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Darini Shereen Arulpragasam

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William W. Farquhar
Major professor

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HOPE: IT'S DEVELOPMENT IN RELATION TO ERIKSON'S STAGE THEORY AND LOCUS OF CONTROL IN THE INTERPERSONAL, INSTRUMENTAL AND SOCIO-POLITICAL REALMS.

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DARINI SHEREEN ARULPRAGASAM

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ABSTRACT

HOPE: IT'S DEVELOPMENT IN RELATION TO ERIKSON'S STAGE THEORY AND LOCUS OF CONTROL IN THE INTERPERSONAL, INSTRUMENTAL AND SOCIO-POLITICAL REALMS.

By

Darini S. Arulpragasam

The relationships between three of Erikson's stages of development (Stages 1,4 &7); locus of control in the interpersonal, instrumental and socio-political arenas, and the degree of hopefulness of employed individuals was examined. The sample consisted of 205 employees: employees at General Motors Company (n=66), Paul Dever State School for the Mentally Retarded (n=68) and a group of volunteers (n=71). The results of the analysis provided support for Erikson's theory. In the study, the level of hope increased as an individual moved up Erikson's earlier stages of trust and industry. However, a stabilization of the level of hope occurred between stages 4 and 7, and no differences were found between the two groups. Furthermore, individuals who mastered, in order, Erikson's stages of trust, industry and generativity had significantly higher levels of hope than individuals who mastered a later stage while failing an earlier.

The results of the locus of control hierarchy analysis supported Erikson's theory of the development of

the virtue of hope as requiring a sense of control in early dyadic interactions (child/parent); secondly, a sense of control in the arena of one's competence; and thirdly, a sense of control in the socio-political realm. Both males and females with the interpersonal/ personal efficacy/ socio-political sphere of control hierarchy had higher levels of hope than individuals with any other hierarchy.

The significant predictors of the hope score were Erikson's stages and the sphere of control hierarchy. The sex, educational level or employment site were not significant predictors of hope in individuals.

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CHAPTER 1

THE PROBLEM

Almost every developmental theory makes a passing reference to the importance of hope, however the theorectical development of hope has not received much attention in the literature. Two theories that can be used as a framework to conceptualize hope's development are Erik Erikson's eight stage epigenetic theory of ego development that views the development of hope as a hierarchical process and Social Learning theory which provides a framework that views an individual's hope changing as an individual continues to interact with his environment.

Need for the Study

There has been a great deal of interest in hopelessness and methods to measure and alleviate a sense of hopelessness in individuals. There has, however, not been a corresponding interest in examining how hope develops in an individual. In much the same way that the study of hopelessness has added to an understanding of abnormal development, examining the development of hope can increase the understanding of the development of normal behavior of individuals. In addition, a need exists for empirical research that can shed additional light on the respective validity of conflicting theoretical positions

regarding hope. Finally, attention needs to be given to the possible differences in the development of hope for men and women and if the development of hope in men and women follows the same or different routes. Both research and clinical psychologists could benefit from a systematic study of hope that examines it's development for both men and women.

Purpose of the Study

The purpose of the present research is to compare two theoretical positions that attempt to outline the process by which the establishment of hope occurs in individuals. Of special interest is the following question? Does hope have a developmental process of gaining positive expectations and sense of control in the following hierarchical order: 1) the interpersonal realm, 2) the non-social achievement arena and 3) the socio-political world of an individual's life or is hope an ongoing situation specific process of gaining positive expectations that is dependent on the cognitive schema that an individual develops in relation to his/her reinforcement history.

In this study, the relationships between Erikson's stages of trust/mistrust, industry/inferiority and generativity/stagnation; the locus of control that an individual has in the interpersonal, instrumental and

socio-political arenas; and the degree of hope in individuals was examined. Given the practical consideration of keeping the length of the questionnaire manageable for the participants; the three Eriksonian stages that corresponded mostly closely to the sphere of control battery and also focused on the issues of competence versus relationships were chosen for inclusion in the study.

In addition, attention was focused on differences that occur between males' and females' locus of control hierarchy and any correlation with the degree of hope that is obtained. Whether men focus on the instrumental or work arena for their sense of hope and women focus on the interpersonal arena is a question of particular interest. Any differences between males and females would indicate that at the very least, modification of Erik Eriksons's hierarchical development would need to be considered. This study should aid in the understanding of the normal developmental process of hope and offer additional information regarding the validity of the two theories under consideration.

Research Hypotheses

1. Individuals who move in order through Erikson's stages will show higher levels of hope than displayed by individuals at earlier stages.
   a) Individuals who have mastered Stage 1 will have more hope than individuals who have not mastered any stages.
   b) Individuals who have mastered stages

1 and 4 will have more hope than individuals who have only mastered stage 1.

c) Individuals who have mastered stages 1, 4 and 7 will have more hope than individuals who have only mastered stages 1 and 4.

2. Individuals who have sequentially moved through Erikson's stages will have more hope than individuals who have not mastered Erikson's stages in order.

a) Individuals who have mastered stages 1 and 4, will have more hope than individuals who have mastered a later stage, while not mastering an earlier stage.

b) Individuals who have mastered stages 1,4 and 7 will have more hope than individuals who have mastered stages 4 or 7 while not mastering an earlier stage.

3. Individuals whose sphere of control hierarchy from highest to lowest is 1) the interpersonal sphere (IP) 2) the personal efficacy sphere(PE) and 3) the socio-political sphere (SP) will have more hope than individuals who have a different hierarchy of control in these three areas.

4. There will be no differences between males and females on their mean hope scores when the level of locus of control is held constant.

a) Males whose sphere of control hierarchy is 1) the interpersonal sphere, 2) the personal efficacy sphere and 3) the socio-political sphere will have more hope than males who have a different than IP/PE/SP hierarchy of control in these three areas.

b) Females whose sphere of control hierarchy is 1) the interpersonal sphere, 2) the personal efficacy sphere and 3) the socio-political sphere will have more hope than females who have a different than IP/PE/SP hierarchy of control.

c) Males and females with an IP/PE/SP hierarchy will not differ from each other in their mean hope scores.

d) Males and females with other than IP/PE/SP control hierarchy will not differ from each other in their mean hope scores.

5. Individuals who move in order through Erikson's stages and who have an IP/PE/SP hierarchy will have a higher level of hope than individuals in the same stage but with a different than IP/PE/SP sphere of control hierarchy.

a) Individuals who have not mastered any stage with an IP/PE/SP hierarchy will have more hope than individuals who have not mastered any stage with a different than IP/PE/SP control hierarchy.

b) Individuals who have mastered only stage one with an IP/PE/SP hierarchy will have more hope than individuals who have mastered only stage one with a different than IP/PE/SP control hierarchy.

c) Individuals who have mastered stages one and four with an IP/PE/SP hierarchy will have more hope than individuals who have mastered stages one and four with a different control hierarchy.

d) Individuals who have mastered all three stages with an IP/PE/SP hierarchy will have more hope than individuals who have mastered all three stages with a different than IP/PE/SP control hierarchy.

Theory

Erikson has postulated that psycho-social development is epigenetic in nature. This term borrowed from the study of embryology suggests that there is a critical period of time for the development of certain attributes. Epigenesis asserts that not only is there a succession of events in normal development, but that there are fundamental relationships between these events that follow certain laws of development. Each event builds on the previous event and the events are not interchangeable with each other. Furthermore, if an attribute misses it's

appointed time of ascendancy, not only is it's own existence in question, the whole hierarchy will be endangered. An unchangeable hierarchy is the final outcome (Erikson, 1982).

Erikson views hope as a psycho-social strength that develops primarily out of the first basic conflict that an individual faces: basic trust verses basic mistrust. Trust develops from the experience of being able to get one's basic needs (ie. food, touch, warmth) met through the care of the maternal figure. It is inevitable, however, that as the infant develops, even under the most favorable of circumstances, that not all of an individual's wants and needs will be completely met. A sense of mistrust occurs when the maternal figure inevitably fails to meet the individual's basic needs. The individual realizes he cannot meet his own needs and that his needs are not met by others. There develops a sense of loss and a nostalgia for a paradise lost. Erikson holds that an individual's view about himself and the world is a function of his level of trust in himself and others. It is also a consequence of the interpersonal experiences of the first year of the individual's life. If trust is predominant, a sense of hope is established. Hope is anticipation that future needs will be met. It is this ability to have hope that allows a child to renounce his past and to anticipate a good future.

Life can be controlled. When mistrust prevails in the conflict, hope will wane on both cognitive and emotional levels. When hope prevails, the future of paradise regained remains a possibility. Hope then, is a developmental achievement that allows the individual to start the process of gaining a sense of identity and optimism about his/her place in the world (Erikson, 1969).

The learning theorists' views stand in contrast to Erikson's view of hope as a fundamentally interpersonal process. Mowrer (1960) suggested that the entire process of learning essentially consisted of learning to <u>hope</u> ;that is, learning that a given event signals an oncoming reinforcement. Stotland viewed hope as "a positive function of an organism's perceived probability of attaining a goal and the perceived importance of the goal" (1969,p.7). This particular view of hope does not depend on any type of developmental process. Hope is seen as learning that is 'situation specific' and is dependent only on past learning history. The laws that are applicable to the establishment of hope are the laws of learning not the laws of development.

In similar fashion to Stotland's view of hope as in part dependent on the individual's expectation or perceived probability of obtaining a goal, Rotter has shown that reinforcement serves to increase an 'expectancy' in an

individual that a certain situation will be followed by that reinforcement in the future. These expectancies generalize from a specific situation to a series of situations which are regarded by the organism as very similar to the initial situation. A 'generalized expectancy' for a class of related events allows the individual to show some stability in his behavior. One such area of a generalized expectancy is the locus of control dimension. Rotter defined internal-external locus of control as the generalized expectancy that behavioral outcomes are perceived to be contingent upon one's own ability and effort (i.e., internal control) versus the generalized expectancy that such outcomes are perceived to be determined by powerful others, chance, luck or fate (i.e., external locus of control) (Rotter,1960). From Stotland's view of hope as an expectation of achieving an important goal, it follows that those individual's who feel that their actions can control the achievement of their goals will be more hopeful than those individuals who believe the achievement of important events are independent of their efforts. The view has received support from the literature on hopelessness. Prociuk et al.(1976) found that the Beck's et al.(1975) scale of hopelessness which was designed to measure a person's negative expectancies about oneself and the future was positively related to an

external locus of control.

The recent locus of control literature has generally accepted the idea that the construct of locus of control is multidimensional. Gurin et al.(1970) found that the generalizability of the construct is different across persons. Paulhus (1982), interested in different spheres of reinforcement, developed a scale that measures an individual's amount of perceived control in three behavioral areas: (a) personal control over the nonsocial environment as in personal achievement, (b) interpersonal control over other people in dyads and groups and (c) sociopolitical control over social and political events and institutions. The Paulhus scale partitions an individual's life space into three spheres. An individual contends with a variety of external forces within each sphere. However, as each sphere is distinct, it is quite possible for an individual to have very different expectancies in each of the three spheres.

Multidimensionality of control is of interest because it suggests that males and females may develop differently. In fact, McGinnies et al.(1974) and Parsons and Schneider (1974) have shown that females are more likely than males to have an external locus of control score using Rotters Internal-External Locus of Control. One possible explanation for this finding is that in Rotter's

IE Scale most of the items focus on goal or societal control. If it is true that males are more likely to exercise control in achievement spheres of behavior and females are more likely to exercise control in interpersonal areas of life; it is likely that males' and females' development of hope as defined as an expectation of a positive future may have a different field of focus from each other and therefore have a different developmental history.

The profile of interpersonal, achievement and socio-political arenas of control can be used to complement Erikson's psycho-social developmental hierarchy of interpersonal, achievement and social group interaction. In particular, the relationship between Erikson's stages of trust/mistrust, industry/inferiority and generativity/stagnation and the interpersonal, personal efficacy and socio-political locus of control profile for males and females can be explored. The examination of these particular relationships in conjunction with the level of hope an individual has, could provide additional evidence for or against the hierarchical nature of the Eriksonian model. In addition, it may point the direction for answering the question of how to develop hope in individuals who are lacking in it. This question is not only important to the therapy situation, but also to the

world of work. Productivity depends on a sense of a future that is good and a sense that an individual has a part to play in that future. Seligman and Maier (1967) noted that animals who had been trained that they could not change an undesirable event exhibited a 'learned helplessness' that was characterized by an apathy such that even when they could by their own actions change their environment for the better, they did not. If Erikson's model is valid and the development of hope is fundamentally an interpersonal process, management techniques should reflect that knowledge. If, however, hope is situation specific and if men and women are currently exhibiting a sense of hope in different arenas, management techniques could quite easily be developed that attended to the different coping strategies and styles of individuals. A working climate that allows an individual to feel that his or her working or coping style is making an impact could result in higher productivity and greater perseverance on difficult tasks.

Overview

In chapter II there is a review of the hope, locus of control and Erikson' stage theory literature. A description of the Assessment of Adult Adjustment Patterns (AAAP), the Sphere of Control Battery (SOC), and the Hope Index (HIS), the design of the study, and the proposed analysis will be the topics addressed in Chapter III. In

Chapter IV there is an analysis and interpretation of the results with respect to each of the outlined hypotheses. Chapter V is devoted to integrating the results of the research, drawing conclusions and discussing the implications of the findings.

CHAPTER 11

A REVIEW OF THE LITERATURE

The major goal of this chapter is to review the literature of hope. In particular, a synthesis of the locus of control literature and Eriksonian theory of virtue development and their respective application to the development of hope is outlined. A review of the Hope literature brings out several ideas regarding what hope is. The most often mentioned concept is that hope involves the positive expectation of a future event. The American College Dictionary (1968) defined hope as the expectation of something desired, desire accompanied by expectation or confidence in a future event. Menninger, Maymon and Pruyser (1966) viewed hope as the having of favorable expectations in a particular studied situation, which goes beyond the visible evidence. Stotland's statement that "hope is a positive function of it's perceived probability of attaining the goal and the perceived importance of the goal" (1969,p.7), serves to emphasize the idea of an expectation of an important goal. In a similar manner, Burton (1972) defined hope as "a state of being in which a heightened expectancy overides the objective possibilities of the moment" (p.609). Finally,Brewster Smith (1983)

stated that "hope is the conviction that a good future is possible and worth striving for" (p.398).

A second important principle of hope is that it is firmly based in reality and not just wishful thinking. In addition, the individual perceives hope as a necessary ingredient for his ongoing wellbeing. This viewpoint indicates that hope serves as a motivator for active or goal striving behaviors in the present as the individual is convinced of both the importance and attainability of 'hoped-for' events. Lynch (1965) asserted "hope must be realistic in its' appeal" (p.40). Fromm (1968) thought of hope "as a psychic concomitant to life and growth" and that "hope is not a prediction of the future; it is the vision of the present in a state of pregnancy" (p.12-13). The principle of hope as a future expectation based on an individual's past and present experiences was further articulated by Melges and Bowlby. They stated that "hope reflects how a person estimates the probability of his being able to maintain successful plans of action in the pursuit of present and evolving goals" (1969,p.690). Boris (1976) suggested that "hope arises from preconceptions of how things and experiences should be. These preconceptions at once structure and are shaped by their encounters with actuality" (p.2). Wright and Shontz (1968) delineated

several hope structures. Initially, hopes, similar to desires, are neither time or reality dependent. As the young child matures, the hopes of the child begin to include a future orientation in addition to the positive valence experienced with desire. Thirdly, as the child becomes a young adult, he increasingly surveys reality and finally he realistically "grounds his hopes" with the reality (p.324-325).

A closely connected concept to the reality principle is the idea of locus of control. Bernard (1977) ties hope and the idea of perceived control in his definition of "hope as the belief and expectation that one has some control over his life and future" (p.285). The locus of control construct developed from observations that people, depending on if the outcome of the task was thought to be a result of skill or chance, responded in a different way to their degree of success or failure at that task. This concept of perceived control acquired a central position in Julian Rotter's social learning theory (Rotter, 1954, 1955, 1960, 1982). From this theorectical framework, a large body of empirical data concerning the development of behavior patterns for an individual, was acquired. Rotter suggested that an 'expectancy' for the individual develops from behaviors or actions that obtain

reinforcements. Rotter stated that "expectancies generalize from a specific situation to a series of situations which are perceived as related or similar. Consequently, a generalized expectancy for a class of related events has functional properties and makes up one of the important classes of variables in personality description" (J.B. Rotter,1960). Each time a reinforcement follows a behavior, the expectancy for this particular behavior-reinforcement sequence is strengthened. This pattern in turn, allows an individual to begin to attribute some causality to events that occur in his life. An individual's actions are followed by certain predictable events. A further step in logic, would expect that if a reinforcement is not felt to be contingent on the individual's behaviors, that particular expectancy of behavior-reinforcement sequence would not be strengthened. This theory therefore expects that a stable manner of responding by an individual would develop from the sum of his experiences based on the generalized expectancies acquired through these experiences.

A natural next step was to design an instrument to measure individual differences in the locus of control generalized expectancy construct. Phares (1957) developed the first scale consisting of 13 external and 13 internal

items. He found a tendency for externally stated items to predict that individuals with an external orientation would behave in a similar fashion to all individuals placed in a chance situation versus a skill situation. James (1957) revised this scale and found significant correlations between his scale and behaviors in the task situations involving skill or chance feedback. Internal subjects had larger shifts in the expected direction following feedback and generalized more from task to task. External subjects, on the other hand, tended to produce the results seen in the chance situations of all subjects, including the unusual shifts (up after failure and down after success) in expectancy. A more elaborate measure was designed by Julian Rotter, Shepherd Liverant, Melvin Seeman and Douglas Crowne (1966). Initially, the scale was to focus on control expectancies in a number of areas including achievement, general social and political attitudes, and love. An item analysis of the 60 item scale, however, did not indicate that the subscales were producing separate predictions, resulting in an abandonment of separate subscales in the internal-external control measure. The final scale was thought to be tapping one general construct consisted of 29 forced choice items.

Given the findings that individuals responded in a

different manner in tasks perceived to involve skill versus tasks perceived to depend on chance, a logical deduction was that those individuals at the internal end of the locus of control dimension would show more striving for achievement than those individuals who felt external agents had more control over their lifes. Many studies using a variety of measuring instruments have addressed this issue. Although the relationship is not as straightforward as once was thought, certain findings occur consistently. Bar-Tal and Bar-Zohar (1977) reviewed 36 investigations that focused on the locus of control-achievement relationship. 31 of those studies found significant results in the expected direction; 4 reported no significant findings and 1 study reported a negative relationship between achievement and locus of control. The one negative finding (Massari & Rosenblum, 1972) involved female college students whose grades in a psychology class was associated with externality on Rotter's I-E scale and externality on the attribution for success subscale from the IAR. Another review (MJ. Findley and HM Cooper, 1983) article looked at the results of 98 articles. In addition, the effect of gender, age, locus of control measures and achievement measures used in the studies, were examined. The results again strongly supported the hypothesis that internality is

linked with achievement. The combined probability for studies involving only females was less than .0005. For male only studies, the combined probability was less than .0001. Although the effect is greater for males than females, the internality-achievement link was significant for both males and females separately. Studies were also categorized according to grade level (1st grade - college) of the sample. With the exception of 1st-3rd grade category, the link between internality and achievement was supported. However, an examination of the mean effect sizes suggested that a curvilinear rate than a linear relation might exist between grade level and effect size. The largest effect size occurred for junior high school samples; college and 1st-3rd graders yielded the lowest average effect sizes and 4th-6th and high school sample falling in between. No significant differences were found between general measures of locus of control and specific measure of locus of control concerned with achievement, though specific measures tended to be associated with larger effects. Finally, it was found that a trend for standardized measures of achievement to produce larger effects. This was in contrast to earlier findings that found locus of control a better predictor of grades (Stipek and Weisz, 1981). These inconsistent findings may be due to

the variability of teacher's individual grading systems. To summarize the results of the studies, it appears that there is a positive relation between locus of control and achievement. In addition, the mediator variables such as gender, age, and locus of control measure appear to influence the strength of the positive relationship not the existence of this relationship

Stotland (1969) using the locus of control literature as a foundation, outlined seven propositions of hope. He considered hope to be a necessary condition for action. Proposition 1 stated " an organism's motivation to achieve a goal is, in part, a positive function of it's perceived probability of attaining the goal and of the perceived importance of the goal" (p.7). Propositions 2 and 3 linking together cognition and affect, stated that as an individual's perception of the attainability and importance of the goal increases, the greater will be the positive affect experienced. In contrast, the lower the individual perceives the probability of a goal and the greater the importance of the goal, the higher the level of anxiety (p.9). Proposition 4 outlines the role of anxiety as "organisms are motivated to escape and avoid anxiety; the greater the anxiety experienced or expected, the greater the motivation" (p.10). The last three propositions allow

for the development of a stable manner of responding similar to Rotter's generalized expectancies. Stotland states "the organism acquires schemas as a result either (1) of his perceptions of a number of events in which examples of the same concepts are associated; or (2) of communication from other people" and "a schema is invoked by the organism's perceiving an event similar to a constituent concept of the schema or by the individual receiving a communication from another directing him to invoke the schema ... The probability that a schema will be invoked and remain aroused is, in part, a positive function of the number of times that it has been invoked previously; of the number of events previously perceived as consistent with the schema; of the importance to the organism of the person, if any, from whom one acquired the schema" (p.11-12). The active nature of hope is evident. High anxiety leads to a learned helplessness and a staying in the past or present. The reservoir of schemas and the affect associated with the schemas serve as the foundation by which new experiences are evaluated and organized.

Much less research has examined the importance of the interpersonal relationships and an individual's well being. Lazurus (1966) in his study of learned helplessness suggested that an individuals's ability to cope is

dependent on two beliefs: (1) his beliefs regarding his ability to control outcomes in his world and (2) his belief concerning the trustworthiness of other individuals in his world. The individual's perception will cause the individual to view his world as supportive or hostile, resulting in either psycho-social well being or distress. It is clear from the previous discussion, that there is much evidence supporting the predicted relationship between expectancies and success. Lazurus (1966) has also shown that external locus of control correlates with higher anxiety. The final aspect of hope involves the issue of chance. The issue is alluded to in both Menninger, Maymon and Pruysers' (1966) and Burton's (1972) definitions of hope. The expectation of a future event cannot be completely counted on by the objective realites of the situation. It is through the concept of a power greater than the individual that allow the theorists to begin to elaborate on the role of signicant others in the development of hope. Rotter (1966) stated that a generalized external expectancy viewed outcomes to be determined by chance, fate or powerful others. Rotter (1977) noted in his presidential address of the Eastern Psychological Association that research with his interpersonal trust scale has consistently found that low

trusters in general behave in a less trustworthy and more suspicious manner than high trust individuals. Hochreich (1975) found that externals typically tend to score lower in trust than internals. In addition, the possibility of sex differences has been raised. Wrightsman (1974) reported higher trust scores among females than males with his Trustworthiness scale. Block (1973) theorized that males and females are socialized differently. Males are reinforced for independent instrumentality and females are reinforced for co-operation and joint welfare activities. It would follow from Lindskold and Bennett's (1973) assertion that trust is the end result of what an individual has learned from others, that a generalized expectancy of interpersonal trust would develop for each individual in much the same manner as the expectancy for internal or external control. A major difficulty in attempting to clarify the relationship between trust, locus of control and psycho-social wellbeing is that many constructs that measure interpersonal factors such as trust are not independent of beliefs about personal control of outcomes. For example, Rotter's I-E scale and Interpersonal Trust Scale have been observed to have correlations between .36-.53.(Heretick, 1981). It would also follow that given the difficulty of assessing how beliefs about others'

trustworthiness can independently contribute to the psycho-social well being or hopefulness of an individual, that a scale that can provide a hierarchy of locus of control spheres would aid in this endeavor. In fact, Paulhus and Christie stated that " it was the conspicuous absence of a device for assessing interpersonal control that motivated the spheres of control conception and ensuing research program" (1981,p.166). It was thought that an individual contacts his world in terms of three primary arenas. The first arena is centered on the nonsocial environment and tasks of achievement. The second area is concerned with interactions in dyads or groups, and focuses on control in relationships. The final arena's focus is on the political and social system. It is clear, that these spheres are thought to be independent constructions such that an individual could have widely varying expectancies in the different spheres. As a result, the relationship between an individual's psycho-social wellbeing and locus of control in different arenas can be examined in depth. Paulhus and Christie's (1981) recent Sphere of Control (SOC) scale is timely as it allows the examination of the relationship between an individual's psychosocial well being and locus of control in the interpersonal, personal efficacy (competence) or sociopolitical realm. It would

allow the investigation of the relative importance of interpersonal and personal achievement control to an individual's sensing including their sense of hope.

To summarize, Rotter's social learning theory is based on the interaction between an individual's cognitive structures and the environment. The individual develops stable behavior patterns through the gaining of expectancies of reinforcements from a specific situation and generalizing the expectancy to a series of situations which are perceived to be related or similar. The locus of control research also indicates that individuals who expect their behavior to influence the outcome of tasks they engage in, are more likely to strive to complete the task and are also more successful in the task. Stotland outlined seven propositions that operationalized hope and it's develpment into a stable attribute of an individual. The individual will acquire an expectation of the attainability or unattainability of his goals based on his past learning experiences. In the case of a positive expectation of a goal, the individual will be motivated to act on the strength of the hope. If, on the other hand, the individual has experienced significant anxiety as a result of the importance of his goal and his perceived inability to attain the goal, he will cease actively striving for the

goal. He reduces his anxiety by withdrawing from the task (p.119). Additional studies examined an individual's ability to cope. Two factors proved to be significant in impacting coping ability. One factor was an individual's belief about his ability to control outcomes in his world. The second factor was the belief regarding the trustworthiness of other individuals in the world. The examination of the relative importance of the personal and interpersonal locus of control factors for an individual's psychosocial welfare has been hindered by the lack of a devise for measuring the independent contributions of personal and interpersonal control. Paulhus and Christie's SOC battery that has broken the spheres of control into similar categories as that postulated by Erikson opens many new avenues for research on the development of psychosocial wellbeing.

The position that hope is learned through an individual's prior and ongoing relationships with significant others was most eloquently argued for by Erik Erikson. One of Erikson's (1982) basic assumptions was that a human being's development depended on three channels of organization that were complementary to each other. The first process involved the biological hierarchial organization of the organ systems of the body (soma). The

second process involved the development of an ego synthesis through which an individual was able to organize his experience (psyche). Finally, there was the organization of the social and cultural community that allowed for the safe interdependence of people (ethos). Erikson, although he did not postulate any order to the three organizational processes, drew on the organismic principle of epigenesis for the biological grounding of his theory of psychosocial development. The epigentic position states that the development of each organ has a critical time period. During normal development, a proper relationship of size and function is established among the contributing organs. In contrast, if the organ's development is hindered during this time period, the whole hierarchy of organs is endangered. Erikson's view of the epigenetic development of psychosocial strengths indicated " (1) that each critical item of psychosocial strength ... is systematically related to all others, and that they all depend on the proper development in the proper sequence of each item; and (2) that each item exists in some form before its critical time normally arrives" (Erikson, 1963, p.271). His view of personality is that it develops along predetermined steps dependent upon the individual's ability to interact with a widening circle of other individuals. This view of

personality development is clearly not only a passive moving through predetermined internal developmental steps but also involves an active interaction with the environment.

Erikson divided ego development into eight stages. During each of these stages, the ego faces a specific crisis. The successful or unsuccessful resolution of the crisis strongly influences the following stages' resolution of particular conflicts. Due to the epigenetic nature of development, the individual is propelled into the next stage irrespective of successful or unsuccessful resolution of the crisis. The healthy adult personality is formed through the successful passing of each of the eight specifc crises.

The process of passing through each of the eight developmental stages postulated by Erikson established the ground work for a set of basic ego strengths or virtues to emerge. Erikson considered ego strengths as vital for the survival of the person and the continued survival of the individual, in turn, ensured the passing on of the ego strengths to the future generations. The passage of experience and genetic endowment to the next generation, ensures a stability of culture that joins past, present and future together into a coherent structure. Erikson (1964)

choose the word "virtue" for basic ego strength because of the Old English meaning of inherent strength or "active quality" (p.113). Erikson (1964) further stated that "ego strength depends above all, on the sense of having done one's active part in the chain of the inevitable" (p.119). The emphasis on active serves to underline Erikson's view of psychosocial development as an ongoing interaction between the individual's internal processes and the environment. It is the continuous widening of the infant's world through active exploration that gradually results in the gaining of an increased sense of stability and capacity to cope. It is from this process that the virtue of hope has it's beginnings. Erikson (1982) concluded that " hope emerges from the conflict of basic trust versus basic mistrust" (p.79) and that " hope is both the earliest and most indispensable virtue inherent in the state of being alive" (1964, p.115). Erikson's (1964) primary emphasis on the interpersonal process for the development of identity and the concomitant virtues, is seen in his statement that " nothing in human life, however, is secured in it's orgins unless it is verifed in the intimate meeting of partners in favorable social settings" (p.116). Hope, then, relies on it's emergence through the relationship with trustworthy enough maternal figures who are able to respond to the

infant's needs for food and comfort. The infant gradually learns to regulate his eating and sleeping behavior through the experience and structure of the mothering one's feeding and comforting techniques. Erikson (1963) also thought that the consistency and continuity of this experience allowed the ability to have internal representations of outer realities to develop. The ability to have internal representation is vital for the beginning of trust in that in as much as an infant is confident of his mother's return when she is out of sight; he is able to also trust that other currently unfulfilled needs will be met. Furthermore, the experience of outer consistency through the providing of a moderating structure, helps the infant to cope with his own internal urges. Erikson (1964) defined another facet of hope as the "enduring belief in the attainability of ferverent wishes in spite of the dark urges which mark the beginning of existence (p.118)."

A different important consequence of the interaction between the individual's internal and outer world is the development of a new sense of time that enables the past, present and future to be tied into a pattern that has meaning. The sense of meaning is established through the relationship between different generations working to keep an individual feeling hopeful

in the face of frustration. Erikson (1963) suggests "there are few frustrations in ... this stage which the growing child cannot endure if the frustration leads to the ever renewed expeience of greater sameness and stronger continuity of development, toward a final integration of the individual's life cycle with some wider belongingness ...Children become neurotic not from frustration but from the lack or loss of societal meaning in these frustrations" (p. 249-250). Although Erikson placed primary emphasis on the mother-child relationship for the initial development of hope, this relationship is not sufficient. As hope grows and as the time of ascendance for the other virtues occurs, the individual's range of relationships also enlarges to include other adults and children. It is the quality of the varied relationships that influences the development of hope and all of the other virtues. It is also the formation of relationships that continues to tie the past, present and future together in a meaningful manner for the individual. Hope cannot exist unless a future exists. A future exists through the individual's past and present experiences.

Piediscalzi (1973) clearly and succinctly summarized Erikson's description of the principles that govern the development of the virtues. He outlined four

basic principles. The first principle is the evolutionary principle and includes the concept of epigenesis. The individual passes sequentially through eight stages of human growth. Mutuality, the second principle, asserts that there are relationships in which each person is able to learn and draw upon others for the development of virtues. The third principle, active choice, asserts that growth occurs when there is a reaching out into the world that is not only passive but also involves internal planning. The fourth principle of generation and regeneration is a process that is necessary for the development of a time continuity line. It develops through the interelationship and interweaving of individuals at different life stages. It is important as it provides the structure that helps preserve the values and culture of humanity through a sense of time continuity.

The discussion will now turn from the previous discussion of the development of virtue of hope that was explored through the first stage of trust versus mistrust, to the virtue of competence that emerges during the fourth stage of industry versus inferiority. Erikson (1982) described the fourth stage as a period of sexual latency with a concomitant emphasis on schooling. It is the stage in which an individual gains a basic sense of competence in

the tool world. He is exposed to the rules of society where he must learn to gain a sense of mastery while adhering to the need for cooperation that is necessary for the continued existence of society. Erikson (1968) thought that this stage was different from the earlier stages because the violent internal drives are more dormant. He suggested that it is, however, the stage that is socially decisive. The society moves into the child's world to provide him with specific instruction in the prevailing technologies which, in turn, allows him to move into adulthood with the necessary skills for supporting his future family.

If the child senses that he is not suceeding at the task of gaining technological and social skills, he may develop a sense of inferiority. The loss of the hope of the acquisition of successful work skills narrows the child's boundaries. The child, instead of widening his circle of influences, retreats to a more isolated position of staying safely within the confines of the nuclear family. This causes an inertia to develop as he turns back towards the rivalries within the family and away form the broader society (Erikson, 1963). If, however, the child meets this stage after a relatively successful completion of the earlier stages and actively interacts with his teachers to produce or generate products, a sense of competence

emerges. Erikson (1964) defined competence as "the free exercise of dexterity and intelligence in the completion of tasks, unimpaired by infantile inferiority" (p.124). It is the foundation stone for cooperative participation through the logical use of tools and skills. It is the time the child is able to begin to develop perseverance and persistence because of the expectation of continued success.

To summarize, the stage of industry versus inferiority is interwoven into the fabric of an individual's development upon the successful completion of the previous stages. As was true in the development of hope, the principles of epigenesis, mutuality, active choice and generation are readily apparent in the development of competence. Likewise, again as was true for the stage of trust versus mistrust, the adequate resolution of this stage required the individual's exploration of his world. In addition, the individual had to develop more sophisticated social skills which allow for stronger and broader interelationships with others. Finally, the mastery of the tool world and the acquisition of the social skills of cooperation and interdependance enables for the provision of the continued survival of the society both economically and culturally. Unsuccessful resolution of

this stage results in a pulling back from the technological world such that a sense of inertia is established. This, in similiar manner to the withdrawal from people that occur in individuals who do not establish 'good enough' trust during the first stage, results in a passivity and movement away from relationships. The passivity and movement away from people, endanger the continued health of the individual and society.

It is during Erikson's seventh stage of generation versus stagnation that the virtue or ego strength of care comes to the fore. Erikson (1964) defined care as "the widening concern for what has been generated by love, necessity or accident; it overcomes the ambivalence adhering to irreversible obligation" (p.131). The major focus of this stage is on the responsible establishment and teaching of the next generation and is therefore central to adult development. As seen in the previous stages, the principles of mutuality and generation are evident, aiding man's survival through mutual interdependence in the face of changing conditions. According to Erikson (1968), "the basic ego strengths ... and the essentials of an organized human community have evolved together as an attempt to establish a set of proven methods and a fund of traditional reassurance which enables each generation to meet the needs

of the next in relative independence from personal difficulties and changing conditions" (p.139). Although the dependence of the infant is readily apparent, it is also true that each individual needs to be needed and needs to be encouraged. For adults, it is the active curiosity and dependency of the young that provides for the meeting of the need. The adult, in turn, must reach out to the next generation. It is in this way, that the virtue of care is more firmly established.

If individuals fails to enrich the next generation through their products or guidance, a sense of stagnation occurs. There is a rejection of the individuals' responsibility to the external world and an increasing pampering of themself as if they were their own child (Erikson, 1968). Once again, unsuccessful resolution of the stage results in a withdrawal, in this case through rejection, from active ongoing interaction with the environment (Erikson, 1982). The narrowing of horizons hinders the development of a sense of time and a connection between past, present and future. Without a sense of future, hope fades. Instead, a sense of stagnation is left which threatens the ongoing survival of both the individual and the society to which he belongs.

There has been reported in the literature only two

objective devices designed to measure all eight Eriksonian stages. The first, the Self Description questionnaire was developed by Boyd and Koskella (1970) and consisted of 160 items. The items were collected from non-directive interviews of adults. Items that were shown to have content validity through the agreement of a panel of judges, were retained. Each stage consisted of a total of 20 items that reflected 10 positive and 10 negative items. Two six point Likert scales were used on a college population of undergraduate and graduate students. The continuums were " like- unlike me" and " of concern- of no concern for me", The college aged sample used in the development of this questionnaire were only age appropriate for the fifth and sixth Eriksonian stages. As this was the only sample used to complete the questionnaire, the establishment of a hierarchy of concerns for the other stages than those immediately prior or after stages 5 and 6, was hindered. In addition, there was no attempt to control for consistency or social desirability response-set taking. The researchers concluded that the study gave support to Erikson's contention that ego stage crises are ordered chronologically and that successful resolution of each ego crisis is related to the resolution of the preceding ego crisis. Previous ego stages were found to be significant

partial predictors for later stages. It should be noted, however, that the above results and conclusions are limited because of the homogeneity of the sample and the lack of validation scales.

The second objective measurement of all eight Eriksonian scales is the Assessment of Adult Adjustment Patterns (AAAP) developed by Farquhar, Wilson and Parameter (1977). A full description of the AAAP and its use in the present study, is given in chapter three. The AAAP includes validation scales to control for consistency and social desirability. In addition, it used a sample that included individuals who ranged in age from 19-69 years old and in educational level from junior high to PhD./M.D.

To summarize, a review of the literature of hope indicated that hope involved a positive expectation of a future event, that was firmly based in reality and not just wishful thinking. Hope based on reality was linked to the concept of locus of control through the expectation that an individual has some control over his life and future. Furthermore, Stotland stated that the development of hope into a stable attribute occured as an individual acquired an expectation of the attainability or unattainability of his goals based on his past learning experiences. He also proposed that an additional factor for the development of

hope was the belief regarding the trustworthiness of other individuals in the world.

The position that hope is learned through an individual's prior and ongoing relationship with significant others was most eloquently argued for by Erik Erikson. He stated that hope relied on it's emergence through the relationship with trustworthy enough maternal figures who were able to respond to the infant's need for food and comfort. Erikson stated that as hope grows and as the time of ascendance for other virtues occurs; the individual's range of relationships also is enlarged to include other adults and children. The quality of the varied relationships continue to influence the development of hope and all the other virtues.

CHAPTER 111

METHODOLOGY OF THE STUDY

In chapter 3, a description of the AAAP- The Assessment of Adult Adjustment Patterns Instrument; the Spheres of Control Battery and the Hope Index are presented. In addition, the sample, design and analytic procedures are outlined.

Description of the Development of the Assessment of Adult Adjustment Patterns (AAAP).

The AAAP is an instrument based on Erikson's eight stage epigenetic theory of ego development. Farquhar, Wilson and Parmeter (1977) developed the AAAP on the model advocated by Jackson (1970) in the development of the Personality Research Form. This model held that personality measures had greater construct validity when the item pool was generated from clearly formulated theoretically based definitions. As a result, a research team consisting of a counseling psychologist, an educational psychologist and three doctoral-level counseling students, closely examined Erikson's writings and outlined descriptions of activities that related to each developmental stage. From this outline, an item pool was generated. Seven criteria were needed for an item from this initial pool of 2500 items to be accepted in the final form of the AAAP.

1. Items had to be responded to in either the mastery or non-mastery direction by more than 5% of the respondents. If an item frequency of less than 5% in the non-mastery direction was found, the item was considered for the Unusual Response Scale.

2. Items were eliminated if they correlated higher with the Crowne-Marlowe social desirability scale than with any of the Eriksonian total scale scores.

3. Items had to correlate higher with the total stage score for which they were written, or to a previous stage total score than with a subsequent ego stage score. The rationale for criteria three was that Erikson's theory is hierarchical, therefore it would be inconsistent if an item had higher correlations with subsequent rather than with the previous stages.

4. Items could not decrease the reliability of the ego stage scale for which it was written.

5. Items had to discriminate so that respondents who had mastered an ego stage would indicate a mastery response more frequently than those who had not mastered the stage.,

6. Items had to load on an interpretable factor with a correlational value greater than .25.

7. Items in each of the subsequent factors had to increase the reliability of the stage factor.

Note. From "Overview of Assessment of Adult Adjustment Patterns (AAAP)" by William Farquhar, Unpublished Report, 1984.

The instrument, in its present form, consists of three hundred and twenty items. It is an objective, self report instrument that measures mastery or non-mastery of each of Erikson's eight stages. In addition, the test consists of a likert form of the Crowne-Marlowe (1960) social desirability index, an unusual response scale validity index and a consistency scale index.

Participants are asked to rate themselves on a four point scale that consists of 1 (definitely true of me), 2 (true or mostly true of me), 3 (Not true or mostly not true of me and 4 (Definitely not true of me). A mastery or non-mastery score is obtained for each stage based on the given responses. Mastery is defined as responding in the resolution direction over a specified percentage of the time to items in each particular stage. The necessary mastery levels for each stage are Stage 1--67%; Stage 2--78%; Stage 3--69%; Stage 4--78%; Stage 5--85%; Stage 6--80%; Stage 7--73%; Stage 8--84% (Azar,1982).

The ego stages of the AAAP have quite high internal consistency (See Table 3.1) (Valdez, 1984). In addition, the modified Crowne-Marlowe SD Scale was found to yield results similar to the original Crowne-Marlowe administered contiguously. The correlation between the two forms was .96 (Farquhar & Wilson, 1977). A factor analysis of the original instrument indicated twenty-three factors that are consistent with Erikson's theory and are moderately reliable. (See Table 3.2) (Azar, 1982). In the present instrument, an additional factor, optimism, has been added to the first stage. Construct validity was established by comparing a normal with a psychiatric population. The means for each stage were significantly higher for the normal population than for the psychiatric population except for

TABLE 3.1

MEANS, STANDARD DEVIATIONS, AND RELIABILITIES FOR THE SCALES OF THE ASSESSMENT OF ADULT ADJUSTMENT PATTERNS

	Azar (1982) n=353			Valdez (1984) n=138		
Stage Scale	Mean	SD	Cronbach's Alpha	Mean	SD	Cronbach's Alpha
1. Trust	54.01	7.33	.88	71.20	7.48	.83
2. Autonomy	108.86	11.59	.91	107.67	10.71	.89
3. Initiative	75.27	8.90	.87	72.84	7.12	.79
4. Industry	190.56	20.99	.95	183.47	19.09	.94
5. Identity	100.08	10.41	.90	103.87	11.20	.90
6. Intimacy	88.09	10.80	.90	93.11	10.72	.90
7. Generativity	84.37	10.77	.89	84.27	9.74	.85
8. Integrity	74.23	8.71	.85	77.16	8.26	.85

TABLE 3.2

FACTORS EMERGING FROM THE AAAP

Stage	Name of factor	No. of items	Reliability.
1	Basic trust	18	.88
2	Will to be oneself	23	.89
2	Solitude	11	.82
2	Holding on,letting go	13	.82
3	Self punishment and guilt	23	.86
3	Anticipation of roles by parents	4	.81
4	Apply to task	26	.92
4	Win recognition by producing things	31	.93
4	Perserverance	15	.86
4	Competence	18	.85
4	Trust in Adults	12	.85
4	Confidence	10	.79
5	Trust in peers	16	.86
5	Ideological thought	8	.79
5	Molding identity	13	.84
5	Fidelity tests	10	.79
6	Commitment to affiliation	19	.90
6	Genital Maturity	11	.83
6	Fusion with another	7	.68
7	Establishing and guiding next generation	17	.88
7	Charity	15	.84
8	Order and Meaning	17	.83
8	Accepting one's life Cycle	13	.80

Note: From " An Item, Factor and Guttman Analysis of an Objective Instrument Designed to Measure the Constructs of Erikson's Epigenetic Developmental Theory" by James Azar, Doctoral Dissertation, 1983

Stage 6 ($p < .165$) (See Table 3.3).

Problems with the Assessment of Adult Adjustment Patterns

Since the AAAP is still a new instrument, several additional studies need to be undertaken to ensure the reliability and validity of the questionnaire. At the present time, there is not available test-retest reliability data. As was mentioned above, the construct validity of Stage 6 is in question, i.e., the mean of the normal population was not significantly higher than that of the psychiatric population for this stage, ($p < .165$) (See Table 3.3) (Azar, 1982). Finally, criterion validity has not been established.

Because in this study, stage 6 is not used and given the AAAP's ego stage scales good internal reliability, high content and construct validity, its use is merited. In addition, one aspect of the criterion validity of the AAAP will be examined in this study.

Assessment of Adult Adjustment Patterns:
Scale Reliabilities

Reliability estimates of the three stages used in this study were computed. The Cronbach's Alpha reliability coefficients for the Trust, Industry and Generativity scales were .83, .93, and .86, respectively (see Table 3.4). These reliability measures are consistent with

TABLE 3.3

COMPARISON BETWEEN THE NORMAL AND PSYCHIATRIC SAMPLES ON THE EGO STAGE SCALE OF THE ASSESSMENT OF ADULT ADJUSTMENT PATTERNS

(N= 354)

Erikson Scale	Means		Standard Deviation		F-Test	P
	Normal	Psychiatric	Normal	Psychiatric		
1. Trust	55.08	44.19	6.45	6.92	97.65	.000
2. Autonomy	110.30	94.34	10.17	14.75	65.27	.000
3. Initiative	76.49	63.00	7.81	10.01	82.13	.000
4. Industry	193.14	164.59	18.72	24.96	63.34	.000
5. Identity	103.44	91.66	9.73	12.21	40.62	.000
6. Intimacy	88.34	85.56	10.74	11.30	1.94	.165
7. Generativity	84.84	79.62	10.62	11.26	6.94	.009
8. Wisdom	74.75	69.06	8.56	8.64	12.81	.000

Note: From "Assessment of Adult Adjustment Patterns (AAAP) Research Instrument: First Report" by William Farquhar, Unpublished Report, 1983.

previous studies' findings .83, .94 and .85 respectively (Valdez,1984) (see Table 3.1).

The Sphere of Control Battery (SOC)

The SOC Battery is an objective, self report instrument that " measures an individual's perceived control in three primary spheres of behavior: (a) personal efficacy-control over the nonsocial environment as in personal achievement (PE), (b) interpersonal control-control over other people in dyads and groups (IP), and (c) socio-political control-control over social and political events and institutions (PE)" (Paulhus, 1983, p.1253).

The instrument in its present form consists of thirty items, with each of the three spheres having ten items. Participants are asked to rate themselves on a five point scale that consists of 1 (Strongly Agree), 2 (Mildly Agree), 3 (Agree and Disagree Equally), 4 (Mildly Disagree) and 5 (Strongly Disagree). The SOC is keyed in the internal direction such that a high score indicates an internal sense of control. A score is obtained by reversing those items with negative loadings and summing the given responses from each subset. A set of three scores is obtained for each individual participant. Test-retest correlations for each of the subtests, at four weeks, are above .90 and at 6 months are above .70 (Paulhus, 1980). Typical alpha reliabilities for the IP/PE/SP subscales

TABLE 3.4

MEANS, STANDARD DEVIATIONS, AND RELIABILITIES FOR THE SCALES OF THE ASSESSMENT OF ADULT ADJUSTMENT PATTERNS, THE SOC BATTERY, AND THE HOPE INDEX

(Present Study)
n=205

	Mean	SD	Cronbach's Alpha
Erikson's Stages			
1. Trust	74.71	9.33	.83
4. Industry	196.25	21.55	.93
7. Generativity	82.41	11.69	.86
Soc Battery			
1. Interpersonal	37.32	5.52	.72
2. Personal Efficacy	40.04	21.58	.42
3. Socio-Political	29.94	15.10	.72
Hope Index	366.29	52.9	.69

samples were .77,.75, and .81, respectively. These values are higher than the .65-.75 values that were obtained with Rotter's I-E scale using the same samples (Paulhus and Christie, 1981). The study obtained Cronbach's Alpha coefficients for PE,IP,SP subscales of .72, .42 and .72, respectively (See Table 3.4). These are lower than those obtained by Paulhus et al (1981). In addition, the PE scale reliability shows relatively poor reliability, suggesting that at least with this sample it is measuring some item heterogeneity. When the sample is divided into male and female groups, the reliability coefficients are .52 and .31, respectively.

In order to compare the SOC model to Rotter's I-E one factor model, a confirmatory factor analysis was done using the Linear-Structural Relations (LISREL) program (Joreskog and Sorbom, 1978). This program tests a derived set of factors against a hypothesized model. A chi-square badness of fit statistic tests the resulting factor structure. If the hypothesized factor gives a significantly poorer fit to the data than a totally unrestricted solution, a significant result is obtained. A one factor model similar to Rotter's I-E scale, was given to LISREL. A significantly bad fit was found (chi-square of X^2 (405) =501.6, $p<.01$,) suggesting that a one-factor model is quite restrictive. In addition, two versions of the SOC model were run. In one version, the SOC factors were fixed to be mutually orthogonal. In the second version, the

factors were allowed to be oblique. Both of the SOC solutions were not significant, X^2 (402) =450.7 and X^2 (405) =466.1, suggesting that in these models, the badness of fit is not significantly worse than a fully unconstrained model. Finally, a comparison of the one factor and oblique SOC models was performed by testing the difference in chi-squares, 501.6-450.7= 50.9, df405-402 =3. The comparison was significant at the $p<.001$ level. Overall, the SOC model provides a better fit to the data than a one-factor model similar to Rotter's scale (Paulhus, 1983).

Validity studies on the SOC have included predicting the control profiles of football, tennis players and nonathletes (males) based on descriptions of characteristics made by raters who were judged to be knowledgeable about such athletes. It was predicted that football players would score the highest on IP (interpersonal control), because of the team approach; tennis players would score highest on the PE (personal efficacy) scale because of the emphasis on individual skill; and that there would be no differences in the SP (socio-political) scores among the three samples. These predictions were supported (Paulhus, 1983). In addition, it was hypothesized that the SP score would be predictive of

voter participation; the PE- IP score would predict whether an individual would use a bargaining or a solo-learning game and the IP score would predict the participant's assertiveness. The sample consisted of 46 male undergraduates from an Ivy League University. The results supported all three hypotheses. SP was predictive of voting in the mayoral election, $t(50)=1.90$, $p<.05$ one tailed. Those individuals whose PE score was higher than their IP score choose the individual learning task to the bargaining task, $t(45)=2.41$, $p<.01$, one tailed. Assertiveness during the interview was related only to IP, $r=.27$, $p<.03$, one tailed (Paulhus, 1983).

The SOC battery was correlated to the Rotter's (1966) I-E scale. Each subscale correlated negatively with the Rotter Scale (note: Rotter's scale is keyed in the external direction, the SOC is keyed in the internal direction). The multiple correlation of Rotter's scale with the three SOC scale was high ($R=.75$ uncorrected). The finding indicates that the original construct has been greatly tapped by the SOC battery. The SOC battery was also correlated with the Marlowe-Crowne Social Desirability scale (Marlowe and Crowne,1964). Minimum correlation was found with the PE scale having the greatest correlation ($r=.19$). This is a great deal lower than the SD correlation for the Rotter's scale ($r=-.32$)(Paulhus,1983).

The SOC battery was correlated to the Rotter's (1966) I-E scale. Each subscale correlated negatively with the Rotter Scale (note: Rotter's scale is keyed in the external direction, the SOC is keyed in the internal direction). The multiple correlation of Rotter's scale with the three SOC scale was high (R=.75 uncorrected). The finding indicates that the original construct has been greatly tapped by the SOC battery. The SOC battery was also correlated with the Marlowe-Crowne Social Desirability scale (Marlowe and Crowne,1964). Minimum correlation was found with the PE scale having the greatest correlation (r=.19). This is a great deal lower than the SD correlation for the Rotter's scale (r=-.32)(Paulhus,1983).

Problems with the SOC Battery

The scale shows good internal and test-retest reliability. The validity studies indicate good construct and criterion validity. At the present time, however, the majority of validation studies on the final form of the scale have used a male college age population. Additional unpublished studies have been done using college age women. The results were similar, although there does appear to be greater PE/IP correlation with the female population (Paulhus, personal communication,1984). As the subscales are conceptually independent dispositions such that an individual is able to have quite different expectancies in each of the behavioral spheres, only minimal correlations

between subscales are expected. As a result, this PE/IP correlation for females needs to be studied to see if this finding is consistent across the female population or is limited to academic high achievers. Finally, the most serious limitation is the surprising reliability data found for the PE scale with this sample. The finding that the hetrogeneous sample did not have high inter-item reliability, will require additional reliability studies to be performed on the PE subscale to determine if it is a consistent finding. In spite of this limitation, the SOC's previous strong reliability and validity data merits in some instances, its use in research studies over the Rotter's I-E scale.

The Hope Index Scale (HIS)

The Hope Index Scale is an objective self report instrument that is designed to assess the attributes of hope in adult individuals without racial, sexual or socioeconomic biases. The model is based on Tuckman's (1975) recommendations to ensure clarity and face validity. The following criteria were used to develop a model of hope from which an item pool could be generated:

1. The derived model must be a simple, explicit, and a meaningful definition that most people can identify with, understand, and be able to use.

2. The derived model of hope must be congruent with widely accepted and prevailing notions of human behavior.

3. The derived model must have support from experimental findings and clinical observations made by respected

investigators.

Note From "The Anatomy of Hope" by Obayuwana and Carter, 1982

Using the above criteria, hope was defined as "the state of mind which results from the positive outcome of ego strength, perceived human family support, religion, education, and economic assets" (Obayuwana et al.,1982 p.761). For each of the five areas, ten items are included. There are also ten additional items that estimate the social desirability bias. The final instrument consists of sixty items that can be answered with a "Yes" or "No" response. The instrument is scored on three scales. The first scale gives the actual Hope score, the second scale gives the social desirability, comprehension and attentiveness score and the third scale gives the critical score that gives the clinical significance of the actual Hope Score. For the first and third scales, each item is awarded ten points for the desirable response. The results give a range of 0-500 and 0-60 points, respectively. Because there were no clinical applications in this study, the third scale was not scored.

The Hope Index (HIS) has been tested on over three thousand persons. The Kuder-Richardson's formula and split-half reliability analyses indicate that the criterion measured by the HIS is heterogeneous (Anastasi 1976) but the HIS is internally consistent (Alpha =.61, $p<.01$). The

alpha coefficient for the current sample was .69 (see Table 3.4). The range of HIS raw scores was 210-470. The control group made up of medical, graduate and dental students had a mean score of 378 ± 34.6. The mean score for the experimental group of subjects (individuals who had a positive psychiatric history or suicide attempts) was 208 ± 41.2. The difference is statistically significant (t=33.76, P<.001). A significant difference was also found between individuals that gave an impression of depression without suicide ideation and those who had attempted suicide. The HIS scores of psychiatric subjects were found to have a negative correlation (Pearson r=-.88; p<.001) with the Beck's Hopelessness Scale. (Obayuwana et al.,1983) (see Table 3.5)

Limitations of Hope Index (HIS)

Major limitations of the HIS instrument as a research tool are its cost and severe restrictions in its use. The questionnaire has to be given in the form it is purchased. As a result items cannot be embedded in other questionnaires. Because of the face validity of the Hope scale, the social desirability bias responding of subjects is of concern. In addition, there is no published information on the reliability and validity of the social desirability subscale used in the questionnaire. It appears that the Edward's Social Desirability scale and the MMPI

TABLE 3.5

HOPE AND HOPELESSNESS MEAN SCORES FOR EXPERIMENTAL SUBJECTS

	Experimental Subgroups			
	1 Control (n=150)	11 Experimental (n=150)	111 Depression (n=74)	1V Suicide (n=52)	V Misc. (n=24)
HIS	378±34.6	208±41.2	180±40.0	150±30.0	-
BHS	0.360±.48	11±4.2	11.3	15.2	-

Note Taken "Hope Index Scale: An Instrument for the Objective Assessment of Hope" by Obayuwana et al.,1984.

validity scales use a pathological model as their base, it would be of interest to know if a non-clinical population responds in a more socially desirable direction than a clinical population. As a result of the questions raised with the SD subscale, the subscale was not used in this study. Because the Crowne-Marlowe SD scale was designed for a non- clinical population and has good reliability and validity, the issue of social desirability responding bias was resolved in this study by using the modified Crowne-Marlowe that was embedded in the AAAP.

Sample

The sample consisted of three available groups: employees at General Motors Company (n= 66), staff employees at the Paul Dever State School for the Mentally Retarded in Taunton, Massachusetts (n= 68) and a group of additional volunteers from Michigan and Massachusetts (n= 71) who agreed to participate in the study. The General Motors employees were drawn largely from plants in Michigan; however groups of ten or less employees were drawn from each of plants located in Ontario, Indiana, California and New York. The participants included both management and non-management employees. The Paul Dever State School staff were all involved in service occupations and included both professional and non-professional persons. The third group consisted of employed people from a variety of employment sites. Although the numbers from

each profession were small, the following professions had at least one representative: medicine, nursing, teaching, energy analysis, computer engineering, professional sports, real estate, students, college administration, security service, media technicians, food service, financial consultation and neuropyschology. The mean and median ages of the respondents were 34 and 32 years old, respectively. The participants ranged in age from 18 to 61 years with a standard deviation of 9.82 years. Most of the testees were Caucasian (83%). Other races represented included Blacks (13%) and Orientals (0.3%). There were slightly more females (55%) than males (45%). The educational level was varied with 38% having a high school diploma or less; 38% having additional training up to a four year college degree, and 21% having a masters level or higher degree. The demographic material can be found summarized in Tables 3-6 to 3-9, respectively.

Procedures

Individual volunteers were given a packet of information consisting of a letter explaining the purpose of the study (see Appendix D), a fact sheet (See Appendix E), a consent form (See Appendix F) and three questionnaires (See Appendices A,B and C). The first questionnaire consisted of the validity scales and of all

Table 3-6

Age of Respondents

No	199
Mean	34
Median	32
Range	43
Standard Deviation	10

Table 3-7

Race of Respondents

Race	Number	Percent
Caucasian	170	83.0
Black	26	12.7
Oriental	1	00.3
Other	4	2.0
No Response	4	2.0

Table 3-8

Sex of Respondents

Sex	Number	Percent
Females	112	55
Males	93	45

Table 3-9

Education of Respondents

Category	Frequency	Percent
Junior High	1	00.5
High School	76	37.4
Trade School	23	11.2
College	55	26.8
Masters	33	16.1
Educational Specialist	1	00.5
Ph.D./M.D.	7	3.7
No Response	9	4.4

the items in stages one, four and seven of the AAAP. The second questionnaire consisted of the thirty items from the SOC battery and the third questionnaire was the Hope Index Scale. The participants were instructed that due to the length of the questionnaires, the questionnaires could be completed over a number of sittings. They were also notified that the questionnaires would be coded and kept confidential. Finally, they were informed that they were free to discontinue at any time. The respondents returned the completed packet to their contact person. The directions for the different employment sites were identical.

Design

The study is descriptive in nature. The study is a naturalistic experiment that uses instruments designed to investigate the relationship between Erikson's stage theory, locus of control, and hope. The independent variables are Erikson's stage attainment, locus of control hierarchy, age, and sex of participants. The dependent variable is the Hope Score obtained for each participant.

Hypotheses

1. Individuals who move in order through Erikson's stages will show higher levels of hope than individuals at an earlier stage.
   a) Individuals who have mastered Stage 1 will have more hope than individuals who have not mastered any stages.

   b) Individuals who have mastered stages 1 and 4 will have more hope than individuals who have only mastered stage 1.
   c) Individuals who have mastered stages 1, 4 and 7 will

have more hope than individuals who have only mastered stages 1 and 4.

2. Individuals who have moved in order through Erikson's stages will have more hope than individuals who have not mastered Erikson's stages in order.
a) Individuals who have mastered stages 1 and 4, will have more hope than individuals who have mastered a later stage while not mastering an earlier stage.
b) Individuals who have mastered stages 1,4 and 7 will have more hope than individuals who have mastered stages 4 or 7 while not mastering an earlier stage.

3. Individuals whose sphere of control hierarchy from highest to lowest is 1) the interpersonal sphere (IP) 2) the personal efficacy sphere(PE) and 3) the socio-political sphere (SP) will have more hope than individuals who have a different hierarchy of control in these three areas.

4. There will be no differences between males and females on their mean hope scores when the level of locus of control is held constant
a) Males whose sphere of control hierarchy is 1) the interpersonal sphere, 2) the personal efficacy sphere and 3) the socio-political sphere will have more hope than males who have a different hierarchy of control in these three areas.
b) Females whose sphere of control hierarchy is 1) the interpersonal sphere, 2) the personal efficacy sphere and 3) the socio-political sphere will have more hope than females who have a different hierarchy of control.
c) Males and females with an IP/PE/SP hierarchy will not differ from each other in their mean hope scores.
d) Males and females with any other control hierarchy will not differ from each other in their mean hope scores.

5. Individuals who move in order through Erikson's stages and who have an IP/PE/SP hierarchy will have a higher level of hope than individuals in the same stage but with a different sphere of control hierarchy.
a) Individuals who have not mastered any stage with an IP/PE/SP hierarchy will have more hope than individuals who have not mastered any stage with a different control hierarchy.
b) Individuals who have mastered only stage one with an IP/PE/SP hierarchy will have more hope than individuals who have mastered only stage one with a different control hierarchy.
c) Individuals who have mastered stages one and four with an IP/PE/SP hierarchy will have more hope than individuals who have mastered stages one and four with a different

control hierarchy.
d) Individuals who have mastered all three stages with an IP/PE/SP hierarchy will have more hope than individuals who have mastered all three stages with a different control hierarchy.

Procedures for Data Analysis

ANOVA and post hoc comparisons of means were performed for each of the hypotheses. Post hoc comparisons were used because they control for overall alpha and do not require independence of the comparisons. As a result, the overlap of data is controlled for. In addition, a multiple regression was performed to determine if a significant relationship existed between hope and Erikson's stages, locus of control, sex, education, or work site. Finally, non- parametric tests of significance were used to determine if a significant relationship existed between Erikson's stages and education or employment site. A chi-square test was used for the analysis.

The assumption of normality was met by the Central Limit Theorem. However, because of the unequal n's, in order to ensure that the homogeneity of variance assumption was met, a R-transformation was run for each comparison. The R-transformation procedure tested for differences between variances. In every case, the null hypothesis was not rejected, allowing the homogeneity assumption to also be accepted.

Summary

The development of hope was studied from an Eriksonian framework. Of special interest was the question of whether hope followed a similar hierarchical process. Tests were conducted to see if individuals at higher Eriksonian stages showed higher levels of hope than individuals at earlier stages of development. In order to address the same question from a different vantage point, the locus of control spheres of individuals were examined. Individuals who had a sphere of control hierarchy (interpersonal/ personal efficacy/ sociopolitical) that was consistent with Erikson's model of development were compared to individuals with a different hierarchy. It was expected that these individuals would have higher mean hope scores than individuals with a different hierarchy. Differences between men and women's control hierarchy and their hope scores were examined because Erikson's model does not differentiate between males and females development. Differences found between the sexes would suggest the need for replication studies which might lead to a modification of Erikson's theory. Finally, tests of significance would be run on the beta values for each of the independent variables of stage, locus, sex, work and education. This would address the concern that sex, work or education are confounding variables in the hope score.

A sample consisting of employees at General Motors, Paul Dever State School and various other employment sites, completed a set of three questionnaires. From these

questionnaires, a hope score, a locus of control hierarchy, and an Eriksonian stage mastery scores were obtained for each individual. To control for social bias responding, a modified version of the Crowne-Marlowe Social Desirability scale was given. Individuals who responded to 80% or more items in the social desirable direction were eliminated from the study.

CHAPTER IV

RESULTS OF THE ANALYSIS

In the following chapter the result of the data analyses is presented. Each hypothesis is stated in testable as well as symbolic form. Results of the analysis are given followed by a statement of whether or not the hypothesis was accepted or rejected.

Hypotheses about Erikson's Stages

Erikson hypothesized that individuals who proceed sequentially through the eight developmental stages that he postulated, are healthier than individuals who do not negotiate a successful resolution of one or more of the developmental stages. Research has suggested that hopefulness is positively related to coping and a sense of wellbeing and conversely, hopelessness is a primary ingredient in the 'giving up' that occurs in learned helplessness and suicide. As a result, Hope was used as the measure of wellbeing in the following set of hypotheses designed to test the validity of Erikson's hypotheses. The mean hope scores, measured by the Hope Index Scale (HIS), were found for the groups of individuals who had completed, as measured by the AAAP, (1) none of the stages successfully; (2) only the first stage of trust; (3) the stages of trust and industry; (4) and the stages of trust,

industry and generativity. The four groups were compared with the expectation that the group's mean hope score would increase as the number of successful Erikson's stage resolutions rose. In addition, the mean hope score of the group of individuals who had failed an earlier stage while mastering a later stage, were compared to the mean hope scores of the groups of individuals who mastered stages 1 (trust) and 4 (industry); and stages 1, 4 and 7 (generativity). Because Erikson emphasized the epignetic nature of his stages of psycho-social development, it is expected that the mean hope score of the group of individuals who did not master the stages in order will be lower on the Hope Index Scale (HIS) than the two groups that mastered the stages in order.

I.

1. H_0: There will be no difference in the mean hope scores between individuals who have failed all of Erikson's stages and individuals who have mastered the first stage of trust (H_0: $M_1 \leqslant M_0$, where O=failed all stages,and 1=passed only stage 1).

H_A: Individuals who have mastered Stage 1 (trust/mistrust), mean hope scores will be higher than individuals who have not mastered any stages (H_A: $M_1 > M_0$).

The results of the Duncan's New Multiple Range Test allowed the rejection of the null hypothesis at the $p < .05$

level. The alternative hypothesis, that individuals at stage 1 will have more hope than individuals who have not mastered any stages, was accepted. (See Table 4.1.)

2. H_0: There will be no difference in the mean hope scores between individuals who have mastered stages 1 (trust) and 4 (industry) and individuals who have only mastered stage 1 (H_0: $M_4 \leq M_1$, where 1=stage 1 mastery, and 4=stage 4 mastery).
H_A: Individuals who have mastered stages 1 and 4, mean hope scores will be higher on the Hope Index Scale than individuals who have only mastered stage 1 (H_A: $M_4 > M_1$).

The results of the Duncan's New Multiple Range Test allowed the rejection of the null hypothesis at the $p < .01$ level. The alternative hypothesis, that individuals who have mastered up to stage 4 will have more hope than individuals who have only mastered stage 1, was accepted. (See Table 4.1.)

3. H_0: There will be no differences in the mean hope scores between individuals who have mastered stages 1 (trust) and 4 (industry) and individuals who have mastered stages 1,4 and 7 (generativity), (H_0: $M_7 \leq M_4$, where 4=stage 4 mastery, and 7=stage 7 mastery).
H_A: Individuals who have mastered stages 1, 4 and 7,

mean hope score will be greater than individuals who have only mastered stages 1 and 4 (H_A: $M_7 > M_4$).

The results of the Duncan's New Multiple Range Test did not allow the rejection of the null hypothesis at the $p < .05$ level. The null hypothesis that there are no differences between individuals who have mastered up to stage 4 and individuals who have mastered up to stage 7, was accepted. (See Table 4.1.)

4. H_0: There will be no difference in the mean hope scores between individuals who have mastered both stages 1 and 4 and individuals who have mastered a later stage while not mastering an earlier stage (H_0: $M_4 \leq M_{OO}$, where 4=stage 4 mastery, and OO=out of order mastery). H_A: Individuals who have mastered stages 1 and 4, will have higher mean hope scores than individuals who have mastered a later stage while not mastering an earlier stage (H_A: $M_4 > M_{OO}$).

The results of the Duncan's New Multiple Range Test allowed the rejection of the null hypothesis at the $p < .025$ level. The alternative hypothesis that individuals who have

TABLE 4.1

SUMMARY OF IN ORDER ERIKSONIAN STAGE RESULTS

Hypothesis 1: A Multiple Comparison of Hope Mean Scores Differences Between each Group that passed the Stages of Trust/Mistrust (1), Industry/Inferiority (4), Generativity/ Stagnation (7) or failed all three stages (0).

			Stages			
N	SD	Mean	0	1	4	7
21	3.97	31.90	0			
38	4.48	35.03	1	*		
60	4.38	38.13	4	*	*	
65	4.87	38.60	7	*	*	

(*) at the vertical/horizontal intercept denotes each pair of groups that are significantly different from each other at the .05 level

Note:
0=Failed all stages
1=Passed only stage 1 (trust/mistrust)
4=Passed stages 1&4 (trust/mistrust,industry/inferiority)
7=Passed stages 1,4,7 (trust/mistrust,industry/inferiority, generation/ stagnation)

mastered up to Stage 4 in order will have higher mean hope scores than individuals who have mastered stages out of order, was accepted. (See Table 4.2.)

5. H_O: There will be no differences in the mean hope scores between individuals who have mastered Erikson's stages 1,4 and 7 and individuals who have mastered a later stage while not mastering an earlier stage (H_O: $M_7 \leqslant M_{OO}$, where 7 =stage 7 mastery and OO=out of order mastery).

H_A: Individuals who have mastered stages 1,4 and 7, mean hope scores will be greater than individuals who have mastered a later stage while not mastering an earlier stage (H_A: $M_7 > M_{OO}$).

The results of the Duncan's New Multiple Range Test allowed the rejection of the null hypothesis at the $p < .025$ level. The alternative hypothesis that individuals who have mastered up to Stage 7 in order will have higher mean hope scores than individuals who have mastered the stages out of order, was accepted. (See Table 4.2)

Hypotheses about Locus of Control Hierarchy

Research has indicated that if an individual perceives that he is capable of exerting some control in his environment, he is more likely to persist in his goals. If, however, he perceives the locus of control to be in

TABLE 4.2

SUMMARY OF OUT OF ORDER ERIKSONIAN STAGE RESULTS

Hypothesis 2: A Multiple Comparison of Hope Mean Score Differences between each of the Groups with Out of Order Mastery (OO) and In Order Mastery of Erikson Fourth (4) and Seventh (7) Stages.

				Stages		
N	SD	Mean		00	4	7
21	4.34	35.57	00			
60	4.38	38.13	4	*		
65	4.87	38.60	7	*		

(*)at the vertical/horizontal intercept denotes each pair of groups significantly different from each other at the .025 level

Note:
00= Out of Order Mastery
(mastery of a later stage; failure of an earlier stage)
4= Passed Stages 1&4 (trust/mistrust,industry/inferiority)
7= Passed Stages 1,4,7
(trust/mistrust,industry/inferiority,generativity/stagnation)

some other agent's hand, he is more likely to give up in times of stress. In order to help validate Erikson's theory that psycho-social health begins initially through interpersonal interaction (parents), progresses to interaction with the world of tools and finally to the world of organizations; a locus of control hierarchy was obtained for each individual that gave a separate locus of control score for three spheres similar to those areas postulated by Erikson. A group of individuals whose hierarchy showed the greatest perceived control, as measured by the SOC battery, in the interpersonal arena, the second amount of perceived control in their personal efficacy and lastly the least amount of perceived control in their socio-political control was compared to a group of individuals whose control hierarchy was different from the IP/PE/SP hierarchy. It was expected that the hope scores measured by the Hope Index Scale as an indication of psycho-social wellbeing, is the highest for the group with the interpersonal/personal efficacy/socio-political hierarchy.

1. H_0: There will be no differences in the mean hope scores of individuals whose sphere of control hierarchy from highest to lowest is 1) the interpersonal sphere (IP) 2) the personal efficacy sphere(PE) and 3) the

socio-political sphere (SP), and individuals who have a different hierarchy of control in these three areas (H_O: $M_I \leqslant M_O$ where 1=IP/PE/SP hierarchy and O=any other hierarchy).

H_A: Individuals whose sphere of control hierarchy from highest to lowest is 1) the interpersonal sphere 2) the personal efficacy sphere and 3) the socio-political sphere, mean hope scores will be greater than individuals with a different hierarchy (H_A: $M_I > M_O$).

The results of the One Way Analysis of Variance allowed the rejection of the null hypothesis. The alternative hypothesis that the mean hope scores of individuals with an IP/PE/SP control hierarchy are higher than individuals with a different hierarchy, was accepted. ($F=10.03, p<.001$) (See Table 4.3.)

2. H_O: There will be no differences in the mean hope scores between males whose sphere of control hierarchy is 1) the interpersonal sphere 2) the personal efficacy sphere and 3) the socio-political sphere and males who have a different control hierarchy (H_O: $M_{MI} \leqslant M_{MO}$, where MI= male IP/PE/SP hierarchy, and MO= male other hierarchy).

H_A: Males whose sphere of control hierarchy is 1) the

TABLE 4.3

A COMPARISON OF THE HOPE SCORES OF A GROUP OF INDIVIDUALS WITH AN INTERPERSONAL/ PERSONAL EFFICACY/ AND SOCIAL-POLITICAL LOCUS OF CONTROL HIERARCHY AND A GROUP OF INDIVIDUALS WITH A DIFFERENT THAN IP/PE/SP LOCUS OF CONTROL HIERARCHY

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARES	F RATIO	F PROB/
Between Groups	1	238.2422	238.2422	10.03	.0009*
Within Groups	203	4821.9529	23.7535		

(* Significant at the .001 level)

interpersonal sphere 2) the personal efficacy sphere and 3) the socio-political sphere, mean hope scores will be greater than males who have a different sphere of control hierarchy (H_A: $M_{MI} > M_{MO}$).

The results of the Duncan's New Multiple Range Test did not allow the rejection of the null hypothesis at the $p < .05$ level. The null hypothesis that males with an IP/PE/SP hierarchy and males with different hierarchies do not differ in their mean hope scores, was accepted. (See Table 4.4)

3. H_O: There will be no differences in the mean hope score of females whose sphere of control hierarchy is 1) interpersonal sphere 2) personal efficacy sphere and 3) socio-political sphere, and females who have a different control hierarchy (H_O: $M_{FI} \leqslant M_{FO}$, where FI =female IP/PE/SP hierarchy and FO =female other hierarchy).

H_A: Females whose sphere of control hierarchy is 1) the interpersonal sphere, 2) the personal efficacy sphere and 3) the socio-political sphere, mean hope scores will be greater than females who have a different sphere of control hierarchy (H_A: $M_{FI} > M_{FO}$).

The results of the Duncan's New Multiple Range Test

TABLE 4.4

A COMPARISON OF THE MEAN HOPE SCORES FOR MALES AND FEMALES WITH AN INTERPERSONAL/ PERSONAL EFFICACY/ SOCIAL-POLITICAL LOCUS OF CONTROL HIERARCHY AND MALES AND FEMALES WITH A DIFFERENT HIERARCHY

N	SD	Mean		FO	MO	FI	MI
67	5.26	35.42	FO				
61	4.34	36.57	MO				
45	5.24	38.11	FI	*			
32	4.45	38.31	MI	*			

(*) at the vetical/horizontal intercept denotes each pair of groups significantly different from each other at the .025 level

NOTE:

FO = females who did not have an interpersonal/ personal efficacy/ social political (IP/PE/SP) locus of control hierarchy.
MO = males who did not have an IP/PE/SP locus of control hierarchy.
FI = females who have an IP/PE/SP locus of control hierarchy.
MI = males who have an IP/PE/SP locus of control hierarchy.

allowed the rejection of the null hypothesis at the $p < .005$ level. The alternative hypothesis, that females whose control hierarchy was IP/PE/SP have higher mean hope scores than females with a different hierarchy, was accepted. (See Table 4.4)

4. H_O: Males and females with an IP/PE/SP hierarchy will not differ from each other in their mean hope scores (H_O: $M_{MI} = M_{FI}$, where MI= males, IP/PE/SP and FI= females, IP/PE/SP).

H_A: Males and females with an IP/PE/SP hierarchy will differ from each other in their mean hope scores (H_A: $M_{MI} \neq M_{FI}$).

The results of the Duncan's New Multiple Range Test did not allow the rejection of the null hypothesis at the $p < .05$ level. The null hypothesis that there was no difference between males and females with an IP/PE/SP hierarchy, was accepted. (See Table 4.4)

5. H_O: Males and females with a different hierarchy than IP/PE/SP will not differ from each other in their mean hope scores (H_O: $M_{MO} = M_{FO}$, where MO= males, other hierarchy and FO= females, other hierarchy).

H_A: Males and females with a different hierarchy than

IP/PE/SP will differ from each other in their mean hope scores (H_A: $M_{MO} \neq M_{FO}$).

The results of the Duncan's New Multiple Range Test did not allow the rejection of the null hypothesis at the $p < .05$. The null hypothesis that there is no difference between males and females with a different hierarchy than IP/PE/SP was accepted. (See Table 4.4)

Hypotheses about Stage and Locus of Control Interaction

The interaction effect of Erikson's stages of trust, industry and generativity and Paulhus and Christie's Sphere of Control hierarchy was also examined. Of particular interest was the effect of the sphere of control hierarchy at each of Erikson's stages of trust, industry and generativity on an individual's psycho-social development as measured by the Hope Index Scale. It was expected that for each of Erikson's stages of trust, industry and generativity; the hope scores as measured by the Hope Index, would be higher for individuals with an IP/PE/SP control hierarchy than for individuals with a different hierarchy at the identical stage.

1. H_0: There will be no differences in their mean hope scores between individuals with an IP/PE/SP control hierarchy, who have not mastered any stage and individuals with a different hierarchy, who have not mastered any stage

(H_O: $M_{OI} \leq M_{OO}$ where OI= stage 0, IP/PE/SP hierarchy, and OO= stage 0, other hierarchy).
H_A: Individuals with an IP/PE/SP control hierarchy, who have not mastered any stages will have greater mean hope scores than individuals with a different hierarchy, who also have not mastered any stages (H_A: $M_{OI} > M_{OO}$).

The results of the Duncan's New Multiple Range Test did not allow the rejection of the null hypothesis at the $p < .05$ level. The null hypothesis, that individuals with an IP/PE/SP hierarchy who had failed all the stages did not differ from individuals with a different hierarchy who had also failed all the stages, was accepted (See Table 4.5).

2. H_O: There will be no differences in the mean hope scores between individuals with an IP/PE/SP control hierarchy, who have mastered only stage 1 and individuals with a different hierarchy, who have also only mastered stage 1 (H_O: $M_{II} \leq M_{IO}$, where II= stage I, IP/PE/SP hierarchy and IO= stage I, other hierarchy).
H_A: Individuals with an IP/PE/SP control hierarchy, who have mastered only stage 1 will have a greater mean hope score than individuals with a different hierarchy, who also have mastered only stage 1 (H_A: $M_{II} > M_{IO}$).

TABLE 4.5

A SUMMARY OF THE INTERACTION BETWEEN EACH OF ERIKSON'S STAGES AND LOCUS OF CONTROL HIERARCHY ON THE HOPE SCORES OF INDIVIDUALS

				Stage/Locus of Control							
N	SD	Mean		0I	00	10	1I	70	40	4I	7I
5	4.44	31.80	0I								
16	3.96	31.94	00								
22	4.86	33.59	10								
16	3.05	37.00	1I	*	*	*					
40	4.90	37.38	70	*	*	*					
35	3.77	38.09	40	*	*	*					
25	5.20	38.20	4I	*	*	*					
25	4.32	40.56	7I	*	*	*	*	*	*	*	

(*) at the vertical/horizontal intercept denotes each pair of groups significantly different from each other at the .05 (1-tailed) level.

NOTE:

00 = Failed all Erikson's stages and who do not have an interpersonal/ personal efficacy/ social political (IP/PE/SP) locus of control hierarchy.
0I = Failed all Erikson's stages and have an IP/PE/SP locus of control hierarchy.
10 = Passed Erikson's first stage of trust/mistrust and who do not have an IP/PE/SP locus of control
1I = Passed Erikson's first stage of trust/mistrust and who have an IP/PE/SP locus of control hierarchy.
40 = Passed Erikson's stages of trust and industry and do not have an IP/PE/SP locus of control hierarchy.
4I = Passed Erikson's stages of trust and industry and who have an IP/PE/SP locus of control hierarchy.
70 = Passed Erikson's stages of trust, industry and generativity and do not have an IP/PE/SP locus of control hierarchy.
7I = Passed Erikson's stages of trust, industry and generativity and who have an IP/PE/SP locus of control hierarchy.

The results of the Duncan's New Multiple Range Test allowed the rejection of the null hypothesis at the .025 level. The alternative hypothesis that Stage 1 individuals with a IP/PE/SP control hierarchy, mean hope score is larger than Stage 1 individuals who have a different hierarchy, was accepted. (See Table 4.5)

3. H_O: There will be no differences in their mean hope scores between individuals with an IP/PE/SP control hierarchy, who have mastered up to stage 4 in order and individuals with a different hierarchy, who have also only mastered up to stage 4 (H_O: $M_{4I} \leqslant M_{4O}$, where 4I= stage 4, IP/PE/SP hierarchy, and 4O= stage 4, other hierarchy).

H_A: Individuals with an IP/PE/SP control hierarchy, who have mastered up to stage 4 will have greater mean hope scores than individuals with a different hierarchy, who also have mastered stage 4 (H_A: $M_{4I} > M_{4O}$).

The results of the Duncan's New Multiple Range Test did not allow the rejection of the null hypothesis at the .05 level. The null hypothesis that there are no differences in the mean hope scores of Stage 4 individuals with an IP/PE/SP control hierarchy and Stage 4 individuals who have a different hierarchy, was accepted. (See Table 4.5)

4. H_O: There will be no differences in their mean hope scores between individuals with an IP/PE/SP control hierarchy, who have mastered up to stage 7 in order and individuals with a different hierarchy, who have also only mastered up to stage 7 (H_O: $M_{7I} \leq M_{7O}$ where 7I= stage 7, IP/PE/SP hierarchy, and 7O= stage 7, other hierarchy).

H_A: Individuals with an IP/PE/SP control hierarchy, who have mastered up to stage 7 will have greater mean hope scores than individuals with a different hierarchy, who also have mastered stage 7 (H_A: $M_{7I} > M_{7O}$).

The results of the Duncan's New Multiple Range Test allowed the rejection of the null hypothesis at the .025 level. The alternative hypothesis that Stage 7 individuals with an IP/PE/SP control hierarchy, have a higher mean hope score than Stage 7 individuals who have a different hierarchy, was accepted. (See Table 4.5)

Additional Exploratory Results

A multiple regression was run to see the probability that a particular relationship occurs when the other independent variables are held constant. The beta weight for each independent variable was tested to see if it was large enough to justify including the variable as a predictor of hope. The results found two variables yielded

significant beta weights for predicting Hope. These variables were Erikson Stage (t= 6.070, p <.0001) and Control Hierarchy (t= 3.082, p <.005). Education level, sex and work site were not significant predictors. (See Table 4.6). In addition, a chi- square analysis was run to determine if there was a relationship between Erikson's stages and education or work site.

Hypotheses concerning Erikson's Stage Theory and the AAAP Scale

Additional validation hypotheses were run on the AAAP and Erikson's stage theory. The hypotheses examined if individuals at a later stage of psycho-social development were older than individuals at an earlier Eriksonian stage of psycho-social development. Because the sample consisted of adults, a comparison was performed for only the stages of industry and generativity. According to Erikson's theory, the individuals who had mastered the generativity stage would be older than individuals who had mastered the industry stage but had failed the generativity stage of psycho-social development.

I.

H_0: There will be no difference between the ages of individuals in stage 4 and individuals in stage 7 (H_0: $M_7 \leqslant M_4$, where 7= age of stage 7 individuals, and

TABLE 4.6

A SUMMARY OF THE ANALYSIS OF VARIABLES THAT ARE SIGNIFICANT PREDICTORS OF HOPE

Multiple Regression with the Dependent Variable of Hope

VARIABLE	B	SE B	BETA	SE BETA	CORREL	PART. COR	T	SIG T
Sex	.282	.690	.028	.068	-.068	.027	.412	.6811
GM	-.286	.829	-.027	.078	.059	-.023	-.345	.7304
Locus	2.229	.723	.213	.069	.221	.206	3.08	.0024*
Stage	.783	.129	.409	.067	.415	.406	6.070	.0000*
Educ	.896	.714	.087	.069	.116	.084	1.255	.2111
PD	-1.301	.838	-.122	.078	-.110	-.104	-1.552	.1225
(Constant)	32.893	.986					33.251	.0000

(*) denotes significant predictor at p <.01

GM = General Motors
PD = Paul Dever State School

4= age of stage 4 individuals).

H_A: Individuals who are have mastered stage 7 will be older than individuals in stage 4 (H_A: $M_7 > M_4$).

The results of the student t-test (one tailed) allowed the rejection of the null hypothesis at the $p < .01$. The alternative hypothesis that individuals in stage 7 will be older than individuals in stage 4 was accepted (See Table 4.7).

II.

H_0: There is no relationship between Erikson's stages and education levels (H_0: P(S) - P(E)= 0, where S= stages, and E= education).

H_A: There is a relationship between Erikson's stages and education level (H_A: P(S) - P(E)$\neq$ 0).

The results did not allow the rejection of the null hypothesis at the $p < .05$ level. The null hypothesis that there is no relationship between Erikson's stages and education levels was accepted. (X^2 = 2.53, df= 4, $p < .05$). (See Table 4.8)

III.

H_0: There is no relationship between Erikson's stages and employment site (H_0: P(S) - P(W)= 0, where S= stages, and W= work site).

H_A: There is a relationship between Erikson's stages

TABLE 4.7

SUMMARY OF AGE/STAGE RESULTS

STAGES	MEAN AGE	SD	T-TEST	PROB
INDUSTRY	31.58	8.73	2.98	.002*
GENERATIVITY	37.22	11.42		

(*) denotes pairs of groups significantly different at the .005 level.

TABLE 4.8

SUMMARY OF STAGE/EDUCATION RELATIONSHIP RESULTS

Count row pct col pct tot pct	NONE 0	TRUST 1	INDUST. 4	GENER. 7	OUT OF ORDER (OO)	ROW TOTAL
<HS	7 9.1 33.3 3.6	18 23.4 47.4 9.2	19 24.7 33.3 9.7	26 33.8 42.6 13.3	7 9.1 36.8 3.6	77 39.3%
>HS	14 11.8 66.7 7.1	20 16.8 52.6 10.2	38 31.9 66.7 19.4	35 29.4 57.4 17.9	12 10.1 63.2 6.1	119 60.7%
Missing	0	0	3	4	2	9 0%
Column Total	21 10.7%	38 19.4%	57 29.1%	61 31.1%	19 9.7%	196 100%

X^2 (df=4) = 2.53. p< .6389
Pearson's R = .00153, p< .4915

and employment site (H_A: P(S) - P(W) $\neq$ 0).

The results did not allow the rejection of the null hypothesis at the p <.05 level. The null hypothesis that there is no relationship between Erikson's stages and employment site was accepted. (X^2 = 6.24, df= 8, p <.05) (See Table 4.9)

Summary

Hope was studied from an Eriksonian framework. The analysis found that the level of hope increased as an individual moved up Erikson's earlier stages. However, it was also found that between stages 4 and 7 a stabilization of the level of hope occurred as there were no differences in the mean hope scores between these two groups. In addition, the results of the study found that the group of individuals who had passed either stage 4 or 7 while failing an earlier stage (out of order hierarchy) had significantly less hope than individuals who had achieved stage 4 or stage 7 development in sequence. The finding supports the idea of a hierarchical developmental process for hope. Individuals who do not proceed in the correct order are at greater risk for developing less hope than individuals who proceed in the hierarchical fashion.

The results of the locus of control hierarchy analysis also supported Erikson's theorectical developmental framework. Individuals who had an IP/PE/SP

TABLE 4.9

SUMMARY OF STAGE/WORK SITE RELATIONSHIP RESULTS

Count row pct col pct tot pct	NONE 0	TRUST 1	INDUST. 4	GENER. 7	OUT OF ORDER (OO)	ROW TOTAL
General Motors	7 10.6 33.3 3.4	11 16.7 28.9 5.4	19 28.8 31.7 9.3	24 36.4 36.9 11.3	5 7.6 23.8 2.4	66 32.2%
Paul Dever	8 11.8 38.1 3.9	12 17.6 31.6 5.9	25 36.8 41.7 12.2	16 23.5 24.6 7.8	7 10.3 24.6 3.4	68 33.2%

hierarchy were thought to reflect the process of first developing a sense of control in dyadic interactions (the earliest being between parent and child), secondly developing a sense of control in the arena of one's competence (mirroring Erikson's industry stage); and finally moving into the socio-political realm in order to prepare the world for the next generation (Erikson's generativity stage). It was found that individuals who had this particular IP/PE/SP hierarchy did indeed have significantly higher levels of hope than individuals with different hierarchies.

The results of the locus of control hierarchy analysis also showed that differences between males and females existed. The analysis supported Erikson's model in that both males and females with an IP/PE/SP hierarchy showed no differences in their mean hope scores, while showing significantly higher levels of hope than females with a different control hierarchy. However, there were no differences found in the hope scores between males with a different hierarchy and males or females with an IP/PE/SP hierarchy. As importantly, there were also no differences found in the mean hope scores of males or females with a different hierarchy than IP/PE/SP. The finding showed that males with a different control hierarchy than IP/PE/SP had

hope scores between the females with an other than IP/PE/SP hierarchy and males and females with an IP/PE/SP hierarchy. One possible explanation for the result could be the social reinforcers that males receive in this society for competence, serves to add to his level of hope to bring it more on a par with individuals who have an IP/PE/SP control hierarchy. The results are consistent if it is also true, that the social reinforcers that females receive are more likely to be interpersonal in nature, as females with a different than IP/PE/SP hierarchy did not show the same increase in hope scores.

The results of the study indicated, in addition, that when control hierarchy and stage interactions were examined, stage 4 did not follow the expected pattern. It was expected that individuals who had passed stage 7 and had an IP/PE/SP control hierarchy would have the highest amount of hope. In addition, it was expected that individuals who had passed only stage 1 and who had an IP/PE/SP hierarchy would have a higher amount of hope than individuals who had failed all the stages and individuals who had passed stage 1 but did not have an IP/PE/SP hierarchy. The results occurred as expected. It was also hypothesized that individuals who had passed stage 4 and who had an IP/PE/SP hierarchy would have more hope than individuals with a different hierarchy who had passed stage

4. Lastly, it was hypothesized that individuals who had passed stage 1 with an IP/PE/SP hierarchy would have less hope than individuals who have passed stage 4 with the same SOC hierarchy. The hypotheses did not hold up as no significant differences were found between stage 4, IP/PE/SP individuals, stage 4, other hierarchy individuals, and stage 1, IP/PE/SP individuals. One possible explanation could be that in Erikson's stage 4 (industry vs. inferiority), the crisis is the crisis of competence. As a result, successful completion of the stage, would require a focusing on the issue of individual competence, thereby temporarily throwing out of balance the normal developmental process. As the individual passes through the stage, the process reverts to normal as seen in the stage 7 results.

Finally, the results of the study showed that the dependent variable, the hope score, was not confounded by the variables of sex, education level or employment site.

CHAPTER V

SUMMARY AND CONCLUSIONS

In this chapter, the study and the conclusions that were reached, were summarized. In addition, implications for future studies on the development of hope are discussed.

Summary of the Study

In the study, the relationship between Erikson's stages of trust/mistrust, industry/inferiority and generativity/stagnation; locus of control that an individual has in the interpersonal, instrumental and socio-political arenas; and the degree of hope in individuals were outlined.

There were 205 subjects consisting of employees at General Motors, staff at Paul Dever State School for the Mentally Retarded and a group of additional volunteers employed in a variety of occupations, who agreed to participate in the study. The participants ranged in age from 18 to 61 years, with a mean age of 34 years old. Most of the participants were Caucasion (83%). Other races represented included Blacks (13%) and Orientals (0.3%). There were more females (55%) than males (45%). The educational level of the participants was varied with 38%

having a High School diploma or less, 38% having additional training up to and including a four year college degree, and 21% having a Masters or higher degree.

The respondents volunteered to complete the items in stages one (trust/mistrust), four (industry/ inferiority) and seven (generativity/ stagnation) of the AAAP; the SOC Battery, the HIS scale, a consent form and a demographic fact sheet. The participants were informed that due to the length of the questionnaire, the questionnaire could be completed over several sittings. They were also notified that the questionnaires would be coded and kept confidential and that they were free to discontinue at any time. Finally, the respondents returned the completed packet to their contact person. The directions for the different employment sites were identical.

For the analysis, Anova and post hoc comparisons of means were performed for each of the hypotheses. Post hoc comparisons were used because they control for overall alpha and do not require independence of the comparisons. In addition, a multiple regression was performed to find if a significant relationship existed between hope and Erikson's stages, locus of control, sex, education or work site. Finally, two additional validation studies for the AAAP instrument were also performed. A chi-square test, a non-parametric test of significance was used to determine

if a significant relationship existed between Erikson's stages and education or employment site. Lastly, a comparison of the ages of the individuals in Erikson's fourth (industry/ inferiority) and seventh (generativity/ stagnation) stages, was performed in order to determine if the stage 7 group was significantly older than the stage 4 group.

Conclusion

The five hypotheses concerning Erikson's stages of trust, industry and generativity, level of hope and the results of the statistical tests are listed below. The first three hypotheses are concerned with mastery of Erikson's stages in the proper sequence, while the last two hypotheses are concerned with the group of individuals who mastered Erikson's stages out of the order that he had postulated and the level of hope in individuals.

1. The group of individuals who have mastered only Erikson's first stage of trust/ mistrust, mean hope score will be higher than the group of individuals who failed Erikson's first (trust), fourth (industry) and seventh (generativity) stages. It was found that individuals who had mastered only stage 1 had a significantly higher level of hope than individuals who had failed all three of the above Eriksonian stages ($p < .05$).

2. The group of individuals who mastered Erikson's trust and industry stages, mean hope score will be higher than the group of individuals who mastered only the first stage of trust. It was found that individuals who mastered both of Erikson's stages of trust and industry had significantly higer levels of hope than individuals who mastered only the first stage of trust ($p < .01$).

3. The group of individuals who mastered Erikson's trust, industry and generativity stages, mean hope scores will be higher than individuals who mastered only the first and fourth stages of trust and industry. The results indicated that there were no differences in the level of hope between individuals who mastered Erikson's trust, industry and generativity stages and individual's who only mastered the trust and industry stages ($p < .05$).

4. The group of individuals who have mastered Erikson's stages of trust and industry, mean hope scores will be higher than individuals who mastered a later stage while not mastering an earlier stage. It was found that individuals who mastered Erikson's stages of trust and industry had significantly higher levels of hope than individuals who mastered a later stage while not mastering an earlier stage ($p < .025$).

5. The group of individuals who have mastered Erikson's stages of trust, industry and generativity stages, mean hope scores will be higher than individuals who mastered a later stage while not mastering an earlier stage. It was found that individuals who mastered Erikson's stages of trust, industry and generativity had significantly higher levels of hope than individuals who mastered a later stage while not mastering an earlier stage ($p < .025$).

The five hypotheses about sphere of control hierarchy, male/ female differences, level of hope and the results of the statistical tests are listed below.

1. The group of individuals whose sphere of control hierarchy from highest to lowest is the interpersonal sphere, the personal efficacy sphere and the socio-political sphere (IP/PE/SP), mean hope scores will be higher than the group of individuals with a different hierarchy of sphere control. It was found that individuals with the IP/PE/SP sphere control hierarchy have significantly higher levels of hope than individuals with a different sphere control hierarchy ($p < .001$).

2. The group of males who have an IP/PE/SP sphere of

control hierarchy, mean hope score will be higher than males who have a different sphere of control hierarchy. The results indicated that there was no difference in the level of hope between males with an IP/PE/SP sphere of control hierarchy and males with a different sphere of control hierarchy ($p < .05$).

3. The group of females who have an IP/PE/SP sphere of control hierarchy, mean hope score will be higher than females who have a different sphere of control hierarchy. It was found that females who have an IP/PE/SP sphere of control hierarchy have significantly higher levels of hope than females with a different hierarchy ($p < .005$).

4. Males with an IP/PE/SP sphere of control hierarchy, mean hope scores will not differ from females with the same IP/PE/SP hierarchy. It was found that there were no differences in the mean hope scores between males and females with an IP/PE/SP sphere of control hierarchy ($p < .05$).

5. Males and females who do not have an IP/PE/SP sphere of control hierarchy, will not differ in their mean hope scores. It was found that there was no difference in the mean hope scores between males and females who do not have an IP/PE/SP sphere of control hierarchy ($p < .05$).

The four hypotheses about the interaction between Erikson's stages and the sphere of control hierarchy on the level of hope for an individual was examined. The results of the statistical tests are listed below.

1.Individuals with an IP/PE/SP sphere of control hierarchy who have not mastered any of Erikson's stages of trust, industry or generativity will have higher mean hope scores than individuals who do not have an IP/PE/SP sphere of control hierarchy and who also have not mastered any of Erikson's stages of trust, industry or generativity. It was found that individuals who had not mastered Erikson's stages of trust/ industry/ generativity and had an IP/PE/SP sphere of control hierarchy did not differ in their level of hope from individuals who had not mastered Erikson's stages of trust/ industry/ and generativity and who did not have an IP/PE/SP sphere of control hierarchy ($p < .05$).

2. Individuals with an IP/PE/SP sphere of control hierarchy who have mastered only Erikson's first stage of trust (stage 1 mastery), will have higher mean hope scores than individuals who do not have an IP/PE/SP sphere of control hierarchy and who also have mastered

only Erikson's first stage of trust. The results indicated that stage 1 mastery individuals with an IP/PE/SP sphere of control hierarchy have significantly higher mean hope scores than stage 1 individuals who have a different sphere of control hierarchy ($p < .025$).

3. Individuals with an IP/PE/SP sphere of control hierarchy who have mastered Erikson's stages of trust and industry (stage 4 mastery), will have higher mean hope scores than individuals who do not have an IP/PE/SP sphere of control hierarchy and who have mastered Erikson's stages of trust and industry. It was found that there were no significant difference in the mean hope scores of stage 4 mastery individuals with an IP/PE/SP sphere of control hierarchy and stage 4 mastery individuals with a different sphere of control hierarchy ($p < .05$).

4. Individuals with an IP/PE/SP sphere of control hierarchy who have mastered Erikson's stages of trust, industry and generativity (stage 7 mastery), will have higher mean hope scores than individuals who do not have an IP/PE/SP sphere of control hierarchy and who have mastered Erikson's stages of trust/ industry and generativity. It was found stage 7 mastery individuals with an IP/PE/SP sphere of control hierarchy have

significantly higher mean hope scores than stage 7 mastery individuals with a different hierarchy ($p < .025$).

Additional Exploratory Results

A mutiple regression was performed to determine the probability that a particular relationship occurs when the other independent variables are held constant. The beta weight for each independent variable was tested to determine if it was large enough to justify including the variable as a predictor of hope. The variables Erikson's Stages ($t = 6.070$, $p < .0001$) and Control Hierarchy ($t = 3.082$, $p < .005$), yielded significant beta weights for predicting hope. Education level, sex and site of employment were not significant predictors.

Hypotheses concerning Erikson's Stage Theory and the AAAP Scale

1. Individuals who have mastered Erikson's stages of trust, industry and generativity (stage 7 mastery) will be older than individuals who have only mastered Eriksons's stages of trust and industry (stage 4 mastery. It was found that stage 7 mastery individuals were significantly older than stage 4 mastery individuals ($p < .01$).
2. There is no relationship between Erikson's stages

and education levels. It was found that there was no relationship between Erikson's stages and education level ($p < .05$).

3. There is no relationship between Erikson's stages and employment site. It was found that there was no relationship between Erikson's stages and employment site ($p < .05$).

Discussion

The overall findings of the study generally support Erikson's theory of psychosocial development. An individual's sense of wellbeing, measured by the degree of hope, increases as mastery of successive stages occurs. The results indicated that the degree of hope increased as stage mastery increased, except between the stage 4 and stage 7 mastery groups. No differences in the hope scores were found between the two groups. In addition, Erikson's hypothesis that individuals who master a later stage of development while failing to master a previous stage, will have a higher level of wellbeing, was also supported. Results from the study indicate that individuals who had mastered stages 1 (trust) and 4 (industry) or stages 1, 4 and 7 (generativity) had significantly more hope than individuals who had mastered the stages out of order (mastering a later stage while failing an earlier stage).

Additional support for Erikson's theory was

obtained through a comparison of an individual's level of hope and his sphere of control battery. Individuals with a sphere of control hierarchy considered consistent with Erikson's formulation were compared to individuals with a different sphere of control hierarchy. The hierarchy considered consistent with Erikson's theory showed the highest sense of control in the dyadic interpersonal arena; the second highest sense of control in the personal efficacy arena and the least sense of control in the socio-political arena. This hierarchy follows Erikson's view that an individual initially gains a sense of control through interactions with his parents; next develops a sense of competence in the tool and educational world and finally, gains a sense of control over the socio-political system. It was found that individuals with the interpersonal/ personal efficacy/ socio-political sphere of control hierarchy have significantly higher levels of hope than individuals with a different sphere of control hierarchy.

An examination of sphere of control hierarchy and stage interaction, however, indicated that, once again, the stage 4 mastery group did not follow the expected pattern. No differences were found between stage 4, IP/PE/SP hierarchy individuals, stage 4, other hierarchy individuals and stage 1, IP/PE/SP hierarchy individuals. In addition,

individuals who failed all three of Erikson's stages and had an IP/PE/SP sphere of control hierarchy, did not differ in their hope scores from individuals who failed Erikson's stages but had a different hierarchy. A review of Erikson's theory suggests a possible explanation for these results. Individuals who have not yet mastered Erikson's first stage of trust versus mistrust are at the bottom rung in the development of hope, such that their perceived sense of control in any spheres is still likely to be tenuous. As a result, their level of hope is low and no fine discriminations are yet apparent. In the case of the stage 4 mastery results, one explanation could be that the crisis is the crisis of competence. At this stage, an individual's energy is focused on an individual's competence as seen by his tool and educational mastery. The focus on environmental control can serve to temporarily throw out of balance the normal developmental process. As the individual successfully masters stage 4, the process returns to normal as seen in the stage 7 mastery results.

The results of the locus of control hierarchy analysis showed differences between males and females. Erikson's model was supported in that both males and females with an IP/PE/SP sphere of control hierarchy showed no differences in their mean hope scores; while showing significantly higher levels of hope than females with a

different control hierarchy. However, the results indicated that males with a different control hierarchy than IP/PE/SP had hope scores between the males and females with an IP/PE/SP sphere of control hierarchy and females with a different sphere of control hierarchy. An explanation for the result could be the social reinforcers that males receive in this society for competence, serves to add to his level of hope to bring it more on par with individuals who have an IP/PE/SP hierarchy. If females' social reinforcers are more likely to be interpersonal in nature; it would be expected that females with a different than IP/PE/SP sphere of control hierarchy would show the lowest level of hope. The results indicate that although Erikson's theory is in part supported, the role of the environment also plays an active role.

To summarize, Erikson's psycho-social developmental theory received significant support from the study of hope. Hope generally, increased as stage mastery increased. Individuals whose sphere of control hierarchy was consistent with Erikson's theory had higher levels of hope than other idividuals. The finding was true for both males and females. In addition, individuals who had mastered Erikson's stages out of order showed lower levels of hope than individuals who sequentially mastered the stages. The exceptions to these results suggested that the crisis of

competence (stage 4) causes a temporary turmoil with a focus on environmental control, which subsides when the stage is mastered. Finally, the supporting but vital role of environment can be seen through the males with a different sphere of control hierarchy, higher levels of hope than females with a different hierarchy, although they have lower levels of hope than both males and females whose sphere of control hierarchy is consistent with Erikson's theory.

Limitations of the Study

A major problem for the present research was that conclusions were drawn about Erikson's eight-stage theory of psycho-social development, using only three of the stages. The consequences of limiting the study to just three of Erikson's stages is unknown. Further research is needed to more fully address the issue of the hierarchical nature of Erikson's theory. The present research indicated that Stage 4 did not follow the hierarchical pattern suggested by Erikson. An examination of all the stages and an individual's hope score is necessary to help determine if the AAAP can discriminate individuals at different Eriksonian stages with regards to level of hope. The results of such a study would help clarify the stage 4 results uniqueness as due to the developmental crisis involved or part of a questionnaire that is not able to

measure at other stages, fine discriminations of Erikson's psycho-social development. A natural next step to address the above issues, would be to broaden the scope of the study by including the five additional stages. Such a design would neccessiate a larger sample size in order for the cell sizes to be large enough for the analysis.

Implications for Future Research

A longitudinal approach to the study of the development of hope was not used in this research project. Such a study would necessitate that subjects are examined at each stage of development. Although the questionnaires would be an inappropriate tool at the very early stages, a structured observation and interview could be included. Though this type of study was impractical for a dissertation, a research project following the model of other developmental theorists such as Piaget and Kolhberg would be of tremendous importance in the further delineation of the specific developmental stages of hope for individuals.

As the study was a pilot, there was no replication of the study. Due to the small sample size and the limitation of the sample to individuals who were employed in some capacity, replication studies are necessary in order to ensure that the results found in the study are due to the Eriksonian stages and Paulhus' sphere of control

factors, rather than due to chance variations.

The study also used three relatively new instruments and additional studies using these instruments are warranted. In particular, studies that examine the Sphere of Control Battery use with a female population as compared to a male population, are necessary. Additional studies that examine the internal consistency of the sub scales also are warranted, given the poor reliability for the personal efficacy scale. The Hope Index Scale social desirability scale needs to be examined using a normal rather than a clinical population. Research with the AAAP, SOC and the Hope Index also needs to proceed with a variety of populations.

Finally, the study examined a normal adult population of individuals who were employed in some capacity. A comparison between a normal adult population and a clinical population could add to the fund of knowledge concerning the building of hope and alleviation of hopelessness in the clinical population.

Clinical Implications

The finding of the importance of a sense of control in the interpersonal arena in the development of hope, needs to be closely examined in the light of prevailing thoeries of treatment. One particular point of comparison that needs further examination is the role of the therapist

as a facilitator of relational skills in clients versus the role of the therapist in the development of the client's sense of personal efficacy. Additional research that compares treatments that teach interpersonal skills versus treatments that build self esteem through the building of competence for hopeless clients, would be benficial in the understanding of the treatment of suicidal clients.

Another important implication for the clinical practitioner, is the view of hope as fundamentally an active process of interaction of the individual with the environment. In hopeless clients, there is a need to develop treatments that enhance the development of positive goals. In addition, there is a need to develop positive goals that are based in reality and therefore can be fulfilled through an ongoing active interaction with the social environment.

APPENDICES

Appendix A

Assessment of Adult adjustment Patterns (AAAP)

All items are to be rated:

1 = Definitely true of me
2 = True or mostly true of me
3 = Not true or mostly not true of me
4 = Difinitely not true of me

1. I have worked on a school committee.
2. I am sometimes irritated by people who ask favors of me.
3. I feel inferior to most people.
4. I worry about my future.
5. Children bore me.
6. I have a lot of energy.
7. I go at my work without much planning ahead of time.
8. I learn fast.
9. I can stay with a job a long time.
10. I like to gossip at times.
11. I am willing to admit it when I don't know something.
12. It takes something of real significance to upset me.
13. I frighten easily.
14. I can't stand the children who live in my neighbourhood
15. I worry about things that never happen.
16. When things are not going right in my work, I reason my way through the problems.
17. I feel optimistic about life.
18. When people express ideas very different from my own, I am annoyed.
19. When I was prepared, teachers couldn't fool me with trick questions.
20. There have been times when I felt like rebelling against people in authority even though I knew they were right
21. I am basically cooperative when I work.
22. For me to learn well, I need someone to explain things to me in detail.
23. It takes a lot to frighten me.
24. When I feel tense, there is a good reason.
25. I never like to gossip.
26. I play around so much I have a hard time getting the job done.
27. I have gone door-to-door collecting signatures on a petition.
28. Children's imagination fascinate me.

29. When I decide to do something, I am determined to get it done.
30. I have deliberately said something that hurt someone's feelings.
31. I feel disappointed and discouraged about the work I do.
32. I eat balanced meals.
33. I believe the best times are now.
34. I play fair.
35. I make it a point to vote in all elections.
36. I have difficulty in getting down to work.
37. I am happy.
38. I like children.
39. I have actully sought out information about my school board members in order to form an opinion.
40. I do many things well.
41. I am proud of the accomplishments I have made at work.
42. I feel there is nothing I can do well.
43. I get those things done that I want to do.
44. When it's time to go to bed, I fall asleep easily.
45. People expect too much for me.
46. I give blood (or would if not medically prohibited).
47. My happiness is pretty much under my own control.
48. I feel good when others do something nice for me.
49. I have volunteered my name as a witness at the scene of a crime or an accident.
50. Once I have committed myself to a task, I complete it.
51. Completed and polished products have a great appeal for me.
52. I feel more confident playing games of skill than games of chance.
53. I like to answer children's questions.
54. When I feel worried , there is usually a pretty good reason.
55. I can work under pressure.
56. I feel useless.
57. I am an even-tempered person.
58. When I took a new course in school, I felt confident that I would do all right.
59. Getting along with loudmouth obnoxious people is impossible for me.
60. Its good to be alive.
61. My tables manners at home are as good as when I eat out in a restaurant.
62. I am not irked when people express ideas very different from my own.
63. People like me.
64. I believe people are basically good.
65. I feel optimistic about life.
66. I just can't be courteous to people who are

disagreeable.
67. Basically, I feel adequate.
68. If I were one of the few surviving persons from a worldwide war, I would make it.
69. There have beem occasions when I felt like smashing things.
70. I devote time to helping people in need.
71. People respect my work because I do a good job.
72. I rarely check the safety of my car no matter how far I am traveling.
73. Children talk to me about ppersonal things.
74. I'm just not very good with children.
75. No matter what the task, I prefer to get someone to do it for me.
76. I give help when a friend asks a favor.
77. I trust others.
78. I feel uneasy if I don't know the next step in a job.
79. I get stage fright when I have to appear before a group.
80. I find it hard to keep my mind on a task or job.
81. The thought of making a speech in front of a group panics me.
82. I am dedicated to my work.
83. I learn well when someone gives me the problem and lets me work out the details for myself.
84. I see to it that my work is carefully planned and organized.
85. I am calm.
86. I keep my word.
87. I do not intensely dislike anyone.
88. I like to solve problems.
89. I read a great deal even when my work does not require it.
90. I generally attend community or school meetings.
91. Sometimes I deliberately hurt someone's feelings.
92. I publically question statements and ideas expressed by others.
93. I can remember "playing sick" to get out of something.
94. I feel deep concern for people who are less well off than I am.
95. I like the way young children say exactly what they think.
96. I get caught up in my work.
97. I learn things as fast as most people do who have my ability.
98. My plans work out.
99. In my work I show individuality and originality.
100. When I have to speed up and meet a deadline, I can still do good work.
101. I check things out myself.

102. I like problems which have complicated solutions.
103. I like curious children.
104. It is hard for me to keep my mind on what I am trying to learn.
105. I like being able to come and go as I please.
106. I will probably always be working on new projects.
107. I feel proud of my accomplishments.
108. I sometimes try to get even rather than forgive and forget.
109. I have feelings of doom about the future.
110. I enjoy the times I spend with young people.
111. I like problems that make me think for a long time before I solve them.
112. I take the unexpected in stride.
113. I am a worthwhile person.
114. My work is usually up to the standards set for me.
115. Whatever stage of life I am in is the best for me.
116. I enjoy things that make me think.
117. I enjoy interacting with children.
118. There are times when I get quite jealous of the good fortune of others.
119. When I get hold of a complicated problem, I return to it again and again until I come up with a workable solution.
120. When I argue, I use facts to support my position.
121. I feel strongly about some things.
122. I enjoy finding out if complex ideas work.
123. I lend things to my neighbours when they need them.
124. I know the children who live in my neighbourhood.
125. It is hard for me to work on a thought problem for more than an hour or two.
126. I can work on ideas for hours.
127. I find people are consistent.
128. Young people today are doing a lot of fine things.
129. I work to make my community better.
130. When I sit down to learn something, I get so caught up that nothing can distract me.
131. I sometimes feel resentful when I don't get my own way.
132. I am basically an unhappy person.
133. I am good at solving puzzles.
134. My judgement is sound.
135. When I'm in a group, I feel confident that what I have to say is acceptable.
136. I give clothing and other items to charitable organizations such as the Salvation Army.
137. I am confident when learning a complicated task.
138. I am proud of my work.
139. I learn from constructive criticism.
140. I like people who say what they really believe.

141. I do things for my community.
142. I enjoy explaining complex ideas.
143. I have taken time to help my neighbors when they need it.
144. I generally feel please with my performance when I talk in front of a group.
145. I have met and formed my own opinion about the leaders of my community.
146. I have been punished unfairly.
147. I am picky about my food.
148. If I can't solve a problem quickly I lose interest.
149. I have gone door- to- door collecting money for charity.
150. I keep up with community news.
151. I am confident when learning something new which requires that I put myself on the line.
152. I am active in community or school organizations.
153. People expect too much of me.
154. I am proud of my accomplishments.
155. When the situation demands, I can go into deep concentration concerning just about anything.
156. I can work on ideas for hours.
157. I can work even when there are distractions.
158. There are questions that interest me which will not be answered in my lifetime.

Appendix B

The Sphere of Control Battery (SOC)

All items are to be scored

1. Strongly agree
2. Mildly agree
3. Agree and disagree equally
4. Mildly disagree
5. Strongly disagree

1. In attempting to smooth over a disagreement I usually make it worse.
2. Often people get ahead just by being lucky.
3. I can usually establish a close personal relationship with someone I find attractive.
4. Bad economic conditions are caused by world events that are beyond our control.
5. I often find it hard to get my point of view across to others.
6. I can learn almost anything if I set my mind to it.
7. When I look at it carefully I realize it is impossible to have any really important influence over what big businesses do.
8. When I get what I want it's usually because I worked hard for it.
9. Even when I'm feeling self-confident about most things, I still seem to lack the ability to control social situations.
10. It's pointless to keep working on something that's too difficult for me.
11. I have no trouble making and keeping friends.
12. I find it easy to play an important part in most group situations.

13. The average citizen can have an influence on government.

14. I usually don't set goals because I have a hard time following through on them.

15. On any sort of exam or competition I like to know how well I do relative to everyone else.

16. I prefer games involving some luck over games requiring pure skill.

17. My major accomplishments are entirely due to my hard work and ability.

18. I'm not good at guiding the course of a conversation with several others.

19. If I need help in carrying off a plan of mine, it's usually difficult to get others to help.

20. I prefer to concentrate my energy on other things rather than on solving the world's problems.

21. Competition discourages excellence.

22. When being interviewed I can usually steer the interviewer toward the topics I want to talk about and away from those I wish to avoid.

23. One of the major reasons we have wars is because people don't take enough interest in politics.

24. With enough effort we can wipe out political corruption.

25. It is difficult for people to have much control over the things politicians do in office.

26. In the long run we, the voters, are responsible for bad government on a national as well as a local level.

27. By taking an active part in political and social affairs we, the people, can control world events.

28. There is nothing we can, as consumers, do to keep the cost of living from going higher.

29. When I make plans I am almost certain to make them work.

30. If there's someone I want to meet I can usually arrange it.

Appendix C

The Hope Index Scale (HIS)

The Hope Index Scale cannot be reproduced in any form. A sample of the Scale can be purchased from Dr. Alphonsus O. Obayuwana, M.D., Institute of Hope, PO Box 6189, Silver Spring, Maryland 20906.

Appendix D

Request for Participation in Study

Dear Participant:

We are studying the role of hope in the development of normal adults. We have felt that too often interest has been focused away from healthy development and towards unhealthy development. As a result, we have decided to focus on Hope, the healthiest of all attributes, that an individual possesses. The question we propose to begin to answer is How does HOPE develop in adults?. In addition, we would like to explore the differences between male and females in the way that they develop and express their hopefulness in their daily lives.

What we need from you is your time to answer a measure of adult adjustment patterns, a measure of one's hopefulness and a measure of the amount of impact that an individual feels he/she has in his/her life. The questionnaires are long so it will take about one hour to complete. But most people find filling out the questionnaires interesting because they get to think over many issues about their own development.

Because of the length of the instrument we want you to take your time. If you need to work until you feel tired ---come back to it later when you are refreshed. We know we are asking a lot from you but we need your help desperately. For too long we have neglected studying the normal functioning person. One reason is that you are not an easy group to contact. Therefore, if you will send in the enclosed forms, completed, we would greatly appreciate it. If you choose not to particpate in the study, please return the questionnaires so they can be given to another participant.

If you are willing to do this task for us, please return the forms to your contact person as soon as possible. Your responses will be confidential and it is not necessary for your name to be given to us. If, however, you would like a summary of the results of our study, please enclose your name and address on the index card provided for that purpose.

Once again, Please let me express my sincere thanks for your time and effort!

Sincerely,

Darini S Arulpragasam, M.Ed.

Appendix E

INSTRUCTION SHEET

Code # GM Employee Yes ___ No ___
Other (list company) _____

Please fill in the following information:

1. Age in years

2. Your race: 1) Oriental 2) Caucasian 3) Black 4) Other

3. Sex: 1. Male 2. Female

4. Education (Check highest level completed)

   1) Grade school 2) Junior High 3) High School

   4) Trade school 5) Bachelors degree 6) Master's degree

   7) EDS 8) PhD/MD.

5. Level: 1. Management 2. Non management 3. Other _____

6. Profession or Job Title _____

The purpose of this study is to examine how hope develops in an individual. The study consists of three questionnaires. Each questionnaire has a color coded computer scoring sheet for ease of administration:

1) The blue questionnaire (158 items) has a fullsized blue computer sheet. Make your marks with a pencil on the answer sheet next to the same number that appears before the question in the questionnaire. Do not mark on the questionnaire .

b) When you have reached the 158 item, and marked your response next to #158 on the answer sheet, you are at the end.

c) Please also fill in the male/female box at the bottom left hand corner of the answer sheet. Mark the M circle if you are male and the F circle if you are female.

2. The pink questionnaire (30 items) has a 1/2 sized red computer answer sheet. Make your marks with a pencil on the answer sheet next to the same number that appears on the questionnaire. Stop after item #30.

3. The ivory questionnaire (60 items) has a 1/2 sized brown computer answer sheet. Make your marks on the answer sheet next to the same number that appears on the Hope questionnaire. (ex.for item #1 you say yes, mark next to item #1, circle 1 or A, if you say no, mark next to item #1, circle 2 or B on computer sheet.) Do NOT mark on questionnaire. Stop after item #60.

Remember please use a PENCIL

Appendix F

CONSENT FORM

1. I freely consent to take part in a scientific study being conducted by Darini S. Arulpragasam, Doctoral Candidate at Michigan State University.

2. I have read the letter of explanation of the study, and I understand the explanation and what my participation will involve.

3. I understand that I am free to discontinue my participation in the study at any time. However, in the interest of contributing to the knowledge of how normal adults develop, I will try my best to finish my participation in the study, if I can do so in good conscience.

4. I understand if I do not complete and return the questionnaires within three weeks, I may be contacted by a member of the research team.

5. I understand that the results of the study will be treated in strict confidence. All my responses will be coded and will remain anonymous. Within these restrictions, results of the study will be made available to me at my request.

6. I understand that my participation in the study does not guarantee any beneficial results to me. If I am an inmate, my participation or non participation will not affect my release date or parole eligibility.

7. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed _____

Date _____

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