events as capable, or not, of being changed.

The second part of this question focuses upon the relationship between self-acceptance and sense of self and predominance of problem-focused coping mechanisms. Correlations with the % scores were as follows: for the event appraised as capable of being changed, a correlation of -.11 (p < .043) was found with self-acceptance scores, and a correlation of .00 (p < .001) was found with sense of self scores. For the event that could not be changed, a
correlation of .07 (p < .145) was found with self-acceptance scores and a correlation of .18 (p < .002) was found with sense of self scores. For both events that can and cannot be changed, a weak, but significant correlation was found between % of problem-focused coping mechanisms and sense of self; a significant correlation was found, as well, with self-acceptance for the event that was appraised as capable of being changed. These findings suggest that the higher the sense of self score and the lower the self-acceptance score (which is indicative of higher identity), the higher the percentage of problem-focused coping mechanisms utilized.

Correlations with the summed scores were as follows: for the event appraised as capable of being changed, a correlation of -.01 (p < .418) was found with self-acceptance scores, and a correlation of -.05 (p < .196) was found with sense of self scores. For the event appraised as not capable of being changed, a correlation of .05 (p < .196) was found with self-acceptance scores, and a correlation of .04 (p < .260) was found with sense of self scores. As was the case with identity scores, these correlations are insignificant, and suggest that no relationship exists between sense of self and self-acceptance and the amount and intensity of problem-focused coping mechanisms. (see table 11)
Table 11

CORRELATION BETWEEN IDENTITY DIMENSIONS AND PROBLEM-FOCUSED COPING

<table>
<thead>
<tr>
<th></th>
<th>SELF-ACCEPTANCE</th>
<th>SENSE OF SELF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>% PROBLEM-FOCUSED COPING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y*</td>
<td>-.11#</td>
<td>.28+</td>
</tr>
<tr>
<td>N**</td>
<td>.07</td>
<td>.18+</td>
</tr>
<tr>
<td><strong>SUM OF PROBLEM-FOCUSED COPING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y</td>
<td>-.01</td>
<td>.07</td>
</tr>
<tr>
<td>N</td>
<td>.05</td>
<td>.04</td>
</tr>
</tbody>
</table>

Y*=event appraised as capable of being changed
N**=event appraised as not capable of being changed
#=p < .002
+=p < .05
#=#=p < .005

The third part of the question focuses upon the relationship between self-acceptance and sense of self scores and predominance of emotion-focused coping. As was stated earlier, % of emotion-focused coping scores are the reverse of % of problem-focused coping scores; the correlation scores are the inverse of each other. Correlations with % scores were as follows: for the events appraised as capable of being changed, a correlation of .11 (p < .043)
was found with self-acceptance scores, and a correlation of 
-0.28 (p < .001) with sense of self scores. For the events
appraised as not capable of being changed, a correlation of 
-0.07 (p < .145) was found with self-acceptance scores, and
a correlation of -0.18 (p < .002) was found with sense of
self scores. These results indicate that as was the case
with identity scores, for events capable of being changed,
the higher the sense of self score and the lower the self-
acceptance score, the lower the % of emotion-focused coping
mechanisms utilized. A significant, negative correlation
was found, as well, with sense of self scores for the event
appraised as not capable of being changed. (see table 12)

The following correlations were found with summed
scores: for the event appraised as capable of being
changed, a correlation of .18 (p < .001) was found with
self-acceptance scores, and a correlation of -.25 (p <
.001) was found with sense of self scores. For the event
appraised as not capable of being changed, a correlation of
.10 (p < .056, which is marginally significant) was found
with self acceptance scores, and a correlation of -.16 (p <
.005) was found with sense of self scores. These results
indicate that the higher the sense of self score, and the
lower the self-acceptance score (both indicative of higher
identity), the less emotion-focused coping mechanisms were
utilized. These results are similar to those found for the
identity achievement score, and support the results described above, which suggest that the lower the self-acceptance score and the higher the sense of self score, the more problem-focused coping mechanisms were used. (see table 12)

<table>
<thead>
<tr>
<th></th>
<th>SELF-ACCEPTANCE</th>
<th>SENSE OF SELF</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENT EMOTION-FOCUSED COPING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Y*</td>
<td>.11#</td>
<td>-.28+</td>
</tr>
<tr>
<td>N**</td>
<td>-.07</td>
<td>-.18+</td>
</tr>
</tbody>
</table>

SUM OF EMOTION-FOCUSED COPING

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y*</td>
<td>.18+</td>
<td>-.25+</td>
</tr>
<tr>
<td>N*</td>
<td>-.10-</td>
<td>-.16+</td>
</tr>
</tbody>
</table>

Y* = event appraised as capable of being changed
N** = event appraised as not capable of being changed
+= p < .005
#= p < .05
-=marginal significance, p < .057
The last part of this question focuses upon the relationship between self-acceptance and sense of self scores and the choice of coping mechanisms utilized to cope with stressful life events, based upon the eight subscale classification (Folkman and Lazarus, in press). A Pearson correlation was computed between self-acceptance and sense of self scores and seven of the eight subscales, in an attempt to assess whether a relationship exists between identity and choice of coping mechanisms, particularly those which facilitate problem-focused coping efforts. The results of this analysis are reported in table 13.

For events that could be changed, a significant positive relationship was found between self-acceptance scores and four emotion-focused coping subscales: wishful thinking, detachment, self-blame, and keep to self. The lower the score (i.e. the higher the identity), the less likely was the individual to use these coping mechanisms. In addition, for events that could be changed, a significant, positive correlation was found between sense of self and problem-focused coping. A significant, negative correlation was found between sense of self and the emotion-focused subscales wishful thinking, detachment, self-blame, and keep to self. The higher the score, the more likely was the individual to use problem-focused coping; the less likely was the individual to use the emotion-
Table 13

**CORRELATION BETWEEN IDENTITY DIMENSIONS AND 7 COPING SCALES**

<table>
<thead>
<tr>
<th>Y*/</th>
<th>SELF-ACCEPTANCE</th>
<th>SENSE OF SELF</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBLEM-FOCUSED SUBSCALE</td>
<td>-0.00</td>
<td>-0.11#</td>
</tr>
<tr>
<td>WISHFUL THINKING SUBSCALE</td>
<td>-0.26+</td>
<td>-0.33+</td>
</tr>
<tr>
<td>DETACHMENT SUBSCALE</td>
<td>-0.12#</td>
<td>-0.16+</td>
</tr>
<tr>
<td>SEEKING SOCIAL SUPPORT SUBSCALE</td>
<td>-0.03</td>
<td>-0.09-</td>
</tr>
<tr>
<td>FOCUS ON POSITIVE SUBSCALE</td>
<td>-0.05</td>
<td>-0.05</td>
</tr>
<tr>
<td>SELF-BLAME SUBSCALE</td>
<td>-0.17+</td>
<td>-0.23+</td>
</tr>
<tr>
<td>KEEP TO SELF SUBSCALE</td>
<td>-0.12#</td>
<td>-0.22+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N**/</th>
<th>SELF-ACCEPTANCE</th>
<th>SENSE OF SELF</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBLEM-FOCUSED SUBSCALE</td>
<td>-0.05</td>
<td>-0.05</td>
</tr>
<tr>
<td>WISHFUL THINKING SUBSCALE</td>
<td>-0.14#</td>
<td>-0.25+</td>
</tr>
<tr>
<td>DETACHMENT SUBSCALE</td>
<td>-0.16+</td>
<td>-0.14#</td>
</tr>
<tr>
<td>SEEKING SOCIAL SUPPORT SUBSCALE</td>
<td>-0.06</td>
<td>-0.09-</td>
</tr>
<tr>
<td>FOCUS ON POSITIVE SUBSCALE</td>
<td>-0.04</td>
<td>-0.02</td>
</tr>
<tr>
<td>SELF-BLAME SUBSCALE</td>
<td>-0.07</td>
<td>-0.03</td>
</tr>
<tr>
<td>KEEP TO SELF SUBSCALE</td>
<td>-0.07</td>
<td>-0.19+</td>
</tr>
</tbody>
</table>

Y*=event appraised as capable of being changed

N**=event appraised as not capable of being changed

+=p < .007

#=p < .04

-=marginally significant, p < .09

focused mechanisms wishful thinking, detachment, keep to self, and self-blame.

For events that could not be changed, a significant positive correlation was found between self-acceptance
scores and two emotion-focused subscales: wishful thinking and detachment. The lower the score, the less likely were the individuals to use these emotion-focused coping mechanisms. In addition, for events that could not be changed, a significant negative relationship was found between sense of self and three emotion-focused coping mechanisms: wishful thinking, detachment, and keep to self. The higher the score, the less likely was the individual to use these emotion-focused coping mechanisms. Finally, for both types of events, a marginally significant relationship was found between sense of self and seeking social support.

When correlating both identity achievement and sense of self and self-acceptance scores with the eight coping subscales, the results consistently suggest that strength of identity (i.e. higher identity) is negatively correlated with four emotion-focused coping mechanisms: wishful thinking, detachment, self-blame, and keep to self. However, only two marginal correlations were found with the two subscales found to be most strongly correlated with the problem-focused coping subscale (and, hence, facilitative of the problem-focused coping process); i.e. seeking social support and focusing on the positive.
C. RESEARCH QUESTION: #3: IDENTITY AND AGE

The third research question focuses upon the relationship between identity achievement and age. This question was included in this study in an attempt to determine at what age identity is achieved, and whether prolonged student status affects identity achievement.

Several statistical techniques were utilized in the investigation of this issue. First, in order to determine whether a linear relationship exists between age and identity achievement, an anova was performed upon ego identity scores and educational level. (3) The results obtained were as follows: F-ratio = 5.1039 (p < .0067); unweighted linear term F-ratio = 7.6277 (p < .0061); weighted linear term F-ratio = 8.2442 (p < .1623). Both the F-ratio and the unweighted linear term F-ratio were significant, indicating that the relationship between ego identity score and educational level is linear; as age goes up, so do identity scores.

(3) This variable is a nominal level variable designed to indicate whether the subject was a freshman, senior, or graduate student. However, since subjects were required to be within a certain age range in order to be included in one of these categories in this study (i.e. freshmen, 17-19; seniors, 21-22; graduate students, 24-29), it is reflective of age of subjects, as well. Consequently, several analyses were conducted with educational level, rather than age.
Having determined that the relationship between age and identity is linear, a Pearson correlation was computed between both age and educational level and the three identity measures included in this study: the Ego Identity, Self-Acceptance, and Sense of Self scales. The purpose of this analysis was to determine the strength of the relationship between these two variables. The results of this analysis are reported in Table 14.

<table>
<thead>
<tr>
<th></th>
<th>AGE</th>
<th>EDUCATIONAL LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ego Identity Scale</td>
<td>.15</td>
<td>.17</td>
</tr>
<tr>
<td>Self-Acceptance</td>
<td>-.17</td>
<td>-.18</td>
</tr>
<tr>
<td>Sense of Self</td>
<td>.16</td>
<td>.16</td>
</tr>
</tbody>
</table>

for all scores, p < .007

A positive, but weak, significant correlation was found between ego identity and sense of self scores and both age and educational level. A negative, but weak, significant
correlation was found between self-acceptance and both age and educational level. These results suggest that although the relationship between identity and age is linear, this relationship is weak.

In order to gain a better understanding of the relationship between age and identity achievement, mean identity scores of the three educational levels were compared. The following results were obtained: (see table 15)

<table>
<thead>
<tr>
<th>EDUCATIONAL LEVEL</th>
<th>MEAN IDENTITY SCORE</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRESHMEN (age 17-19)</td>
<td>32.629</td>
<td>5.713</td>
</tr>
<tr>
<td>SENIORS (age 21-22)</td>
<td>34.871</td>
<td>5.650</td>
</tr>
<tr>
<td>GRADUATE (age 24-29 ) STUDENTS</td>
<td>34.98</td>
<td>5.984</td>
</tr>
</tbody>
</table>

These results indicate that there is a modest difference between mean identity scores for the three age groups. In order to determine whether this difference was significant, an anova was computed for educational level and the three
identity scores. The results of this analysis are as follows: for the Ego Identity Scale, F-ratio = 5.1039, p < .0067; for the Self-Acceptance Scale, F-ratio = 5.4181, p < .0049; for the Sense of Self Scale, F-ratio = 4.5061, p < .0119. All of these results are significant, suggesting that a significant difference exists in identity achievement at the three educational levels.

A final analysis was conducted to determine which age groups differed significantly from each other on their identity scores; the Student-Neuman-Keuls test was utilized for this analysis (alpha value=.05). The results of this analysis indicated that the freshmen (age 17-19) differed significantly on their identity scores from the other two groups. Seniors and graduate students did not differ significantly from each other.

Several analyses were conducted regarding the relationship between age and identity achievement. The results of these analyses suggest that a weak, linear relationship exists between these two variables. As age goes up, so does identity achievement. However, the primary distinction is between freshmen and the other two age groups; freshmen identity scores were significantly lower than both senior and graduate student identity scores. Graduate students did score higher than seniors; however, these results were not significant.
The final research question focuses upon the relationship between age and coping. The purpose of this question was to assess whether age itself impacts upon the coping process. This question was investigated through the use of the stepwise multiple regression technique. Four independent variables were included in the analysis: appraisal, score on the Ego Identity scale, sex, and age. Several multiple regression analyses were conducted, using the different coping scores as the dependent variable. The results of these analyses will be reported below.

The first analysis was conducted using the % of problem-focused coping score as the dependent variable. For the event appraised as capable of being changed, the following results were obtained:

- ego identity scale score - $R^2 = .05245$
- Multiple $R = .22903$
- $p = .0002$
- $r = .22903$

No other variable reached the .05 limit.

Five percent of the variance on the coping score could be accounted for by the ego identity score; the other three variable did not account for any variance in the predominance of problem-focused coping.
For the event appraised as not capable of being changed, the following results were found:

**age-**

- \( r^2 = .01896 \)
- Multiple \( R = .13771 \)
- \( p = .0292 \)
- \( r = .13771 \)

**appraisal-**

- \( r^2 = .03890 \)
- Multiple \( R = .19723 \)
- \( p = .0073 \)
- \( r = .12470 \)

Two percent of the variance on the coping score could be accounted for by age; 4% of the variance could be accounted for by age and appraisal. The rest of the variance could not be accounted for by the variables included in this analysis.

The second analysis was conducted using summed scores as the dependent variable. For the event appraised as capable of being changed, the following results were obtained:

**age**

- \( r^2 = .02655 \)
- Multiple \( R = .16295 \)
- \( p = .0075 \)
- \( r = -.16295 \)

**sex**

- \( r^2 = .04114 \)
- Multiple \( R = .20282 \)
- \( p = .0038 \)
- \( r = .12205 \)

No other variables reached the .05 level
Three percent of the variance on the coping score could be accounted for by age; 4% of the variance could be accounted for by age and sex. No other variance could be accounted for by the variables included in this analysis.

For the event appraised as not capable of being changed, no variables reached the .05 limit. No variance could be accounted for by the variables included in this analysis.

In the third analysis, summed emotion-focused coping scores were used as the dependent variable. For the events appraised as capable of being changed, the following results were obtained:

<table>
<thead>
<tr>
<th>Variable</th>
<th>R square (R²)</th>
<th>Multiple R</th>
<th>p-value</th>
<th>R value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.07799</td>
<td>.27927</td>
<td>.000</td>
<td>-.27927</td>
</tr>
<tr>
<td>Ego identity scale</td>
<td>.12737</td>
<td>.35688</td>
<td>.000</td>
<td>-.26273</td>
</tr>
</tbody>
</table>

Eight percent of the variance could be explained by age, and 13% of the variance by age and ego identity score. The rest of the variance could not be accounted for by the variables included in this analysis.

For the event appraised as not capable of being changed, the following results were obtained:

<table>
<thead>
<tr>
<th>Variable</th>
<th>R square</th>
<th>Multiple R</th>
<th>p-value</th>
<th>R value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.0460</td>
<td>-.2118</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>
p = .008
r = -.21118

sex
R square = .07041
Multiple R = .26534
p = .0001
r = .15830

ego identity scale
R square = .09037
Multiple R = .30062
p = .000
r = -.16047

appaisal
R square = .09250
Multiple R = .30415
p = .0001
r = -.00457

Four percent of the variance could be explained by age, 7% by age and sex, 9% by age, sex and ego identity score, and a little over 9% by age, sex, ego identity score, and appraisal. All four variables made contributions to the variance in coping measured by this scale.

The results of these analyses suggest that age does impact upon the coping process. A significant, positive correlation was found between age and % of problem-focused coping for the event appraised as not capable of being changed (r = .14); this finding suggests that the higher the age, the higher the percent of problem-focused coping utilized in events perceived as not capable of being changed. A significant negative correlation was found between age and summed problem-focused scores for events appraised as capable of being changed (r = -.16), and for summed emotion-
focused scores for both types of incidents ($r = -0.28$; $r = -0.21$). These results suggest that the lower the age, the greater the amount and intensity of emotion-focused coping mechanisms used; a similar relationship appears to exist with absolute amount and intensity of problem-focused coping mechanisms for events that can be changed. Thus, it would appear that age impacts upon the coping process directly, as well as upon identity achievement.

**E. ADDITIONAL ANALYSES**

Several analyses were conducted in this study that were not included in the original research questions of the study. The first is related to the relationship between sex and identity achievement; an attempt was made to determine whether males and females scored differently on the identity scales. The t-test procedure was used to look at the relationship between sex and the three identity scales. All three analyses were insignificant; these results suggest that no relationship exists between sex and identity achievement. (see table 16)

The relationship between sex and coping was analyzed, as well, in the multiple regression analyses reported in the previous section. The results of this test show that a weak, but significant, correlation exists between sex and
Table 16

<table>
<thead>
<tr>
<th>T-TEST RESULTS FOR SEX AND THREE IDENTITY SCALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAN</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>EGO IDENTITY</td>
</tr>
<tr>
<td>SCALE</td>
</tr>
<tr>
<td>SELF-ACCEPTANCE</td>
</tr>
<tr>
<td>SCALE</td>
</tr>
<tr>
<td>SENSE OF SELF</td>
</tr>
<tr>
<td>SCALE</td>
</tr>
</tbody>
</table>

*=male
**=female

summed problem-focused scores \( r = .12205, \) \( p < .0038 \) for events appraised as capable of being changed, and between sex and summed emotion-focused scores for events appraised as not capable of being changed \( r = .15830, \) \( p < .0001 \). For the events appraised as capable of being changed, women appear to use more problem-focused coping mechanisms than men; for the events appraised as not capable of being changed, women appear to use more emotion-focused coping mechanisms than men.
The remaining analyses were conducted in an attempt to provide support for several of Folkman and Lazarus's findings (1980; in press). According to these authors, one factor which contributes to choice of coping mechanisms is appraisal. These authors suggest that coping with events appraised as capable of being changed will differ from coping with events appraised as not capable of being changed. More problem-focused coping is used for events appraised as capable of being changed, whereas more emotion-focused coping is utilized for events appraised as not capable of being changed. In an attempt to replicate these findings, a Pearson correlation was calculated for each of the coping scales between scores for incidents appraised as capable of being changed, and scores for incidents appraised as not capable of being changed. The results of these correlations are presented in table 17.

Correlations between the various coping scores for events appraised as capable of being changed, and for events appraised as not capable of being changed were all significant, suggesting that only a modest difference exists between coping with incidents appraised as capable of being changed and coping with incidents appraised as not capable of being changed. These results were surprising, and additional evidence was sought to verify these findings. Consequently, a second analysis was conducted,
Table 17
CORRELATION BETWEEN COPING SCORES FOR Y* AND N** EVENTS

<table>
<thead>
<tr>
<th>COPING SCALE</th>
<th>CORRELATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBLEM-FOCUSED COPING SCORES SUMMED</td>
<td>.4870 (p &lt; .001)</td>
</tr>
<tr>
<td>EMOTION-FOCUSED COPING SCORES SUMMED</td>
<td>.6326 (p &lt; .000)</td>
</tr>
<tr>
<td>PREDOMINANCE OF PROBLEM-FOCUSED-COPING</td>
<td>.3111 (p &lt; .000)</td>
</tr>
<tr>
<td>PROBLEM-FOCUSED COPING SUBSCALE (8 SUBSCALES)</td>
<td>.4262 (p &lt; .000)</td>
</tr>
<tr>
<td>WISHFUL THINKING SUBSCALE</td>
<td>.5512 (p &lt; .000)</td>
</tr>
<tr>
<td>DETACHMENT SUBSCALE</td>
<td>.3684 (p &lt; .000)</td>
</tr>
<tr>
<td>SEEK SOCIAL SUPPORT SUBSCALE</td>
<td>.5306 (p &lt; .000)</td>
</tr>
<tr>
<td>FOCUS ON POSITIVE SUBSCALE</td>
<td>.4530 (p &lt; .000)</td>
</tr>
<tr>
<td>SELF-BLAME SUBSCALE</td>
<td>.2815 (p &lt; .000)</td>
</tr>
<tr>
<td>KEEP TO SELF SUBSCALE</td>
<td>.4842 (p &lt; .000)</td>
</tr>
</tbody>
</table>

Y*=event appraised as capable of being changed
N**=event appraised as not capable of being changed

using the paired t-test to compare coping scores for incidents appraised as capable of being changed, and incidents appraised as not capable of being changed. Results indi-
cate that for several of the coping scales, a significant difference exists between coping with incidents appraised as capable of being changed, and coping with incidents appraised as not capable of being changed. The results of this analysis are presented in table 18.

The results indicate that appraisal does affect coping, but that its effects are predominantly on problem-focused, as opposed to emotion-focused, coping. The effects of appraisal were consistently found on all problem-focused coping scales and subscales, but were found on only two emotion-focused coping subscales: detachment and self-blame and on the scale measuring percent of emotion-focused coping.

It is important, however, to note that the authors of this scale not only suggest that appraisal affects coping; they indicate the direction of this relationship. According to Folkman and Lazarus (1980), for events appraised as capable of being changed, problem-focused coping predominates; for events appraised as not capable of being changed, emotion-focused coping predominates. These findings were replicated with this sample, as well; when the percent of problem-focused coping mechanisms was calculated, the mean score for the event capable of being changed was 38.2079, and for the event that could not be changed
<table>
<thead>
<tr>
<th>COPING SCALE</th>
<th>M/Y*</th>
<th>M/N**</th>
<th>T-VALUE</th>
<th>DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBLEM-FOCUSED COPING SCORES SUMMED</td>
<td>21.2621</td>
<td>15.9677</td>
<td>8.27+</td>
<td>247</td>
</tr>
<tr>
<td>EMOTION-FOCUSED COPING SCORES SUMMED</td>
<td>34.8508</td>
<td>35.4153</td>
<td>-0.66+</td>
<td>247</td>
</tr>
<tr>
<td>% PROBLEM-FOCUSED COPING</td>
<td>38.2079</td>
<td>30.4733</td>
<td>9.75+</td>
<td>247</td>
</tr>
<tr>
<td>% EMOTION-FOCUSED COPING</td>
<td>61.7921</td>
<td>69.5267</td>
<td>-9.75+</td>
<td>247</td>
</tr>
<tr>
<td>PROBLEM-FOCUSED COPING SUBSCALE</td>
<td>13.6008</td>
<td>10.2218</td>
<td>8.34+</td>
<td>247</td>
</tr>
<tr>
<td>WISHFUL THINKING SUBSCALE</td>
<td>6.2097</td>
<td>6.5685</td>
<td>-1.33+</td>
<td>247</td>
</tr>
<tr>
<td>DETACHMENT SUBSCALE</td>
<td>4.6855</td>
<td>6.1250</td>
<td>-6.02+</td>
<td>247</td>
</tr>
<tr>
<td>SEEK SOCIAL SUPPORT SUBSCALE</td>
<td>9.0121</td>
<td>8.5282</td>
<td>1.60+</td>
<td>247</td>
</tr>
<tr>
<td>FOCUS ON POSITIVE SUBSCALE</td>
<td>4.6129</td>
<td>4.5403</td>
<td>0.38+</td>
<td>247</td>
</tr>
<tr>
<td>SELF-BLAME SUBSCALE</td>
<td>3.6492</td>
<td>1.7419</td>
<td>10.18+</td>
<td>247</td>
</tr>
<tr>
<td>KEEP TO SELF SUBSCALE</td>
<td>2.4597</td>
<td>2.4597</td>
<td>.00+</td>
<td>247</td>
</tr>
</tbody>
</table>

Y*=event appraised as capable of being changed  
N**=event appraised as not capable of being changed  
M/Y*=mean score for event appraised as capable of being changed  
M/N**=mean score for event appraised as not capable of being changed  
+=p < .001
The difference between these mean scores was found to be significant \( t=9.75, p < .001 \), suggesting that a higher percent of problem-focused coping mechanisms are used in situations appraised as capable of being changed than in situations appraised as not capable of being changed. On the emotion-focused coping scale, the mean percent score for the event capable of being changed was 61.7921, and for the event not capable of being changed 69.5297. The difference between these means scores was also found to be significant \( t=-9.75, p < .001 \), which indicates that a higher percent of emotion-focused coping mechanisms are used when an event is appraised as capable of being changed, than when it is appraised as not capable of being changed.

According to the coping theory, type of situation can affect the coping process, as well. Folkman and Lazarus (1980) report that, in work situations, people tend to use more problem-focused coping; in health situations, they tend to use more emotion-focused coping. In an attempt to replicate these findings, the life event scale provided in the questionnaire was divided into 7 categories, or types of situations: interpersonal, work, health, family, school, personal, and finances. A oneway analysis of vari-
ance was carried out, investigating the relationship between category and percentage of problem-focused coping. For the incident appraised as capable of being changed, no significant effect was found of situation on percentage of problem-focused coping ($f=1.2113$ $DF=6.255$ $p < .3008$). For the incident appraised as capable of being changed, a significant effect was found ($f=7.1678$ $DF=6.230$ $p < .001$). Using the LDS and Duncan procedures to determine which categories differed in terms of % of problem-focused coping, the following effects were found:

a) The highest percentage of problem-focused coping mechanisms was used for school-related incidents. The other categories were ranked in the following, descending order: work, interpersonal relationships, health, personal, family, and financial incidents.

b) Coping with incidents involving interpersonal relationships involved a significantly higher percent of problem-focused coping than finance and family-related incidents.

c) Coping with work-related incidents involved a significantly higher percent of problem-focused coping than finance and family-related incidents.
d) coping with school incidents involved a significantly higher percent of problem-focused coping than finance, family, personal, interpersonal relationship, and health-related incidents.

These results indicate that type of stressful incident affects the predominance of problem-focused coping mechanisms.

Several analyses were conducted in an attempt to support findings reported by Folkman and Lazarus (1980). The results of these analyses offer definite support for their findings; they suggest that appraisal of a situation as capable, or not, of being changed and type of incident both affect the coping mechanisms utilized by the individual to deal with life event stress.
Chapter VI

DISCUSSION AND CONCLUSIONS

The following chapter will be divided into four sections. In the first and second sections, the major findings of this study will be reviewed and discussed; theoretical and applied implications of this study will be discussed in the third section. The final section will focus upon the major conclusions of this study and directions for further research.

I. REVIEW OF MAJOR FINDINGS

A. THE RELATIONSHIP BETWEEN IDENTITY ACHIEVEMENT AND APPRAISAL

The results of this study indicate that no relationship exists between identity score and the tendency to appraise stressful life events as capable, or not, of being changed. An insignificant relationship was found, as well, between the two dimensions of identity investigated in this study, sense of self and self-acceptance, and appraisal. These findings demonstrate that identity achievement has no
impact upon the overall tendency to assess stressful life events as capable, or not, of being changed.

**B. THE RELATIONSHIP BETWEEN IDENTITY ACHIEVEMENT AND COPING**

The results of this study suggest that a weak, but significant relationship exists between identity achievement and coping with stress. Findings indicate that the higher the identity score, the higher the percentage of problem-focused coping mechanisms (1) used to cope with specific stressful life events (for events appraised as capable of being changed, \( p < .001 \); for events appraised as not capable of being changed, \( p < .063 \), which is marginally significant), and the lower the percentage of emotion-focused coping mechanisms utilized. In addition, although an insignificant relationship was found between absolute number and intensity of problem-focused coping mechanisms used (summed score) and identity achievement, a significant negative relationship was found between absolute number and intensity of emotion-focused coping mechanisms used and identity achievement (for event appraised as capable of being changed, \( p < .001 \); for event appraised as not capable of being changed, \( p < .005 \)). These results provide additional support for the relationship between identity achievement and coping with stress.

(1)Unless otherwise specified, results which are reported regarding the problem and emotion-focused coping scales refer to the dichotomous distinction.
The results of this study further suggest that a relationship exists between identity achievement and type of emotion-focused coping mechanisms used to cope with stressful life events (based upon the 8 scale distinction). Findings indicate that the higher the identity score, the less likely is the individual to utilize emotion-focused coping mechanisms perceived as a possible impediment to the problem-focused coping process (i.e. wishful thinking, p < .001; detachment, p < .04; self-blame, p < .001 for event that could be changed, for event that could not be changed, p < .069, which is marginally significant; and keeping to oneself, p < .001). However, a significant relationship was not found between identity score and use of emotion-focused coping mechanisms identified as facilitative of the problem-focused coping process; i.e. seeking social support and focusing on the positive (a marginally significant (p < .069) relationship was found, however, between identity and seeking social support, for the event that could not be changed).

In this study, identity achievement was measured in two ways; the first provides an overall, unitary measure of identity achievement, while the second focuses upon two dimensions of identity: self-acceptance and sense of self. The results of this study suggest that a weak, but signifi-
cant relationship - which is also similar to that found with the overall identity scores - exists between these two dimensions of identity achievement and coping with stress.

Findings indicate that the higher the score on these two dimensions of identity, the higher the percentage of problem-focused coping mechanisms utilized to cope with stressful life events (SENSE OF SELF: $p < .002$

SELF-ACCEPTANCE: for events appraised as capable of being changed, $p < .043$; for events appraised as not capable of being changed, results were insignificant, $p < .145$), and the lower the percentage of emotion-focused coping mechanisms utilized. In addition, as was the case with overall identity scores, no relationship was found between identity and absolute number and intensity of problem-focused coping mechanisms, but a significant, negative relationship was found with absolute number and intensity of emotion-focused coping scores (for event appraised as capable of being changed, $p < .001$; for event appraised as not capable of being changed, SELF-ACCEPTANCE, $p < .056$, which is marginally significant, and SENSE OF SELF, $p < .005$).

A significant negative relationship was also found between these two dimensions of identity and the four (from the 8 scale distinction) emotion-focused coping mechanisms perceived as a possible impediment to problem-focused cop-
ing: wishful thinking, detachment, self-blame, and keeping to self (for events appraised as capable of being changed (wishful thinking, self-blame - p < .007; detachment and keep to self - SENSE OF SELF, p < .007, SELF-ACCEPTANCE, p < .04). For events appraised as not capable of being changed, a significant relationship was found between the two dimensions of identity and only two of these scales, wishful thinking and detachment; a significant relationship was found, as well, between sense of self and the keep to self subscale. (wishful thinking - SELF-ACCEPTANCE, p < .04, SENSE OF SELF, p < .007; detachment - SELF-ACCEPTANCE, p < .007, SENSE OF SELF, p < .04; keep to self, SENSE OF SELF, p < .007). A marginally significant relationship was found between sense of self and seeking social support (p < .09), but no other significant relationship was found with the coping mechanisms perceived as facilitative of the problem-focused coping process.

To summarize, the findings of this study clearly demonstrate the existence of a relationship between identity achievement, and two dimensions of identity: sense of self and self-acceptance, and coping with stress. The higher the identity score, the more likely is the individual to used problem-focused coping mechanisms, the less likely is the individual to use emotion-focused coping mechanisms, in general, and the less likely is the individual to use
emotion-focused coping mechanisms which are perceived as a possible impediment to problem-focused coping. It is also important to note that more significant relationships were found between sense of self and coping than between self-acceptance and coping. These findings suggest that a stronger relationship exists between sense of self and coping, than between self-acceptance and coping.

C. The relationship between age and identity achievement

The findings of this study demonstrate the existence of a weak (r = .15 to .18, p < .007), but linear (p < .007) relationship between identity achievement, sense of self, and self-acceptance and age; the older the subjects, the higher their identity scores. It is important to note that mean identity scores for all three educational groups (freshmen, seniors, and graduate students), were within two points of each other; a significant difference was, however, found between identity scores (on all three scales) of freshmen and of the other two age groups (p < .01). These results suggest that by the senior year of college, identity crystallizes, with little change occurring between the senior year and graduate school.
D. THE RELATIONSHIP BETWEEN AGE AND COPING

The results of this study suggest that a significant, but weak, relationship exists between age and coping with stress. A significant positive relationship was found between age and percent of problem-focused coping mechanisms (for the event appraised as not capable of being changed, p < .03); however, a significant negative relationship was found between age and absolute amount and intensity of problem-focused coping (p < .008, for event that could be changed). A significant, negative relationship was also found between age and absolute amount and intensity of emotion-focused coping mechanisms (p < .009, for both types of events). These results indicate that the older the subject, the higher the percentage of problem-focused coping mechanisms used for events appraised as not capable of being changed, the lower the absolute amount and intensity of problem-focused coping mechanisms used for events appraised as capable of being changed, and the lower the amount and intensity of emotion-focused coping mechanisms used for both types of incidents. Thus, it would appear that age does, in fact, impact upon the coping process.
E. ADDITIONAL FINDINGS

Several additional analyses were conducted in this study which were unrelated to the original research questions. The primary goal of these analyses was to replicate earlier findings of Folkman and Lazarus, (1980; in press); the results of these analyses provide support for their findings regarding the relationship between appraisal and coping, and between type of situation and coping.

According to Lazarus and Folkman (1980; in press), appraisal of an event as capable or not of being changed impacts upon the choice of coping mechanisms; for events appraised as capable of being changed, more problem-focused coping mechanisms are likely to be used, and for events appraised as not capable of being changed, more emotion-focused coping mechanisms are likely to be used. Results of this study suggest that this relationship, in fact, exists; findings indicate that a higher percentage of problem-focused coping was utilized for events appraised as capable of being changed, whereas a higher percentage of emotion-focused coping was utilized for events appraised as not capable of being changed (p < .001). In addition, a significantly greater amount and intensity of problem-focused coping was used for events appraised as capable of being changed than for events appraised as not capable of
being changed \( (p < .001) \); there was, however, no significant difference in absolute amount or intensity of emotion-focused coping mechanisms used for the two types of incidents. Significant differences were found on the amount and intensity of only two emotion-focused coping mechanisms (based on the eight subscale distinction): detachment and self-blame \( (p < .001) \). Detachment was used more for incidents appraised as not capable of being changed, whereas self-blame was used more for incidents perceived as capable of being changed.

According to Folkman and Lazarus (1980; in press), a second factor which may impact upon coping is the type of stressful situation encountered. These authors report a predominance of problem-focused coping for work situations, and an increase in emotion-focused coping mechanisms for health situations. Results of this study suggest that a significantly higher percentage of problem-focused coping mechanisms was used for school situations than for any other type of situation, other than work (for events appraised as capable of being changed, \( p < .05 \)); these results appear to support those found by Folkman and Lazarus, since school may well be the equivalent of work for students. In addition, it is important to note that the second highest percentage of problem-focused coping mechanisms were used for work situations. Furthermore, the results of this study
indicate that of the seven categories, health was fourth in terms of percentage of problem-focused coping mechanisms (p < .05). These results suggest that in health-related situations, there is, in fact, an increase in emotion-focused coping mechanisms.

A final issue dealt with in this study is the relationship between sex and both coping and identity. Lazarus and Folkman (1980) report no meaningful difference between the genders in terms of coping; they suggest that most of their results reflect not gender differences, but difference in the type of stressful situation encountered. However, they point out a puzzling difference in the greater use of problem-focused coping mechanisms by men for events appraised as not capable of being changed. Results of this study suggest that women appeared to use a greater absolute amount of problem-focused coping mechanisms for events appraised as capable of being changed (p < .004), and more emotion-focused coping mechanisms than men for events appraised as not capable of being changed (p < .001). These results provide partial support for those found by Folkman and Lazarus. No relationship was found, however, between sex and identity achievement. This is an interesting finding; in his theoretical formulation of identity achievement, Erikson (1968) suggests that such a relationship does exist. In addition, recent research (e.g. Gilli-
gan; Thorbecke and Gortevant, 1982) provides empirical evidence of the existence of such differences.

E. SUMMARY

To summarize, the following results were reported in this study:

1) There is no relationship between identity and the tendency to appraise events as capable or not of being changed.

2) The higher the identity (both as a unitary entity and in terms of the two dimensions of identity investigated in this study), the higher the percentage of problem-focused coping mechanisms used, the lower the percentage of emotion-focused coping mechanisms used, and the less use is made of emotion-focused coping mechanisms perceived as a possible impediment to problem-focused coping (self-blame, wishful thinking, detachment, keep to self).

3) Although a relationship was found between both sense of self and self-acceptance and coping, sense of self appears to have a greater impact upon the coping process than self-acceptance.

4) Older students achieve, on the average, higher identity scores. There is a significant difference in identity achievement between freshmen and the other two age groups; however, there is no significant difference in identity scores between seniors and graduate students.
5) Age impacts upon the coping process; the older the subjects, the more problem-focused coping mechanisms are used and the less emotion-focused coping mechanisms are used.

6) Sexual differences were noted in the choice of coping mechanisms. Women appear to use more problem-focused coping mechanisms for events that can be changed, and more emotion-focused coping mechanisms for events that cannot be changed.

7) There is no relationship between sex and identity achievement.

8) Appraisal affects the choice of coping mechanisms; more problem-focused coping mechanisms are used for events appraised as capable of being changed and more emotion-focused coping mechanisms are used for events appraised as not capable of being changed.

9) Type of situation affects the choice of coping mechanisms; more problem-focused coping mechanisms are used for school and work-related events, whereas for health-related events, more emotion-focused coping mechanisms are utilized.
II. DISCUSSION OF FINDINGS

According to Erikson (1950, 1959, 1968), personality development involves progression through eight sequential developmental stages; each stage is characterized by a development task to be mastered or resolved. Each stage serves as a building block of the following stage; successful resolution of each stage is contingent upon the successful resolution of earlier stages. The developmental stage which has been the primary focus of Erikson's work is adolescence; the task to be mastered during this stage of development is identity achievement and according to Erikson, successful resolution of this developmental stage impacts upon overall psychosocial functioning as an adult.

One aspect of psychosocial functioning regarding which little identity research has been conducted is that of coping with stress. In his cognitive-phenomenological model of coping, Lazarus (1966) suggests that coping consists of two processes: appraisal and coping efforts made to master, tolerate, or reduce stress. According to this author, personality variables may impact upon both the appraisal and coping processes. However, although Lazarus mentions several personality characteristics which may impact upon the coping process (e.g. locus of control; ego development; cognitive style; Lazarus and Folkman, 1984), he makes no reference to the issue of identity achievement.
The primary goal of this study was to investigate the relationship between identity achievement and coping with stress. In the following section, the results of this study will be discussed from a theoretical and methodological perspective, in an attempt to gain a greater understanding regarding these findings.

A. THE RELATIONSHIP BETWEEN IDENTITY AND APPRAISAL

According to Lazarus (1966) and Folkman (Folkman and Lazarus, 1980, in press; Lazarus and Folkman, 1984), personality variables impact on both the appraisal and coping processes. In this study, however, no relationship was found between identity achievement and the tendency to appraise events as capable, or not, of being changed. Identity achievement may have no impact upon the appraisal process; however, it is possible that these findings are the result of methodological, rather than theoretical, factors.

First of all, it is important to note that subjects were given a list of 50 stressful items, and asked to mark off which of these items had occurred to them in the past year. The coping scale was completed in relation to two incidents selected from that list. This technique has been utilized in other coping research (e.g. McRae, 1984); however, it is possible that results may have been different had subjects
been allowed to identify stressful events which had occurred to them without referring to an available list. Several subjects noted in their questionnaires that the incidents, which they selected for completion of the Ways of Coping Checklist, were not necessarily extremely stressful for them; this may have affected the meaningfulness of their responses. If the events were only mildly stressful for them, the issue of control (which is reflected in the assessment of an event as capable, or not, of being changed) may have been irrelevant, or less meaningful to them.

Secondly, appraisal was measured, for the purpose of analysis, as the percent of all incidents which had occurred to the subjects which were perceived as capable of being changed. This measure is, in essence, a measure of a tendency to perceive stressful events as within, or beyond control. It is possible that a relationship may have been found had the analysis been conducted item by item, or in terms of categories of situations, rather than as a general tendency. Appraisal may be related more to the type of stressful event which occurs than to a general tendency to perceive life events as within, or beyond, one's control.

Additional research is required which will control for the methodological factors described above. Subjects
should be allowed to select stressful items without reference to a prepared list; appraisal should be analyzed item by item, or by category of situations. If a relationship is then found between identity and appraisal, it will be clear that the results of this study were affected by methodological factors.

B.THE RELATIONSHIP BETWEEN IDENTITY AND COPING

The findings of this study demonstrate that a significant relationship exists between identity achievement and coping; the higher the identity scores, the higher the percentage of problem-focused coping mechanisms that was utilized, regardless of appraisal. (2) According to Lazarus and Folkman's model, problem-focused coping is most appropriate and effective with events appraised as capable of being changed. When an event is appraised as not capable of being changed, emotion-focused coping efforts are more appropriate. Collins, Baum, and Singer (1983) provide support for this model in their discussion of the Three Mile Island incident. These authors report that the use of problem-focused coping mechanisms in an uncontrollable incident, led to more psychological symptoms than were evident in individuals using less problem-focused coping

(2) However, it is also important to note that due to the nature of the data analysis (correlational), conclusions cannot be reached regarding the directionality of this relationship.
efforts, and more emotion-focused coping mechanisms. Subjects in this study were also found to use more problem-focused coping mechanisms for events appraised as capable of being changed, and more emotion-focused coping mechanisms for events appraised as not capable of being changed.

Based upon this model, identity is associated with predominance of one type of coping mechanism (i.e., problem-focused coping), which may be ineffective in certain types of situations. However, it is important to note that according to both Billings and Moos (1981) and Pearlin and Schooler (1978), problem-focused coping as a general category is more effective than emotion-focused coping. Billings and Moos (1981) report that more reliance on active attempts to deal with an event, and fewer attempts to avoid dealing with it, are associated with less stress. Based upon their model, the results of this study would appear to suggest that higher identity is associated with more effective coping.

Additional research is necessary to resolve the issue of the effectiveness of coping. The two models described may, in fact, complement each other; it is possible that a predominance of problem-focused coping is more effective, but that for events appraised as beyond control, more emotion-focused coping mechanisms should be used than are used for
events appraised as capable of being changed. The Ways of Coping checklist is a process, rather than an effectiveness, measure. However, what is of ultimate importance in coping research is the effectiveness of the process. Consequently, future research should focus upon this issue of effectiveness, in an attempt to determine what is the optimal combination of problem and emotion-focused coping mechanisms for dealing most effectively with life stress.

As was stated earlier, the results of this study suggest that a significant relationship exists between identity and coping. However, it is important to note that this relationship was found more consistently with % of problem and emotion-focused coping, than with absolute number and intensity of these coping mechanisms (summed scores). The two scoring methods appear to measure two different dimensions of the coping process. Summed scores measure absolute amount; % scores measure relative amounts. The results of this study suggest that it is not how many of a certain type of coping mechanisms are used that is important, but what percentage that is of the total coping effort.

The authors of the coping scale recommend the use of the summed scoring method. The results of this study suggest that a percentage score may provide more valuable and mean-
ingful information and results than the summed scores. Additional research is required to determine which scoring method is more effective, and/or how the two scoring methods can be used to supplement each other.

C. STRENGTH OF THE RELATIONSHIP BETWEEN IDENTITY AND COPING

The results of this study suggest that a significant relationship exists between identity achievement and coping with stress. However, it is important to note that the strength of this relationship ranged between .14 and .33. These relationships are relatively weak, which may simply indicate that the relationship between these two variable is, in fact, a weak relationship. However, it is important to note that the mean identity score for the entire sample was 34.037, with a standard deviation of 5.863; these results suggest that 66% of the population fell between the scores of 29 and 40. In addition, the mean scores of each group were very similar to each other, and to the overall mean score (freshmen, mean = 32.629, sd = 5.713; seniors, mean = 34.871, sd = 5.650; graduate students, mean = 34.988, sd = 5.984). These results suggest that the entire sample was fairly homogeneous, in terms of their identity scores. The weakness of the results may be the result of the homogeneity of the identity scores, rather than weakness of the relationship. Additional research is
necessary to resolve this issue; however, such research would require the selection of a more heterogeneous subject pool.

Another interpretation of the weakness of the results is related to the possible effect of intervening variables; additional research is indicated to determine whether variables not included in the analysis (e.g., demographic variables, such as socioeconomic status or psychological variables, such as locus of control) have an impact upon the relationship between coping and identity achievement.

**THE RELATIONSHIP BETWEEN IDENTITY AND AGE**

The results of this study suggest that identity still develops between the freshman and senior years, but that by the senior year, identity is crystallized, and no longer changes significantly. These results support findings reported by Waterman, Geary, and Waterman (1974), which suggest that identity continues to develop between the freshman and senior years. They support results reported by Marcia (1966), as well, who indicates that at a six year follow-up of subjects measured as college seniors, identity appeared to be relatively stable. However, it is important to note that although the mean identity scores of freshmen were significantly lower than those of the other two groups, they were not substantially lower. In fact, they
were only 2.2 points lower than those of the seniors, and 2.4 points lower than those of the graduate students. It is also interesting to note that the mean scores of all three age groups were fairly low, reflecting what may be interpreted as a medium level of identity achievement. Why is this the case?

In a study conducted regarding the impact of prolonged student status upon adolescent development, Finklestein and Gaier (1983) describe the following effects of prolonged student status: the fostering of emotional dependence upon parents; negative repercussions for achievement of identity and a sense of worth as a physical and social being; and deceleration of progress regarding vocational identity formation. They further suggest that the university setting serves as a parent surrogate, prolonging adolescence. These authors found, for example, that regardless of age, students scored significantly higher than non-students on emotional dependence. They also found that students had a higher proportion of vocational crystallization scores (reflective of specification of vocational preference), but a lower proportion of vocational implementation scores. The student may have greater awareness regarding his vocational preferences (which he/she may possibly be pursuing as a student), but as a result of his student status, will obviously have less opportunity for implementation of this choice.
Identity issues are clearly resolved during the early college years; significant empirical findings, including those of this study, exist in support of this contention. However, it would appear that prolonged student status may impact upon the achievement of a strong identity. Identity issues are surely resolved by students. However, the degree of their resolution may be affected by the fact that for as long as they are students, many personal decisions are delayed (particularly vocational); many interpersonal experiences may be avoided, as well (which may affect the sense of self-worth regarding the ability to negotiate the "real world"). Thus, although identity may be achieved, it may remain only of medium strength until the individual is forced to negotiate the world outside of the university setting.

Additional research is required regarding the impact of the school environment upon identity achievement. Such research should compare students with a non-student population of a similar age; however, it would be necessary to compare subjects of different ages, so as to assess the meaning of prolongation. Does prolongation refer to the college education, or is the impact greater upon students who remain in a university setting during their middle and late twenties? What happens to the student who returns to school after several years of employment? Is returning
different than remaining in school for several consecutive years? More research is obviously necessary to answer these questions.

**THE RELATIONSHIP BETWEEN AGE AND COPING**

The results of this study suggest that a relationship exists between age and coping. A higher percentage of problem-focused coping mechanisms, and a lower percentage and absolute amount of emotion-focused coping mechanisms are utilized by older subjects. However, the findings of this study also demonstrate the existence of a negative relationship between age and absolute amount of problem-focused coping mechanisms. A lack of consistency between the % of problem-focused coping and summed scores for problem-focused coping was found throughout this study. Additional research is indicated, regarding the scoring of the coping scale. As was stated earlier, % scores reflect predominance of a certain type of coping mechanism; summed scores reflect amount and intensity. The % scores may well be more meaningful than the summed scores recommended by the authors of the coping checklist.

It is important to note that the impact of age upon the coping process is similar to that of the impact of identity upon coping. Since a linear relationship was identified between identity and age, it might be suggested that iden-
Identity achievement is an intervening variable in the relationship between age and coping. However, the results regarding the relationship between age and coping were obtained through a multiple regression, in which identity achievement was included, as well. This procedure identified a relationship between age and coping, while controlling for the impact of identity achievement, which suggests that the relationship identified between age and coping, in fact, exists.

THE RELATIONSHIP BETWEEN IDENTITY AND SEX

The results of this study suggest that sex has no impact upon identity achievement. Erikson (1968) suggests that gender differences exist in the identity formation process; he claims that interpersonal issues are the domain of female identity, whereas occupational choice is the domain of male identity formation. Thorbecke and Grotevant (1982) and Gilligan (1982) provide empirical evidence of differences in identity formation for males and females; Orlofsky (1977) reported different behaviors for men and women in the same identity status. However, these authors focus more upon process, in terms of the types of issues dealt with and how, and on behavior, than on a general measure of identity achievement and strength. The focus of this study was upon overall identity achievement. It is possible that
gender affects which issues are dealt with and how, as well as behavior within the identity status achieved, but not the ultimate achievement of an identity by the individual, or its strength.

Additional research is necessary to determine the impact of gender upon identity. What is the nature of this effect? Is it upon overall identity achievement, or the strength of identity achievement? Or does it impact more upon the predominance of certain identity issues, or the order in which issues are resolved? Future research should focus specifically upon these issues, but a different identity measure than that used in this study might be more appropriate for this type of research. The Dignan scale would not be sensitive enough to identify specific identity issues being resolved by the subject.

G. The relationship between appraisal, situation type, sex, and coping

The results of this study provide support for earlier findings of Folkman and Lazarus (1980; in press). As was stated earlier, these findings show that how an event is appraised affects the choice of coping mechanisms used, as does the type of stressful life event encountered by the individual. For events appraised as capable of being changed, more problem-focused coping mechanisms were uti-
lized; for events appraised as not capable of being changed, more emotion-focused coping mechanisms were utilized. In addition, coping with work and school situations involved more problem-focused coping, whereas coping with health situations involved more emotion-focused coping. These findings clearly replicate those reported by Folkman and Lazarus.

A final finding of interest relates to the relationship between sex and coping. Folkman and Lazarus (1980) found no real evidence of gender differences in coping. Gender differences were found in this study, and women were shown to be more appropriate in their choice of coping mechanisms (problem-focused for incidents that could be changed, and emotion-focused for incidents that could not be changed). Additional research is necessary to verify the existence of the coping pattern identified in this study.

III. IMPLICATIONS OF THIS STUDY

The major significance of this study lies in its potential to contribute both to theory development and to social work practice. From a theoretical perspective, additional evidence is provided for the relationship between identity achievement and adult psychosocial functioning; a relationship is clearly established between identity achievement
and one aspect of psychosocial functioning: the ability to cope with stress. Evidence of the impact of personality variables upon the coping process is provided, as well. A relationship is clearly established between identity achievement and choice of coping mechanisms used to deal with stressful life events. Support is found in this study for the theoretical models developed by both Erikson and Lazarus, and for the relationship between these two models. This study also replicates empirical findings of Folkman and Lazarus (1980; in press), regarding the impact of appraisal and type of incident upon choice of coping mechanisms.

In terms of the identity issue, this study demonstrates the existence of a relationship between two dimensions of identity, sense of self and self-acceptance, and adult psychosocial functioning. These findings provide important information regarding the multi-dimensionality of the identity construct. They suggest that sense of self contributes more to the coping process than self-acceptance, which may mean that knowing who one is is more important for the coping process than being satisfied with oneself. This study also attempts to resolve the issue of age of identity achievement. Movement toward the resolution of the identity task between the freshman and senior years of college is clearly demonstrated in this research. This study also
reflects what may be the impact of prolonged student status upon the strength of identity achievement.

On a practical level, this study may provide valuable information for the social work practitioner dealing with clients in stress. Clinical treatment is a multi-faceted process, which involves psychosocial assessment of the client situation, and the selection of appropriate treatment techniques. More comprehensive knowledge of the impact of selected personality variables upon the coping process will hopefully redirect and expand the interventive focus of the social work practitioner, allowing for greater practitioner effectiveness.

The treatment of stress problems is a growing field. "Today, it is no longer unusual for clinicians to view treatment as training in coping skills and an opportunity to help the person substitute effective forms of coping for counterproductive ones" (Lazarus and Folkman, 1984, p. 317). Certain therapists teach problem solving skills, while others provide cognitive preparation for stressful encounters (Lazarus and Folkman, 1984). Ellis (1962) suggests that patient's difficulties stem from faulty assumptions about themselves. The results of this study suggest that the ability to cope with stress is related to identity, to how one perceives oneself; to how well one knows who
they are and where they are going, and how comfortable one feels with these perceptions. These findings offer an additional focus for stress treatment.

A final implication of this study relates to the goals of social work practice. The unified conceptualization of social work practice (discussed earlier) suggests that the primary objective of the individual is the realization of human potential (Gordon and Schutz, 1977). The mission of social work practice is to facilitate this process. Realization of this potential is dependent upon the development of psychosocial resources, such as coping abilities, which appear to emerge as a product of the processes of growth and development (Germaine, 1973). Thus, it is incumbent upon the social work practitioner to assure individual members of society the availability of adequate opportunities for growth and development, so that the individual will not only develop psychosocial resources such as coping abilities, but to enable individuals to maximize their human potential.

Social work is a reactive profession, responding to the needs of clients as they arise; however, social work must be proactive, as well. It must develop preventive programs, that will assure all members of our society their right to grow and develop. This study focuses upon one
aspect of development: identity achievement. How can the potential for identity achievement be maximized?

According to Erikson (1950, 1959, 1968), certain conditions are required to maximize identity achievement. These conditions are related to the availability of numerous and varied models of identification. Children and youth who grow up in underprivileged neighborhoods are not afforded these conditions. Many of these children grow up in single parent homes, and alternate models of identification (neighbors and relatives) are often either deviant or limited in scope. How many lawyers, doctors, and engineers reside in underprivileged neighborhoods? Social work practitioners must be aware of the developmental needs of youth. They must establish programs, such as "big brothers" and community centers with extra-curricular activities, that can broaden the horizons and expand the skills and interests of participants, while also providing models for identification. Such programs would not only maximize the ability of these youth to grow and develop; they would affect the ability of individuals to cope with stressful life events, and ultimately to maximize their human potential.

The findings of this study have implications for the field of social work on both the micro and macro level. On
the micro level, the results of this study suggest the need to focus upon the issue of identity achievement in the treatment of stress. Resolution of the identity issue may facilitate the ability of individuals to cope with life stress. On a macro level, the findings of this study suggest the need to make youth programs a top ideological and budgetary priority, so as to facilitate the ability of today's youth to grow and develop, to cope more effectively with life's stress, and ultimately, to maximize their human potential.

IV. CONCLUSIONS AND RECOMMENDATIONS FOR ADDITIONAL RESEARCH

The results of this study demonstrate the existence of a significant relationship between identity achievement and coping with stress. The findings indicate that higher identity is associated with use of a higher percentage of problem-focused coping mechanisms, and a lower percentage of emotion-focused coping mechanisms, in general, and those which are an impediment to problem-focused coping, in particular. This study also demonstrates an impact of age and gender upon the coping process.

This study provides valuable information regarding the identity formation process, as well. Results suggest that identity is formed before the senior year of college, but
that the prolonged student status may impact upon the strength of identity achievement. Results also suggest that gender does not impact upon overall identity achievement, although it may impact upon the actual process.

This research provides valuable information regarding both the identity formation and coping processes. However, several issues remain unresolved, and additional research efforts are clearly indicated. Future research directions were discussed in great detail in the discussion section of this chapter. These suggestions will be summarized again below.

Subsequent research efforts should focus upon the following issues:

1) Subject pool - Subsequent research regarding the relationship between identity and coping with stress should select a more heterogeneous subject pool, so that all levels of identity achievement - including the extremes - will be represented. In addition, subjects should include non-students, as well, so that the impact of the school environment upon identity achievement can be assessed. Comparisons should also be made between returning and consecutive students, in order to investigate if the impact of prolonged student status is affected by intervening outside employment.
2) Subsequent research should focus upon the relationship between gender and both identity achievement and the coping process. Research of the relationship between gender and identity should focus upon process, rather than overall identity achievement. Gender may have a greater impact on the type of issues dealt with in the identity formation process, their order, and resulting behaviors, than on general strength of identity achievement.

3) Subsequent research should resolve certain methodological issues. First of all, subjects should be allowed to select stressful life events without being confined to a prepared list. Secondly, appraisal should be measured in terms of individual, or categories of, events. Finally, the issue of scoring of the coping scale must be resolved; as was stated earlier, it is the opinion of this author that the % scores provide more valuable information than summed scores. It is of major importance to assess the relative usefulness of these two scoring methods; it is also recommended to investigate the possibility of their use in a supplementary fashion.

4) A final issue to be investigated is related to the issue of coping effectiveness. The coping measure used in this study is a process, rather than an effectiveness, measure. A relationship clearly exists between identity and the cop-
ing process, but it is unclear what the nature of the relationship is between identity achievement and coping effectiveness. Subsequent research should determine which coping mechanisms are more effective, and under what circumstances; this research should focus on the possibility that problem-focused coping is more effective than emotion-focused, but that in situations perceived as beyond control, more emotion-focused coping mechanisms should be utilized than in situations perceived as within control. Based upon the findings of this research, the relationship between identity achievement and coping effectiveness should be reassessed.

The findings of this study provide valuable information regarding the relationship between identity formation and coping with stress. However, as is most often the case, with the discovery of new relationships come additional questions. This study is only a beginning; hopefully, additional research will be conducted to resolve the many issues left unresolved.
Appendix A

COPING WITH STRESS SURVEY

Due to formatting considerations, the response scales were omitted from the body of the questionnaire included in this appendix (except for Part I). The following response scales were included in the questionnaire distributed to the respondents:

**Part II, IV, VII** - A response scale of "1 2 3 4 5" was placed between the adjective pairs.

**Part III, V** - A "yes - no" response scale was placed at the end of each statement.

**Part V** - In addition to the "yes - no" response scale, "____" was added to allow the respondent to check off those items (stressful incidents) which had occurred to them in the past year. The response scale had the following format:

"____ yes no"

**Part VI** - A response scale of "0 1 2 3" appeared at the end of each item. At the top of each page of this section, a description of this scale was included; this description had the following format:

<table>
<thead>
<tr>
<th>Does not apply and/or not used</th>
<th>Used quite great what a bit deal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

*Please note: All additional commentary regarding the questionnaire (which were not included in the body of the questionnaire as distributed to respondents), will be printed in boldface lettering.*
COPING WITH STRESS SURVEY

GENERAL INSTRUCTIONS

The following questionnaire is composed of seven sections. The first section is concerned with background information; the other sections focus upon coping with stress. Each section is preceded by a set of instructions; please follow these instructions carefully when completing the questionnaire. Approximately one and one-quarter hours will be required to complete this questionnaire.

Most of the questions in this survey focus upon attitudes, perceptions, and behaviors; there are no right or wrong answers. Please answer these questions as honestly as possible. Also, please respond spontaneously; your immediate impressions are usually the most accurate. Your answers will remain confidential, and will be used for statistical purposes only. You need not put your name on the questionnaire.

Thank you for your cooperation and assistance.
PART I. BACKGROUND INFORMATION

1. Sex
   1) male
   2) female

2. Age (years) __________

3. Marital Status
   1) never married
   2) currently married
   3) currently separated
   4) divorced/widowed

4. Ethnicity
   1) white
   2) black
   3) hispanic
   4) oriental
   5) other (specify)

5. Educational level
   1) freshman
   2) senior
   3) graduate student
6. If graduate student, what level?
   1) Masters
   2) PhD
   what year? _____

7. College/department______________________________

8. Educational level of father
   1) elementary school graduate___
   2) high school graduate____
   3) some college education_____
   4) college graduate_____ 
   5) graduate education____
   6) professional (e.g. lawyer, doctor, social worker) / PhD___

9. Educational level of mother
   1) elementary school graduate___
   2) high school graduate____
   3) some college education_____ 
   4) college graduate_____
   5) graduate education____
   6) professional (e.g. lawyer, doctor, social worker) / PhD___
10. Is your mother employed outside the home?
   1) yes _____  2) no _____

11. Is your father employed outside the home?
   1) yes _____  2) no _____

12. Income level of household in which you grew up
   1) under $10,000 _____
   2) $10,000 - $20,000 _____
   3) $20,000 - $30,000 _____
   4) $30,000 - $40,000 _____
   5) $40,000 or more _____
   6) don't know _____
   7) other - specify __________
People often think of themselves in more than one way; although they behave in a certain manner, they may feel that they are actually different on the inside, or that they would want to be different in some way. In the following section you will be asked to describe yourself as you ordinarily think of yourself; later on, you will have an opportunity to describe yourself in other ways, as well.

The following section consists of 20 pairs of adjectives which can be used to describe people. Each pair consists of words which are opposites, such as talkative and quiet. For each pair, you will be asked to rate yourself on a scale of one to five, by circling the number at which you rate yourself. For example, if you are extremely talkative, you would rate yourself at one; if you are quite talkative, you would rate yourself at two; if you are mildly talkative, you would rate yourself at three; if you are quiet, you would rate yourself at four; and if you are very quiet, you would rate yourself at five.

talkative <---- 1 ---- 2 ---- 3 ---- 4 ---- 5 ----> quiet

Please look at the word at each end of the line before rating yourself. Also, please be as frank as possible; remember, there is no right or wrong answer. Give your first reaction; it is most likely to be the best answer. Please do not omit any items, and mark each item only once.

Describe yourself as you ordinarily think of yourself; on the following page, circle the number which best reflects how you perceive yourself.
| 1. cooperative         | uncooperative        |
| 2. quitting           | persevering          |
| 3. calm               | easily upset         |
| 4. confident          | unsure               |
| 5. shy                | sociable             |
| 6. immature           | mature               |
| 7. ungrateful         | grateful             |
| 8. friendly           | unfriendly           |
| 9. lively             | tired                |
| 10. impatient          | patient              |
| 11. thoughtless        | thoughtful           |
| 12. frank             | secretive            |
| 13. efficient          | inefficient           |
| 14. impulsive          | deliberate           |
| 15. practical          | impractical           |
| 16. boastful          | modest               |
| 17. intelligent        | unintelligent        |
| 18. gloomy            | cheerful             |
| 19. reliable           | undependable         |
| 20. unrealistic        | realistic            |

*Sense of Self scale.*

**Disagreement between judges: items 1, 16**
PART III.

In the following section, there is a list of fifty statements. Please read each statement and decide if it is true or false as applied to you. Remember to give your own opinion of yourself; please try to be frank. Your first reaction is most likely the best answer.

There are two possible responses: yes and no. If the statement is true as applied to you, please circle the "yes" which appears next to the statement. If the statement is false as applied to you, circle the "no" which appears next to the statement. If the answer is both yes and no, circle the answer which is true most often. Remember: please be spontaneous in your answers and don't go back to change your responses.

1. It seems to me that the arts, politics, current events, science and things aside from my main pursuits make life interesting and exciting.
2. I feel that I am respected by everyone for what I am.
3. What I am now is pretty much what I am going to be.
4. I am more myself now than when I was in high school.
5. I like to picture myself as someone else.
6. I believe I see myself pretty much as others see me.
7. I have no regrets for having become what I am.
8. People who work with me find that I know what I'm after.
9. From day to day, I'm just not the same.
10. I'm tired of acting roles all the time; I want to be myself.
11. I would like to be something other than I am.
12. Sexual matters no longer bother me much.
13. People seldom mistake me for another person.
14. My problem is that I don't really know what I would like to become.

15. First I try to be like one person I know, then another.

16. It is easier to lay aside my principles than to fight for them against opposition.

17. I believe I know most of my strong points.

18. My roommate (or spouse) complains because I always seem to know what I want.

19. I experience a real sense of pride in my accomplishments.

20. I like to be called by my first name.

21. I feel swallowed up by the crowd here at the university.

22. Criticism doesn't upset me.

23. If I don't want to do something, I don't hesitate to say why not.

24. It annoys me when others refer to me as X's "younger sister", X's "daughter" or X's "wife/husband".

25. Sometimes I wonder who I really am.

26. I know pretty much what I want from life.

27. It doesn't bother me that I can't do things members of the other sex can do.

28. Regardless of what people think, I am willing to fight for the things I value.

29. At times I seem to feel unfamilar, even to myself.

30. It seems to me that most of the things that members of my sex do are very dull.

31. Being away from my parents more, makes me prefer to do things my own way.

32. What strikes others most about me is my strong personal convictions.

33. I feel a deep need to live up to my ideals.
34. I'm not good enough to do what I'd really like to do with my life.

35. At times I think I am a mystery, even to myself.

36. Hard as I try, I can't really fool myself.

37. I feel that I am a young man/woman now.

38. I feel that I am a different person since being in college.

39. I know I'm not perfect, but I prefer to be as I am.

40. Although I do not act the same with teachers as with friends of the opposite sex, I am basically the same person.

41. When I encounter a stranger face to face, I generally like to introduce myself.

42. I enjoy spending an evening alone occasionally.

43. I always think of myself as a college (or graduate) person now.

44. I impress others as very self-possessed.

45. It is easy for me to make up my mind.

46. I don't like relatives to tell me that I'm just like my mother or father.

47. Meeting new people is fun for me.

48. Most people say that I know my own mind.

49. I don't seem to be changing as much since entering college as I did in high school.

50. I know my principal weaknesses pretty well.

*Interjudge disagreement on items: 3, 24, 36, 38, 44, 49

**Tentative interjudge disagreement on items: 2, 6, 18, 37, 43
This section is similar to part II. You are being asked again to rate yourself on pairs of adjectives. However, when responding to the questions, think of yourself as only your inner self sees you. Our spontaneous perceptions of ourselves often differ from those based on deep thought and self observation. For example, when asked whether you are a friendly person, your spontaneous response may be "yes". However, on second thought, you may realize that you are a friendly person only at certain times, or in certain situations. In completing this section, your responses should reflect the second, deeper perception. Some of your answers may be the same as in part two; others may be different. Please respond as frankly as possible.

1. cooperative uncooperative
2. quitting persevering
3. calm easily upset
4. confident unsure
5. shy sociable
6. immature mature
7. ungrateful grateful
8. friendly unfriendly
9. lively tired
10. impatient patient
11. thoughtless thoughtful
12. frank secretive
13. efficient inefficient
14. impulsive deliberate
15. practical impractical
16. boastful        modest
17. intelligent     unintelligent
18. gloomy          cheerful
19. reliable         undependable
20. unrealistic      realistic

*Self-Acceptance scale. Score on this scale was subtracted from score on part VII.*
PART V.

The following section consists of a list of events which may, or may not, have occurred in your life during the past twelve months. If the event did not occur, skip it and go on to the next item. If the event did occur to you in the past twelve months, please put a check mark on the line which appears next to the stated event. Then, please indicate whether you perceived this event as one which was, or was not, able to be changed by you once it had occurred so as to become more beneficial, or less detrimental, to you. Indicate only whether you perceived the event as able to be changed, not whether you in fact made the change. Also, please think of the event in terms of whether it could be changed once it had occurred, and not whether it could have been prevented before its occurrence.

Next to each event will appear three columns. The first will consist of a line, and the second and third of the words "yes" and "no", and will look like this: ___ yes no. If the event occurred to you in the past year, place a check mark on the line. If you felt that you could change the situation or do something about it in a way which would be beneficial, or less detrimental, to you, circle the word "yes". If you felt that it could not be changed, but rather had to be accepted or gotten used to, circle the word "no". If the event did not occur to you, simply move on to the next one.

1. Terminated intimate relationship (boy/girl friend)
2. Negative personal encounter with a professor
3. Marital separation or divorce
4. Separation from parents or siblings
5. Worsening of parents' financial status
6. Separation from close friend due to moving
7. Health of a close relative/friend became much worse
8. Chose to terminate relationship with close friend
9. Decreased number of friends
10. Learned that a close friend/relative is very different than you thought (e.g., sexual behavior, involvement in serious drugs, criminal activities)

11. Difficulty with sexual performance

12. Death of a friend

13. Parents separated or divorced

14. Death of a close relative

15. Significantly increased your level of debt

16. Remarriage of parent

17. Fired or lost job

18. Serious conflict between members of your family

19. Increased difficulty with a job

20. Encountered difficulty with school regulations or facilities

21. Withdrawal from a college or university

22. Increased demands from academic coursework

23. Problems with academic performance

24. Decided on a major or a career

25. Serious conflict with roommate

26. Difficulty with landlord/landlady

27. Physical appearance became worse

28. Physical health became worse or much worse (due to illness or accident)

29. Began or increased use of illicit drugs

30. Hospitalization of self

31. Female: possibility of an unwanted pregnancy (f)
    Male: possibility of girlfriend/wife's unwanted pregnancy (m)

32. Female: had an abortion (f)
    Male: girlfriend/wife had an abortion (m)
33. Involvement in accident
34. Victim of crime
35. Problem with law
36. Rejected by all schools you desired to attend
37. Increased use of alcohol
38. Not accepted into a social organization you desired
39. Loss of a pet through death or runaway
40. Increased separation from children
41. Personal rejection by a close friend or lover
42. Had a disagreement with a friend (small or large)
43. Decreased amount of dating
44. Relationship with boy/girl friend became worse
45. Relationship with spouse became worse
46. Decreased sexual activity
47. Quit job
48. Moved back into parents' home after living away
49. Decreased involvement with hobby or task
50. Relationship with relative became worse
PART VI

Below is a list of ways people cope with stressful events. Please select two events out of those which you marked off in the previous section as having occurred to you; one event should be the one which you felt that you were most able to change and the other should be the one which felt that you were the least able to change. Then, please indicate by circling the appropriate response the strategies which you used to deal with each event. The list will be presented twice so that you will be able to respond regarding each event separately. Please indicate before responding which incident you are referring to by listing the number, as well as the description of the incident, as indicated in part V.

Next to each statement (each of which refers to a particular strategy which can be used to cope with stressful events), you will find four numbers. Each of these represent a possible response. If the strategy does not apply, or was not used in the stressful events which occurred to you, circle the number "0". If the strategy was used somewhat, circle the number "1". If the strategy was used quite a bit, circle the number "2". If it was used a great deal, circle the number "3".

For example, if in the previous section, event number 7 was the one which you felt you were most able to control, you would complete the questionnaire in the following fashion:

<table>
<thead>
<tr>
<th>strategy</th>
<th>Does not apply and/or not used</th>
<th>Used some-what</th>
<th>Used quite a bit</th>
<th>Used a great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>sleep all the time</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Please complete the first set of questions in relation to the incident which you felt that you were most able to control. Please indicate the number and description of that incident below:

no. ___ description: ___________________________
1. Just concentrate on what I have to do next -- the next step.

2. I try to analyze the problem in order to understand it better.

3. Turn to work or substitute activity to take my mind off things.

4. I feel that time will make a difference -- the only thing to do is to wait.

5. Bargain or compromise to get something positive from the situation.

6. I'm doing something which I don't think will work, but at least I'm doing something.

7. Try to get the person responsible to change his or her mind.

8. Talk to someone to find out more about the situation.

9. Criticize or lecture myself.

10. Try not to burn my bridges but leave things open somewhat.

11. Hope a miracle will happen.

12. Go along with fate; sometimes I just have bad luck.

13. Go on as if nothing is happening.

14. I try to keep my feelings to myself.
15. Look for the silver lining, so to speak; try to look on the bright side of things.

16. Sleep more than usual.

17. I express anger to the person(s) who caused the problem.

18. Accept sympathy and understanding from someone.

19. I tell myself things that help me feel better.

20. I am inspired to do something creative.

21. Try to forget the whole thing.

22. I'm getting professional help.

23. I'm changing or growing as a person in a good way.

24. I'm waiting to see what will happen before doing anything.

25. Apologize or do something to make up.

26. I'm making a plan of action and following it.

27. I accept the next best thing to what I want.

28. I let my feelings out somehow.

29. Realize I brought the problem on myself.
30. I'll come out of the experience better than when I went in.

31. Talk to someone who can do something concrete about the problem.

32. Get away from it for a while; try to rest or take a vacation.

33. Try to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.

34. Take a big chance or do something risky.

35. I try not to act too hastily or follow my first hunch.

36. Find new faith.

37. Maintain my pride and keep a stiff upper lip.

38. Rediscover what is important in life.

39. Change something so things will turn out all right.

40. Avoid being with people in general.

41. Don't let it get to me; refuse to think too much about it.

42. Ask a relative or friend I respect for advice.

43. Keep others from knowing how bad things are.

44. Make light of the situation; refuse to get too serious about it.
45. Talk to someone about how I am feeling.

46. Stand my ground and fight for what I want.

47. Take it out on other people.

48. Draw on my past experiences; I was in a similar situation before.

49. I know what has to be done, so I am doubling my efforts to make things work.

50. Refuse to believe it will happen.

51. Make a promise to myself that things will be different next time.

52. Come up with a couple of different solutions to the problem.

53. Accept it, since nothing can be done.

54. I try to keep my feelings from interfering with other things too much.

55. Wish that I can change what is happening or how I feel.

56. Change something about myself.

57. I daydream or imagine a better time or place than the one I am in.

58. Wish that the situation would go away or somehow be over with.
59. Have fantasies or wishes about how things might turn out.

60. I pray.

61. I prepare myself for the worst.

62. I go over in my mind what I will say or do.

63. I think about how a person I admire would handle this situation and use that as a model.

64. I try to see things from the other person's point of view.

65. I remind myself how much worse things could be.

66. I jog or exercise.

67. I try something entirely different from any of the above. (Please describe.)
ITEM CLASSIFICATION

DICHTOMOUS CLASSIFICATION:

Problem-focused coping mechanisms: 1, 2, 5, 7, 8, 10, 20, 22, 24, 26, 27, 31, 34, 35, 39, 42, 46, 48, 49, 52, 56

Emotion-focused coping mechanisms: 3, 4, 6, 9, 11, 12-16, 18, 19, 21, 22, 23, 28, 30, 32, 33, 36-38, 40, 41, 43-45, 50, 51, 53, 55, 57-59

8-SCALE CLASSIFICATION:

Problem-focused scale: 2, 26, 35, 39, 46, 48, 49, 52, 54, 62, 64

Wishful thinking scale: 11, 55, 57-59

Detachment scale: 4, 12, 13, 21, 24, 53

Seeking social support scale: 8, 18, 28, 31, 42, 45, 60

Focusing on the positive scale: 15, 20, 23, 38

Self-blame scale: 9, 29, 51

Tension-reduction scale: 32, 33, 66

Keep to self scale: 14, 40, 43
Please complete the following set of questions in relation to the incident which you felt that you were least able to control. Please indicate the number and description of that incident below:

no._____  description:__________________________

1. Just concentrate on what I have to do next -- the next step.
2. I try to analyze the problem in order to understand it better.
3. Turn to work or substitute activity to take my mind off things.
4. I feel that time will make a difference -- the only thing to do is to wait.
5. Bargain or compromise to get something positive from the situation.
6. I'm doing something which I don't think will work, but at least I'm doing something.
7. Try to get the person responsible to change his or her mind.
8. Talk to someone to find out more about the situation.
9. Criticize or lecture myself.
10. Try not to burn my bridges but leave things open somewhat.
11. Hope a miracle will happen.
12. Go along with fate; sometimes I just have bad luck.
13. Go on as if nothing is happening.
14. I try to keep my feelings to myself.
15. Look for the silver lining, so to speak; try to look on the bright side of things.
16. Sleep more than usual.
17. I express anger to the person(s) who caused the problem.
18. Accept sympathy and understanding from someone.
19. I tell myself things that help me feel better.
20. I am inspired to do something creative.
21. Try to forget the whole thing.
22. I'm getting professional help.
23. I'm changing or growing as a person in a good way.
24. I'm waiting to see what will happen before doing anything.
25. Apologize or do something to make up.
26. I'm making a plan of action and following it.
27. I accept the next best thing to what I want.
28. I let my feelings out somehow.

29. Realize I brought the problem on myself.

30. I'll come out of the experience better than when I went in.

31. Talk to someone who can do something concrete about the problem.

32. Get away from it for a while; try to rest or take a vacation.

33. Try to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.

34. Take a big chance or do something risky.

35. I try not to act too hastily or follow my first hunch.

36. Find new faith.

37. Maintain my pride and keep a stiff upper lip.

38. Rediscover what is important in life.

39. Change something so things will turn out all right.

40. Avoid being with people in general.

41. Don't let it get to me; refuse to think too much about it.
42. Ask a relative or friend I respect for advice.

43. Keep others from knowing how bad things are.

44. Make light of the situation; refuse to get too serious about it.

45. Talk to someone about how I am feeling.

46. Stand my ground and fight for what I want.

47. Take it out on other people.

48. Draw on my past experiences; I was in a similar situation before.

49. I know what has to be done, so I am doubling my efforts to make things work.

50. Refuse to believe it will happen.

51. Make a promise to myself that things will be different next time.

52. Come up with a couple of different solutions to the problem.

53. Accept it, since nothing can be done.

54. I try to keep my feelings from interfering with other things too much.

55. Wish that I can change what is happening or how I feel.

56. Change something about myself.
57. I daydream or imagine a better time or place than the one I am in.

58. Wish that the situation would go away or somehow be over with.

59. Have fantasies or wishes about how things might turn out.

60. I pray.

61. I prepare myself for the worst.

62. I go over in my mind what I will say or do.

63. I think about how a person I admire would handle this situation and use that as a model.

64. I try to see things from the other person's point of view.

65. I remind myself how much worse things could be.

66. I jog or exercise.

67. I try something entirely different from any of the above. (Please describe.)

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PART VII.*

This section is the same as parts II and IV. You are being asked again to rate yourself on pairs of adjectives. However, when responding to the questions, think of yourself as you would like to change yourself in a realistic way, rather than as you ordinarily think of yourself or as your inner self sees you. Please respond as frankly as possible.

1. cooperative  uncooperative
2. quitting    persevering
3. calm        easily upset
4. confident   unsure
5. shy         sociable
6. immature    mature
7. ungrateful  grateful
8. friendly    unfriendly
9. lively      tired
10. impatient  patient
11. thoughtless thoughtful
12. frank      secretive
13. efficient  inefficient
14. impulsive  deliberate
15. practical  impractical
16. boastful   modest
17. intelligent unintelligent
18. gloomy     cheerful
19. reliable undependable
20. unrealistic realistic

THANK YOU AGAIN FOR YOUR COOPERATION.

*Self-Acceptance scale. Score on part IV was subtracted from score on this scale.
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