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**The relationship between selected personality factors and the
resolution of certain Eriksonian stages in a group of female
elders**

Coates, Katherine Beale, Ed.D.

The College of William and Mary, 1993

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Ann Arbor, MI 48106

**THE RELATIONSHIP BETWEEN
SELECTED PERSONALITY FACTORS AND
THE RESOLUTION OF CERTAIN
ERIKSONIAN STAGES IN A
GROUP OF FEMALE ELDERS**

A Dissertation
Presented to
The Faculty of the School of Education
The College of William and Mary in Virginia

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education


by
Katherine Beale Coates
March 1993

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by

Katherine Beale Coates


Approved March 1993 by



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Dedication

This work is dedicated to Carter,
who has supported me through
innumerable crisis resolutions for
more than thirty years,
and to
Mother and Erin, my models
of Integrity and Trust.

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Acknowledgements

Special thanks are due to each member of my dissertation committee:

Dr. Kevin Geoffroy, whose calm confidence kept me on course from inception to completion of the paper;

Dr. George Bass, who introduced and humanized the process of effective research;

Dr. Barbara Fuhrmann, who exemplified the stringent demands of an academic and the empathy of a counselor.

The study could not have been completed without the assistance of many others. I appreciate:

Dr. Bradley Elison, who was so generous with his statistical expertise;

Mary Bennett, whose typing and editorial question marks focused me on the finished product;

Townes Coates, who believed that I could and should pursue the advanced degree;

All the family and friends who encouraged me along the way;

The administrators, recreation directors, and other staff whose cooperation made the assessments possible;

Each gracious lady who volunteered to help with my project.

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ABSTRACT

This study focused on female elders living in age-segregated communities. It investigated the direction and strength of the relationship of Openness to Experience and Neuroticism to the resolution of Erik Erikson's Trust and Integrity stages, and to a Total Resolution score. The accessible volunteer subjects lived in eleven retirement and/or assisted care facilities in Richmond, Virginia.

Personality domains were measured by the NEO Personality Inventory (NEO-PI). The Measures of Psychosocial Development (MPD), an instrument based on Erikson's theories, was used to assess resolution.

It was hypothesized that Openness to Experience would show a significant positive correlation with each of the resolution scores. Additional hypotheses stated that there would be a significant inverse relationship between Neuroticism and each resolution measurement.

The 62 subjects, who ranged in age from 67 to 99, were assessed individually or in small groups. They completed a brief demographic sheet, the MPD, and the NEO-PI.

Assistance in reading or recording was available if the subject presented vision or motor problems. All sessions were conducted on-site, during November, 1992.

Data from the study were submitted to product-moment correlations to test the hypotheses. In addition, step-wise multiple regression was used, to determine the extent to which personality and demographic variables explained the resolution variables.

Results indicated no significant relationship between Openness and Resolution of Trust or Resolution of Integrity. There appeared to be a statistically significant positive correlation between Openness and Total Resolution. However, subsequent regression equations revealed that Openness did not add significantly to Neuroticism in explaining the variance in Total Resolution. The three Openness hypotheses did not appear to be confirmed.

Correlation data showed that Neuroticism demonstrated a significant, apparently meaningful inverse relationship to each of the three resolution scores. The Neuroticism hypotheses appeared to be confirmed in this study. Other than Neuroticism, no demographic (age, education, marital status) or personality variable helped explain the variance in the resolution scores.

The study's data and observations, combined with the results of previous research, suggested three areas of application: counseling implications, promulgation of

information about elders, and the importance of intergenerational contacts. The specificity and size of the sample was a limiting factor. However, it was posited that the study results could be generalized to other female elders living in age-segregated communities. It seemed possible that females of the same age cohort who lived at home might display similar relationships.

Suggestions for further study included expanding the correlations to individual personality facets and additional Eriksonian stages. Analysis of test items might reveal a pattern of cognitive or affective focus. More demographic information could furnish broader dimensions. Similar studies might be undertaken with male elders, and with females of different economic and educational backgrounds.

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THE RELATIONSHIP BETWEEN
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Chapter 1 - Introduction

Statement of the Problem

This project investigated the relationship of older females' openness to experience and neuroticism to resolution of Erik Erikson's first and last psychosocial stages, and to overall crisis resolution. The research study's question was: What are the direction and strength of relationships between female elders' designated personality characteristics and the degree of developmental stage resolutions?

Justification for the Study

Burdened by physical limitations and confronting a personal future that may seem more inescapably finite than ever before, those nearing the end of the life cycle find themselves struggling to accept the inalterability of the past and the unknowability of the future, to acknowledge possible mistakes and omissions, and to balance consequent despair with the sense of overall integrity that is essential to carrying on.

(Erikson, Erikson, & Kivnick, 1986, p.56)

In the statement quoted above, Erik Erikson, the father of epigenetic theory, and himself a nonagenarian, defined succinctly the unique tension experienced by "elders," as he termed older persons. Conservative projections indicate that by the year 2030 at least 20 percent of Americans will be over sixty-five years of age (Belsky, 1990). These conditions alone suggest a demand for scrutiny of the elderly population. Indeed, the burgeoning population of elders has implications for all sectors of society. It impacts on present and future tax structure, family interaction and responsibility, and the dispensation of health services. No group of professionals is more affected than providers of various therapies, be they medically or psychologically oriented. In particular, counselors are likely to encounter the increasing influence of elders. The lives of older adults will be inextricably woven into younger clients' relationships with parents and grandparents and with the clients' social and financial transactions.

Perhaps most challenging to counselors, however, is the need for direct provision of services to elders; how can older clients be assisted in striking the "balance" of which Erikson writes? With the growing popularity of retirement communities, resident counselors may well become as essential as medical or recreational directors. Additionally, there must be an outreach to the isolated elderly, who often are in dire need of support services.

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Much of the current research with elders deals with their perception of a somewhat nebulous "life satisfaction." It is an appealing thought that individuals or groups could be categorized in terms of satisfaction with life circumstances. However, studies (Dillard, Campbell, & Chisholm, 1984; Krause, 1991; Davidson & Cotter, 1982) indicated that many variables (health, economic status, stressful events, or relationships with family, for instance) impinged on the subjects' perceptions. The most significant correlates of "satisfaction" appeared to be beyond the control of elders. From a pragmatic perspective, it appeared wise to examine subjects' inner resources for resolving problems. This approach implies that older adults can analyze present conflicts in terms of past experiences. It further suggests that elders can use personality characteristics as instruments for change. A sense of control and coping ability can be developed. These premises seem to be corroborated by Hansson's historical review of studies about elders (1989), in which he inferred the need to "encourage older adults to develop their own coping skills and expectations for self-help" (p.30). Further, McCrae (1982), after a study of several hundred subjects, suggested that "older people in these studies cope in much the same way as younger people" (p.459).

Empirical data are important for identifying the problems elders face, suggesting interrelationships of

personality traits and problem resolution, and implying the relevancy of various therapeutic interventions. The present study, then, addressed three problematic areas in a significant segment of the population. First, there was an examination of certain personality domains, using an instrument that had been proven reliable and valid for older adults. Second, an additional assessment offered a sense of elders' prior and current success in resolving personal crises. Last - and most important for therapeutic intervention - a correlation of personality characteristics and resolution strengths suggested ways of implementing helpful strategies.

Theoretical Rationale

Since 1930, when his first work was published, Erik Erikson has covered an astounding range of subjects. He has written in numerous personae: analyst, anthropologist, biographer, play therapist, and social scientist. It was in Childhood and Society, first published in 1950, that Erikson promulgated the epigenetic theory of human development for which he is best known. In subsequent years, he refined and elaborated his idea of Psychosocial Development. Erikson envisioned eight major stages or crises; initially, each stage linked "two seemingly contrary dispositions" (Erikson, Erikson, & Kivnick, 1986, p.33). The crisis of infancy was

delineated as Basic Trust vs. Mistrust, while the second stage (early childhood) included Autonomy vs. Shame and Doubt. Initiative vs. Guilt was the crisis for the play age; the next stage (school age) involved Industry vs. Inferiority. In adolescence, Identity and Confusion were balanced. Intimacy vs. Isolation represented the crisis for young adults, and older adults dealt with Generativity vs. Stagnation. In the eighth and final stage (old age), Integrity vs. Despair was the crisis (Erikson, 1963, 1982; Erikson, Erikson, & Kivnick, 1986). Considering his psychoanalytic background, it is not surprising that Erikson's stages can be envisioned in conjunction with Freud's stages of sexual development (with greater emphasis on adults). Erikson stated that he had originally intended to provide "new illustrations" for Freudian theory. It was his later view that old and contemporary theory could not be compared, but that "without the older ones, newer ones could not have emerged" (Evans, 1981, p.13).

Erikson's theory, however, involved much more than a formulation of psychosocial stages or crises. From the beginning, he highlighted the epigenetic character of the system; "... each critical item of psychological strength... is systematically related to all others.... they all depend on the proper development in the proper sequence of each item... each item exists in some form before its critical time normally arrives" (Erikson, 1963, p.271). Erikson

suggested further that each crisis should be studied "with the total configuration of stages in mind" (ibid., p.272). Also clear, in spite of the word "versus," was his intention to describe stage resolution as a "favorable ratio." Some degree of mistrust, for instance, is necessary for safety and survival. The healthy resolution of the initial crisis finds trust dominating, but not eliminating, mistrust. In similar fashion, each succeeding stage requires a balancing of the seemingly opposing tendencies.

In Insight and Responsibility (1964), Erikson explicated his use of the term crises to describe his eight stages: "To each such unity corresponds a major crisis; whenever... a later crisis is severe, earlier crises are revived" (p.138). He defined crisis in its medical sense: "A crucial period in which a decisive turn one way or the other is unavoidable.... Thus... infancy would culminate in a crisis in which basic trust must outweigh basic mistrust... in old age only integrity can balance despair" (p.139).

Further, Erikson elaborated on the outcomes of "favorable ratios" by labeling the virtue or strength that emanated from successful stage resolutions. In this paradigm, Hope evolved from the balance of trust and mistrust, Will from a favorable ratio of autonomy and shame and doubt, Purpose from initiative and guilt, and Competence from industry and inferiority. As the individual traversed

adolescence and adulthood, the balance of identity and role confusion produced Fidelity; Love sprang from a ratio of intimacy and isolation; Care represented a resolution of generativity and stagnation. In the final stage, Wisdom evolved from integrity and despair. As the author defined it, wisdom

... maintains and conveys the integrity of experience, in spite of the decline of bodily and mental functions. It responds to the need of the on-coming generation for an integrated heritage and yet remains aware of the relativity of all knowledge. (Erikson, 1964, p.133)

Erikson's wisdom, then, involves an openness, a sense of emotional balance, and a trust in self and others. It is bound to all previous stages and virtues - most especially to the hope that balances trust and mistrust: "If, then, at the end the life cycle turns back on the beginnings, there has remained something in the anatomy even of mature hope... which confirms hopefulness as the most childlike of all human qualities" (Erikson, 1982, p.62).

In recent years, as he and his wife reached elder status, Erikson focused special attention on the last of his eight stages. He reiterated that

... Each step (even wisdom) is grounded in all the previous ones, while... the developmental

maturation (and psychosocial crisis) of one of these virtues gives new connotations to all the "lower" and already developed stages as well as to the higher and still developing ones. This can never be said often enough. (Erikson, 1982, p.59)

Certain conclusions may be drawn from Erikson's theory of psychosocial development, as it affects the present study:

1. Originally designed to complement Freudian theory, Erikson's ideas have developed a unique quality and a pervasive influence.
2. Erikson extended the scope of developmental study into cognitive and social realms, and focused considerable attention on adult stages.
3. In psychosocial theory, there is a series of turning points, or crises, in which an individual realizes some ratio between opposing tendencies.
4. Although there is a hierarchy of crises, every tendency is present at each stage; for instance, a child may experience despair.
5. A favorable balance or ratio of tendencies results in the emergence of psychosocial strengths or virtues.
6. The increasing number of elders focuses additional demand for study of older adults' capacity for crisis resolution.

Erikson, speaking of the balancing of integrity and despair, stated:

It is through this last stage that the life cycle weaves back on itself in its entirety, ultimately integrating maturing forms of hope, will, purpose, competence, fidelity, love, and care into a comprehensive sense of wisdom... The elder is challenged to draw on a life cycle that is far more nearly completed than yet to be lived, to consolidate a sense of wisdom with which to live out the future, to place him - or herself in perspective among those generations now living, and to accept his or her place in an infinite historical progression.

(Erikson, Erikson, & Kivnick, 1986, p.56)

Eriksonian theory formed the foundation for the study, as personality traits were related to elders' degree of successful crisis resolution.

Definition of Terms

For purposes of the study, the following operational definitions were used (adapted from Hawley's Measures of Psychosocial Development [MPD], 1988; Leong & Dollinger,

1990; Costa & McCrae's NEO Personality Inventory [NEO-PI], 1985b):

Integrity

Integrity is denoted by a sense of meaning in life. Concomitants are common-sense and dignity. It involves satisfaction with one's accomplishments, and a belief in life's order and continuity. Integrity's opposing factor is Despair, in which there is an overwhelming sense of lost chances, with no time left for starting over. This feeling applies to self, to mankind, and even to life.

Neuroticism

Neuroticism is a domain of normal personality that includes tension and apprehension, low frustration tolerance, hopelessness, shame, inability to resist cravings, and inability to deal with stress.

Openness to Experience

Openness to Experience is defined as a domain of normal personality that is characterized by imagination, sensitivity to aesthetics and feelings, interest in novelty and variety, intellectual curiosity, and tolerance.

Resolution

Resolution is defined as the extent to which positive (syntonic) dispositions outweigh negative (dystonic) factors in an assessment of developmental stages. Total Resolution is the sum or total of resolution scores for eight Eriksonian psychosocial stages.

Trust

Trust, in the psychosocial sense, is characterized by optimism, a sense of coping ability, and an openness to persons, ideas and experiences. It is contrasted with Mistrust, in which perceptions of threat, stress, unpredictability, and doubt result in lack of confidence and suspicion of others' motives.

Research Hypotheses

1. There will be a significant positive relationship between female elders' openness to experience, as measured by the NEO Personality Inventory, and their resolution of the trust - mistrust crisis, as assessed by the Measures of Psychosocial Development.
2. There will be a significant positive relationship between female elders' openness to experience, as measured by the NEO Personality Inventory, and their resolution of the integrity - despair crisis, as assessed by the Measures of Psychosocial Development.
3. There will be a significant positive relationship between female elders' openness to experience, as measured by the NEO Personality Inventory, and the total resolution

of eight Eriksonian crises, as assessed by the Measures of Psychosocial Development.

4. There will be a significant negative relationship between female elders' normal neuroticism, as measured by the NEO Personality Inventory, and their resolution of the trust - mistrust crisis, as assessed by the Measures of Psychosocial Development.

5. There will be a significant negative relationship between female elders' normal neuroticism, as measured by the NEO Personality Inventory, and their resolution of the integrity - despair crisis, as assessed by the Measures of Psychosocial Development.

6. There will be a significant negative relationship between female elders' normal neuroticism, as measured by the NEO Personality Inventory, and their total resolution of eight Eriksonian crises, as assessed by the Measures of Psychosocial Development.

Sample Description and General Procedures for Gathering Data

The target population for the study was white, middle and upper income females, age 65 and older, and living in age-segregated communities. The accessible population was

found in eleven retirement and/or assisted care communities in Richmond, Virginia. There were 62 women in the sample. Volunteers for the study were solicited through posted flyers, announcements in the community news letter, presentations, and individual contact. In individual or group sessions, conducted by the investigator, informed consent statements were executed and the two assessments were completed. In addition to the assessments and consent form, subjects were asked to indicate age, marital history, and educational level completed. Most subjects furnished all necessary data in a single session.

Limitations of the Study

The study was subject to certain limitations, which must be considered in any interpretation and generalization of results:

1. The specific residency of all subjects negated generalization to elders with other living arrangements (i.e., private homes or medical facilities), or to older adults in different geographical areas.
2. Since ability to complete the assessments required a fifth-sixth grade reading level, results were not generalized to elders with severely limited educational backgrounds.

3. The subjects were all Caucasian; generalizations to other racial groups were not attempted.

4. No effort was made to generalize the results to male elders.

5. The use of only two assessments, while justified by time constraints, made any conclusions less definitive. Each variable was measured in only one way. If one of the instruments had an undetected flaw, there was no additional test to point out that deficiency.

6. The comparatively small number of subjects, and their volunteer status, limited broad conclusions and generalizations. As pointed out in a subsequent section, there are certain characteristics common to volunteers which may not be true of the general population.

7. Since the investigator was present at all data collection, her relationship with the subjects could have been a positive or negative factor in their performance. This possibility seemed to be outweighed by the advantage of controlling the subjects' discussion of items with friends, family, or staff.

Chapter 2 - Review of the Literature

Applications of Erikson's Theory

Despite the popularity that Erik Erikson's work has enjoyed, there exists no systematic explication of the propositional structure of his theory of ego identity formation. In fact, many theoreticians, researchers, and clinicians appear to make reference to Erikson's work without having a full sense of the overall structure and unity of it. (Côté & Levine, 1987, p.273)

A review of literature that is relevant to Erikson and elders reveals several types of application. There are analyses, extensions, and inferential statements based on the theory. Empirical research, including attempts to construct assessment instruments, appears infrequently. Several authors suggested ways of implementing the theory; others were openly skeptical about its validity. As Côté and Levine implied in discussing ego identity, there are negligible empirical data. The authors suggested that investigation should focus on such areas as behavioral and environmental factors (as opposed to the subjects'

attitude). Additionally, they called for research in clinical settings, more longitudinal studies, and research focused on women. Finally, the authors cited the need for more specific definition of the identity paradigm being measured, and a comparison with Erikson's definition of ego identity. Although their focus was on a specific Eriksonian crisis, Côté and Levine raised legitimate areas of concern. It is important to note their thesis that it is not the theory itself, but a simplistic interpretation, that flaws most applications of Erikson.

Several contemporary articles referred to Erikson's use of biographical material to explicate his ideas. In a recent essay, Steven Weiland (1989b) employed psychosocial theory as a basis for evaluating current biography: "As a model, few scholars can match Erik Erikson's blurring of the boundaries of psychology, history, and biography" (p.191). On the other hand, Novak (1986) used biography to question the model of epigenesis. He cited other work in adult development, as well as apparent contradictions in Erikson's own work. Novak posited that biographies of Luther and Gandhi reveal "disorder and breakdown" in the epigenetic process (p.194). It appears, however, that Novak's criticism failed to consider a basic tenet of Erikson's ideas; that is, each crisis is contained in preceding and succeeding stages. Further, there seems to be no conflict in the attempts of other theorists to provide additional

adult stages. Indeed, Novak's statement that "Adulthood... requires the intentional discovery of meaning as [its] most urgent task" (p.202) fit nicely with Erikson's view of Gandhi and Luther: "In each historical situation, the man and his time complemented each other" (Hall, 1983, p.30). Of particular interest is Rosel's (1988) application of Erikson's biographical techniques in the case studies of three elderly women. She elaborated on Erikson's paradigm with additional definitions; for instance, "wisdom" is expanded to include "mature knowledge and understanding; folk wit; a detached yet active concern with life; and ... self possession" (p.22).

A few empirical applications of Erikson are found in the current literature. Using data collected by the National Opinion Research Center, Lacy and Hendricks (1980) set out to "test the assertion that developmental paradigms... describe a universal sequence of stages appropriate for conceiving the lifelines of adulthood" (p.92). Their study analyzed the data from 9100 subjects, whom they grouped into cohorts of three or four year age spans. The authors concluded that their analysis of life satisfaction and orientation found "little empirical support for developmental stage models" (p.106). In spite of an effort to conduct a large-scale investigation, the study has conspicuous weaknesses. No research questions were stated, and statistical methods were not described. The findings

that attitude and age were only "minimally related" (p.89) appear unrelated to the broad issue of developmental stages, especially to Eriksonian crises. This lack of relevancy is significant, since Erikson's theory was cited as "the most influential of the developmental perspectives" (p.89).

Much sounder methodology was demonstrated by Ochse and Plug (1986). Their inference from Erikson held that "there will be positive interrelations among all those personality components that have theoretically passed their critical stages" (p. 1240). Strong points of this study included a thoughtful literature review, a careful description of the scale construction and pilot study, and adequate information on the reliability and validity of instruments. The subjects were drawn from South African males and females of varied ages and occupations. These subjects, who numbered 1475 whites and 384 blacks, were volunteers recruited by psychology students. Each subject completed a questionnaire that included statements of Eriksonian concepts, The Index of Well-Being, and a scale of social desirability. For purposes of statistical analysis, level of significance was set at 1%. In view of the care with which the study was designed, and the authors' willingness to couch conclusions as suggestions, this research deserves attention, although generalizability may be limited. The results pointed to validation of Eriksonian constructs, suggesting "that personality dimensions described by Erikson are usually but

not invariably interrelated" (p.1248). However, the study suggested that these subjects did not reach certain crises in the time frame or sequence outlined by Erikson. Gender and racial differences were apparent; for instance, black subjects seemed to evidence "less sense of identity than white subjects" (p.1248). The authors' conclusions implied the importance of intimacy, not just as a correlate, but as a forerunner of identity crisis resolution.

Additional empirical studies dealt with the design of instruments to measure Eriksonian constructs (Rosenthal, Gurney, & Moore, 1981; Spiesman, Costos, Houlihan, & Imbasciati, 1983; Darling-Fisher & Leidy, 1988; Hawley, 1988; Domino & Hannah, 1989). Of this kind of research, only the most recent considered all eight stages. Darling-Fisher and Leidy presented convincing statistics for the reliability and validity of their instrument, but they reported data from a small sample (n=168). As will be indicated in Chapter 3, Hawley's assessment appeared to utilize reasonable norming procedures. Walasky, Whitbourne, and Nehrke (1983) reported on the construction and validation of a status interview for ego integrity. This work defined a continuum of Erikson's last stage, to include four statuses. In addition to the interview, the forty subjects were administered seven other instruments. Interrater agreement was found for the coding of the status interview, and it appeared that the four projected statuses

could be separated.

Other theoretical studies suggest pragmatic applications of Eriksonian thought. Heckenmueller and Keller (1984) promulgated a rationale for Adult Integrated Learning (AIL). They maintained that

While Erikson clearly and explicitly argues for the need for intergenerational interchange, we could find no direct statements in his theory advocating AIL specifically. But, we propose that the theory, indeed, supports such a program and that it does so by virtue of the most essential and prominent aspects of the theory itself. (p.5)

The AIL program deliberately combined a class of young undergraduates and approximately the same number of elder students. The authors proceeded to justify the aims of AIL with Erikson's demands for intergenerational exchange. They suggested "the literature on personal control, stress, and social support is consistent with an age integrated approach to learning, and is a logical extension of Erikson's thinking" (p.7).

Along the same utilitarian path, Burack (1984) presented the psychosocial stages along with Super's career stages. He suggested that both models would do well to consider such additional factors as the effect of aging on work productivity, the importance of individual development,

multiple careers, and the life-work roles of women (p.53). Hamachek (1988, 1990) attempted to define crises behaviorally, thus making Eriksonian theory more usable for therapists. A list of "characteristic behaviors" and "implicit attitudes" was presented for each stage. For example, the attitudes for Integrity are: "1. I have much to be thankful for. 2. I am in control of my life. 3. I accept myself for who I am, and I accept others for what they are" (p.680). It should be noted that Hamachek's lists were inferential, not based on empirical evidence. He submitted them as guidelines for clinical use.

Other articles stated or implied dissatisfaction with Eriksonian theory. Freed (1985) doubted the applicability of the theory to a woman's life cycle. Gilligan (1986) wrote, "That developmental psychology has been built largely from the study of man's lives is not my invention" (p.333). Although Gilligan's work frequently addressed morality, it has been cited by others (Hotelling and Forrest, 1985) to dispute Erikson's ordering of identity and intimacy (p.184). As in studies cited previously, it appears that critics overlook Erikson's insistence that all components do exist at all stages; it is not heresy to suggest that young women may fuse intimacy and identity. The literature reveals neither empirical data nor strong implication that there is significant gender difference in the resolution of early or final crises.

As he traversed the decades of an elder, Erikson himself concentrated on the final stage of development. Interviews with aging persons, detailed in Vital Involvement in Old Age (Erikson, Erikson, and Kivnick, 1986) offered pragmatic insights and models useful for practitioners. As Steven Weiland (1989a) indicated, "While unable to undertake new psychohistoric projects Erikson has still, in his eighties, added significantly to our understanding of the goals of his work as they have been modified within his own late development" (p.254). It should be noted that Weiland's comment referred to The Life Cycle Completed (Erikson, 1982), but they would be equally applicable to the 1986 book. Clearly, Erikson's writing underwent its own epigenesis; each new idea existed in previous thought, while contributing an additional dimension.

In summarizing and critiquing the literature on theory application, several points may be made. First, there is a dearth of empirical data relating Erikson's theories to the elderly; most of what does exist concerns development of assessments. Second, current literature reveals ongoing interest in study and use of the theory. Additionally, Erikson's interest in aging is revealed in his more recent publications. Finally, although flaws do exist, some criticisms appear to be the result of simplistic or inadequate interpretation.

Valid concerns may be voiced, however:

1. As a number of writers mention, Erikson's writing style sometimes makes interpretation difficult. Many analysts attempted to restate or clarify aspects of his theory, and may have diluted or altered the original ideas.

2. Certain crises, especially identity and intimacy, have received more attention in the literature. There is a surprising lack of interest in the first or eighth stages, or in total resolution.

3. Little effort has been made to test Erikson's concept of "virtues" (hope or wisdom, for instance).

4. There is a paucity of Eriksonian studies focused on women, children, elders, non-Caucasians, or gays. At the present time, it is virtually impossible to assess the value of psychosocial theory for specific groups.

Openness to Experience

The construct of openness to experience has been assessed, directly and by implication, in several studies of the aging. In an exploration of life structure among 54 older adults, Priefer (1990) considered the relationship

between life tasks and perception of well-being. Her methodology included enumerating the number and types of tasks, having a subsample of subjects categorize tasks and activities, and relating well-being to the way tasks and activities fit together. She concluded from this limited study that late life tasks were "action-oriented, interpersonal, and growth enhancing" (p.72). Reporting a "significant correlation" between well-being and numbers of tasks and activities, the author concluded that "life tasks which focus on new experiences and knowledge expansion appear to be associated with feelings of positive growth in later life" (p.vii). Birren and Perlmutter (1990), in addressing the facet of divergent thinking as it relates to wisdom, suggested:

The desire to generate a novel solution to a problem appears to be not wholly a matter of the ability to do it.... Risk taking in generating novel or divergent thought can be suppressed in older adults much as it is in restrictive classroom atmospheres of the school years. (p.63)

The authors' thesis that divergent thought is suppressed in elders may impact expressions of openness. This unfortunate possibility may be inferred from McCrae's 1987 study of data from 123 men aged 48-80, a subset of a larger group. The findings yielded a correlation of .42

between openness and total divergent thinking (p.1261). In addition, Gough's Creative Personality Scale (CPS) showed a .44 correlation with openness (p.1262), when all subjects were considered, that is, not broken down by age. McCrae suggested that "it seems reasonable to conclude that openness to experience is a common characteristic of creative individuals" (p.1264), but he called for further research. The author also expressed interest in the fact that openness and divergent thinking were "consistently related" and were "not independent predictors of creativity" (p.1264); he offered several possible explanations, but was pessimistic about determining any causal relationships. This study involved data gathered over a period of years, and the statistical analyses were applied to varying numbers of subjects. Although correlations appear significant, the effects of maturation and change cannot be overlooked. It should be noted that the study was replicated with a small number of women, who also yielded "positive correlations" between the CPS and openness (p.1263).

Other applications of the concept of openness illustrated its importance to adjustment of the aged. Wasson et al. (1984) assessed 83 homebound patients (mean age 77) who displayed psychiatric impairment. Evaluations included interviews, diagnostic impressions, and reports from others. Varied interventions were applied. The lack of specificity in describing assessment and intervention

negates the empirical value of this study. However, it seems significant that the authors concluded, "The openness of the patient and/or significant others to actively collaborate with the team correlated highly with improvement or stabilization" (p.242).

The positive value of openness as a personality domain was demonstrated by two studies of memory in the aging. Finkel and Yesavage (1989), using instruction aided by computer, found this method produced benefits comparable to those realized by subjects with 14 hours' classroom training. Although the differences in group improvement were not significant, the computer-instructed gain scores showed significant correlation with an assessment of openness to experience (p.200). This study's findings were labeled as preliminary, and there were several validity threats to the design, but it appeared that openness may be a significant factor in successfully dealing with novel instruction.

A more substantive study of memory related specific personality traits to three treatment conditions designed to improve face-name recall. Gratzinger, Sheikh, Friedman, and Yesavage (1990), using 156 elders (72% women), created three conditions of instruction, with random group assignment. The statistical analysis of the data from this pretest-posttest experimental design included personality domains from the NEO Personality Inventory (NEO-PI) as covariates.

The difference in improvement among groups did not reach a significant level. In examining over-all performance, using an ANCOVA, the investigators found age to be a significant negative effect, while Openness to Experience was related positively and significantly (p.891). Nevertheless, the authors declined to draw definite conclusions; they did consider their work corroborative of earlier research, linking openness to visual abilities. In fact, although the design seems comparatively free of flaws, conclusions were stated tentatively, and it was suggested that the entire projected sample (n=300) needed to be collected (p.892).

Costa, McCrae, and Holland (1984) examined the relationship between certain personality domains and Holland's typology. Their subjects included 394 male and female college students, adults, and elders. Openness to Experience showed correlations of .33 and .49 respectively with Holland's Investigative and Artistic typologies (p.395). One caveat lay in the tendency of open persons to be more enthused about novel occupations; the expressed interests might not be lasting. The authors suggested, "Personality data may be helpful to counselors when the subject shows a relatively undifferentiated profile" (p.398). Of particular interest to the present study was the writers' belief that "Vocational interests and their associated personality traits are highly stable across adulthood.... The range and variety of interests does not

decline with age" (p.399).

In a study by Carol Ryff (1989), two groups of adults, of whom 69 were between 30-64 years and 102 were 65 or older, were interviewed. Four broad topics subsumed general evaluations of life, earlier life experiences, concepts of good psychological functioning, and perceptions of aging. The analysis of data included reading the protocols, creating coding categories, and checking on interrater agreement, which ranged from .81 to .95 (p.197). Answer content was analyzed and statistical procedures (MANOVAs) were performed. The results of Ryff's carefully designed and documented research produced a conclusion especially relevant to the value of openness to experience: "In describing qualities of the well-adjusted, mature person, older respondents emphasized accepts change" (p.205).

A final study worth noting examined elders' tolerance, a specific facet of openness. Harris and Furukawa (1986) surveyed 72 male and 135 female adults, with a mean age of 69.6. The subjects, who were drawn from senior centers and elder residences, were asked to complete an anonymous questionnaire about obesity. Although the design fell short on certain validity criteria, the findings suggested that these elders' attitudes toward obesity were only slightly negative. This contrasted sharply with the results of many cited studies that used younger subjects. The authors believed that their data might reflect "greater tolerance

and a decreased emphasis on slimness (and appearance in general) as a guide to personal worth" in aging persons (p.14).

The literature on factors related to openness to experience may be summarized as follows: Both commentaries and empirical studies appear to link openness with successful aging. There is a body of literature that deals specifically with the NEO-PI operational definition, but additional studies may be connected inferentially with the construct of openness. Openness has been related pragmatically with elders' skills or interests, such as certain types of memory, use of technology, and vocational predilections.

There are, of course, certain limitations to the study of openness:

1. The term itself is ambiguous, and relies on an operational definition or a behavioral description.
2. Most research has been conducted with comparatively small groups of aging subjects.
3. The research involving analysis of longitudinal data is open to internal validity threats and lack of control.
4. Much research on openness is inferential. Areas

such as divergent thinking or acceptance of change appear to fit the operational definition of openness.

Neuroticism

The issue of neuroticism in older adults falls into several categories, such as the relationship of somatic complaints and neurotic tendencies, depression as a component of neuroticism, age/gender differences, and diagnosis and treatment of neurotic symptoms. Since Costa and McCrae's operational definition is the model for the research, it is appropriate to begin with one of their studies. The authors (1985a) used data from earlier research on male subjects to consider neurotic symptom-reporting. They concluded, "Even within a population of ostensibly normal individuals, there is a clear pattern of association, with individuals high in neuroticism reporting two to three times as many symptoms as do the best adjusted men" (p.22). Reexamining the data after eliminating 106 subjects with pathologically high scores yielded essentially the same linear effect. In addition, Costa and McCrae reviewed previous literature and stated: "In adulthood, at least, personality is extremely stable, and longitudinal studies... have repeatedly shown retest correlations of about .70 for measures of neuroticism.... there is little evidence that ill health leads to permanent changes in

personality" (p.22). The authors also considered the possibility that neuroticism causes illness. Their analysis of four small subgroups from the study led them to state, "Neuroticism appears to lead to complaints and complaints to diagnoses, but neuroticism does not seem to lead to heart disease" (p.23). Costa and McCrae also analyzed the data to explore a relationship between aging and hypochondriasis. They concluded that an increase in somatic complaints was found only in those areas where degenerative processes usually occur (i.e., sensory, cardiovascular, and genitourinary) (p.26).

Ross, Handal, Tait, Grossberg, and Brandeberry (1990) conducted a study comparing a group of elders with a group of college students, equated for gender, health, depression, and education. After administering a self-report assessment of psychosomatic complaints, the researchers found significant differences on the strength or intensity of reported symptoms; the elderly subjects reported lower intensity (p.185). The authors believed that this finding was a confirmation of Costa and McCrae's work. Further, Ross et al. conjectured that elders may adapt to the symptomology of the aging process. They cautioned against any broad generalizations; the subjects were not necessarily typical, and some of the instrumentation had not been normed on elders.

As might be predicted in a literature review of elders'

neuroticism, analyses of depressive symptoms predominated. Blazer, Hughes, and George (1987) surveyed more than one thousand community dwellers, age 60 and above. The authors analyzed their data in light of demographics, symptomology, and reports of life conditions and events. In addition to positing significant depressive subtypes (p.285), the authors reported gender-specific differences. The percentage of females labeled as depressed with anxiety, dysthymic, or having major depression, was disproportionately greater than the percentage of female subjects (p.284). Subsequent work by Blazer (1989), using a variety of data, suggested that the current cohort of elders 65-85 showed a decreased prevalence of depression. Although he discussed possible confounding factors, Blazer believed this could be a valid finding.

An indication of the inefficacy of diagnostic procedures for elders' depression is found in a study by Rapp, Parisi, Walsh, and Wallace (1988). The authors used 150 cooperative and mentally competent male subjects, gathered from an initial random sample of 314 patients 65 and over. The subjects were interviewed and administered several well validated instruments, including the Beck Depression Inventory and the Geriatric Depression Scale. The results of these tests for depression were compared with a blind review of the subject's medical charts. Using the diagnostic criteria of the instruments, only 8.7 % of the

depressed subjects were detected by the non-psychiatric medical staff (p.510). The authors stated, "The detection of comorbid syndromal depression in elderly hospital patients by primary care physicians can be very poor.... self-report scales such as those studied can be used as screening devices" (pp.511-512). Before condemning house staff, it should be noted that this study was conducted in a Veteran's Administration hospital, where the staff's focus might have been on speedy relief of physical symptomology.

Koenig and Meador (1987) surveyed the topic of caring for elders' emotional needs. The authors cited the literature, and offered a thoughtful commentary. They concluded:

As the major initial source of mental health care for the elderly, the primary care physician must be alert to signs and symptoms of mental distress, be competent in diagnosis and management of mental disorders, and utilize all possible resources including psychiatrists, psychologists, and the clergy in their task of delivery of optimal health care to older patients. (p.51)

Several other studies considered the incidence of depression between groups of elders and young subjects. Among these, Molinari and Niederche (1984) compared the responses of 305 undergraduates with 117 elders, and concluded,

The combination of a highly internal orientation

with relative disbelief that powerful others exert control over one's life appears to be particularly related to low depression scores in the elderly.... These results suggest that mental health workers should take heed not to intrude too forcefully into the lives of those elderly whose belief in control over their lives could be weakened by too much "helping behavior" by powerful others. (p.49)

This conclusion appears to corroborate the elder research of Tiffany and Dey (1983), who suggested that high degrees of external control were positively related to depression, hypochondriasis, and conversion hysteria (pp.4-7). Baker (1991) examined the usual presenting symptoms of elders' depression, emphasizing the loss of energy and interest, and a lack of pleasure in living (p.341). He proceeded to contrast the symptomology of elders with that of children, adolescents, and younger adults, in making a case for the unique character of older depressives:

In summary, the presentation of depressive illness varies across the life cycle. Sadness or irritability and poor school performance mark childhood depression. Behavioral changes and substance abuse characterize depressive illness in adolescents.... depressed mood, positive

neurovegetative signs, feelings of worthlessness and guilt, cognitive slowing, and, frequently, diurnal variation in mood and energy level is seen in adults. The older depressed person may be either agitated and irritable, with hypochondriacal complaints, or withdrawn, anhedonic, and asthenic. In older adults, cognitive slowing, difficulty concentrating and thinking, and indecisiveness produce a clinical picture of "pseudementia."

(Baker, 1991, pp.342-343)

Burvill, Hall, Stampfer, and Emmerson (1989) subgrouped 103 patients, age 60 or over, into early- and late-onset depressives. Both groups exhibited significant neuroticism, but the authors cautioned against the inference of causal factors, and suggested that the patients be reassessed when they were not exhibiting depression (p.677).

Still another study focused on possible gender differences existing in elders' psychopathology. Controlling for health and education, Hale and Cochran (1983) interviewed and assessed 53 male and 53 female married residents of a retirement community. The authors found differences on anxiety level and interpersonal sensitivity, with females scoring significantly higher. The combination of factors that best described the female

subjects grouped higher anxiety, interpersonal sensitivity, and lower paranoid ideation (p.649).

A.E. Jorm (1987) synthesized research on neuroticism published prior to 1985. Of particular concern was the possibility of discovering an age/gender pattern in neuroticism similar to that reported in depression. Jorm's meta-analysis revealed that females scored consistently higher in neuroticism. Although there was less male-female difference in children and elders, a significant discrepancy did exist. This finding contrasted with the lack of gender difference in depression at either end of the life span. Jorm cautioned that the comparatively small number of elder studies available limited any conclusions (p.503). He also offered suggestions for apparent differences (i.e., sex bias in scales of neuroticism, or a true difference in gender socialization). The author called for additional studies of sex differences in neuroticism (p.504).

Although the variable of depression figures heavily in available research, Oxman, Barrett, Barrett, and Gerber (1987) and G.D. Cohen (1990) considered other symptomology. Cohen stated, "Psychiatric problems in later life are significant in their prevalence and impact on both mental and physical health in older adults" (p.433). He noted the divergence of supporting data, but cited the occurrence of anxiety, personality disorders, and alcohol abuse (p.438). Not relying on conjecture, Oxman et al. surveyed more than

1000 general practice patients over a period of 15 months; about one third of the subjects were 65 or over. Analysis of the data revealed a decline with age in the symptomology of depression, anxiety, hostility, and interpersonal sensitivity (p.169). Although the authors offered possible explanations for these findings, they cited corroborating evidence that the data were accurate. They concluded, "This study supports the notion that not only depression but psychiatric symptoms in general... are not normal concomitants of aging in primary care patients... When such symptoms are present, extra effort should be made to identify treatable causes" (p.172).

Several studies suggested counseling applications when neurotic tendencies appear in an elderly client. Scogin, Jamison, and Davis (1990) conducted a small-group study in which 30 depressed elders were given structured bibliotherapy assignments. Although it appeared that the subjects were less depressed at the end of two years (p.525), it is obvious that there was no way to control a number of variables. Rybarczyk and Auerbach (1990) reported success in reducing pre-surgery anxiety by interviews utilizing reminiscence; the 104 male subjects were pre- and post-tested, although analysis was focused on only 10 test items. Less encouraging was the report of Harp Scates, Randolph, Gutsch, and Knight (1986), who found no significant reduction of anxiety in small groups of elders

assigned treatment to reminiscence, cognitive-behavioral instruction, and activity (p.143-144).

Although they offered no statistical corroboration, Waller and Griffin (1984) reported success with ongoing groups of depressed elders. Especially noteworthy were their observations of women's groups: "Self-disclosure comes early.... The topics and dialogue tend to be more intensely personal and related to home and family.... attendance at group meetings tends to be short term [compared to men's groups]" (p.310). In spite of such differences, the authors found certain themes in all their elders' groups: "Handling stress, coping with frustration, adjusting to retirement, and fighting loneliness" (p.310).

McCrae and Costa (1986, 1991) also offered specific suggestions for implementing knowledge of personality domains in a therapeutic milieu. An especially noteworthy point was that a high neuroticism score, even on a test that does not claim medical diagnoses, might warrant a consideration of psychopathology assessment. Further, they suggested the value of personality domains in matching a client with an appropriate therapist or technique (p.369).

As has been demonstrated, there is a heavy emphasis in the literature on the role of depression in the neuroticism complex, but no one successfully established a causal relationship. In fact, it may well be that operational definitions cannot separate the two factors completely.

Another consideration lies in the validity of instruments used for empirical studies, and the difficulty in eliminating confounding elements. To the various authors' credit, most of the cited studies included caveats on interpretation. The stability of personality traits across the age-span continues to be of interest, as does the issue of possible gender differences.

A critique of the articles of the preceding section should contain the following points:

1. Instruments used to measure neuroticism vary in their definitions, and some are not adequately normed on elders.
2. Most studies tend to deal with small groups of subjects, or with cohorts that are geographically localized; generalization may be risky.
3. Many studies appear to focus on depression; some facets of Costa and McCrae's definition of neuroticism are largely ignored in the literature.
4. In considering the effects of age or gender, there are insufficient empirical data to justify definitive conclusions.
5. Although inferences may be made concerning medical

or counseling programs, there is a similar dearth of substantive data on therapeutic intervention.

Trust

"The question of old age, and perhaps of life, is how - with the trust and competency accumulated in old age - one adapts to and makes peace with the inevitable physical disintegration of aging" (Erikson, Erikson, & Kivnick, 1986, p.332). In spite of Erikson's emphasis on recapitulation of each crisis in those stages that follow, and a particular focus on elders' realistic trust, this topic has been explored negligibly in the literature. Neither trust as a significant personality facet, nor its successful resolution through life stages, has been the subject of meaningful empirical research. In discussing the value of older learners in the classroom, Wolf (1988) posited, "... however, they [educators and gerontologists] often don't consider the aged to be engaged in development.... The cornerstone of this development is the virtue of trust: trust in oneself, the community, and the next generations" (p.2).

Domino and Hannah (1989) reported on the use of an unpublished instrument, the Inventory of Psychosocial Balance (IPB), that purported to operationalize each Eriksonian stage as a separate dimension of personality

(p.320). With 143 subjects age 59 to 82, the authors administered the IPB and the self-realization scale of the California Psychological Inventory. Multiple regression analyses of the data yielded interesting findings:

Using amount of variances accounted for as a criterion, the results indicate that for men, a greater sense of trust and industry and a lesser sense of generativity and intimacy leads to a greater sense of realization; for women, it is a sense of identity that is most important, and lesser trust and industry lead to greater realization. (p.325)

The authors, however, were cautious about drawing definitive conclusions from their study, citing a number of limitations.

Rotenberg (1990) utilized a modification of Rotter's trust scale to examine the trust beliefs of 140 elders. Forty of that number completed a sociometric rating of their peers, in addition to the trust scale and demographic questionnaire given to all subjects. A factor analysis isolated four facets of the Rotter scale: belief in the dependability of social-legal organizations, fear of being cheated, reliability of specified social groups, and belief in the honesty of other persons. The author found a [modest] positive correlation between income and the first

two factors, but a negative correlation with specific group dependability. Further, it appeared that the relationship between age and the first factor was curvilinear; trust in social-legal organizations lessened in the mid-elderly years and then increased in the 80-89 year group (pp.148-149). Rotenberg suggested that this finding reflected the renewed need of very old persons for an assurance of "the welfare and safety of people in future generations" (p.150).

Since Erikson (1964) linked the successful balancing of trust and mistrust with an emergence of hope, implications from Fry's (1984) study of hopelessness in the elderly seem appropriate. Although development of a hopelessness scale was the main thrust of Fry's work, he stressed the need for elders to form a facilitative relationship with therapist or family (p.330). It may be inferred that the most effective hope-builder is predicated on trust in others and self.

Two interventions that specifically dealt with trust issues were detailed by Anderson (1985) and by Van Wylen and Dykema-Lamse (1990). Anderson's exploratory project involved small-group meetings with elderly women who had indicated that they were lonely. Follow-up six months after the groups' termination indicated that the subjects evidenced "a positive effect on the stated ability to trust and there is also a relationship - albeit weaker - between an increased ability to trust and decreased SBP [systolic blood pressure]" (p.362). It must be noted that Anderson's

trust measurement involved only two items; nevertheless, the study offered questions for more extensive research. Van Wylen and Dykema-Lamse presented an informal report on the value of daily group exploration of feelings in an adult center. They stated, "For many participants it has played a major role in reducing isolation, building interpersonal relationships, and increasing trust, self-esteem, and hope. This has been consistently confirmed through observations by the staff and participants' families" (p.559).

It may be seen that there is a scarcity of sound empirical data regarding the trust issue in contemporary elders. Some of the reported citations require an inference on the writer's part; for example, trust has been operationally defined as having a relationship to hope.

Concerning the studies available, the following critique may be offered:

1. In many cases the reported data are based on comparatively small numbers of subjects.
2. The instruments used for measuring trust appear questionable, in view of their experimental nature or limited items.
3. In the reports on possible interventions with elders, trust has not been the variable of primary concern or interest.

Resolution

The topic of crisis resolution is central to Erikson's theory, and has been treated previously in the paper. Offered in this section is a review of other work directly or inferentially connected to resolution of life crises in the elderly population.

Clayton (1975) posited that the elder who reaches the final stage of development probably had "successfully compromised his way through earlier life crises, never really resolving any of them completely" (p.128). She conjectured that such compromise might be a requisite of experiencing integrity. Van der Werff (1985), although not specifically addressing elders' sense of identity, wrote in a similar vein of "the person who continuously and completely focuses his personal contradictions, without losing himself in exploring them, and who restrainedly commits himself to the impossibility to resolve them" (p.468). Liptzin (1985) was not inclined to agree. In an article that was pragmatic rather than esoteric, he cited the treatment history of an elderly woman; essential to the treatment was a resolution of her crisis of trust and mistrust. Liptzin stated, "I believe that focusing on Basic Trust was essential to the therapeutic work and has also allowed [the patient] to begin to rework and resolve issues from several other developmental stages" (p.201). Equally

specific was Heyman (1984), who commented on several patients, none of whom was initially invested in therapy. Heyman stated, "Despair leading to uncommitted behaviors may be seen throughout the life cycle. In late adulthood, however, the despair has a psychosocial validity unmatched at other ages" (pp.102-103). The author cited the case of an elderly woman who was able to resolve other issues after she had dealt with the despair crisis. Both Heyman and Liptzin seem to illustrate the circular notion of crises and their resolution.

ReVille (1989) stressed the importance of intergenerational activity; her discussion of elders clearly implied the importance of intimacy and generativity in the older adult's search for integrity. Helen Kivnick (1985), who has collaborated extensively with the Eriksons, appeared to suggest that intergenerational relationships were strongly related to resolution of later stages. She concluded, "Grandparenthood seems to facilitate the grandparent's involvement in various of the psychosocial tasks of postmaintenance adulthood" (p.102).

Tarman (1988) and Malde (1988) each considered the use of autobiography as a tool for elders. Tarman's approach was essentially a review of theory, while Malde discussed the results of using autobiography as treatment. In Malde's post-test experimental design, no significant differences were found between treatment and control groups for any of

the dependent variables. The author concluded, "Guided Autobiography may not produce positive changes in the older person's self-concept, time competence, and sense of purpose in life" (p.292). More alarming was a follow-up questionnaire revealing that a few respondents perceived negative outcomes; their despair was intensified, rather than resolved (p.293). The author's reported handling of this issue - and the year's time between group and follow-up - seems questionable. Of the relevant available material, only one study appears to be designed to yield valid results.

Wagner, Lorion, and Shipley (1983) reported two studies dealing with insomnia and Eriksonian crisis resolution. The first of these focused specifically on 122 elders. Using a variety of assessments, the researchers gathered data on death anxiety, life satisfaction, attitude toward aging, internal-external control, and sleep habits. Comparing sleep disturbed elders with non-insomniacs, Wagner et al. found a significant difference, $p \leq .005$, on the total variables, and differences of significance on each individual variable except locus of control (p.599). This study appears to have been appropriately controlled for certain validity threats. However, the choice of instruments to measure integrity and despair resolution reflected the subjectivity of the authors. Using other instruments, particularly one operationalized more directly

from Erikson, might yield different results.

Resolution of psychosocial crises, then, will be debatable until a body of research is amassed using the same operational definitions. Even then, a certain degree of subjectivity creeps in. The fact that a number of authors have proposed assessments is an indication of interest. Erikson's later (1982, 1986) books appear more criteria-specific. Perhaps current attempts at measuring resolution are destined to be more definitive. In any case, it appears that:

1. Little empirical research deals specifically with crisis resolution.
2. In general, instrumentation for measuring resolution reflects great variation in interpreting Erikson.
3. There continues to be interest among therapists in assisting clients with life crisis resolution.
4. The broad subject of resolution is subject to the same limitations of any therapeutic - outcome study; inferences are best drawn from case histories of small groups or individuals, but this method is not likely to yield definitive empirical data or statistical analyses.

Population

The population for the study was females over 65; these volunteers were recruited from retirement communities. Accordingly, this review considers research and commentaries dealing with the elderly in general, with retirement community dwellers, and with women elders specifically. A commentary by Wettle (1991) systematically cited studies to contradict the public image of the aged. The author stated, "By accepting the myths of aging, we buy into the negative and destructive self-fulfilling prophecies of a miserable old age" (p.4). Among the common beliefs refuted by Wettle were that elders are ill and inactive, that they are disinterested in sex, that they are impoverished, and that their decline was inevitable. The author was careful to point out that much observed mental or physical deterioration was remediable by medical treatment, or just by support and encouragement. While not downplaying the true financial dilemma of some elders, Wettle stated that greater numbers of elders have planned for retirement, and are comparatively independent (pp.5-9).

Taking a more problem-centered view, Hull (1990) reviewed literature on the elderly, and concluded:

As the population ages, special needs unique to that group require identification. Older adults and families need an understanding of the aging

process, the role of changes encountered with aging, as well as knowledge of the special problems of the aging. As the elder population grows, demands increase for having their needs met. (p.24)

The author offered specific suggestions for the involvement of counselors.

A number of researchers investigated concomitants of aging. Longino and Kart (1982) set out to replicate a 1972 study of activity theory. The original research had tested hypotheses linking elders' activity with life satisfaction. Longino and Kart, using 1209 subjects from three types of retirement communities, investigated the respective relationships of informal, formal, and solitary activity to the dependent variable. Data were analyzed using Multiple Classification Analysis. The authors stated, "Informal activity, that activity type representative of primary relationships, is positively associated with life satisfaction.... solitary activity ... has the least effect" (p.717). Formal activity, that is, organizational participation, was found to be inversely correlated with life satisfaction to a significant degree. The authors suggested that it is unhappy elders who are most likely to be urged to join formal activities, and proposed that the whole activity theory merited further research.

Schmotkin (1991) has viewed life satisfaction in terms of orientation to past, present, or future, and attachment of importance to each time span. Analyzing data from surveys conducted in Israel, with more than 5000 subjects, the author concluded,

The results concerning Past generally support prior expectations.... older people seem to attach increasing satisfaction to the past.... [Past] never reaches the salience of Present, but equals that of Future in the older groups. This attests to the importance of past accomplishments in allowing the elderly to reconcile themselves to the hardships of the present and their diminishing resources in the future. (Schmotkin, 1991, p.P248)

Russell (1985), after assessing 130 men and women age 60 to 94, indicated that "gender [female], income, and leisure satisfaction were significant correlates of satisfaction with retirement life" (p.4). Unfortunately, in the transcript of her oral presentation, the author did not offer statistical data.

Of continuing interest to investigators is research on the comparative stability of personality into old age. Nilsson (1983) administered the Eysenck Personality Inventory to samples in cohorts age 70, 75, and 79; the 79 year old subjects were members of the 75 year group who were

reexamined after four years. The author compared data from his study with data from studies on 50-year-olds in the same community. This cross-sectional technique seems fraught with internal and external validity questions; a cohort effect counterindicates comparing contemporary 70-year-olds with 50-year-olds. Additionally, the study was carried out in a Swedish industrial town, and one should avoid generalizing results to other populations. Worthy of mention, however, are Nilsson's findings with his septuagenarian subjects. Female subjects on this particular assessment scored significantly higher than males on neuroticism (p.206). The author offered this finding without suggesting the possibility of confounding factors. In terms of implications for further study, two interesting significant findings emerged: "The 70-year-old female survivors scored higher on Extraversion than those who died within the following 5 years and 75-year-old male survivors scored lower on Neuroticism than those who died within the following 4 years" (p.209).

Heckhausen and Baltes (1991) considered the stability of inner controls. They collected data from 100 adult subjects in three age groups; all were residents of West Berlin. The authors found that across age groups, their subjects had a sense of being able to control a number of desirable developmental attributes (p.P170). The authors also stated that "many young and middle-aged adults - but

not old adults - viewed developmental losses occurring in advanced age as relatively low in controllability" (p.P169).

Whereas Heckhausen and Baltes began with the premise of psychological change, others hypothesized that personality in adulthood is stable. Costa et al. (1986) examined a large national sample (N=10,063), later comparing the results with data from a smaller volunteer sample. The authors considered as significant only p values less than .001 (p.146). Although younger subjects appeared somewhat higher in neuroticism, openness, and extraversion, the authors report that "the magnitude of the effects is very small" (p.147). The figure illustrating the scores shows, in fact, almost flat curves. Costa et al. concluded:

It would be a grave mistake to imagine that the flat curves... imply that there is nothing to learn from the study of aging and personality. The personality stability they attest to is as intriguing and informative as any pattern of change would be.... An understanding of the mechanisms of stability would not only provide important insights into personality itself; it would also provide a basis for interventions for therapeutic change. (p.148)

Costa and McCrae (1988) reported further analysis of data from subjects in the Augmented Baltimore Longitudinal

Study of Aging. It is not clear whether some of these subjects were the same volunteers who figured in the 1986 study. In any case, this research added the dimension of spousal rating of personality domains. In this study, analysis appeared to reveal significant increases in some personality facets (p.858); however, the authors noted the lack of a "replicated pattern of effects ... in cross-sectional, longitudinal, and cross-sequential analyses" (p.859). Costa and McCrae believed that their stability theory of personality was corroborated.

Field and Millsap (1991) were not sure that they agreed. They posited that "the only real test of stability must include ratings made on two occasions by 'naive' observers" (p. P300). The authors used subjects from the Berkeley Older Generation Study; members of this group have been interviewed periodically since 1929. They obtained data from 51 women and 21 men, interviewed in 1969 and again in 1983. Their findings indicated that satisfaction and intellect maintained stability, extroversion declined somewhat, and agreeableness appeared to increase. Field and Millsap concluded:

These findings can help shatter the common stereotype that personality 'rigidifies' in old age, or that people become more conservative or cranky as they age. Our primary finding was of

stability, and where there was change, each trait followed its own trajectory. (p. P307)

McCrae and Costa (1988) considered the possible influence of widowhood on various psychological domains. Their sample was drawn from participants in a previous survey; this allowed the authors to compare those widowed at the time of the original data collection, those widowed within the 10-12 year intervening period, and those who were still married. ANCOVAs were conducted, correcting for age and education effects. No variable was significantly different among the three groups of men who were 65-74 in the initial survey; the over-65 women differed only in the better self-rated health reported by those widowed before the initial survey (p.134). While admitting a number of potential threats to the validity of the results, and stressing that the research in no way minimizes the deleterious effects of widowhood, McCrae and Costa suggested that citing this demonstrated resilience of the bereaved may enable counselors to encourage their clients (p.140).

Others whose research or commentary addressed therapeutic intervention include Hunter, Linn, and Harris (1982), who examined the variable of self-esteem in 250 elders. Even with health held constant, the subjects showed significant correlation between measured self-esteem and four variables: "Elderly with low self esteem reported more

somatization, more anxiety, more depression, and a greater external control orientation " (pp.121,123). The authors suggested that intervention and preventive measures were indicated for many elders (pp. 124-125). Small and Jarvik (1982) noted and attempted to challenge the medical community's bias toward depressed elders. The work of Gallagher-Thompson, Hanley-Peterson, and Thompson (1990) with 91 older depressives suggested that "the elderly who benefit most from therapy initially are able to maintain their therapeutic gains about as well as younger depressed patients" (p.373).

Wolinsky (1985) suggested that consultation, in the form of a whole-family interview, might be a particularly effective way of helping elders and their families handle problems, and might facilitate additional therapy if it were needed. She offered an outline of strategies for such a meeting (p.543). Although Wondolowski and Davis (1988) offered no statistical data, their analysis of the ideas of 100 men and women, age 80 and above, has strong implications for therapeutic encounters. Especially significant was their emphasis on pretending and imaging; they suggested that the practitioner's reality - focused explanations were not necessarily effective. The authors believed that their study demonstrated the elder's need to explore beyond the basic facts, finding personal meaning and implications for life enhancement (p.269).

In studies of retirement communities, M.A. Cohen, Tell, Batten, and Larson (1988) offered a well-stated introduction to the Continuing Care Retirement Community or CCRC, describing the usual format of independent apartments, with health services guaranteed (p.637). They stated, "Although only a small percentage of elderly people are enrolled in CCRCs today, the number of new communities being planned and developed is increasing by about 15% to 20% per year.... There is greater diversity in CCRC sponsorship and important changes in the types of services that are offered" (p.637). The authors attempted to survey some 2100 elders who were residents or on the waiting list of two CCRCs. Of those polled, 71% responded (p.637). The respondents' stated reasons for joining the residential community showed consistency across age cohorts and time of enrolling; most important were such factors as "access to medical services, access to services to maintain independence, fear about being a burden... access to nursing home, financial protection... [and] having staff nearby" (p.639). The cost of entering and maintaining residency was found to cause increasing worries. However, almost half of the subjects had no significant concerns (pp.641-642).

On the other hand, when Tell, M.A. Cohen, Larsen, and Batten (1987) questioned those in the same waiting list group cited above, describing a less expensive Life Care at Home (LCAH) concept, they found that almost half of those

surveyed expressed an interest in this option (p.506). It might be inferred that in this select group of subjects, the retirement community was not necessarily a whole-hearted choice. These results also confirm some subject's financial concerns, although this group was disproportionately well-off compared to the general population.

Osgood (1982) investigated the degree of social integration that occurs among residential community dwellers. Using observation, interviews, and study of documents, she investigated three disparate retirement communities. She concluded that "age per se formed the basis of integration for residents. Members from the same cohort share a common past ... and are at the same stage in the life cycle" (p.14).

Lest one assume that adjustment to elder peers is comparatively easy, Carp's (1985) study of public housing residents specified some adjustment criteria. Assessing and interviewing a total of more than 400 subjects, including an eight-year follow-up on 127 of them, Carp drew the following conclusions:

All partial correlations for the personality traits were significant and meaningful in size.... Extraversion, congeniality and neuroticism were consistently relevant to resident's happiness and to perceptions of residents by their peers and the staff. Nosiness/gossip was related negatively to

peer perceptions. (p.550)

In a qualitative study of 36 retirement communities, varying in size, location, and facilities, Streib, Folts, and La Greca (1985) considered the desire for autonomy among residents. Foremost among their findings were these: The majority of residents seemed content to let management or peers make decisions, unless some crucial matter arose; at that juncture, residents seemed ready and able to act. It appeared that with the exceptions of a few politically-oriented residents, most community dwellers just wanted to know that they could take action if needed. With the death of leaders, new residents and greater numbers of women might assume leadership roles in the residential community (p.408). The apparent apathy to personal involvement in policy could be detrimental to residents in the long run.

Slivinske and Fitch (1987) used a pretest-posttest control group design to study 63 residents of three retirement communities. Intervention for the treatment groups included education, physical fitness classes, and conferences. The thrust of instruction was in stress reduction and greater personal control. It appeared that the treatment group demonstrated significant gains in perceived control and wellness. Disturbingly, the control group actually revealed negative changes. The authors speculated that this deterioration might be a factor in retirement community life; they did not seem to consider a

possible demoralization factor among their controls (pp.179-180). Slivinske and Fitch did enumerate a number of limitations to their study, of which attrition was particularly significant (p.180).

Two additional studies of retirement community dwellers have more than passing interest in defining the social relationships of residents. Weinstein and Rosen (1988) compared elders in an age - segregated community with a group of residents in the mainstream. A total of 314 subjects responded to a survey mailed to 600. While the results appeared to demonstrate that the age-integrated subjects were significantly higher in sexual interest and activity (p.267), the low rate of responses to the survey seems to negate any definitive conclusions. Still, it is interesting to consider the results in view of research by Alexander and Duff (1988). The authors interviewed 260 residential community dwellers on their drinking habits and degree of social interaction. Comparing their group with Census Bureau statistics, they found that their subjects included a significantly larger number of "regular drinkers"; ie., one or more drinks per week. The difference in percentages was reported as 46% in those interviewed, and 28% in the census. Drinking habits showed a definite positive relation to social interaction. The authors suggested that "wide spread social drinking is part of the social fabric of these retirement communities" (p.635). It

might be inferred from the two studies just cited that interpersonal factors are important to many elders living in retirement communities.

The last main group of population studies addresses elderly women. Mellinger and Erdwins (1985) investigated the relationship of personality, age, and career choice in 220 women, of whom 60 were age 60 or above. All subjects were assessed with a variety of standard instruments. MANOVAs and factor analyses revealed some significant findings: "The over-60 age-group could be characterized as showing less need for achievement but having a greater need for affiliation than the younger women" (p.507). The older subjects also presented higher scores on femininity and lower levels on independent achievement. As the authors noted, it was not possible to eliminate the contamination of cohort effects in interpreting these data (p.513).

Redfoot and Back (1988) explored elder women's attachment to personal possessions. The authors found that their 40 subjects, who were interviewed after moving into retirement facilities, differed significantly in meanings attributed to possessions. These differences occurred according to the "social class" to which the authors assigned them initially (p.161). Although this assignment was inadequately explained, it appears that it did serve to distinguish groups. Biographical or historical references were attached predominately by so-called middle class

subjects, while those labeled lower- or working class retained items for immediate needs or activities (p.164). The authors suggested that these findings had implications for studying the elder's tendency to review her life. Field (1982) had analyses and ratings performed on transcripts of interviews with 44 women; these tapes spanned 40 years. She concluded that "There is no evidence for stability of social relationships over time... stability tends to be the rule, however, for the child and family oriented dimensions, where 75% of all the women's correlations are .40 or better" (p.10).

Roberto (1989, 1992) considered modes of coping among older women with physical problems. Her earlier study, of 115 women with osteoporosis, revealed that use of medication, heat, or lying down were common remedies (p.114). Giving up housework, using a brace or cane, and limiting activities were examples of stress-producing adaptation (p.115). According to Roberto, 65% of the subjects stated an interest in some type of support group (p.118). Roberto's 1992 study focused on 101 women with broken hips, and found that the subjects most commonly sought social support as a means of coping (p.P25). Those subjects who scored high on external locus of control were likely to use distancing or escape-avoidance (p.P24); the latter means of coping appeared to be predictive of depression (p.P25).

A number of studies have addressed the effects of marriage or parenthood on older women. Longino and Lipman (1982) interviewed almost 400 women, subgrouped into presently married, once married and never married. They concluded, in terms of informal support: "Women who had never married received less emotional, social and instrumental support from their families.... [for the married women] it was the presence of children - even just one child - that generated greater social and emotional support from her family" (p.294). Rubinstein, Alexander, Goodman, and Luborsky (1991) examined the relationships of the older childless woman who had never been married. Of the 31 ladies interviewed, six described a "quasi-parental" relationship; eight spoke of a close companion of the same gender and generation; 29 of the subjects listed significant friendships, almost all female (pp.S274-S275).

In considering the female elder, it is informative to note the commentary of Dean Rodeheaver (1987), after reviewing gerontological literature:

Feminine qualities of relatedness and the lifelong interdependence of women's lives with others' may be ignored or devalued when old age policies are based on the assumption that independence is necessary.... The aged share the popular perception that the family is deteriorating, and if they believe that the family may no longer be

counted on for care, they have little choice but to adopt a personal stance of self-reliance. Thus, the social myth of the decline of the American family may be accompanied by a personal myth of the need for independence. (p.745)

Data from a number of studies on the elderly, including residents of retirement communities and specific groups of female elders, serve to focus attention on the population under investigation. A critique of the reviewed articles contains the following points:

1. Generalizations about elders are rampant, but studies tend to disprove certain theories; debates and myths continue to proliferate.
2. Most of the empirical data available are subject to validity threats and limitations in interpretation. In most cases, the investigators have delineated cautions about generalization.
3. One general observation that appears to have extensive corroboration is the comparative stability of many personality traits over the life span. This is a crucial finding, for it implies that an elder's radical personality change signals a medical or emotional crisis.

4. In planning studies with elders, direct assessment or interview appears more effective than mailed questionnaires.

Relationship of the Literature to The Study

The preceding sections of this chapter have considered analyses, investigations, and commentaries on the theoretical base, on variables of the study, and on the population from which the study subjects were drawn. Certain inferences may be made from the available literature:

1. Interest in the elderly population is significant. Standard listings of books, journal articles, and dissertation topics contain extensive citations.
2. Focus on developmental and personality factors in the elderly is on-going; elder research is currently appearing on a regular basis.
3. The percentage of elderly in the population is growing; by implication, there will be a significant demand for therapists, developmentalists, and educators who specialize in older adults.

4. There will be increasing need for a sound knowledge base in a variety of elder concerns.

5. The variables in the study have received comparatively little attention, although they appear to have positive value for an understanding of elders.

6. None of the surveyed literature has dealt with the relationship between this study's personality and resolution variables. It appears that this is a challenging field for investigation.

Chapter 3 - Methodology

Study Population

As previously noted, the target population consisted of Caucasian females, age 65 and over, middle to upper income, who resided in age-segregated communities. The sample was drawn from an accessible population of residents in the Richmond, Virginia area.

A total of eleven residential communities was represented in the study. The number of elders in these age-segregated residences ranged from 50 to more than 900. Six of the facilities have the support or sponsorship of specific religious denominations, although they are non-sectarian and non-discriminatory in their admissions policies. Four communities are owned by private corporations. One is run by a fraternal order, and admits only members of that organization, their wives, or their widows. One of the communities with a religious affiliation is rent-subsidized by the Department of Housing and Urban Development. Two of the private residences offer full time assisted care as required. The majority of the other communities have on-campus health care beds, to which a resident may transfer.

Although some of the facilities have financial assistance available, it is safe to say that most of the accessible sample were in living situations that require a middle-to-upper income bracket, and some degree of personal or family financial planning. The majority of subjects lived in those continuing care facilities that have a sizable entrance fee (\$50,000 and up) and significant monthly rent. As might be expected, women far outnumber men in each community. Planned activities are an important aspect in every residence.

The target population was comprised of mentally-competent female residents of age-segregated communities. The accessible population was determined by the efforts of the investigator and staff persons to recruit in the specific communities.

In addition, the study subjects were volunteers. Borg and Gall (1989), in synthesizing the earlier work of Rosenthal and Rosnow, cited certain tendencies of volunteer subjects. Better education, greater intelligence, greater sociability, higher social status, and greater need for social approval (p.228) were factors that could impact on a subject's responses; those factors were generally applicable to these subjects. On the other hand, the bulk of research done on elders has used volunteers. In comparing the volunteers of this study to respondents in previous investigations, it appears that the accessible subjects were

quite similar. One factor that was especially notable in this sample, however, was the subjects' sincere interest in helping the investigator with her project.

Data Gathering

Data gathering was preceded by a limited pilot study, in which a small number of elderly females completed all parts of the assessment. These subjects were asked to comment on clarity of instructions, length of time required, and degree of difficulty in working with test materials. Additional subjective reactions to the assessment content were solicited, also. This feedback was used by the investigator in the study itself.

Prior to the assessment, the researcher contacted the chosen communities' activities directors or administrators for suggestions about recruiting subjects. Generally, posted notices and newsletter items were the initial means of seeking volunteers. In five instances, the investigator made presentations to potential volunteers. In five other facilities, the administrator or activities director approached possible respondents. At one community, a mutual friend made the contact with a resident, who in turn recruited others. At several of the facilities, subjects encouraged their friends to volunteer.

Using a list of potential subjects, the investigator

made telephone contact and set up an assessment appointment. Subjects were assessed in groups no greater than five - or individually, for persons presenting vision or mobility problems, and those with scheduling conflicts. In most cases all subjects in a given community were assessed within a five day period, to minimize discussion of the procedures among subjects. When the investigator met with the potential subjects, she briefly discussed the study. The following points were among those stressed in the consent form (Appendix A):

1. The study sought to investigate the relationship between personality characteristics and developmental stages of childhood and adulthood.
2. The focus of the study would be on group data.
3. The demographic questionnaire and assessments would be presented in a coded packet; no names would be requested on the packet. There would be no way that the investigator could match consent form names with code numbers.
4. The subjects would be free to withdraw during the assessment by so indicating on the cover sheet.

5. The investigator would be available at a later time to discuss the study purposes and results.

6. The subjects' participation would be a meaningful contribution to elder research.

After an explanation, the consent form was signed. As the forms were collected, packets of the demographic sheet and tests were distributed. The investigator went over the directions and was present throughout the test period. Inter-subject discussion during the testing was discouraged; the investigator addressed any individual's confusion. A break between tests was encouraged. In those cases where a subject exceeded the estimated testing time significantly, she was offered reading or writing assistance, reminded of the option to withdraw, and/or offered another time to complete the testing. Several subjects exercised one of these choices. At the tests' conclusion, the materials were collected. The subjects received a memo (Appendix A) noting the investigator's phone number and encouraging questions.

Individual sessions were scheduled when a potential subject noted that she would need assistance, or when the subject was unable to attend the scheduled group assessment. In those sessions, the investigator read the test items and recorded answers, if the subject presented visual or motor problems. Even when the person was able to work

independently, the investigator remained in the room.

Instrumentation

The assessment packet contained three elements. A brief questionnaire (Appendix B) asked the subject to indicate her age. In addition she was asked to check her highest level of education: less than high school diploma, high school diploma, at least two years of college, graduate studies. The investigator chose to categorize college experience in terms of a minimum of two years because two year college programs for teaching were common for this age cohort. It was felt that this allowed for the effects of the college experience, without the demand of a four year degree program. Finally, she was requested to give current marital status, choosing one or more categories: presently married, never married, previously married - divorced, previously married - widowed, previously married - widowed and divorced.

NEO Personality Inventory

Two instruments were utilized for the study. The first was the NEO Personality Inventory, or NEO-PI (Costa & McCrae, 1985). This assessment has been used extensively with an aging population.

The NEO-PI, according to its authors, is an assessment of "normal personality traits that has demonstrated its

utility for research applications. Data... suggest... potential for use in clinical, industrial, and educational settings" (Costa & McCrae, 1985 b, p.1). This self-report measure yields scores for five domains and 18 facets of personality. The two domains of interest in this study were Neuroticism and Openness to Experience. The subject scoring high on the Neuroticism domain is likely to be a worrier, nervous, insecure and emotional, inadequate and hypochondriacal. A low scorer is likely to be relaxed and calm, self-satisfied and secure, hardy and unemotional. Persons high in the Openness to Experience domain will probably be curious and creative, original and imaginative, non-traditional, and interested in many areas. The low-scorer is more likely to be conventional, down to earth, unartistic, and unanalytical. She probably has narrow interests (p.2). The assessment consists of a test booklet with highly legible type, and an accompanying answer sheet. Each statement has a continuum of five possible answers, ranging from "Strongly Disagree" to "Strongly Agree," with the negative response on the left. The NEO-PI is a self-report design that should require little administrative explanation. There are built-in cues to keep the subject in the correct answer column. The special utility of the instrument appears to be its applicability to elders, and its wide use with volunteers.

Although the original norming was done as part of an

all-male study, subsequent studies included women. The authors reported that their subjects showed little difference by gender on the domains of Openness or Extraversion, with women scoring somewhat higher in Neuroticism. Their studies led Costa and McCrae to conclude that "intelligence and education should not influence the validity of scale scores" (p.38). Costa and McCrae reported internal consistency of .93 for Neuroticism and .88 for Openness in data taken from a study of 290 women. Spousal ratings were also similar. Retesting 31 men and women after six months yielded a test-retest reliability of .87 for Neuroticism and .86 for Openness (p.29).

The NEO-PI has been correlated with various personality measures, demonstrating a strong correlation of the Neuroticism scales of the NEO-PI and the Eysenck Personality Inventory, and of Openness on the NEO-PI with thoughtfulness on the Guilford-Zimmerman Temperament Survey (p.30). Correlations of NEO-PI facets with MMPI factors indicated significance at the .001 level for Neuroticism; certain Openness facets showed similar correlations of significance with intellectual interests. Both Neuroticism and Openness yielded significant negative correlations with the MMPI masculinity-femininity scale (Costa, Busch, Zonderman, and McCrae, 1986, p.647). In 1980, McCrae and Costa had two judges classify subjects' Loevenger sentence completions, and found a correlation of .66 between the raters' judgment

of openness and a total openness score (p.1187) on a forerunner of the NEO-PI. The authors' report in the Manual (1985b) indicated evidence of consensual validation of traits on the NEO-PI. Both spousal and peer ratings have yielded correlations with self-report that were significant at the .001 level (pp.32-33).

Construct validity was established by previously cited correlations with other instruments, and by correlations with such variables as life satisfaction, perception of health, and vocational interests (p.34). Of particular interest was the absence of significant correlation of Openness to life satisfaction; the authors concluded that "open individuals experience both positive and negative feelings more keenly.... they are neither more nor less happy than closed individuals, although they would seem to have a richer and more differentiated emotional life" (pp. 34-35).

References in the NEO Personality Inventory Manual (Costa & McCrae, 1985b) and the NEO-PI/FFI Manual Supplement (Costa & McCrae, 1989) are indicative of a large number of investigations by the authors. Although they appeared to be conservative in their data generalization, it is to be expected that Costa and McCrae would exhibit confidence in their instrument. The opinion of objective parties is thus particularly important. One such review (Leong & Dollinger, 1990) summarized the authors' numerous studies and discussed

the history and possible applications of the assessment.

Their critique was generally favorable, concluding:

"Overall, we give the NEO-PI an enthusiastic recommendation for use in research and for thoughtful use in applied settings" (p.537). In another independent review, Hogan (1989) praised Costa and McCrae's use of adult populations for development and norming, and the test's consistency with our knowledge about traits. Hogan also cited favorably the authors' data-based assertions that scores were not rendered ambiguous because of social desirability. While lauding their "search for psychological meaning" (p. 547), he did note the ambiguity of the Openness scale.

Measures of Psychosocial Development

The Measures of Psychosocial Development, or MPD (Hawley, 1988), is an instrument specifically designed to assess resolution of Erikson's crises, or stages. It is intended to measure constructs of normal development; the MPD does not purport to assess psychopathology, nor should it be used diagnostically (p.3). However, it is "sensitive to differences in overall psychosocial adjustment" (p.2). The test format consists of a booklet containing 112 statements or descriptions, and an answer sheet. There are five response options, ranging from "not at all like" to "very much like" [the respondent]; the negative response is on the left. The print size appears adequate. For the purposes of this study, analysis utilized resolution scores,

which are derived by subtracting scores on the less desirable trait (e.g., mistrust or despair) from the more adaptive trait (e.g., trust or integrity). Total resolution is similarly obtained, by finding the difference between total positive and negative resolution scores.

In the present study, focus was on the resolution of trust and mistrust, integrity and despair, and on total resolution. Persons high in trust are likely to be relaxed and calm, generous and optimistic. They have a sense of being able to cope, and are open and receptive. In contrast, those high in mistrust perceive inconsistency and stress in the world; they have little confidence in others or themselves. They are likely to be suspicious and wary. Subjects high in ego integrity have a sense of satisfaction about their lives. They attach meaning and significance to their accomplishments. On the other hand, subjects high in despair have a sense of futility about themselves, and life in general (pp. 9-10). Since total resolution is derived from all stages, it is impacted by resolution of each of the eight crises. Obviously, a skewed resolution score on even one stage affects the total resolution. This, however, is not inconsistent with Eriksonian epigenetic theory.

The MPD was normed on data from 2,480 subjects, age 13 to 86. Compared to 1980 census demographics, the norm group was high in females and in Caucasians. The majority of subjects lived in the South. More than half were married,

and 55% had more than 12 years' education. The norm group appears quite comparable to the target subjects for this study (p.7). However, a further breakdown by age (Roid & Ledbetter, 1987) showed subjects 60 and over to be underrepresented in the sample. Wording of the test items relied heavily on Erikson's descriptions. Content validity was tested by seeking a consensus of expert judges' ratings. The arrangement of test items generally moves from objective to personal.

Test-Retest reliability, with a 2-13 week interval, showed a correlation of .78 for the resolution of trust and mistrust, .85 for the resolution of integrity and despair, and .87 for a total resolution. It should be noted that a rather small sample was used for this correlation. Internal consistency appears adequate, with alpha coefficients of .65 for trust, .72 for mistrust, .74 for integrity, and .81 for despair (p.15). Hawley (1988) reported tests of construct validity, considering both convergent and discriminant aspects. The author correlated the MPD with two other assessments of Eriksonian stage development, using an intricate matrix design with a multitrait-multimethod approach. As expected, the monotrait-monomethod block (retest reliability) yielded the highest convergent correlations; i.e., .75 - .85 for positive validity scales and .67-.89 for negative scales. Finding correlations for heterotraits "provided strong internal evidence for the

discriminant validity of the MPD" (p.17).

Comparing the MPD with each of two other instruments yielded correlations of .46 - .78 for the MPD and the Inventory of Psychosocial Development, and .28 - .65 for the MPD and the Self-Description Questionnaire (p.17).

Additional analyses revealed requisite patterns for all positive scales and most negative scales. Hawley concluded that her three-phase test corroborated the convergent and discriminant validity of the MPD (pp.16-19). Longfellow (1989) examined the factorial validity of the MPD and reported: "Two factors were consistently identified that accounted for a significant portion of the variance. Such a finding is supportive of the factorial validity of the MPD" (p.164). However, Longfellow later voiced concern "regarding the low levels of unique contribution by variables due to their high communalities [sic]" (p.170). It would seem that this sharing of common themes is inevitable in view of Eriksonian theory, which clearly notes the interrelationship of the eight stages.

The previously cited study by Roid and Ledbetter (1987) reexamined the norming data from the MPD and concluded that "the majority of the positive scales... showed positive relationships with age. This provides construct validity evidence for the MPD as well as verifying the apparent developmental nature of the Eriksonian dimensions measured by the instrument" (p.6). While recognizing the

comparatively small number of elderly subjects, the authors noted "the repeated finding that elderly subjects show a decrement in scores on many of the Eriksonian dimensions" (p.7). A visual analysis of the scatterplots seemed to indicate that this diminishing score trend was barely perceptible in the trust and integrity dimensions.

Ledbetter (1991) pursued an examination of the MPD normative data. The author utilized first a confirmatory factor analysis, considering a division into the two factors of total positive and total negative scores. Additionally, he assumed that the "same-stage positive subscale would be highly negatively correlated with the negative subscale" (p.22). Thus Ledbetter tested the MPD with 2-factor and 8-factor bipolar analyses. For group 4 (age 50-86) females, both conceptualizations demonstrated "goodness of fit," although the 2-factor model was just barely acceptable. The author concluded, after analyses across age groups:

These results provide evidence for the construct validity of the MPD.... The tendency for the positive and negative stages to cluster together indicate [sic] that a positive or negative resolution of personality stages is suggestive of similar resolutions in both prior and subsequent stages. Similarly, although a weaker relationship for most age groups, same-stage positive and negative scores are negatively

related as would be suggested by the oppositional nature of the two same-stage measures (e.g., Trust vs. Mistrust). (Ledbetter, 1991, p.91)

The construction of Measures of Psychosocial Development appears to have followed a rigorous course, in which persons with psychometric expertise were intimately involved at every step. Because it represented Eriksonian theory with accuracy, it was the instrument of choice for a number of researchers in developmental theory. On the other hand, its specificity limits research applications. Hawley has prudently restricted her suggestions for use of the instrument.

Research Design

The research utilized a correlational design, in which each of the personality variables, openness and neuroticism, was related to the variables of trust-mistrust resolution, integrity-despair resolution, and total resolution of eight positive and negative poles. Additionally, the variables were considered in combination with demographic factors.

Specific Hypotheses

1. There will be a significant positive relationship

between female elders' openness to experience, as measured by the NEO-PI, and their resolution of the trust-mistrust crisis, as assessed by the Measures of Psychosocial Development.

2. There will be a significant positive relationship between female elders' openness to experience, as measured by the NEO-PI, and their resolution of the integrity-despair crisis, as assessed by the Measures of Psychosocial Development.

3. There will be a significant positive relationship between female elders' openness to experience, as measured by the NEO-PI, and their total resolution of developmental crises, as assessed by the Measures of Psychosocial Development.

4. There will be a significant negative relationship between female elders' neuroticism, as measured by the NEO-PI, and their resolution of the trust-mistrust crisis, as assessed by the Measures of Psychosocial Development.

5. There will be a significant negative relationship between female elders' neuroticism, as measured by the NEO-PI, and their resolution of the integrity-despair

crisis, as assessed by the Measures of Psychosocial Development.

6. There will be a significant negative relationship between female elders' neuroticism, as measured by the NEO-PI, and their total resolution of developmental crises, as assessed by the Measures of Psychosocial Development.

Data Analysis

The hypotheses of the study were tested using the product-moment correlation coefficient. For purposes of analysis and determining statistical significance, alpha was set at .05. In addition, multiple regression was used to determine the relationship between each of the three criterion variables and a combination of personality and demographic variables (i.e., neuroticism, openness, age cohort, level of education, and marital status). The resulting data have been used to shed light on the hypothesis test results, and suggest future areas for research. In the study design, the object was to consider relationships of possible significance. In no way could this design yield causal factors. The ultimate goal of the study was to balance findings with previous investigations, and to explicate practical applications of the findings.

Ethical Considerations

In this final section, possible ethical implications of research are considered. An effort has been made to show how the study design responds to each possibility, in terms of subject treatment and data interpretation.

1. Subjects may not be adequately informed about research in which they are involved. In the study, this danger was countered by informing the subjects orally of the investigation's purpose; including a statement of purpose and ethical safeguards in the consent form; assessing only those subjects who executed a written consent.
2. It is possible that confidentiality may be breached in research. This was prevented by coding the assessment packets so they could not be matched to subjects' names, and by reporting data only in terms of groups or sub-groups.
3. A subject may not have the opportunity to withdraw, if research becomes personally threatening. In the study, this possibility was prevented by selecting assessments that were highly unlikely to arouse negative emotional response, and by giving subjects the option of withdrawing, even after the tests had begun.

4. Subjects may not have a chance to debrief after research assessment. In this design, subjects were informed of a way to contact the investigator, should they have any concerns. In addition, the investigator offered to make information about the study's purposes and results available to all participants.

5. The research report may be vague in descriptions of methodology, with resultant misleading data. To counter this possibility, the study specifies the numbers and sources of subjects, strengths and weaknesses of the instrumentation, and the statistical techniques utilized. Hypotheses are clearly stated, and results have been related to the hypotheses.

6. The data from research may be slanted or misinterpreted in the final report. In the study, the investigator discloses statistical results, and avoids generalization beyond the target population. Any inferential statements are clearly labeled as such. No causal factors are identified or attributed in the study. Any threats to the validity of the results are noted.

Chapter 4 - Presentation of Data

Demographic Information

A total of 67 females volunteered for the study and executed the consent form. Five of that number presented incomplete or unusable data, leaving 62 subjects for whom valid statistical information could be reported. Appendix C lists the eleven facilities from which the accessible subjects were drawn with the number of subjects from each residential community.

The mean age for the subjects who reported it (n=59) was 81.39; the median was 81. Table 4-1 presents a summary of the subjects' age. As shown, the subjects ranged in age from 67-99. It will be noted that there was a bimodal frequency; there were six subjects each at ages 75 and 85.

Table 4-1

<u>AGE</u>					
<u>Age</u>	<u>Subjects</u>	<u>Age</u>	<u>Subjects</u>	<u>Age</u>	<u>Subjects</u>
67	3	80	2	91	1
70	1	81	3	92	1
71	1	82	3	95	1
73	1	84	4	99	2
74	3	85	6		
75	6	86	4		
76	1	87	3		
78	4	88	3		
79	5	89	1		

Table 4-2 shows the highest level of education indicated by the subjects. Approximately 11% reported less than a high school diploma, while about 32% had graduated from high school. Another 32% noted at least two years of college (in some cases, this included nursing or business training). Most noteworthy is the number of subjects (15 of the 62, or approximately 24%), who had some graduate studies.

Table 4-2

<u>HIGHEST LEVEL OF EDUCATION</u>	
Less Than High School Diploma	7
High School Diploma	20
At Least 2 Years of College	20
Graduate Studies	15

In terms of marital status (Table 4-3), seven subjects

(about 11%) were married at the time of the assessment; eight (almost 13%) had never married. Three of the subjects were divorced; they represented about 5%. Another three subjects reported having been divorced and widowed. It will be seen that the largest group by far (66%) was comprised of widows. The tally of 41 subjects does not include the three who reported being widows and divorcées.

Table 4-3

MARITAL STATUS

Presently Married	7
Never Married	8
Previously Married - Divorced	3
Previously Married - Widowed	41
Previously Married - Divorced and Widowed	3

N = 62

All subjects were Caucasian. No health statements were solicited, but four of the subjects were known to live in health care or assisted care units; all were ambulatory. Some other subjects lived in private quarters, but presented vision, hearing, and/or motor impairments. No potential subject was rejected for health reasons. The living accommodations of all subjects implied a degree of financial stability, but income level was not a facet of the study. It may be stated that the vast majority of the subjects fell in the middle to upper income bracket.

Relationship of Data to the Research Hypotheses

The research hypotheses were tested with a Pearson's product-moment correlation (2-tailed significance). The results appear in Table 4-4. The hypotheses and results follow:

1. There will be a significant positive relationship between female elders' openness to experience, as measured by the NEO-PI, and resolution of the trust - mistrust crisis, as assessed by the MPD. Openness correlated .1016 with Resolution of Trust. The correlation was not statistically significant ($p=.432$). Therefore the study data did not support the first hypothesis.
2. There will be a significant positive relationship between female elders' openness to experience, as measured by the NEO-PI, and resolution of the integrity - despair crisis, as assessed by the MPD. Openness correlated .1481 with Resolution of Integrity. The correlation was not statistically significant ($p=.251$). The study data did not support the second hypothesis.
3. There will be a significant positive relationship between female elders' openness to experience, as measured by the NEO-PI, and the total resolution of

eight Eriksonian crises, as assessed by the MPD. When paired with Total Resolution, Openness presented a weak (.2861) but statistically significant correlation ($p=.024$). However, the third hypothesis was subject to scrutiny, in light of subsequent multiple regression results. Chapter 5 will consider whether the statistical significance was meaningful.

4. There will be a significant negative relationship between female elders' normal neuroticism, as measured by the NEO-PI, and resolution of the trust - mistrust crisis, as assessed by the MPD. Neuroticism showed a significant inverse relationship ($-.5699$; $p<.001$) when paired with Resolution of Trust. The study data supported the fourth hypothesis.

5. There will be a significant negative relationship between female elders' normal neuroticism, as measured by the NEO-PI, and resolution of the integrity - despair crisis, as assessed by the MPD. Neuroticism presented a significant inverse correlation ($-.6178$; $p<.001$) with Resolution of Integrity. The study data supported the fifth hypothesis.

6. There will be a significant negative relationship between female elders' normal neuroticism, as measured

by the NEO-PI, and total resolution of eight Eriksonian crises, as assessed by the MPD. The study presented a significant inverse correlation ($-.6065$; $p < .001$) between Neuroticism and Total Resolution. The sixth hypothesis was supported by the study data.

Table 4-4

CORRELATION COEFFICIENTS (2-TAILED SIGNIFICANCE)

	<u>Resolution of Trust</u>	<u>Resolution of Integrity</u>	<u>Total Resolution</u>
Openness	.1016 p=.432	.1481 p=.251	.2861 p=.024*
Neuroticism	-.5699 p=.000**	-.6178 p=.000**	-.6065 p=.000**

* $p < .05$

** $p < .001$

Information from Additional Statistical Applications

So that the accessible population could be compared with the subjects used to norm the MPD and the NEO-PI, the mean and standard deviation for each variable were obtained. The results appear in Table 4-5. The bracketed figures are obtained from the Manual for the MPD (Hawley, 1988, p.8) and the Manual Supplement for the NEO-PI (Costa & McCrae, 1989, p.3). Generally, the subjects of this study appeared to score appreciably lower than the norm subjects in Openness

and in Total Resolution. Possible explanations for these variations will be offered in Chapter 5.

Table 4-5

COMPARISON OF STUDY SUBJECTS WITH NORMING POPULATION

<u>Variable</u>	<u>Cases</u>	<u>Mean</u>	<u>Std Dev</u>
Openness	62	104.3065 [115.3]**	15.3148 [18.3]**
Resolution of Trust	62	15.5000 [15.99]*	6.2849 [6.89]*
Resolution of Integrity	62	15.0161 [16.36]*	6.7908 [7.04]*
Total Resolution	62	96.1452 [114.76]*	41.5971 [45.76]*
Neuroticism	62	77.0484 [80.7]**	20.0176 [23.3]**

* For females, age 50+
** For females, age 19-93

In an effort to shed more light on the influence of demographic and personality variables on resolution variables, a step-wise multiple regression was run. The results appear in Tables 4-6, 4-7, and 4-8. 4-6 shows the results of the first equation, in which Resolution of Trust was the dependent variable. The independent variables neuroticism, age, education, marital status, and openness

were examined. The criterion for entry was .05; the criterion for removing a variable from the equation was .1. Neuroticism was the only variable that reached the .05 entry criterion. The Multiple R for Neuroticism in the final equation showed .56569; the R square was .32001, and an adjusted R square was .30808. Multiple R shows the correlation between Neuroticism and Resolution of Trust; R square shows the percentage of variance accounted for by Neuroticism. Adjusted R square is the result of a statistical treatment that considers the number of variables and the type of measurement. As such, it is the most accurate figure. In this equation $F = 26.82454$ (F significance $<.0001$). The Beta of $-.565693$ was in the direction predicted in the research hypothesis.

Table 4-7 shows the results of the second equation, with Resolution of Integrity as the criterion variable. Again, the five independent variables were examined. Criteria for entry or removal were .05 and .1, respectively. Neuroticism was the only variable meeting the entry criterion. The Multiple R for Neuroticism in this equation was .61434; the R square was .37742; the Adjusted R square was .36650. In this equation, F was reported as 34.55440 (F significance $<.0001$). The Beta again was negative ($-.614345$).

Table 4-8 shows the results of equation three. Total Resolution is the criterion variable, with five independent

variables considered. Neuroticism met the .05 entry criterion. The Multiple R for Neuroticism was .60380; R square was .36458, and Adjusted R square was .35343. F was 32.70399 (F significance <.0001). Beta was -.603802.

Results of Step-Wise Multiple Regression Equations

Table 4-6

RESOLUTION OF TRUST

Dependent Variable: Resolution of Trust
 Criterion for inclusion: .0500
 Criterion for removal
 from the equation: .1000

Variable Entered on Step Number 1: Neuroticism

Multiple R	.56569
R Square	.32001
Adjusted R Square	.30808
Standard Error	5.28886

Analysis of Variance

<u>Square</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean</u>
Regression	1	750.33792	750.33792
Residual	57	1594.40784	27.97207

F = 26.82454 Signif F = .0000

Variable in the Equation

<u>Variable</u> <u>T</u>	<u>B</u>	<u>SE B</u>	<u>Beta</u>	<u>T</u>	<u>Sig</u>
Neuroticism	-.175969	.033976	-.565693	-5.179	.0000
(Constant)	29.029211	2.703006		10.740	.0000

Variables not in the Equation

<u>Variable</u>	<u>Beta In</u>	<u>Partial</u>	<u>Min Toler</u>	<u>T</u>	<u>Sig T</u>
Age	.057657	.068699	.965379	.515	.6084
Education	.067526	.081395	.987994	.611	.5436
Marital Stat	-.027358	-.032869	.981500	-.246	.8065
Openness	.004907	.005902	.983681	.044	.9649

Table 4-7

RESOLUTION OF INTEGRITY

Dependent Variable: Resolution of Integrity
 Criterion for inclusion: .0500
 Criterion for removal
 from the equation: .1000

Variable Entered on Step Number 1: Neuroticism

Multiple R .61434
 R Square .37742
 Adjusted R Square .36650
 Standard Error 5.49246

Analysis of Variance

	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean</u> <u>Square</u>
Regression	1	1042.40656	1042.40656
Residual	57	1719.52565	30.16712

F = 34.55440

Signif F = .0000

Variable in the Equation

<u>Variable</u> <u>T</u>	<u>B</u>	<u>SE B</u>	<u>Beta</u>	<u>T</u>	<u>Sig</u>
Neuroticism	-.207408	.035284	-.614345	-5.878	.0000
(Constant)	30.990284	2.807059		11.040	.0000

Variables not in the Equation

<u>Variable</u>	<u>Beta In</u>	<u>Partial</u>	<u>Min Toler</u>	<u>T</u>	<u>Sig T</u>
Age	.005149	.006412	.965379	.048	.9619
Education	.058968	.074284	.987994	.557	.5795
Marital Stat	.048083	.060372	.981500	.453	.6526
Openness	.053233	.066912	.983681	.502	.6177

Table 4-8

TOTAL RESOLUTION

Dependent Variable: Total Resolution
 Criterion for inclusion: .0500
 Criterion for removal
 from the equation: .1000

Variable Entered on Step Number 1: Neuroticism

Multiple R .60380
 R Square .36458
 Adjusted R Square .35343
 Standard Error 33.91844

Analysis of Variance

	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean</u> <u>Square</u>
Regression	1	37624.65304	37624.65304
Residual	57	65576.26222	1150.46074

F = 32.70399

Signif F = .0000

Variable in the Equation

<u>Variable</u> <u>T</u>	<u>B</u>	<u>SE B</u>	<u>Beta</u>	<u>T</u>	<u>Sig</u>
Neuroticism	-1.246075	.217893	-.603802	-5.719	.0000
(Constant)	191.727673	17.334869		11.060	.0000

Variables not in the Equation

<u>Variable</u>	<u>Beta In</u>	<u>Partial</u>	<u>Min Toler</u>	<u>T</u>	<u>Sig T</u>
Age	-.167681	-.206682	.965379	-1.581	.1196
Education	.021706	.027065	.987994	.203	.8402
Marital Stat	-.069346	-.086185	.981500	-.647	.5200
Openness	.194236	.241672	.983681	1.864	.0676

Summary of Data

This study presented data for 62 Caucasian females aged 67-99. The subjects were predominately widows, and almost half reported at least two years of college. All subjects lived in age-segregated communities. Support was evidenced for a relationship between Neuroticism (defined as a normal personality domain) and resolution of Erik Erikson's first and eighth stage resolutions (Trust and Integrity). In addition, there was support for a relationship between Neuroticism and the Total Resolution score, which considered all eight stages. There was statistical support for a relationship between Openness and Total Resolution. However, this finding was challenged by the multiple regression equation, which indicated that Openness did not add significantly to Neuroticism in explaining variance in Total Resolution. In all three multiple regression equations, only Neuroticism contributed significantly to explaining the variance in the criterion variables.

Chapter 5 - Discussion of the Research

Emphasis of the Study

This study focused on a group of female elders living in age-segregated communities. It sought to investigate the direction and strength of the relationship of Openness to Experience and Neuroticism to the resolution of Erikson's Trust and Integrity stages, and to a Total Resolution score. The 62 subjects, all volunteers, lived in eleven different retirement and/or assisted care facilities in Richmond, Virginia. All assessment sessions were held on-site; the investigator was always present. Assessment sessions took place during November, 1992.

A View of the Sample Data

Comparison of this study's raw data with norming information from the NEO-PI and the MPD revealed differences in several areas. There was a marked discrepancy in Openness; the norm group's mean score was some eleven points higher and the standard deviation about three points higher. This difference was probably attributable to the wide age range of the NEO-PI female norm group (i.e., age 19-93). A

number of women in the younger age cohorts might present with greater interest in novelty and variety, and more intellectual curiosity. Differences may be the result of the operational definition, outlook of a younger age cohort, and greater structure in the age segregated community. The latter explanation could reinforce the suggestion of Birren and Perlmutter (1990), who conjectured that elders' divergent thought may be subject to restriction or suppression.

The gap in Neuroticism scores, with the norm group mean and standard deviation about three points higher than the study subjects, may also be the result of combining definition and environmental factors. Such factors as tension and apprehension, low frustration tolerance, and inability to deal with stress may be significantly reduced in a retirement community. In fact, M.A. Cohen, Tell, Batten, and Larson (1988) listed a number of factors that tended to reduce the anxiety level of such residents. It should also be noted that the study subjects presented a Neuroticism mean some four points higher than the men's norm group. This finding would seem to confirm gender difference findings of Hale and Cochran (1983), Nilsson (1983), and Burvill et al. (1989).

The greatest discrepancies occurred on the MPD Total Resolution scores. The norm females (age 50+) showed a mean eighteen points higher (four points higher on the standard

deviation). However, comparison of Trust Resolution and Integrity Resolution scores of study subjects and norm subjects found them remarkably convergent. It seems reasonable to conclude that the differences between the groups reflected in Total Resolution occurred at one or more stages other than Trust and Integrity. This seemed to confirm the findings of Roid and Ledbetter (1987). Their study presented scattergrams of mean raw scores for each positive scale (not resolution scores). The scores of females age 56+ were observed to level off, drop slightly, or continue to climb for Trust, Autonomy, Identity, and Integrity. However, the mean scores for Initiative, Industry, Intimacy, and Generativity exhibited an appreciable downward trend with age.

The subjects' age, marital status, educational level, and degree of openness were found to lack statistical significance in explaining the Eriksonian resolution variables. The age finding was consistent with the personality stability notion of Costa et al. (1986), Costa and McCrae (1988), and Field and Millsap (1991). The apparent lack of influence of marital status in a study group of predominately widows deserved attention. It seemed to confirm McCrae and Costa's (1988) conjecture that widowhood had no significant influence on domains of personality. While subjects' educational level appeared disproportionately high, especially for the age cohort, age

appeared to have no utility in explaining the criterion variables. "Better education" was cited by Borg and Gall (1989) as a general characteristic of volunteer subjects.

Consideration of the Research Hypotheses

1. There will be a significant positive relationship between female elders' openness to experience and their resolution of the trust - mistrust crisis. The data from this study did not support this hypothesis.

2. There will be a significant positive relationship between female elders' openness to experience and their resolution of the integrity - despair crisis. The data from this study did not support this hypothesis.

3. There will be a significant positive relationship between female elders' openness to experience and the total resolution of eight Eriksonian crises. The data supported this hypothesis with statistical significance, but additional information led to the conclusion that the statistical confirmation was not meaningful.

4. There will be a significant negative relationship between female elders' normal neuroticism and their

resolution of the trust - mistrust crisis. The study data appeared to confirm this hypothesis.

5. There will be a significant negative relationship between female elders' normal neuroticism and their resolution of the integrity - despair crisis.

The study data appeared to confirm this hypothesis.

6. There will be a significant negative relationship between female elders' normal neuroticism and their total resolution of eight Eriksonian crises.

The study data appeared to confirm this hypothesis.

Contrary to stated expectations, Openness did not show a significant relationship to the Resolution of Trust or to Integrity Resolution. While there appeared to be a weak but statistically significant correlation between Openness and Total Resolution, the real significance of the relationship must be questioned. The results of step-wise multiple regression seemed to indicate that Openness, when added to Neuroticism, did not contribute significantly to an explanation of Total Resolution. There was no evidence, however, that Neuroticism and Openness to Experience measure the same thing; the NEO PI/FFI Manual Supplement (1989) reported only a .02 intercorrelation of the two domains. In the present study, Openness to Experience did not appear to

be significant in its relationship to resolution of the chosen stages. A search of the literature offered no satisfactory explanation. Perhaps openness tends to expose a person to disillusioning as well as beneficial experiences, with a concomitant lessening or ambiguity of trust. This possibility is a parallel to the suggestion of Costa, McCrae, and Holland (1984) that very open individuals tend to pursue a variety of vocational interests and be unable to settle on one.

Similarly, the Openness facets of imagination, intellectual curiosity, and need for novelty may temper one's acceptance of common sense, order and continuity, which figure in the definition of Integrity Resolution. An additional possibility is that the obtained Openness scores were influenced unduly by particular facets of that domain (i.e., fantasy, aesthetics, feelings, actions, ideas, values). Another suggestion posits that Openness facets are basically in the domain of the intellect, and measure cognitive constructs. It is conceivable that resolution of Trust and Integrity is more closely related to affective facets (such as those measured in the Neuroticism domain).

In terms of Erikson's theory, the negligible relationship between Openness and Trust Resolution appears consistent with the low correlation of Openness and Integrity Resolution. This seems to confirm Erikson's (1982) belief that the stages are bound together. It might

be conjectured that Openness was more closely related to one or more of the other six stages, thus boosting the Total Resolution correlation.

Consistent with the stated research hypotheses, the study subjects presented a statistically significant and meaningful inverse relationship between Neuroticism and Resolution of Trust, Resolution of Integrity, and Total Resolution. Further statistical investigation indicated that Neuroticism was the only one of the demographic and assessment variables that significantly explained part of the variance in each of the Eriksonian criteria.

Erikson (1982) posited that the successful balancing of Trust and Mistrust resulted in the virtue that he termed Hope. By inference, a greater degree of anxiety, hostility, depression, self-consciousness, impulsivity, and vulnerability (facets of Neuroticism on the NEO-PI) should lead to lessened Hope (i.e., an inadequate resolution of Trust). This was exactly what the study's inverse relationship seemed to indicate. In this paradigm, as Neuroticism levels rose, Resolution of Trust declined. Conversely, lower Neuroticism scores were associated with greater Trust Resolution.

In viewing a favorable Integrity-Despair ratio, Erikson (1982) labeled the result Wisdom. He defined this strength in terms of emotional balance, trust, and openness. By extension, the presence or absence of characteristics

defined as part of Neuroticism should relate to Integrity Resolution. This study's findings appear to confirm that relationship. It should be noted that Erikson (1982) interrelated all stages, placing particular emphasis on the connections of Trust and Integrity. If Erikson's theory is valid, the Neuroticism-Total Resolution relationship should show consistency with the previously cited data. This appears to be the case. The same factors that influenced an inverse relationship apparently impacted on the other stages, resulting in a consistent Total Resolution correlation.

This study did not attempt to isolate individual Neuroticism facets, but earlier research dealt with some of them. The work of Blazer, Hughes, and George (1987) noted disproportionate (by gender) levels of depression among female elders. Tiffany and Dey (1983) targeted high external control as a factor related to depression. Hale and Cochran (1983) found a group of female retirement community dwellers higher (than males) in anxiety and sensitivity. Jorm's (1987) meta-analysis showed females scoring higher in generic neuroticism, although the difference was less in elder subjects. These studies, viewed in combination with the present research, suggest that treatment plans should give attention to interrelationships of neurotic symptomology and developmental stage resolution. A subsequent section

discusses some of these pragmatic applications.

Validity of Results

In view of the subjects' observed willingness and cooperation, it is important to consider the influence of the small group or individual assessments. Costa and McCrae (1985) cited evidence in their NEO-PI Manual to maintain, "There is no evidence that socially desirable responding biases NEO-PI scores, at least when used in a normal, volunteer sample of individuals with no motivation to distort the picture they present of themselves" (p.37). The investigator in the present study had no way to test this assertion with the population who recorded their own answers. In several cases where the investigator was the recorder, it appeared that the subject attempted to downplay her positive traits, so as not to appear boastful. This tendency, even if it occurred extensively, would apply to both assessments, and should not affect the correlation.

The test format itself, especially the MPD answer sheet, presented a formidable learning task for this age cohort. The investigator took every step possible to see that the material was utilized properly. In two cases, where it was clear that the subjects had reversed the scales on one of the tests, the results were deemed unusable, and not entered in the data. During those individually

administered tests where the investigator read and recorded, she sometimes had to question the subject to pinpoint the specific response on the scale. Every effort was made not to bias the subjects' answers. It is the investigator's belief that the responses in the study's assessment format were probably more accurate than that provided by unsupervised, at-home use of these tests.

Generalization of the Study

From the outset of the study, certain restrictions were stated. These caveats applied especially to male elders, non-Caucasians, and persons with little formal education. There also was reason to think that female elders residing in their own homes might score differently on the assessments. Studies cited in this chapter have presented significant discrepancies in neuroticism measurement for males and females. This study indicated that differences in education (ranging from less than high school diploma through graduate study) did not affect the criterion variables. It cannot be concluded, however, that females of very limited education or extensive post-graduate study would present similar data.

In terms of racial or ethnic background, Ochse and Plug (1986) reported study results that Caucasians and Blacks in their South African sample differed in stage resolutions.

Lacy and Hendricks (1980) also noted racial differences. Hawley (1988) emphasized that the MPD had not been normed on non-Caucasians. Considering age, Costa et al. (1986) found negligible age differences in tested neuroticism or openness. This seemed to be confirmed by the multiple regression segment of the present study, which showed that age variation (67-99) was not an influence on criterion scores. Marital status did not appear to be a significant factor in the data. Only additional research could indicate whether the age-segregated community dweller presents differently from one of the same marital status who lives at home or with family.

Income and health issues were not addressed in this study, but the investigator observed that the cost of residency would require a middle to upper income level. Certainly some of the subjects presented with physical problems that might be considered restrictive or debilitating. No effort was made to separate their test results from the more fit subjects. The mental competence of these subjects, and their comparative physical stamina, were subjected to the rigors of a testing situation, and the subjects were able to complete the tasks. The few subjects who became unduly fatigued either withdrew (n=3) or completed the assessments at another session.

In summary, it appears reasonable to make the following statements about generalization:

1. The results apply specifically to female Caucasian elders, who are mentally competent, and who live in retirement or assisted care communities. There is no reason to believe that the specific location of the facility would affect the relationships between variables.
2. It seems quite possible that the same relationships between variables might apply to female elders who live at home, but only further study could confirm this conjecture.
3. With less confidence, the results may be generalized to younger females who reside in assisted care or retirement facilities.
4. No generalization can be made to males, non-Caucasians, females living in poverty, or females of atypical educational background.

Practical Applications of the Study

Although there are limits to the generalization of the study, there seem to be a number of pragmatic applications

of the obtained information. One of the investigator's stated purposes was to apply the research results to elder counseling situations. This goal was reinforced by the personality stability findings of Costa et al. (1986). Gallagher-Thompson, Hanley-Peterson, and Thompson (1990) suggested that elders could maintain the benefits of therapy; Rosel (1988) applied Eriksonian techniques in working with three elderly women. Burack (1984), who paired Erikson and Super, cited the need to consider factors of aging. Hamachek (1988, 1990) listed specific counseling implications for dealing with Erikson's stages. A number of others (Scogin, Jamison, & Davis, 1990; Rybarczyk & Auerbach, 1990; Waller & Griffith, 1984; McCrae & Costa, 1986, 1991; Van Wylen & Dykema-Lamse, 1990; Anderson, 1985; Fry, 1984; Liptzin, 1985) addressed therapeutic interventions for elders. This section attempts to add something to that body of counseling literature, based on this study's observations and results.

First, it is important to relate the investigator's experiences to the strengths and needs of the population. The vast majority of the subjects were very candid about themselves. This honesty extended to problematic areas as well as positive factors. Many showed significant insight into the connection between past experiences and their present state of mind. Relationships with family and friends were mentioned frequently, as was the subject's

niche in the residential community. Most demonstrated a desire to be of value - to bolster their sense of personal meaningfulness. On the whole, these subjects exhibited a lively sense of humor about themselves and their situation, and a keen awareness of social issues.

By its very nature, the residential community offers emotional and material support, but it also structures the residents' lives, applies some external controls, and requires a certain diminishing of privacy. Adjusting to the age-segregated community requires a flexibility that many younger persons might emulate.

In short, the investigator met with more than sixty ladies in their residential environments. Personal contacts ranged from a few exchanged comments in group situations to extensive conversation, as part of a private assessment. Generally, these subjects demonstrated some of those qualities most essential in counseling situations: honesty, a degree of insight, concern about one's role, a need for ego enhancement, keen sensitivity to surroundings, flexibility, and a sense of humor. It may be argued that these volunteer subjects were atypical in their emotional health. Nevertheless, it is the investigator's thesis that most elders exhibit many of the same characteristics. The relative strength of these characteristics is in itself an index of counseling readiness and need.

Field and Millsap (1991) posited that elders did not

become more rigid; McCrae and Costa (1988) found widows emotionally resilient and open to encouragement. Hunter, Linn, and Harris (1982) linked elders' self-esteem with the degree of somatization, anxiety, depression, and external control. Each of these studies highlighted the therapeutic need and readiness of certain elders. The investigator's observations of a small group confirmed the earlier studies.

The present study suggests three areas of focus for counseling interventions for female elders. First, the findings suggest that such definitional aspects of Neuroticism as apprehension, anger, hopelessness, inferiority, propensity to cravings, and inability to deal with stress (Costa & McCrae, Manual, 1985) have a direct relationship to the levels of Trust and Integrity, and to Total Resolution of developmental stages. Liptzin (1985) and Heyman (1984) both maintained that therapy for an elder's emotional distress could be facilitated by focusing on unresolved issues of mistrust and/or despair. This premise appeared to be substantiated by the study's findings.

There are indications in the literature that cognitive therapies are in fact effective for elders: Rosel (1988) reported use of Erikson's biographical techniques, while Anderson (1985) and Van Wylen and Dykema-Lamse (1990) preferred group discussion. Waller and Griffin (1984) observed that depressed elder females, compared with their

male counterparts, tended to self-disclose earlier, talk about more personal topics, and terminate after briefer therapy. The investigator concludes that "talk therapy" is of great potential benefit in ameliorating elder females' emotional concerns. Bolstering trust of self and others, encouraging socialization, and giving the client a sense of personal meaning in her life are likely to reduce uncomfortable symptomology. In the course of therapy, the client can work through any unresolved developmental crises. Hamachek's (1988, 1990) models of behaviors and attitudes for each Eriksonian stage offered a valuable resource for counselors to use in identifying problems and planning treatment.

A second emphasis suggested by the results and previous research is the need for public education about elders. In the course of this study, the investigator met a number of professionals who had great insight into the residents' life style. Outside the residential community, however, there is a disturbing tendency to regard elders as inflexible, quirky, and only capable of limited productivity. Personality changes are often viewed as normal, rather than as symptoms of physical or emotional pain. Some professionals tend to adopt the same attitudes - underdiagnosing, overmedicating, or assuming that somatization is normal for elders. Koenig and Meador (1987), and Rapp, Parisi, Walsh, and Walsh (1988) are among

those who implied the need for closer medical attention to elders' emotional symptomology.

As professionals, counselors have an obligation to inform clients and colleagues of existing elder research. Doctors and therapists are in a unique position to counter stereotypes with factual information about the strengths and emotional needs of this segment of the population.

The third application, inferred from observations in this study and the results of other research, is the potential value of intergenerational contacts for elders. This perspective goes beyond the family consultations advocated by Wolinsky (1985). Heckenmueller and Keller (1984) found great value in Adult Integrated [by age] Learning. Most relevant to the present study, ReVille (1989) and Kivnick (1985) suggested that contact with other age cohorts was essential to elders' resolution of later life stages.

Although the present study found no statistical influence of marital status, Longino and Lipman (1982) noted varying degrees of family support for female elders, dependent on marital status and on the presence of children. Their findings suggested that the never married or childless elder received less emotional and social support from her family. It might be conjectured that these individuals compensated for the lack of family support by forming other relationships. In the present study, relationships with

children, grandchildren, or other younger persons were not formally investigated.

Some of the residences visited by the investigator demonstrated awareness of the intergenerational factor. One community housed a child-care facility, and the children had regularly scheduled trips to areas where they could socialize with residents. In another location, volunteer residents worked as tutors at a nearby elementary school. Other residences encouraged visits by school service groups. These are positive steps that could be studied by other facilities. Elders living at home might need encouragement from family and professionals to make contact with younger people. Frequently the emphasis is on establishing social contacts with age peers. Without underestimating that need, it may be stated that adherence to Erikson's theory extends the circle of important relationships. Erikson, Erikson, and Kivnick (1986) addressed the elder's need to find herself "in perspective with those generations now living" (p.56). Attending to intergenerational concerns is an integral part of Erikson's later writing.

Theoretical Implications of the Study

The present study, while it appears to establish a meaningful relationship between the construct defined as Neuroticism and the resolution of certain Eriksonian stages,

raises a number of issues. The most critical area concerns the applicability of results. Care has been taken not to overgeneralize, or to imply any causal relationships. The correlations have direct bearing on a fairly discrete group of females living in age-segregated communities. The practical applications of the results do appear to extend beyond that group. In considering future research, two questions predominate:

1. To what extent would male elders present the same relationships between variables?
2. Would similar results be obtained with female elders not living in retirement communities?

An additional issue lies in the apparent lack of relationship between defined Openness and stage resolution, raising the questions:

1. Are there specific facets of the Openness definition that do relate strongly to stage resolution?
2. Is Openness significantly related to the resolution of stages other than Trust and Integrity?
3. Does the construct of Openness relate to cognitive factors, while Erikson's stage resolution is more affective?

4. Would the use of a different operational definition of openness affect the relationship?

Still another area involves populations of differing backgrounds or social contacts:

1. Would females of other racial or ethnic backgrounds exhibit the same relationships?
2. Do what extent would female elders living in poverty display the same results?
3. What influence, if any, do health and/or children have on the relationships?
4. Is there a connection between stage resolution and the degree of intergenerational communication?

Many of these questions could be resolved in a study that sampled a broader range of the population, viewed correlations of individual facets and each of the eight stage resolutions, and requested more demographic information. The additional statistical applications would require a larger sample, and face to face assessment might not be logistically possible.

Conclusion

This study focused on 62 female elders, all Caucasian, and all residing in age-segregated facilities. It appeared to support substantial relationships between the construct of Neuroticism and Trust Resolution, Integrity Resolution, and Total Resolution, as defined from Erikson's stage development theories. Numerous previous studies linked females to higher levels of neurotic symptoms. The present observed relationships suggest that therapeutic emphasis on stage resolution may be a viable means of lessening anxiety, anger, depression, and other presenting problems. The call for public awareness of elders' needs, and the issue of promoting intergenerational contacts, are also raised.

It is posited that the increasing number of elders in the population will impact counseling services provided to them and their families. Previous research, as well as observations from the present study, indicate that elders can benefit from therapeutic intervention. Suggestions for treatment plans may be obtained from previous literature, and from this study. The primary goal of service to elders is to establish or strengthen feelings of hope, and to give them a sense of meaning and true wisdom.

APPENDIX A

CONSENT FORM

RESEARCH TITLE:

The Relationship Between Selected Personality Factors and the Resolution of Certain Eriksonian Stages in a Group of Female Elders.

RESEARCHER:

Katherine B. Coates, Ed.S., L.P.C.

INSTITUTION AND DISSERTATION CHAIR:

College of William and Mary
Dr. Kevin Geoffroy

PLEASE READ THIS FORM CAREFULLY. IF YOU ARE WILLING TO PARTICIPATE IN THE PROJECT, SIGN AND DATE AT THE APPROPRIATE PLACE.

1. The research project is investigating the relationship between personality characteristics and developmental stages of childhood and adulthood.
2. Your contribution will consist of completing a brief checklist about yourself, and two assessments, in which you will indicate the extent to which each phrase or statement describes you. Total time needed is about 1 and 1/2 hours.
3. Your packet will be numbered; your name will not appear on it. There is no way your name and your packet number can be matched.
4. The research is focused on group, not individual, responses.
5. For greatest accuracy, you should respond to each question. However, you may refuse to respond to particular questions.

6. You are free to withdraw during the assessment session; simply write "withdraw" on your cover sheet.
7. The investigator will go over the directions before the assessments, and will be present during the whole session.
8. The investigator will be available at a stated time to address any concerns or questions about the project.
9. By participating in this project, you are increasing our understanding of older adults, and broadening the application of counseling techniques.

I HAVE READ THE CONSENT FORM, AND UNDERSTAND THE RESEARCH FORMAT. I AM WILLING TO PARTICIPATE IN THIS PROJECT.

(date)_____ (signature)_____

M E M O

Thank you for your participation! You will be notified later (after all data have been collected) of an informational post-session. Your attendance is not required, but join us if you can for a further discussion of the project. In the meantime, if you have any questions, I can be reached at 282-7747, or 282-4043. Please feel free to call!

APPENDIX B

A LITTLE ABOUT MYSELF

1. MY AGE _____

2. MY HIGHEST LEVEL OF EDUCATION (Fill in one):

- LESS THAN HIGH SCHOOL DIPLOMA ()
- HIGH SCHOOL DIPLOMA ()
- AT LEAST TWO YEARS OF COLLEGE ()
- GRADUATE STUDIES ()

3. MARITAL STATUS (Fill in one or more):

- PRESENTLY MARRIED ()
- NEVER MARRIED ()
- PREVIOUSLY MARRIED - DIVORCED ()
- PREVIOUSLY MARRIED - WIDOWED ()

APPENDIX C

Communities Represented and Subject Count for Each

Beth Sholom Woods	1
Ginter Hall West	2
Little Sisters (St. Joseph's Home for the Aged)	2
Masonic Home of Virginia	3
St. Mary's Woods	4
The Village at Stratford Hall	4
Imperial Plaza	6
Gayton Terrace	7
The Hermitage Methodist Home	7
Lakewood Manor Baptist Retirement Community	11
Westminster Canterbury House	15

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