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AN EXPLORATION OF INTRAPERSONAL REMINISCENCE AND FACTORS OF COGNITION IN LATE LIFE

by

© THOMAS F. LIPINSKI

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

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DEDICATION

This thesis is dedicated to my loving wife Ginny. Without her support and encouragement, it would not have been completed.

ABSTRACT

A number of theories of human development hypothesize a period or phase in late adulthood wherein the individual engages in a review and analysis of life's experiences. The outcome of this activity is thought to determine subsequent psychological development and adjustment and in this regard reminiscence is believed to serve an adaptive function in late life.

In general, research has drawn conclusions about the function of reminiscence through correlational studies where reminiscence frequency is assessed in relation to such factors as life satisfaction, ego-integrity, positive affect of reminiscence and freedom from depression. To date, enough contradictory results have been produced to prevent definite conclusions regarding the adaptive role of reminiscence.

The present study was designed to explore factors of cognition, focusing on "how" individuals might reminisce, and in this respect contribute to our knowledge of the hypothesized idea that reminiscence serves an adaptive function.

Eighty-one subjects participated in the study. Of these, 27 were classified as non-depressed elderly, 25 as depressed elderly and 29 as middle-aged. Subjects responded to questions designed to assess frequency of reminiscence, affect of reminiscence, evaluation of life periods or

situations and questions yielding demographic data such as age, years of education, marital status, and occupation. In addition, subjects were assessed on measures of field dependence, integrative complexity, cognitive errors and reminiscence cognitive errors.

The results of the study found both elderly groups to reminiscence to a greater degree than middle-aged subjects. Further, the results suggest a syndrome of negative life evaluation and lower levels of integrative complexity, decreased field independence and increased cognitive errors for the elderly participants. Since the elderly subjects from both groups were undifferentiated on measures of reminiscence frequency support for the theoretical idea that reminiscence serves an adaptive function in late life was not realized.

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To my children, Kenneth and Sarah I must say thanks for reminding me of youth.

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CHAPTER I

INTRODUCTION

Stereotypic and negative connotations regarding the reminiscences of the elderly are common in modern cultures. The general populace believes that this act of recalling the past is frivolous, without social or psychological significance and it is often associated with emotional or intellectual deterioration (Butler, 1963). Relatively recent research, however, indicates that reminiscence may be underrated in terms of its psychological significance (Butler, 1975).

A number of theories based on human psychological development suggest that a period or stage of reflective and analytic behavior occurs at sometime in the latter part of the life cycle. This period of reminiscence or life review is generally thought to be triggered by an awareness of personal mortality. In this stage or phase the individual is faced with the task of evaluating his/her life's experiences and ultimately deciding if he/she was successful in life. Butler (1963), for example, introduced the concept of the life review and in general, is credited with bringing reminiscing into the gerontological spotlight. His conceptualization of the life review holds that aspects of recalling the past are universal and purposive in their psychological function. His main thesis regarding the life review is that it allows the older person a way in which to

account for meaning in life.

Butler's work has prompted other gerontologists to initiate research in the area. Subsequently, the literature contains a number of research studies aimed at analysis of the function of reminiscing in late life. Although the number of published reports is relatively small, most investigators have attempted to establish relationships between reminiscence and the ability to successfully adapt and cope with the later years of life. In this regard reminiscence has been studied in relation to such variables as self-concept, life satisfaction, freedom from depression, ego integrity and positive affect. While the idea that reminiscing serves an adaptive function has received favorable empirical support enough contradictory evidence exists to prohibit definitive statements or conclusions (Lo Gerfo, 1980; Merriam, 1980). The research then remains at an early stage and further exploratory work is required (DeMotts, 1981; Merriam, 1980).

Statement of the Problem

Most studies on reminiscence have drawn conclusions about the adaptive significance of reminiscence on the basis of positive correlations between indices of reminiscence frequency and positive affect of reminiscence. It would seem likely that additional insight into these relations might be achieved through examination of "how" individuals reminisce. In this regard, and since reminiscence is essentially a process of thinking, it appears important to

explore the cognitive attributes of reminiscence. The importance of this line of inquiry is highlighted by existing research which emphasizes the importance of cognitive factors in psychological adjustment and adaptation (Beck, 1976; Lazarus, 1966; Lieberman, 1975).

Objectives of the Study

The objectives of the study were to explore factors of cognition in relation to reminiscence. Specifically, the study was designed to examine reminiscence frequency, affect and evaluation in relation to cognitive factors which have been associated with psychological adjustment. In order to provide information on these variables in regards to psychological adjustment, depressed and non-depressed elderly were compared.

Cognitive factors were examined by employing measures of cognitive style (field-dependence and integrative complexity) as well as a measure of cognitive distortion. As these cognitive factors have been linked to such variables as self-concept, positive affect and freedom from depression it was hoped that we would gain an understanding of how individuals organize, synthesize and integrate their reminiscences and in this regard how they are affected emotionally.

General Questions to be Addressed in the Study

Essentially the study is designed to query if cognitive factors influence the process of reminiscing. The basic questions addressed in this study, then, are as follows:

1. Do depressed and non depressed elderly differ in their frequency, affect and evaluations of life periods when reminiscing?
2. Can differences in reminiscence frequency, affect and evaluation between depressed and nondepressed elderly subjects be explained in terms of their cognitive attributes?

CHAPTER II

REVIEW OF THE LITERATURE

Literature relevant to the study of reminiscence in late life is reviewed in six main sections. The first section offers definitions of reminiscence terms. In the second section theoretical accounts of reminiscence are reviewed. The third section contains an overview of empirical studies. Sections four and five present a synopsis of information on cognitive style and cognitive distortion, respectively. The final section offers an integration of the literature. Literature concerning bereavement, dying, near-fatal experiences and dreams of the past are excluded. These exclusions are based on the observation (e.g. Romaniuk, 1978) that the relationship between these factors and reminiscence is at present tenuous and unsubstantiated.

Definitions of Terms

Webster's Dictionary (1967) defines reminiscence as "the process or practice of thinking or telling about past experiences." Two general types of reminiscence, then, are recognized: interpersonal and intrapersonal. Interpersonal reminiscence is an overt behavior which takes place in the presence of others. While it is generally thought to serve an educative or entertaining function, psychologists have ignored theoretical or empirical examination. Intrapersonal reminiscence is viewed as a covert phenomena where the past

is recalled either in the form of inner dialogue or visual images. This type of reminiscence has received the majority of theoretical and empirical attention (Pincus, 1978).

The term life review requires clarification. Butler (1963), the originator of the term, saw the life review as a universal process which accounts in part for the increase in reminiscing in the latter years:

> The life review, as a looking-back process that has been set in motion by looking forward toward death, potentially proceeds toward personality reorganization. Thus, the life review is not synonymous with but includes reminiscence, it is not either the unbidden return of memories, or the purposive seeking of them, although both may occur. (p.67)

He argues that reminiscing does not necessarily require conscious effort nor does it require an audience. The ego surveys, reviews and reflects upon past events. Re-evaluations of previous actions and beliefs may occur with a subsequent reorganization of meaning and understanding of one's life.

Unlike Butler, most writers in the field refer to the life review as a particular type of reminiscing activity where the past is reviewed and evaluated in it's entirety by examining specific experiences in relation to one's entire existence (Romaniuk, 1978). In the present discussion the term life review is utilized in this more general sense. Reminiscence will be defined, simply, as a process involving recall of the past that can occur as a consequence of conscious as well as unconscious means (DeMotts, 1981).

Reminiscence Theory

Most theoretical accounts of reminiscence are found within the broader context of human development psychology and to a lesser extent in reports dealing with the clinical psychology of aging. The present review will provide a limited synopsis as comprehensive reviews can be found elsewhere (Merriam, 1980; Romaniuk, 1978). Reminiscence theories will be discussed under four main categories: life stage, existential, disengagement theory, and life review theory. An integration and summary of the ideas and implications of reminiscence theory will conclude this section.

Life-Stage Theories

Common to all life stage theories is the idea that there are universal stages of development. When people develop they will pass through a fixed order of stages which cannot be skipped or reordered. Stage theories also allege that each stage is qualitatively different from each other (Lerner, 1978). Within the context of stage theories the theoretical accounts of Erikson, Buhler, Frenkel-Brunswick, Levinson and Jung are reviewed.

Erikson. Erikson (1950) developed a stage and differential theory of psychosocial development. Eight stages of development with corresponding critical periods of psychosocial differentiation are hypothesized. The final stage, that of maturity, involves the emotional crises of ego integrity versus despair. If an individual has

successfully progressed through the previous stages then the last stage will be typified by feelings of success; a sense that life has been full and complete. Conversely, if previous stages were met unsuccessfully, then the individual would feel a sense of despair. Differentiation, then, results in part from an evaluative form of reminiscing. The individual recalls and reflects upon past experiences to determine if life has been successful.

Buhler and Frenkel-Brunswick. Buhler (1959; Buhler and Massarik, 1968) and Frenkel-Brunswick (1968) proposed five stages of development. Development is organized according to the psychological goals of each stage of life. In the final stage, which begins at about age 65, the individual experiences the results of a review and evaluation of past experiences and goals; a review undertaken in the fourth stage of development, occurring between the ages of 45 and 65. If the review and evaluation is successful, that is, if the individual determines that previous goals have been met, then the last stage of life is marked by a sense of fulfillment and satisfaction.

Linden. Development, according to Linden (Cath, 1972, Linden and Courtney, 1953), occurs in three major stages. As with other stage theories, biological, physiological, and psychosocial elements interact to influence development. Essentially, the theory views development as a gradual shift from instinctual and self-gratifying drives to altruistic and social-cultural

drives. In the final stage, biological decline prompts an inversion of orientation. The individual begins to assess the past in order to achieve a sense of meaning and purpose in life. One's personal values are compared with cultural values as the individual relates his/her life experience to significant others. The life evaluation then, serves to determine if the individual has made significant and successful contributions within the socio-cultural context.

Levinson. Levinson (1978) proposes four stages or "eras" in the life cycle. These eras are further distinguished by developmental periods and tasks. As with other stage-type theories, experiences in previous stages influence subsequent psychological development. In Levinson's theory, the late adulthood transition period involves an interaction of biological, psychological and social factors which leads to the developmental task of reevaluation and questioning of actions and experiences in the past. This period of life review dictates subsequent psychological adjustment in the last period of life; late adulthood.

Jung. Although Jung's theory (Jung, 1934, 1959, 1966) of the human life cycle is not a stage-type theory it is included here because it is characterized by two distinct phases of life; each with a set of prescribed developmental tasks. In the first half of life the individual is concerned with developing an "outward" orientation. The tasks of this phase of life include managing instincts,

establishing an identity, developing intimate relationships and establishing a niche in society. In the middle years the individual undergoes a period of crises, a time when psychic tension results from the overdevelopment of dominant aspects of the personality. This time of crises is characterized by a sense of dissatisfaction and doubt about life and personal accomplishments (Jacobi, 1970). The crises marks the beginning of the second phase of life, a phase where the individual assumes an inner orientation. Developmental tasks in this phase include reviewing and evaluating life's experiences and accomplishments, placing one's life in perspective, and preparing for death (Shaws, 1977).

Existential Theories

In contrast to life stage theories the existential orientation to human experience regards human existence as not exhaustively describable or understandable in idealistic or scientific terms. There is a distinct emphasis on the freedom and responsibility of the individual and a marked concern for subjective experience. In this regard a number of existential theorists (Kimmel, 1974; Koestenbaum, 1964; Tomlinson, 1968) argue that the existential quest for finding meaning in life is particularly salient in the latter part of life. Kimmel, for example, observes that the search for meaning becomes more urgent when the death of loved ones and significant others stimulates an awareness of personal mortality. The subjective reaction to personal

losses, then, tends to magnify the need to discover meaning. This process of discovery proceeds, in part, through an evaluation and review of an individual's entire existence (Koestenbaum, 1964).

Disengagement Theory

Disengagement theory (Cumming and Henry, 1961; Cumming, 1964), a much debated orientation resulting from the "Kansas City Studies" of the late 1950's, shares a number of notions held by stage and existential orientations. In general, the theory holds that as individuals enter the later years they begin to disengage themselves from society. Disengagement is seen as a mutual withdrawal between the individual and society beginning in middle age and resulting in an individual's increased awareness and preoccupation with inner concerns. The heightened involvement with inner concerns, coupled with an increased awareness of death, results in an evaluation and review of the past as well as a reflection on life's meaning and the determination of how to utilize the remaining time satisfactorily (Havighurst, Neugarten and Tobin, 1968).

Cumming and Henry (1961) (the originators of the theory) argued that disengagement was a universal process which could be observed in all cultures. Moreover, they believed that disengagement was the result of biological decline. Further research (e.g., Neugarten, 1968) found that the individual's personality rather than disengagement was of more significance in understanding adaptation in late

life.

Life Review Theory

As previously noted, Robert Butler (1963, 1964, 1967, 1975) is credited with bringing reminiscing into the gerontological spotlight. His work, perhaps more than others, represents the most detailed theoretical account of reminiscence. The life review is seen as a process of personality reorganization accomplished through an active evaluation of one's existence. It is seen as a natural and universal process of increased self-awareness which is triggered by the realization of impeding death.

In the life review there is a progressive return to consciousness of past experiences, and particularly a resurgence of unresolved conflicts. In general, the life review begins slowly and may not be completed prior to death. In writing on the manifestations of the life review Butler (1967, p.488) observes that, "in its mild form, the life review is reflected in increased reminiscence, mild nostalgia, mild regret; in severe form, in anxiety, guilt, despair and depression." In the extreme, Butler notes that older individuals may become obsessively preoccupied with the past and may as a result become terrified and suicidal.

Butler (1975) is also the first to suggest the use of the life review as a psychotherapeutic tool. In this regard the creation of an extensive autobiography may lead to, "expiration of guilt, exorcism of problematic childhood identifications, the resolution of intra-psychic conflicts,

the reconciliation of family relationships, the transmission of knowledge and values to those who follow and the renewal of the ideals of citizenship." (p.534)

Summary and Integration of Theory

In reviewing the literature on reminiscence theory it becomes evident that the majority of information on the function of reminiscence is indirect or implied. Except for the writings of Butler there are no definite theses devoted to a "theory of reminiscence." This fact serves to underscore the relative novelty of interest in the field of adult psychology and old age. Nevertheless, implications drawn from many of the theories and from life review theory especially, serve as initial guides to our understanding of reminiscence.

In general, there is a consensus that at some point in life the individual engages in a review or evaluation of personal experiences, achievements, or values. Moreover, this review is often linked to, or directly responsible for, adaptation or adjustment in the last years of life. Broadly speaking, this period of reflection and evaluation may occur at anytime after the age of 40, and is often prompted by psychological or biological losses.

It should be noted that most of the theories reviewed have been influenced by the psychoanalytic orientation and thus are often rooted in clinical as opposed to empirical observation and analysis. In addition, it is important to note that many of the theories discussed and especially the

stage theories, have received severe criticism. Theories of development such as those proposed by Erikson, Buhler, Frenkel-Brunswick and Levinson, for example, were constructed mainly from observations of men. Since the life experiences of women are often considerably different, it has been argued that these theories do not truly encompass the human species (Carlson and Carlson, 1960; Eichler, 1977; Malmo, 1978; Smith, 1977; Williams, 1977). Moreover, other researchers have found that the orderly, linear and sequential development prescribed by stage-type theories is wanting as model of psychological development. In an important study of development in women, Spricer (1981) found adult development to be anything but orderly and sequential. She found, for example, that many of the proposed stages and order of stages as set forth by theorists such as Erikson did not occur for some subjects or if they did occur, they were not in the prescribed order.

Many of the theories, from which we draw our knowledge of reminiscence, have been severely criticized as being unrealistic, reductionist and narrowed to the lives of men leaves one in a quandry as to how to understand reminiscence theoretically. What if, for example, an individual experiences the stage of integrity versus despair at age 50? Does the individual review, reminiscence and evaluate, his or her life then, for that 50 year period and not at age 70 or beyond? Is it possible that some older people have skipped the period of life where a life review is

prescribed? These questions are difficult to answer, but posing them assists, in part, in an explanation of the difficulty researchers have experienced in attempting to empirically test and examine the hypothesis that reminiscence is linked to psychological adjustment or adaptation in old age.

Emperical Studies of Reminiscence

To date there have been approximately 13 documented empirical studies related to reminiscing in late life. Because of the diverse and exploratory nature of many of these studies it is difficult to disseminate the information by common category or research direction. Thus, the present review offers an account of each individual study. A summary and discussion of the empirical research will conclude this section of the review.

McMahan and Rhudick (1967) - Reminiscing: Adaptational significance in the aged

McMahan and Rhudick studied the reminiscences of twenty-five elderly male veterans (age range, 70-90, mean age 84 years). Each subject was interviewed individually. Interviews were tape recorded and each sentence of the transcription was classified as a unit of measurement. Subject responses were classified as to whether the content referred to the past, present or future. Statements referring to the remote past were classified as reminiscences. During the interview subjects were also rated by the authors as to the presence of depression.

Depression, then, served as an index of successful adaptation. In addition, subjects were assessed for intellectual deterioration utilizing the deterioration quotient of the Wechsler-Bellevue Intelligence Test.

Analysis of the interviews revealed three categories of reminiscing: informative "story-telling," recollections that depreciated the present and glorified the past and reminiscences aimed at a critical evaluation of past events. The latter category was equated with the process of the life review as outlined by Butler. In this regard the life review dealt specifically with previously unresolved conflicts. In addition to categorizing the reminiscences of the subjects, the authors observed that intellectual deterioration and reminiscence frequency were unrelated. Moreover, subjects rated as depressed tended to reminisce more frequently than did the non-depressed.

Gorney (1968) - Experiencing and age: Patterns of reminiscing among the elderly

Gorney investigated life reviewing in a cross sectional study of 172 subjects ranging in age from 63 - 91 years. Developmental relationships between life review resolution and chronological age were queried. It was found that life reviewing was observed more often in subjects in their 60's and 70's and that it diminished in older subjects. Moreover, the results support Butler's hypothesis that the life review is an active but transitory problem solving phenomena occurring at particular ages. In concluding,

Gorney observes that, "many individuals who survive into very old age may enter a new developmental state characterized by serenity, ego-integration, and acceptance of death". (p.147)

Lewis (1971) - Reminiscing and self-concept in old age

Lewis examined relationships between reminiscence, self-concept consistency and healthy adaptation. Twenty-four, male caucasians, over 65 years of age and living in the community were assessed as being reminiscers or non-reminiscers. This differentiation was based on an analysis of taped and transcribed interviews. Sentence units were analyzed and if greater than 40% of the units r[illegible] the past (events five or more years in the past) t[illegible]s were classified as reminiscers.

[illegible]retest, reminiscers and non-reminiscers were und[illegible]entiated on a Q sort measure of past and present self [illegible]oncept. Following an experimentally induced stress situa[illegible]ion, however, (subjects were told that their solutions to t[illegible]e social problem of campus disorder were different from most adults) reminiscers showed evidence on post-test Q sort meas[illegible]es of a significant increase in past-present self concept. The author suggests that elderly reminiscers were better ab[illegible] to maintain self-esteem in a self-concept threatening situation than those who were not categorized as reminiscers. It was concluded that, "certain old people may deny the full implications of threats to their self-esteem by cog[illegible]tively linking their present to the past." (p.242)

That is, reminiscers could more readily identify with their past and avoid the impact of present ego stresses that inevitably accompany old age.

Lieberman and Falk (1971) - The remembered past as a source of data for research on the life cycle

Utilizing an interview format where conversations were analyzed as to content and function, the authors investigated reminisicing and adjustment in three groups of elderly (average age 78 years); those living in the community, those living in a nursing home and those on the waiting list to be in that home, and a middle age group (average age 49 years). The results showed that the elderly group on the waiting list displayed the greatest amount of reminiscing. In a two year follow-up of this group it was found that adaptor's (those subjects displaying no deterioration in mental and physical functioning after institutionlization) frequency of reminiscing was no different than with the non-adaptors.

Additional findings were that the older group reported a greater degree of reminiscing activity than the middle age group and that the aged generally reported that reminiscing served to derive personal satisfaction while the middle age group tended to reminisce as a vehicle to solve problems. The authors conclude from their study that reminiscing as an adaptive feature in old age is questionable.

Havighurst and Glasser (1972) - An exploratory study of reminiscence

Havighurst and Glasser explored the frequency, content and affective quality of reminiscing. Questionnaires were sent to over 500 subjects, comprising four groups. Group A (age range 70-85) consisted of 51 males and 71 females drawn from lists of Who's Who in America and Who's Who of American Women. Group B-C was comprised of 12 males and 34 females (age range 62-89) from two different senior citizens' church groups. Group D was a middle age control group of an unspecified number of subjects and was reported in the published results. Group E consisted of three graduating classes (1921, 1922, 1923) from a Western liberal arts college. The age range of this group was not specified.

In general, the results suggest a syndrome of good personal-social affect of reminiscence and high frequency of reminiscing. The authors, however, are uncertain if good personal social adjustment leads to positive affect and high frequency of reminiscing or vise versa. Additional findings were that mental imagery in reminiscing was highly correlated to reminiscing frequency and that reminiscing content often reflected the individual's lifetime interests. For example, subjects who were actively involved in political or community functions reminisced frequently about these events. Further, it was found that a high frequency of reminiscing was positively correlated with pleasant

affect of reminiscence.

Coleman (1974) - Measuring reminiscence characteristics from conversation as features of old age

Coleman researched aspects of what were defined as simple reminiscence, life reviewing and informative reminiscing. Reminiscing, in general, was defined as "linguistic acts referring to the remote past" (p.285) and life reviewing was defined as "a consistent synthesis of interpretations and evaluations of past events and a consequent serene acceptance of the past shown in a balanced appraisal of the good elements in the person's life." (p.285) Informative reminiscing was hypothesized to serve a teaching function most likely to occur when an older individual experiences a severe role loss.

Forty-eight subjects living alone in sheltered housing blocks in London, England, (25 women and 23 men) and varying in age from 69 to 92 years (mean age 80) participated in the study. Transcripts of interviews were analyzed as to the quantity and functional utility of the three categories. Reliability was checked by percent agreement between transcript raters. Measures of reminiscing, constructed in part from Havighurst and Glasser's (1972) questionnaire were related to an analysis of past and present life adjustment. The central hypothesis of the study, that life reviewing would be related to present adjustment for subjects who evidenced dissatisfaction with their past lives, was supported. In addition, it was found that there was no

relationship with either life reviewing or simple reminiscing and present adjustment.

Fallot(1976) - The impact of mood of verbal reminiscing in later adulthood

The question of mood and affect of verbal reminiscing and styles of presentation of the life review was researched by Fallot. It was found that self-report measures of fight-fright, depression, shame and fatigue showed significant decreases after reminiscing. Interviewer ratings, however, did not identify any noteworthy differences in mood between reminiscing and non-reminiscing. Three "styles" of recounting one's life story were identified in this study; an Affirming Style, characterized by a self-acceptance of positive and negative experiences, a Negative Style, characterized by a distancing or exclusion of negative aspects of one's life story and finally a Despairing Style where the individual tends to be painfully aware of and preoccupied with conflicts and negative experiences. It was also found that the Affirming group experienced a greater pattern of positive mood changes after a life story session. The Negative and Despairing group did not report significant changes in mood after relating reminiscing, however, the pattern of results suggests that Despairers experienced decreased elation.

In terms of the presentation of the life's story, the Affirming group were observed to be more organized, consistent and more confident in providing personal

explanation in their reminiscences.

Boylin, Gordon and Nehrke (1976) - Reminiscing and ego integrity in institutionalized elderly males

In this study ego adjustment scales and a questionnaire on reminiscing, based on the work of Havighurst and Glasser (1972), were administered to 41 elderly institutionalized males (mean age 64.37). The results showed that the men who reminisced most frequently scored higher on the measures of ego integrity. In addition, a relationship was found between a negative affect of reminiscing and ego integrity. The authors suggest that this relationship shows that reminiscence in the sample was in the form of the life review as posited by Butler.

Hendriks (1978) - The relationship between life satisfaction and life review processes among older persons

In a doctoral dissertation studying the relationship between life satisfaction and the life review process, fifty-six, self-selected subjects, 55 years or older, were instructed in the production of a "life-story" through autobiographical writing. Measurements utilizing two forms of the Life Satisfaction Index (Neugarten, Havighurst and Tobin, 1968) were taken pre and post instruction. While an increase in life satisfaction was noted to be related to frequency of attendance, the production of an autobiographic life review did not correlate with life satisfaction.

Erlich (1978) - The life review and the elderly: A study in self-concept, recognitions, and re-cognition

Erlich's doctoral dissertation hypothesized that elderly who participated in the life review would have improved self-concept. Thirty-six elderly, Jewish, non-institutionalized subjects participated in either a life review group, a current events discussion group or a control group. Analysis of pre and post measurements on the Berger Self-Concept Scale and the Purpose in Life Test showed no statistical difference between the groups.

Romaniuk (1978) - Reminiscence and the elderly: An exploration of its' content, function, press and product

In a doctoral dissertation designed to explore reminiscence content, function, triggers and products, 91 subjects (age range 58 - 93; mean of 78.5) were administered a Reminiscence Survey consisting of five sections: Background Information, Reminiscence Exercise, Uses Scale, Triggers Scale and Products Scale. The three latter scales consisted of items assessing how the individual uses reminiscence, the types of events or experiences which stimulate or trigger reminiscence and the kinds of outcomes or results produced by engaging in reminiscence. A factor analysis of the Reminiscence Uses Scale revealed three factor subscales: Self-Regard/Image Enhancement, Present Problem Solving and Existential/Self-Understanding. In addition, five factor subscales were identified for the Triggers Scale: Death Awareness/Recognition, Death

Awareness/Other, Realization of Goals/Accomplishments, Changes/Threats to Body and Changes in Career or Life's Direction. Finally, three factor subscales were identified for the Products Scale: Cognitive Restructing, Positive Affect-Self and Integrity or Fulfillment.

Romaniuk also found that reminiscence frequency was positively correlated with life reviewing and uncorrelated with age. Moreover, reminiscence frequency was positively correlated with a positive affect (pleasantness) of reminiscence. From this study Romaniuk concludes that reminiscence functions in an adaptive capacity to serve present needs.

Revere and Tobin (1980) - Myth and reality: The older persons relationship to his past

The authors hypothesized that making the past unique may be more adaptive than making it more positive or more understandable. The central hypothesis in the study was that elderly, in contrast to a middle age group would not only be more involved in their past but also mythicize their past as reflected in ratings of dramatization, consistency, certainty and reconciliation of their reminiscences. Analysis of interviews taken from 35 elderly (age range 65 to 103) and 25 middle aged individuals (age range 44 to 55) showed the elderly group to be significantly more involved and to have a greater degree of dramatization in their reminiscences. The authors interpret the mythicizing of significant figures in the reminiscences of the elderly as

an adaptational response different from making sense out of one's life. They suggest that mythicizing serves to make the uniqueness of the self vivid.

DeMotts (1981) - Reminiscence in older persons as a function of the cognitive control principle of leveling-sharpening and its relationship to life

In his doctoral dissertation DeMott examined the cognitive control principle of leveling and sharpening as a variable which might influence the amount of reminiscence used by an older adult. Cognitive control through leveling and sharpening is thought to influence the differentiation of memories in a consistent manner, which affects the development of personality organization and subsequent adaptation. Sharpeners have a greater ability to recall differential aspects of past stimuli or experiences more coherently. Levelers, on the other hand, are thought to fuse the details of memories or earlier experiences. In addition to studying cognitive control, DeMott examined the relationships of reminiscence frequency, positive affect of reminiscence and life satisfaction.

Analysis of data from 88 non-institutionalized elderly volunteers (age range 65 to 96, mean of 74), showed significant positive correlations between reminiscence frequency and life satisfaction and reminiscence frequency and positive affect. A positive correlation between reminiscence frequency and the measure of leveling - sharpening, however, fell short of statistical significance

($p < .09$). DeMott concludes from his study that:

> If higher frequencies of reminiscence are associated with greater life satisfaction and positive affect in a healthy, older population, as was the case in the present study, then perhaps sharpeners may tend to be better adapted to their environment in their later years and may be more prone to survive the inherent challenges of this life stage longer and more successfully. In other words, sharpeners may combine with other cognitive controls such as flexible-control and field independence, for example, to produce a cognitive style that facilitates better late life adjustment and greater longevity. (p.73)

Summary and Discussion of Emperical Information

The central thrust of most research has been to examine the general theoretical assumption that reminiscing in old age has important adaptive functions. In this regard there have been attempts to link reminiscing to variables such as freedom from depression, self-concept, institutionalization, positive affect, mood, ego integrity, life satisfaction, mythicizing and cognitive control. As previously noted, most studies have been exploratory and few have been designed to test specific hypotheses drawn from reminiscence theory (Romaniuk, 1978; Merriam, 1980). Moreover, contradiction among studies is evident. Some researchers, for example, found positive correlations between reminiscence frequency and positive affect or life satisfaction and others, identified negative or near zero correlations.

Romaniuk (1978) has stated that part of the problems

observed in the empirical research can be traced to reminiscence theory. He suggests that reminiscence has been researched in a "casual" manner which in part "is the result of problems encountered when attempting to translate, operationalize, measure, and test some vaguely defined theoretical notions (e.g. Erikson)" (p.48). As discussed in the review of reminiscence theory, many of the theories have been severely criticized, and have been referred to as sexist, idealistic and reductionistic.

A second source of our inability to make definitive statements regarding the function of reminiscence lies with many of the methods utilized in the empirical work. Romaniuk (1978) has observed that diversity in subject selection (e.g., waiting-lists, those hospitalized), definitions of reminiscence and reminiscers (e.g., broadly and simplistically), bias in "unstructured interviews," lack of independence between scorers of reminiscence and other variables, and questionable validity and reliability of instruments, results in a confusing and ambiguous understanding of reminiscence in late life.

Whereas problems with reminiscence theory and empirical work contribute to our difficulty in understanding the role and function of recalling and reviewing the past, it is important to recognize that this line of study is still relatively novel, and thus, researchers have yet to discover and examine all the variables which may be involved. Except for DeMott's (1981) study of the relationship of cognitive

control and reminiscence the role of cognition has virtually been ignored. Since reminiscence is essentially a process of thinking, further exploration of cognitive factors in reminiscence appears justified. Literature having both direct and indirect implications for the study of cognitive factors in reminiscence is overviewed in the following section.

Cognitive Factors

The importance of cognitive factors in psychology is evidenced by an ever growing amount of empirical and clinical research (Bandura, 1977; Beck, Rush, Shaw and Emery, 1979; Murphy, 1980). The cognitive resources of the individual are recognized as important to psychological adjustment or adaptation. In examining the literature on adjustment and coping (for a comprehensive review see Liburd, 1980) numerous references can be found emphasizing the role of cognitive processes. Lieberman (1975), for example, found the cognition and physical resources of the elderly to be important in adapting to many of the stresses of old age. In writing on psychological stress and coping processes, Lazaraus (1966) emphasized two forms of coping: action tendencies (to eliminate threats) and cognitive maneuvers (where evaluation of situations is changed). In a similar vein, Rapport (1962/65) underscored the need for accurate cognitive perception of situations in coping and adjustment.

In this section of the review an attempt will be made

to explore the role of cognition in reminiscence through an examination of the concepts of cognitive style and cognitive distortion. A summary and integration of the literature will conclude this section of the discussion.

Cognitive Style

Cognitive style refers to the characteristic ways in which individuals conceptually organize the environment. It is often defined as individual variations in modes of thinking, remembering and perceiving or as ways in which individuals apprehend, store, transform or utilize information (Goldstein and Blackman, 1978). The emphasis regarding cognitive style is on the processes rather than the content of thought, that is, on "how" cognition is organized. Numerous theories have been proposed regarding the types and processes of conceptual organization. These include theories of cognitive control/scanning, leveling-sharpening, constricted-flexible control, tolerance for incongruous or unrealistic experience (Messick, 1970) field dependence (Witkin, Lewis, Machover, Meissner and Wapner, 1954), cognitive complexity, (Bieri, Atkins, Briar, Leaman, Miller and Tripodi, 1966; Kelly, 1955), reflectivity-impulsivity (Kagan, Rossman, Day, Alberta and Phillips, 1964) styles of categorization (Pettigrew, 1958) and styles of conceptualization (Kagan, Moss and Sigel, 1963). In the present study the cognitive styles of field dependence and cognitive complexity are examined as factors which may facilitate the reminiscing process.

Field dependence. In general, field dependence reflects the ability to overcome the embedding effects of a perceptual context upon an item within the context (Karp, 1967). Individuals who have little difficulty in separating items from such context are labelled "field independent" (Trammer and Schluderman, 1974). According to the differentiation hypothesis (Witkin, Dyk, Faterson, Goodenough and Karp, 1962), the field dependence dimension may also be considered as an indicator of a much broader dimension, the "global-articulate" dimension, describing analogous social and personality characteristics of an individual. Within this dimension, field dependence reflects poorly developed analytic abilities, difficulty functioning independently without environmental support, evidence of gross and unstructured defences and controls and vague global concepts of body and self. Field-independent individuals, on the other hand tend to exert mastery over environmental forces, to use specialized defences, to have effective control and discharge of impulses, and to evidence considerable self-esteem and confidence (Markus, 1971).

Research on field dependence with elderly subjects has been very limited. The majority of studies have been concerned with examining changes in field dependence throughout the life span, and in this regard field dependence has generally been shown to increase with advanced age. Some studies, however, have shown differences in field dependence among older individuals. Markus, (1973)

for ex[illegible]found institutionalized elderly to be more field [illegible]t than non-institutionalized. Karp (1967) [illegible]nd u[illegible]oyed elderly to be more field dependent than t[illegible]r e[illegible]oyed counterparts. As the authors of these st[illegible]ic[illegible]ave not elaborated on their results, we are left to specul[illegible]e. It may be that the well developed analytic abil[illegible]es inherent in field independence aid the older indi[illegible]dual in adjusting to the losses and crises of old age. Alth[illegible]h he did not explain the idea, Karp (1967) suggested that [illegible]eld independent individuals would tend to survive longe[illegible]an field dependent.

Cognitive complexity. Cognitive complexity represent[illegible] a second form of cognitive style having implica[illegible] for the process of reminiscence. Cognitive complexity is an outgrowth of Kelly's (1955) psychology of personal constructs. Personal constructs as defined by Kelly are stable cognitive structures utilized by the individual to integrate the world and predict the environment. Emerging from this perspective is the Conceptual Systems Model which views cognitive complexity as an information processing variable (Beiri, 1966; Sullivan, 1974). Within this model individuals are ascribed a position along a concrete-abstract continuum reflecting levels of integrative complexity (Schroder, Driver and Steufert, 1967). Individuals at the low end of the "integrative index" would tend to utilize categorical, absolutistic thinking in their interpretations of people and

situations. On the other hand, individuals evidencing a high level of integrative complexity are less absolutistic in their thinking, more able to generate alternatives and better able to explore a diverse amount of information before making conclusions.

To date there have been few, if any, published reports of integrative complexity in older adults. Much of the research on integrative complexity has been focused on developmental trends in children and adolescents and in studying relationships with other forms of cognitive style, usually within an educational context (Goldstein and Blackman, 1978). As with the cognitive style of field dependence, cognitive complexity (integrative complexity) provides a model of how individuals may interpret and evaluate their past. Individuals functioning with low integrative abilities, for example, may tend to evaluate experiences or situations from the past in a concrete, absolutistic and negative way which may result in emotional distress. Since individuals with more abstract or high integrative abilities tend to be better able to see alternative solutions to problems, have a higher tolerance of stress and a more positive self concept, then, when an evaluation of the past is undertaken, it may more readily result in a positive emotional experience.

Cognitive Distortion

A number of treatment oriented psychological theories hold that errors in thinking result in dysfunctional

emotional outcomes. Cognitive therapy, as outlined by Beck (1976) is one such theory. Although few cognitively oriented theories have been concerned with psychotherapy in old age, Emery (1981) applied the principles of cognitive therapy to the question of reminiscing in the elderly. Emery observed that problems in the life review could arise when an individual makes cognitive errors in assessing and evaluating the past. Cognitive errors or cognitive distortion are viewed as faulty information processing. In this respect, individuals tend to make broad global judgements regarding events that impinge on their lives. The meanings that flood their consciousness are likely to be extreme, negative, categorical, absolute and judgemental. The emotional response, thus, tends to be negative and extreme (Beck, Rush, Shaw and Emery, 1979, p.14).

In the theory of cognitive therapy six faulty information processing variables have been hypothesized; they include: (1) Arbitrary inference - the process of drawing a specific conclusion in the absence of evidence to suggest the conclusion or where the evidence is contrary to the conclusion; (2) Selective abstraction - focusing on a detail taken out of context, ignoring other more salient features of the situation and conceptualizing the whole experience on the basis of this fragment; (3) Overgeneralization - the pattern of drawing a general rule or conclusion on the basis of one or more isolated incidents and applying the concept across the board to related and

unrelated situations; (4) magnification and minimization - errors in evaluating the significance or magnitude of an event that are so gross as to constitute a distortion; (5) Personalization - the proclivity to relate external events to the self when there is no basis for making such a connection; (6) Absolutistic, dichotomous thinking - the tendency to place all experiences in one of two opposite categories; for example, flawless or defective, good or bad, saint or sinner. Here, the individual usually categories himself in the negative extreme (Beck, et. al., 1979; p.14).

In regards to reminiscing, Emery observed that depression could result, for example, when an individual selectively abstracts a negative aspect of his or her life and then overgeneralizes to an estimate of his or her total worth as a person. Emotional experience resulting from reminiscence then, may be influenced by faulty information processing factors or cognitive errors.

Summary and Integration of Information on Cognitive Factors

In this section of the review an attempt has been made to demonstrate that the study of the relationship between reminiscing and adjustment in old age may be enhanced by an examination of cognitive factors. When individuals look back on their lives they are in essence, thinking. An evaluation of life's experiences, attitudes or achievements is not a static event. It is an active process, and involves comparing, synthesizing and interpreting. It may involve certain styles of cognition and perhaps styles which

have developed over a lifetime.

The cognitive styles of field dependence and integrative complexity were reviewed as possible vehicles through which we may gain a greater appreciation of the process of reminiscing. Faulty information processing factors or cognitive distortion as outlined in the theory of cognitive therapy were also discussed as additional concepts which may further our understanding of the emotional outcomes of reviewing and recalling the past.

In general, there has been a clear lack of research regarding cognitive style or cognitive distortion relative to the aged. Except for a few studies of field dependence there is little empirical evidence that the concepts may be applicable to aged adults. The study by DeMotts (reviewed in the section on empirical studies of reminiscence), however, demonstrates that further examination of cognitive factors in reminiscence is warranted.

An Integration of the Literature

Theoretical views and research results regarding reminiscing in late life as well as information on cognitive factors which may influence the reminiscing process have been examined in the foregoing sections. We can conclude, at best, from this review that much work remains to be done. What little information serves as reminisce theory and many of the empirical tests of reminiscence functions have been subject to criticism by a number of reviewers (Romaniuk, 1978; Merriam, 1980). This situation serves to remind us of

the relative novelty of gerontology as a field of scientific pursuit. Still, despite our tenuous understanding of reminiscence, a number of trends or generalizations can be extracted from the literature.

First, it appears that reminiscence is a complex phenomenon involving various forms or styles, uses and affect. In addition, it may be influenced by events and concerns of the present both in the physical as well as psychological sense. Attempts to limit reminiscence activity to a specific age period have been inconclusive. Research suggests that a life review may occur sometime after age forty, but even this observation must be tempered by the fact that we have yet to demonstrate the universality of reminiscence and especially the life review.

Whereas reminiscence theory, in general, points to reminiscence as an adaptive feature in late life, the empirical literature has supplied only limited support for this hypothesis. Problems with theory and empirical method have contributed in part to this situation. More importantly, however, is the realization that until recently many important variables have thus far been unaccounted for in studies of reminiscence. In this regard factors of cognition were isolated as variables requiring empirical investigation.

If one assumes, firstly that people reminisce, secondly, that part of this reminiscence activity involves a review of one's life and thirdly, that the outcome of this

review affects the psychological well being of the individual, then it seems logical and important to know how the review is accomplished. Does it proceed in a simplistic and haphazard way or is the review undertaken with a measure of careful examination with the individual exercising logic, objectivity and maturity? What of the individuals who have reported negative or unpleasant affect resulting from reminiscing or their life review? What cognitive factors may be contributing to this emotional experience? How are these individuals interpreting their successes, failures, goals, and experiences to the effect that they may feel that their life has been a success or waste? The present research project will attempt to explore some possible relationships between reminiscence, depression, and cognitive factors such as style, distortion, integrative complexity and field dependence. What form and function reminiscence takes will be examined in light of demographic variables, cognitive processing factors, frequency, affect, life evaluation and level of psychological adjustment.

Rationale for an Exploratory versus "Experimental" Study

The decision to conduct an exploratory as opposed to "experimental" study was based on a number of factors. First, the study of reminiscence is at it's earliest stage, with only a handful of empirical studies from which to guide further research. Second, most of the existing studies have been indirect or exploratory examinations of elements relating to reminiscence; few have set out to examine

specific hypotheses. Third, contradictory findings concerning such factors as reminiscence frequency, and psychological adjustment suggest that these constructs require clarification, but this will need to proceed over a number of years and through many further studies involving a variety of factors and concepts. Fourth, measures which could be employed in assessing cognitive style and cognitive errors have seen very limited use with elderly populations and thus, their reliability and validity may be questionable.

In comparison to experimental research, exploratory studies seek to "discover," rather than "prove." In this regard the present study seeks to gather information and thus poses research questions rather than specific hypotheses. Also, and in accordance with the emphasis on discovery, the analysis of the data tends to be general and conservative, rather than specific and serves to examine the data from a number of perspectives, through the application of a variety of statistical procedures. This conservative approach also allows for the use of less rigorous levels of statistical significance.

The following research questions serve to guide the investigation. Descriptions of the statistical procedures are provided in the following chapter.

Research Questions

1. What relationships exist between factors of age, years of education, reminiscence evaluation,

reminiscence frequency (2 measures), cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence, and reminiscence affect for non-depressed elderly, depressed elderly and for middle age subjects?

2. What differences exist between groups of non-depressed elderly, depressed elderly and middle age subjects on the variables of reminiscence evaluation, reminiscence frequency (2 measures), cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect if age is held as a covariate?
3. What differences exist between groups of non-depressed elderly, depressed elderly and middle age subjects on the variables of reminiscence evaluation, reminiscence frequency (2 measures), cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect in light of subjects' sex, education, marital status, and occupation?
4. What differences exist between non-depressed elderly, depressed elderly and middle age subjects on the variables of reminiscence evaluation, cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect in light of categorization of subjects as either "high" or "low" frequency

reminiscers?

5. What are the differences between non-depressed elderly, and depressed elderly in terms of their sex, occupation, age, education and marital status?

CHAPTER III

METHODOLOGY

In this chapter the subjects, instruments and measures, experimental design and procedures for data collection and analysis are overviewed. In addition, a pilot study designed to test many of the instruments and measures employed in the present study is described.

The Pilot Study

A pilot study was conducted for three general reasons. First, given the complexity of the issues, and the exploratory nature of the project, it was deemed important to provide a preliminary evaluation of measures and instruments which could be employed in the main study. This evaluation was particularly important since many measures have not been used with elderly subjects. The second reason was to gain an appreciation of relationships between selected instruments. Last, conducting a pilot provided the researcher with an opportunity to work with and become familiar with the various measures and procedures to be used in the main study.

Selection of instruments for use in the pilot was determined by the proposed need to examine the issues of reminiscence frequency, the nature of evaluation in reminiscence, analytical abilities (cognitive style) and the level of psychological adjustment. The rationale for selection of instruments and measures meeting the

requirements of the pilot is presented hereafter. Detailed descriptions of these measures are provided in the Instruments and Measures section of the present chapter.

Reminiscence frequency. The construction of a measure of reminiscence frequency was undertaken because the proposed design of the study did not lend itself to analysis of conversation (interpersonal reminiscence) and because previous measures were thought to be too general and therefore allowing only limited responses from subjects. Thus, a measure of reminiscence frequency was developed which allowed subjects to rate their degree of reminiscence on 5 levels and with respect to 10 periods or situations in life.

Reminiscence evaluation. A measure of reminiscence evaluation, based on the Semantic Differential techniques of Osgood, Suci and Tannenbaum (1957) was constructed because the evaluative factor of this technique appeared to correspond with the theoretical idea that reminiscence serves an evaluative function. Thus, in applying this method, subjects were allowed to evaluate specific and general periods in life. In contrast to this method previous research tended to focus on the affect produced by reminiscence or on the content of reminiscence.

Cognitive style. Although the theoretical rationale for the selection of certain measures of cognitive factors has been previously described on pages 28 to 35, it is important at this point to provide additional explanation

regarding the types of cognitive styles to be studied and instrument device. In terms of the assessment of cognitive factors, it was thought that the diverity of conceptualizing cognitive style should be acknowledged in the study. Thus, field dependence, which is assessed through perceptual means and integrative complexity, which is based more on social and moral experience and ability were selected. Field dependence was also included because measures of that style had already been applied in studies of older individuals and was recommended by DeMotts (1981) as a potential source of information relating to the cognitive components of reminiscing.

Other forms of cognitive style, such as reflectivity-impulsivity, breadth of categorizing, constricted versus flexible control, and so on, could have been employed in the study with equal possibility of discovering components to the analytic nature of reminiscence. All these styles and their related instruments, however, suffered from the fact that they had not been empirically applied with older people. The choice of a measure of integrative complexity, and utilizing the Interpersonal Topical Inventory, then, was based on the emphasis on the graduated assessment of cognitive (integrative) complexity (concrete to abstract). Even within the area of integrative complexity, however, other instruments such as the Paragraph Completion Test (Schroder, Priver and Streafert, 1967), the This I Believe Test

(Harvey, 1963) or the Impression Formation Test (Streafert and Schroder, 1962) could have been applied in the present study. The selection of the Interpersonal Topical Inventory, for this project, then, could be likened to having to select only one of a variety of interesting and delicious foods. In the end, the instrument was selected because the author preferred the format, procedures and scoring system. (Had subjects in the pilot found the instrument too cumbersome or difficult another measure would have been substituted.)

Cognitive Distortion. Selecting measures of cognitive distortion was less difficult than selecting measures of cognitive style, for only the measures developed by Levebre (1981) appeared suitable and the only other measure was specific to low back pain patients. Levebre's (1981) instrument, the Cognitive Errors Questionnaire, was designed to tap a broad range of experiences, such as work, leisure, and family. Whereas this measure would provide a general assessment of cognitive distortion, a more specific assessment of cognitive errors in relation to reminiscence was thought to be required. In this regard an instrument (Reminiscence Cognitive Errors Questionnaire) modeled on Levebre's format was designed by the author.

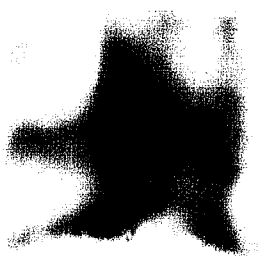
Adjustment. Adjustment can be viewed as a "multi-dimensional construct" (Felton and Kahana, 1974), which allows for a variety of methods of measurement. These include assessment of such factors as life satisfaction,

morale, and adjustment to physical and social changes. In the present study, two instruments measuring aspects of adjustment were selected. A measure of depression using the Beck Depression Inventory was chosen because previous research has suggested that reminiscence is related to freedom of depression (McMahon and Rhudick, 1967) and because the instrument assesses a variety of emotional reactions.

A second measure of adjustment, The Philadelphia Geriatric Centre Morale Scale - Revised, was slected because the items are more specific to the emotional adjustment of older people. The two instruments, when used in conjunction, then, were thought to provide a general and specific assessment of psychological adjustment.

Pilot Study subjects. Fifteen subjects (10 females and 5 males) ranging in age from 61 to 94 years (mean age = 73 years) participated. They were known by the author or referred to him by other participants. A diversity of education and occupation was represented in the sample.

Procedure. Subjects were contacted by the author and asked if they would participate in a study of reminiscence. The aforementioned measures as well as a Background Information Questionnaire were given and subjects were



to comment. Each subject was interviewed after e battery and queried regarding the format, ime to completion and comprehension of the .

Non-statistical results. Given the nature of research with the elderly, and the fact that many of the measures had not been previously tested on older people, the author wanted to know if subjects found the instructions and purpose of the instruments clear. An estimate of the time taken to do the battery was also necessary in order to limit the possible effects of fatigue. All subjects reported completing the battery in 1 to 1 1/2 hours. Many also noted that if the battery had been much longer, it may have affected their performance. All subjects reported that the instructions were clear, and a few had suggestions for rewording of certain passages. Finally, the majority of subjects reported that filling out the questionnaires was interesting and challenging.

Statistical results. Data from the pilot study was correlated (Pearson Product Moment Correlation Coefficient) in order to gain an appreciation of relationships between measures. Because of the low number of subjects in the study, statistically significant correlations were neither expected or produced, and thus, a detailed discussion of the results is not warranted. Certain "patterns" in the results, however, led the author to include additional measures in the main study.

A discrepancy between the correlations involving the measure of reminiscence frequency and the measures of morale and depression was noted. Here, reminiscence frequency appeared to be moderately correlated ($r=.607$) with morale

but negatively (and almost negligably) correlated (r=-.034) with depression. Given that the correlation between morale and depression was positive (r=.203) and that other correlations with reminiscence frequency appeared to be consistent (measures of cognitive style correlated negatively and measures of cognitive distortion correlated positively), it was thought that the measure of reminiscence frequency developed by Havighurst and Glasser (1972) would be included in the main study. Including a second measure of frequency would provide a check on the correlations between two frequency measures and thus allow for consideration of the validity of the construct.

Other inconsistencies in the results were found in regards to the measure of reminiscence evaluation. Here, the reminiscence cognitive errors measure correlated negatively (r=-.205) and the general cognitive errors questionnaire positively and almost negligably, (r=.089) with reminiscence evaluation. Similarly, the measure of field dependence correlated positively (r=.188) and the measure of integrative complexity correlated negatively (r=-.152) with reminiscence evaluation. These discrepancies, though questionable, because the correlations themselves were low, led the author to include Havighurst and Glasser's (1972) measure of reminiscence affect in the main study in order to provide additional information of the "effects" of reminiscing.

The pilot study analysis also allowed for examination

of the correlations concerning measures of cognitive distortion, cognitive style and adjustment. A low-moderate correlation (r=.370) between the two cognitive errors questionnaires provided some validity for including the reminiscence cognitive errors questionnaire in the main study. A low and negative correlation (r=-.177) was found between the two measures of cognitive style, and was thought to reflect the differing orientations of these constructs. Finally, a small but positive correlation (r=.203) between the measures of morale and depression provided support for including both measures in the main study.

The Sample - Main Study

Eighty-one individuals residing in the Province of Alberta, participated in the study. Of this total, 27 subjects were classified as non-depressed elderly; 25 subjects classified as depressed elderly and 29 subjects served as a middle age comparison group. All subjects were required to meet the following criteria:

1. Reads and writes English
2. No serious visual or auditory problems.
3. No evidence of organic brain syndrome.
4. No evidence of terminal illness or of a serious physical disability.

Non-depressed elderly sample. The subjects in this group were recruited by means of posted announcements at the Society for Retired and Semi-retired in Edmonton, Alberta. Subjects (6 males, 21 females) were over the age of 65 with

an age range of 67 to 85 with a mean of 72.9 years. All subjects in this group scored less than 11 on the Beck Depression Inventory and less than 8 on the Philadelphia Geriatric Center Morale Scale - Revised. If recruited subjects scored higher than these scores, they were omitted from the sample.

Depressed elderly sample. The classification of depression in this group was based on a physician's diagnosis. In addition, if these subjects scored less than 11 on the Beck Depression Inventory and less than 8 on the Philadelphia Geriatric Center Morale Scale, they were excluded from the sample.

All of the 25 subjects (4 males, 21 females) in this group were over the age of 65, with an age range of 65 to 89 and a mean of 77.4 years. Eighteen subjects were residents of the Good Samaritan (Mount Pleasant) Care Center and 7 subjects were recruited from the Good Samaritan (Southgate) Care Center. These institutions are nursing home type residences located in Edmonton, Alberta.

Middle-age sample. The subjects in this group (13 males, 16 females) were known by the author or introduced to him by other subjects. All subjects were employed and represent a diverse variety of occupations and education. All subjects reported good health. The ages of these subjects ranged from 40 to 62 years with a mean of 50.6 years.

Instruments and Measures

Background Information. This questionnaire was designed to solicit information on sex, age, marital status, present or past occupation, education, place of residence, ratings of health, income range, frequency of contact with family and friends and information about family attitudes about reminiscencing. The questionnaire can be found in Appendix B.

Measure of Reminiscence Frequency and Affect. A portion of a 22 item questionnaire developed by Havighurst and Glasser (1972) was employed in the present study as one of two measures of reminiscence frequency and as a measure of the affect associated with reminiscing. Coleman (1974) employed the questionnaire in his study and reports a correlation coefficient of .40 ($p<.01$) between frequency of reminiscence as measured by the questionnaire and that found via analysis of the transcription of a one hour taped interview with a subject, and a correlation coefficient of .57 ($p<.001$) between the questionnaire measures and the interviewer's summed rating of the amount of reminiscence in all meetings with particular individuals. Coleman also reports a correlation coefficient of .81 ($p<.05$) between affect as measured by the questionnaire and judges' ratings of affective quality of spontaneous reminiscing in the one hour interview.

Reminiscence frequency scores are established for each subject from responses to questions 1, 2, 4, and 21.

Reminiscence affect is determined by the scores from the subject's responses to questions 4a, 5, 7, 10, 19 and 22. In the present study only questions 1, 2, 4, 4a, 5, 7, and 10 were utilized in the data analysis. Questions 19, 21, and 22 were omitted in order to reduce the total number of questions in the test battery. This measure of reminiscence frequency is termed Reminiscence Frequency II. A copy of these measures is found in Appendix C.

Reminiscence Evaluation and Frequency. The Semantic Differential technique (Osgood, Suci and Tannenbaum, 1957) was employed to assess subject evaluations of general periods or important situations in life. Ten issue-concepts were rated on eight bipolar adjectives reflecting the evaluative factor of the Semantic Differential. The adjective pairs, such as "good-bad", reflect the degree of personal meaning attached to the issue-concepts. The issue-concepts rated were as follows:

1. When I reflect on my childhood.
2. When I remember middle age
3. When I reminisce about my adolescence.
4. Reminiscing about work.
5. When I reminiscence about my marriage.
6. When I recall my early adult years.
7. When I remember important decisions that I made in my life.
8. When I reflect on being a parent.
9. Remembering retirement

10. When I think I've been successful in my life.

Following the rating of each issue-concept subjects estimated how often they reminisced about that period or situation in life. Rating choices of frequency ranged from frequently (several times a day) to very rarely (a few times a year). Reminiscence frequency was calculated as per each period of life or situation and as a general total. This measure of reminiscence frequency is termed Reminiscence Frequency I.

Scoring of the Semantic Differential followed standard procedures. A sum of the 7 point Likert-type scales on 8 adjective pairs yields a low score of 8 and a high score of 56. Evaluative totals were calculated for each of the 10 issue-concepts as well as for a total of evaluative scores (sum of all scores on all issue-concepts). The use of the Semantic Differential in the present study is termed Reminiscence Evaluation. A copy of these measures is found in Appendix D.

Cognitive Style. Measures of field dependence and integrative complexity were employed to assess cognitive style.

1. Field Dependence

The Group Embedded Figures Test (GEFT) (Witkin, Oltman, Raskin and Karp, 1971) was utilized to measure field dependence. This test is based largely on items of the Embedded Figures Test (GEFT) (Witkin, Oltman, Raskin and Karp, 1971). The GEFT contains 18 complex figures, 17 of

which were taken from the EFT. In total the GEFT contains 7 simple practice items and 9 items of increasing difficulty in each of the second and third sections of the test.

The authors report reliability (parallel form) correlations of .82 (Spearman Brown prophecy formula) for both males (N=80) and females (N=97) and note that these reliability estimates compare favorably with those of the parent test (EFT). In addition the authors report adequate validity correlations between the GEFT, the EFT and Rod and Frame Test (another measure of field dependence).

Although the GEFT is a timed test, in this study subjects were neither timed nor tested in groups. It was employed because of it's ease in handling and simplicity in design. In selecting a measure of field dependence two elderly subjects (aged 76 and 94) were shown the Childrens' Embedded Figures Test (CEFT) and the GEFT. In reviewing the tests the elderly subjects determined that the GEFT was less demeaning and easier to handle than the CEFT.

Scoring of the GEFT results in scores ranging from 0 (field dependent) to 18 (greater field independence).

2. Integrative complexity

The Interpersonal Topical Inventory (ITI) (Tuckman, 1966) was employed to assess cognitive integrative complexity. The ITI consists of 6 sentence stems (e.g., "When I am criticized ..."), each presented with 6, two-choice situations. Four conceptual systems are represented in the total 72 alternatives for selection.

Each system is seen as functioning along a concrete-abstract continuum, with System I, for example, reflecting concrete, absolutistic and categorical thinking and System IV, on the other end of the continuum, reflecting a higher degree of abstract thought, less tendency to rely on status and authority as guidelines and a greater tendency toward problem solving and information seeking.

Scoring of the ITI followed the procedure developed and employed by Gardiner (1968, p. 42-43) and Stewin (1969). For each response, the subject is assigned a score representative of the conceptual systems difference between the alternatives presented.

The choice of the more complex alternative yields a positive difference score, whereas a choice of the less complex alternative yields a negative difference score. Negative and positive scores for the 36 possible selections are summed to yield a total ITI score.

Gardiner (1968) reports intercorrelations with other tests of cognitive complexity of .47 between the ITI and the "This I Believe Test" and .61 between the ITI and the Paragraph Completion Test. A copy of the ITI is found in Appendix E.

Cognitive Distortion (Errors). Cognitive errors were assessed using the Cognitive Errors Questionnaire (CEQ) developed by Lefebre (1981). The test consists of 24 short vignettes followed by a dysphoric thought regarding the vignette that reflects a cognitive error. Subjects rate on

a 5 point scale how similar the cognition is to the thought that they would have in a similar situation.

The CEQ taps a broad range of life situations (family, work, home, recreation). Four types of cognitive errors are reflected by the vignettes and accompanying cognition (six vignettes per type of cognitive error). These include: (a) catastrophizing (magnification) - anticipating that the outcome of an experience will be catastrophic or misinterpretation of an event as a catastrophic; (b) overgeneralization - drawing a general rule or conclusion on the basis of one or more isolated incidents and applying the concept across the board to related and unrelated situations; (c) personalization - taking personal responsibility and relating external events to self when there is no basis for making such a connection and (d) selective abstraction - focusing on a detail (negative) taken out of context, ignoring more salient features of the situation and conceptualizing the whole experience on the basis of this fragment.

In the development of the CEQ raters were unable to consensually validate the six cognitive errors (see p.29) identified by Beck, Rush, Shaw and Emery (1979). These cognitive errors appeared to overlap considerably and thus the definitions of the paired errors were combined and revised, following which raters were able to categorize vignettes according to the condensed set of four cognitive errors previously described. Levebre reports test-retest

reliability coefficients of .80 - .85, alternate forms reliability of .76 - .82, and in internal consistency coefficients of .89 - .92. The CEQ has also been shown to have moderate concurrent validity coefficients of .53 - .60 with the Hammen and Krautz (1976) Depressed-Distorted scale. A copy of the CEQ is found in Appendix F.

Reminiscence Cognitive Errors. The Reminiscence Cognitive Errors Questionnaire (RCEQ) was developed by the author to assess cognitive errors specific to aspects of reminiscing. The RCEQ was modeled after the CEQ developed by Lefebre (1981) and contains 20 vignettes reflecting 4 types of cognitive errors. The vignettes were constructed to reflect general periods of life (childhood, adolescence, young adulthood, middle-age) reminiscence in general and reminiscence as a type of life review. Three independent raters familiar with the theory of Cognitive Therapy judged the vignettes as reflecting the appropriate type of cognitive error. Percentage agreements among the raters ranged from 70 to 90% with a mean of 85% over three revisions of the instrument. In the pilot study the CEQ and the RCEQ correlated at .370 ($p<.091$). A copy of the RCEQ is found in Appendix G.

Measures of Adjustment. The Beck Depression Inventory (BDI) (Beck, Ward, Mandelson, Mock and Erbaugh, 1961) and the Philadelphia Geriatric Morale Scale - Revised (PGC) (Lawton, 1975) were employed to assure subject placement in either a depressed or non-depressed group.

The BDI is a 21 item self-report inventory measuring depression. Mood, pessimism, crying spells, guilt, self-hate, self-harm, sense of failure, self-dissatisfaction, social withdrawal, work inhibition, sleep and appetite disturbances constitute the item categories. In scoring the inventory each response is assigned weighing factors from 0 to 3. Test-retest reliability has been reported as .75 after one month and .74 after three months and odd-even reliability has been reported as .86. Concurrent validity of the BDI has received adequate support. Coefficients ranging from .19 to .57 (mean of .54) have been reported from concurrent validity studies, with a mean of .54.

The PGC is a 17 item "yes-no" questionnaire designed to assess various facets of morale in older people (Lawton, 1975). Factor analytic studies, utilizing relatively large numbers of elderly subjects (e.g. Lawton and Cohen, 1974: N=828; Morris and Sherwood, 1974: N=899) has shown three principle factors: (a) Agitation, (b) Attitude Toward Over Aging and (c) Lonely-Dissatisfaction. Lawton reports internal consistency correlations as .85, .81 and .85, respectively for the three factors. The PGC represents a revision of an original 22 item scale. Validation of the original 22 items measure was against adjustment ratings given by staff to over 200 residents of two homes for the aged and an apartment building for the elderly (Lawton, 1972). High scores represent lower level of morale. Copies

of the BDI and the PGC are found in Appendices H and I.

Procedure

Subject volunteers comprising the non-depressed elderly and middle age groups were contacted by telephone and arrangements made for the experimenter to visit and explain, in depth, the purpose of the research project. After an explanation of the project, subjects were asked to review the questionnaires and telephone the experimenter if they agreed to participate. In addition, subjects were asked to sign a consent form (Appendix J) which described the project and stated that they would in no way be subjected to any strain or hardship as a result of participation.

Subjects in the depressed group were recruited through contact with nurses in the two institutions previously named. Subjects were then approached by the experimenter and the nature of the project described. Subjects were told that participation was voluntary. If subjects volunteered they were given the questionnaires and further description of the project and a review of the test instructions was offered.

Because of the nature of questions and items in the reminiscence questionnaire, and the Semantic Differential, special instructions were given to the middle aged group. These subjects were asked to address or answer items which may have little relevance to their own experience (e.g. retirement) as if they had the experience to respond. On the Semantic Differential for example, middle aged subjects

were asked to evaluate retirement, as if they had retired. These special instructions were given verbally and subjects shown examples from the questionnaires to emphasize the procedure.

Delimitations of the Study

The delimitations of the study include the differentiation between inter and intrapersonal reminiscence, group differentiation - depressed versus non-depressed, and geographical factors.

Inter and intra personal reminiscence. The author chose to delimit the study to factors pertaining only to intrapersonal reminiscence. Theory and research on interpersonal reminiscence has been scant, although a few studies (e.g. McMahon and Rhudick, 1967; Coleman, 1974) focused on reminiscence via analysis of conversation. Unfortunately, the similarities and differences between these types of reminiscence have yet to be determined. Thus, interpretation of the present research results must be tempered by the fact that most theoretical inferences about reminiscence often do not make the differentiation between interpersonal and intrapersonal reminiscence.

Group differentiation. Difficulty in locating depressed-elderly subjects from the community caused the author to solicit volunteers from nursing homes. This situation resulted in non-depressed elderly subjects being from the community and depressed elderly subjects being from institutions. It could be argued then, that group

differences could more accurately be described in terms of institutionalized versus non-institutionalized, and not simply in terms of the presence or absence of depression. The author has chose however, to view the results of the study in terms of depressed versus non-depressed subjects as 11 subjects met the criteria for inclusion, but with cognizance of the community-institution difference. Further elaboration of this issue is provided in the discussion section of the thesis.

Geographical factors. The study was confined to elderly and middle aged residents from the Province of Alberta, with the majority of subjects living in the city of Edmonton. Thus, generalization of the results to other geographical areas is not claimed.

Limitations of the Study

A number of sampling, theoretical and instrument limitations affect conclusions drawn from the results of the study.

Sampling limitations. The study is limited by low male to female ratios in the elderly samples (females, 80.7%). This is important to consider as many of the theories from which our knowledge of reminiscence is drawn, and a number of reminiscence research studies, have largely been based on observations and study of men. This situation affects the validity of interpretations regarding either sex. The study is also limited by discrepancies in age, education and occupation between the two elderly groups,

with the depressed elderly being somewhat older, less educated and comprised of more housewives than the non-depressed elderly group.

Further limitations affecting conclusions may result from a question of the physical health of the two elderly samples. Whereas both groups met the criteria for subject selection, those elderly in the nursing homes may have a lesser degree of good health. To date there is limited information, however, on the relationships between good health, reminiscing and cognition. It may be assumed, though, that poor health could negatively affect interpretations of the past.

Theoretical limitations. Because of the relative novelty of studying both reminiscence and cognition in late life researchers are without definitive guidelines which make the interpretations of research results more valid. As previously noted, problems concerning "theories" of reminiscence, include the fact that much of the theory is inferred from more global or general views of human development. Moreover, many of these views of development are based on studies or observations of men, and thus, do not present as "complete" theories. Further, the majority of these theories are influenced by the psychodynamic orientation and we are without the contrasting perspectives of other theories of human psychology (e.g. social learning theory).

Theories regarding cognitive style have been based

primarily on observations and research with children, adolescents and young adults (mainly undergraduates). Research on these factors in old age has been limited, and when drawing inferences from the data in the present study it must be kept in mind that much of our knowledge of cognitive style in late life is based on extrapolations of theory and research from other age groups.

Instrument limitations. Although a pilot study was conducted in order to assess the applicability of many of the instruments and measures employed here, it must be re-emphasized that measures such as the Group Embedded Figures Test, the Intrapersonal Topical Inventory have no reliability and validity data or norms pertinent to elderly age groups. Similarly, the author's constructed measures of reminiscence frequency, reminiscence evaluation and reminiscence cognitive errors do not boast the reliability and validity required of "experimental" research. Although the exploratory nature of his study warrants the inclusion of these measures, it is necessary to be cognizant of the threats to internal and external validity that may occur as a result of employing "untried" instruments.

Summary. Limitations caused by the lack of theoretical and research completeness regarding reminiscence and cognition in late life, and problems with sampling, and instrumentation necessitate caution in generalizing the results of the present study beyond the samples involved.

Data Analysis

The exploration of demographic, reminiscence and cognitive factors proceeded in the following manner:

1. An investigation of relationships between age, years of education, reminiscence evaluation, reminiscence frequency (2 measures), cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence, and reminiscence affect resulted in the construction of three correlation matrices. Thus, a correlation matrix was derived with the aforementioned variables for each group of subjects (non-depressed elderly, depressed elderly and middle-aged). The Pearson Product Moment Correlation Coefficient statistic was employed in the analysis.
2. In order to examine differences between the three groups, but necessarily controlling for the effects of age, a series of one-way analysis of covariance statistics were employed. The variables of reminiscence evaluation, reminiscence frequency (2 measures), cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect were considered in the analysis. The Scheffe Pairwise Contrast of Means statistic was then utilized to determine where differences between the groups existed. The Scheffe was selected from a variety of posterior tests because it tends to be conservative in its application (Winer, 1971), and

because it is not seriously affected by violations of the assumptions of normality and homogeneity of variance (Ferguson, 1976).

3. A series of two way analysis of variance statistics were used to explore differences between non-depressed elderly, depressed elderly, and middle-age subjects on the variables of reminiscence evaluation, reminiscence frequency (2 measures), cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect in light of subjects' sex, education, marital status, occupation, and whether they were "high" or "low" frequency reminiscers. In the latter instance reminiscence frequency as a dependent variable was modified and regarded as an independent variable and only the dependent variables of reminiscence evaluation, cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect were considered.
4. Finally, a series Chi-square statistics were employed to study differences between non-depressed elderly and depressed elderly subjects in terms of their sex, age, education, occupation, and marital status.

Level of Statistical Significance

In keeping with the exploratory focus of the study the acceptable significance level for the statistical analyses was set at .05.

CHAPTER IV

RESULTS

Introduction

The purpose of the study was to explore some possible relationships between reminiscence, depression and cognitive factors such as field dependence, distortions and integrative complexity. In addition, this study examined various forms and functions of reminiscence in light of demographic variables, cognitive processing factors, frequency and affect of reminiscence and level of psychological adjustment.

Description of the Sample

Three groups of subjects (non-depressed elderly, depressed elderly, middle aged) participated in the study. The male/female ratios, age ranges and means and standard deviations, as well as data on education, marital status and occupation are described hereafter for each group.

Non-depressed elderly. The 27 subjects in this group ranged in age from 67 to 85 years with a mean age of 73.0 years (S.D. 4.9). Six subjects were male and 21 subjects female. Twelve subjects in the group were married, 1 never married, 2 were divorced and 12 subjects were widowed. The years of education for this group ranged from 6.0 to 17.0 with a mean of 12.3 years (S.D. 2.7). Six subjects were classified as housewives, 15 as professional (university level education), 4 as technical, and 2 as other (other was defined as an occupation which could not be categorized as

either housewife, professional, technical, business or labor e.g. nursing orderly with no technical school training). All subjects were retired so occupations are considered as past occupations.

Depressed elderly. The 25 subjects in this group ranged in age from 65 to 89 years with a mean of 77.4 years (S.D. 7.07). Four subjects were male and 21 subjects female. Five subjects were married, 2 subjects never married, 1 subject was divorced and 17 subjects were widowed. The years of education for this group ranged from 0 to 15 years with a mean of 9.4 years (S.D. 2.91). Fourteen subjects were classified as housewives, 4 as professional, 2 as technical, 3 as business, 1 as labor and 1 as other. As with the non-depressed elderly group all subjects were retired so occupational classification reflects past occupation.

Middle-aged. The 29 subjects in this group ranged in age from 40 to 62 years with a mean of 50.6 (S.D. 6.7). Thirteen subjects were male and 16 subjects female. Twenty-one subjects were married, 2 subjects never married, 4 were divorced and 3 were widowed. The years of education for this group ranged from 8 to 21 with a mean of 12.7 (S.D. 2.7). Two subjects were classified as housewives, 11 as professional, 3 as technical, 6 as business, 2 as labor and 5 as other. None of the subjects were retired so the classifications represent present occupation.

Description of Dependent Variables

The maximum and minimum values, group means and standard deviations of the dependent variables of Reminscence Evaluation, Reminiscence Frequency I, Cognitive Errors, Reminiscence Cognitive Errors, Integrative Complexity, Field Dependence, Reminiscence Frequency II and Reminiscence Affect are presented for non-depressed elderly, depressed elderly and middle-aged subjects in Table I.

Data Not Presented in the Study

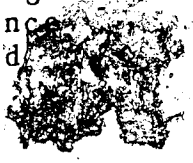
Demographic data on income, reminiscence history, health, place of residence, and frequency of visits with friends or family were omitted from the analysis due to incomplete responses, little variability in response and refusal to answer items such as income.

Research Questions

The research questions of the study are restated followed by the results of the statistical analysis for the question.

Research Question 1.

> What relationships exist between factors of age, years of education, reminiscence evaluation, reminiscence frequency (2 measures), cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect for non-depressed elderly, depressed elderly and middle age subjects?



Results for non-depressed elderly. Significant correlations were identified between age and field dependence ($r=-.522$, $p<.05$), reminiscence frequency I and integrative complexity ($r=-.464$, $p<.05$), reminiscence

Table I

Description of Dependent Variables for Non-depressed (G1), Depressed (G2), and Middle Age (G3) Subjects

	MAXIMUM VALUE			MINIMUM VALUE			GROUP MEAN			STANDARD DEVIATION		
	G1	G2	G3	G1	G2	G3	G1	G2	G3	G1	G2	G3
Reminiscence Evaluation	554.0	532.0	528.0	316.0	299.0	335.0	437.4	383.2	441.4	65.67	57.54	45.38
Reminiscence Frequency I	44.0	38.0	35.0	12.0	13.0	11.0	24.0	23.0	22.4	7.50	6.58	6.16
Cognitive Errors	96.0	86.0	30.00	0.0	5.0	2.0	18.96	29.24	14.89	18.32	17.7	7.6
Reminiscence Cognitive Errors	40.0	48.0	36.0	0.0	0.0	2.0	15.96	17.6	12.6	11.70	10.38	8.53
Integrative Complexity	98.0	82.0	96.0	44.0	32.0	42.0	66.29	55.3	72.3	14.74	14.1	12.39
Field Dependence	18.0	18.0	18.0	0.0	0.0	8.0	11.88	6.28	16.89	5.90	7.38	2.18
Reminiscence Frequency II	20.0	16.0	14.0	5.0	4.0	4.0	10.29	10.36	8.0	3.5	2.75	2.30
Reminiscence Affect	12.0	11.0	12.0	5.0	3.0	4.0	8.25	7.28	7.37	2.04	1.99	1.90

frequency I and integrative complexity ($r=-.410$, $p<.05$), cognitive errors and reminiscence cognitive errors ($r=.600$, $p<.001$) and between reminiscence frequency II and field dependence ($r=.382$, $p<.05$). The correlation matrix for this group is depicted in Table II. No other significant correlations were identified. It was expected that a significant correlation would be demonstrated between field dependence and integrative complexity. The correlation was $r=.356$ and the probability fell short of significance at $p=.068$. In addition, it was expected that the two measures of reminiscence frequency would correlate highly. The correlation was low ($r=.079$) and leads one to query existing methods of assessing how frequently individuals reminisce. Further, a greater positive correlation was expected between reminiscence evaluation and reminiscence affect ($r=.220$).

Results for depressed elderly. Significant correlations were identified between age and field dependence ($r=-.499$, $p<.05$), years of education and field dependence ($r=.438$, $p<.05$), reminiscence evaluation and field dependence ($r=.499$, $p<.05$), reminiscence frequency I and cognitive errors ($r=.554$, $p<.05$), cognitive errors and reminiscence cognitive errors ($r=.468$, $p<.05$) and between integrative complexity and reminiscence affect ($r=.412$, $p<.05$). The correlation matrix for this group is depicted in Table III. No other significant correlations were found. A small but negative correlation ($-.028$) was identified between the two measures of reminiscence frequency.

Table II

Correlation Matrix Involving Age, Years of Education, Reminiscence Evaluation, Reminiscence Frequency I, Cognitive Errors, Reminiscence Cognitive Errors, Integrative Complexity, Field Dependence, Reminiscence Frequency II, Reminiscence Affect. - For Group I Non-Depressed Elderly

	Age	Years of Education	Reminiscence Evaluation	Reminiscence Frequency I	Cognitive Errors	Reminiscence Cognitive	Integrative Complexity	Field Dependence	Reminiscence Frequency II	Reminiscence Affect
Age										
Years of Education	.080									
Reminiscence Evaluation	.112	-.037								
Reminiscence Frequency I	.047	-.179	.060							
Cognitive Errors	-.304	.054	-.246	.533*						
Reminiscence Cognitive Errors	-.130	.071	-.183	.093	.600**t					
Integrative Complexity	-.300	.288	-.464*	-.410*	-.154	.012				
Field Dependence	-.522*	.133	-.276	-.369	-.155	.084	.356			
Reminiscence Frequency II	-.289	.148	-.092	-.079t	.066	.139	.176	.382*		
Reminiscence Affect	.117	.368	.220	-.169	-.235	-.001	.049	-.175	.123	

* $p<.05$

** $p<.001$

t transformed scores correlated

Table III

Correlation Matrix Involving Age, Years of Education, Reminiscence Evaluation, Reminiscence Frequency I, Cognitive Errors, Reminiscence Cognitive Errors, Integrative Complexity, Field Dependence, Reminiscence Frequency II, Reminiscence Affect. - For Group II Depressed Elderly

	Age	Years of Education	Reminiscence Evaluation	Reminiscence Frequency I	Cognitive Errors	Reminiscence Cognitive	Integrative Complexity	Field Dependence	Reminiscence Frequency II	Reminiscence Affect
Age										
Years of Education	-.305									
Reminiscence Evaluation	-.288	.109								
Reminiscence Frequency I	-.017	-.181	.344							
Cognitive Errors	.014	-.083	-.154	.554*						
Reminiscence Cognitive Errors	-.186	.225	-.208	.177	.468*t					
Integrative Complexity	-.075	.137	.353	.382	.106	-.331				
Field Dependence	-.499*	.438*	.499*	.009	-.167	.020	.054			
Reminiscence Frequency II	-.215	.190	-.098	-.028t	.030	.021	-.004	.115		
Reminiscence Affect	.031	.020	.159	.288	.119	-.146	.412*	-.223	-.004	

* $p<.05$

** $p<.001$

t transformed scores correlated

A greater correlation was also expected between field dependence and integrative complexity (r=.054). As with the previous analysis a greater correlation was expected between reminiscence evaluation and reminiscence affect (r=.159).

Results for middle-aged subjects. Significant correlations were identified between age and integrative complexity (r=-.411, p<.05), years of education and integrative complexity (r=.489, p<.05), cognitive errors and reminiscence cognitive errors (r=.555, p<.001) and between reminiscence cognitive errors and reminiscence frequency II (r=.389, p<.05). The correlation matrix for this group is depicted in Table IV. No other significant correlations were identified. As with the previous correlational analyses the correlation between field dependence and integrative complexity did not achieve statistical significance (r=.305, p=.107). This was also the case between the two measures of reminiscence frequency (r=.215) and the measures of reminiscence evaluation and reminiscence affect (r=.196).

Research Question 2.

> What differences exist between groups of non-depressed elderly, depressed elderly and middle age subjects on the variables of reminiscence evaluation, reminiscence frequency (2 measures), cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect if age is held as a covariate.

A significant main effects difference between groups was identified on the Reminiscence Evaluation variable.

Table IV

Correlation Matrix Involving Age, Years of Education, Reminiscence Evaluation, Reminiscence Frequency I, Cognitive Errors, Reminiscence Cognitive Errors, Integrative Complexity, Field Dependence, Reminiscence Frequency II, Reminiscence Affect. - For Group III - Middle Age Group

	Age	Years of Education	Reminiscence Evaluation	Reminiscence Frequency I	Cognitive Errors	Reminiscence Cognitive	Integrative Complexity	Field Dependence	Reminiscence Frequency II	Reminiscence Affect
Age										
Years of Education	-.239									
Reminiscence Evaluation	.096	.124								
Reminiscence Frequency I	-.039	.195	.048							
Cognitive Errors	.059	-.279	-.277	.162						
Reminiscence Cognitive Errors	.101	-.187	-.225	.181	.555**t					
Integrative Complexity	-.411*	-.489*	-.318	-.114	-.085	.009				
Field Dependence	-.159	.298	-.206	.025	.192	.142	.305			
Reminiscence Frequency II	.004	.043	.189	.215t	.098	.389*	.168	.192		
Reminiscence Affect	-.109	.116	.196	.283	.105	.019	.019	.150	.126	

* $p < .05$
** $p < .001$
t transformed scores correlated

When the covariate was considered, however, no significant difference was observed. A Scheffe Multiple Comparisons statistic identified a significant difference on Reminiscence Evaluation between non-depressed elderly (mean = 437.4) and depressed elderly (mean = 383.2). These results are depicted more fully in Table V.

With regard to the dependent variable of Cognitive Errors a significant main effects difference was observed between groups. When the covariate was considered, however, no significant difference was observed. A Scheffe Multiple Comparisons statistic identified a significant difference between non-depressed (mean = 18.96) and depressed elderly (mean = 29.24) on the variable of Cognitive Errors. These results are depicted more fully in Table VI.

A significant difference between groups was identified on the Integrative Complexity variable when age was considered as the covariate. A Scheffe Multiple Comparisons statistic showed no significant differences between groups. The statistical difference between the non-depressed elderly group (mean = 66.29) and the depressed elderly group (mean = 55.3) fell short of significance at $p = .09$. The Homogeneity of Within Cell Regression Tests, however, did not achieve the acceptable level of significance ($p=.53$). This suggests that little correction for age was achieved. The results of these statistics are more fully described in Table VII.

In considering Field Dependence as the dependent

Table V

One-Way Analysis of Covariance between non-depressed elderly, depressed elderly, and middle-aged groups with age as covariate

Reminiscence Evaluation - Dependent Variable

Pooled Within Cell Regression Estimate = -.33

Homogenity of Within Cell Regression Tests DF1=2.0 DF2=75 F=.12 P=.28

Significance Test

Source	S.S.	D.F.	M.S.	F-Ratio	Probability
Effects	33397.667969	2.	16698.832031	4.952414	0.00948*
Cov 1	364.025879	1.	364.025879	0.107960	0.74337
Errors	259633.000000	77.	3371.856934		

Scheffe Multiple Comparisons

	CONTRASTS	VARIANCES	F-VALUE	P-VALUE
G2 - G1	-52.71094	280.52783	4.95217	0.0095*
G3 - G1	- 3.37500	758.41846	0.00751	0.9925
G3 - G2	49.33594	996.48291	1.22131	0.3005

Group 1 = Non Depressed Elderly

Group 2 = Depressed Elderly

Group 3 = Middle Age

*p<.05

**p<.001

Table VI

One-Way Analysis of Covariance between non-depressed elderly, depressed elderly, and middle-aged groups with age as covariate

Cognitive Errors - Dependent Variable

Pooled Within Cell Regression Estimate = -.19

Homogenity of Within Cell Regression Tests DF1=2 DF2=75 F=.153 P=.22

Significance Test

Source	S.S.	D.F.	M.S.	F-RATIO	PROBABILITY
Effects	1860.220459	2.	930.110107	3.870417	0.02502*
Cov 1	116.943008	1.	116.943008	0.486629	0.48754
Errors	18504.074219	77.	240.312637		

Scheffe Multiple Comparisons

	CONTRASTS	VARIANCES	F-VALUE	P-VALUE
G2 - G1	11.12549	19.99326	3.09546	0.0509*
G3 - G1	- 8.30127	54.05255	0.63745	0.5314
G3 - G2	-19.42676	71.01942	2.65701	0.0766

Group 1 = Non Depressed Elderly

Group 2 = Depressed Elderly

Group 3 = Middle Age

*p<.05

**p<.001

Table VII

One-Way Analysis of Covariance between non-depressed elderly, depressed elderly, and middle-aged groups with age as covariate

Integrative Complexity - Dependent Variable

Pooled Within Cell Regression Estimate = -.48

Homogenity of Within Cell Regression Tests DF1=2 DF2=75 F=.63 P=.53

Significance Test

Source	S.S.	D.F.	M.S.	F-RATIO	PROBABILITY
Effects	997.598633	2.	498.799316	2.625832	0.07885
Cov 1	773.670654	1.	773.670654	4.072838	0.04706*
Errors	14626.812500	77.	189.958603		

Scheffe Multiple Comparisons

	CONTRASTS	VARIANCES	F-VALUE	P-VALUE
G2 - G1	-8.75342	15.80396	2.42415	0.0953
G3 - G1	-4.80957	42.72664	0.27070	0.7636
G3 - G2	3.94385	56.13834	0.13853	0.8709

Group 1 = Non Depressed Elderly

Group 2 = Depressed Elderly

Group 3 = Middle Age

*p<.05

**p<.001

variable, significant differences were identified between groups with and without age as the covariate. A Scheffe' Multiple Comparisons statistic showed a significant difference between non-depressed (mean = 11.88) and depressed elderly (mean = 6.28). As the probability of the Homogeneity of Within Cell Regression Tests, in this case, met the acceptable level of statistical significance a one way Analysis of Variance was conducted on this variable and between non-depressed and depressed groups. The results of this latter statistic confirmed a significant difference between non-depressed elderly and depressed elderly on the variable of Field Dependence. The results of these statistics are found in Tables VIII and IX respectively.

With Reminiscence Frequency II as the dependent variable a significant main difference was identified between groups. With age as the covariate, however, no significant difference was observed. A Scheffe Multiple Comparison statistic showed significant differences between both groups of elderly, depressed (mean = 10.36) and non-depressed (mean = 10.29) and middle aged subjects (mean = 8.0). The results of these statistics are depicted more fully in Table X.

Summary of results regarding Research Question 2. In the foregoing analyses differences between non-depressed and depressed elderly predominate. These differences occurred on the dependent variables of Reminiscence Evaluation, Cognitive Errors and Field Dependence. The results suggest

Table VIII

One-Way Analysis of Covariance between non-depressed elderly, depressed elderly, and middle-aged groups with age as covariate

Field Dependence - Dependent Variable

Pooled Within Cell Regression Estimate = -.35

Homogenity of Within Cell Regression Tests DF1=2 DF2=75 F=.41 P=.01*

Significance Test

Source	S.S.	D.F.	M.S.	F-RATIO	PROBABILITY
Effects	224.274811	2.	112.137405	4.214278	0.01833*
Cov 1	396.124512	1.	396.124512	14.886908	0.00024**
Errors	2048.886719	77.	26.608917		

Scheffe Multiple Comparisons

	CONTRASTS	VARIANCES	F-VALUE	P-VALUE
G2 - G1	-4.04681	2.21378	3.69881	0.0293*
G3 - G1	-2.78764	5.98504	0.64920	0.5253
G3 - G2	1.25917	7.86372	0.10081	0.9042

Group 1 = Non Depressed Elderly

Group 2 = Depressed Elderly

Group 3 = Middle Age

*p<.05

**p<.001

Table IX

One Way Analysis of Variance between Non-depressed Elderly and Depressed Elderly

Field Dependence - Dependent Variable

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F RATIO	PROB.
Between Groups	1	408.3703	408.3703	8.856	0.0045*
Within Groups	50	2305.7067	46.1141		
Total	51	2714.0769			

* $p < .05$

Table X

One-Way Analysis of Covariance between non-depressed elderly, depressed elderly, and middle-aged groups with age as covariate

Reminiscence Frequency II - Dependent Variable

Pooled Within Cell Regression Estimate = -.07

Homogenity of Within Cell Regression Tests DF1=2 DF2=75 F=.11 P=.33

Significance Test

Source	S.S.	D.F.	M.S.	F-RATIO	PROBABILITY
Effects	72.133514	2.	36.066757	4.209084	0.01842*
Cov 1	17.649734	1.	17.649734	2.059770	0.15528
Errors	659.796875	77.	8.568790		

Scheffe Multiple Comparisons

	CONTRASTS	VARIANCES	F-VALUE	F-VALUE
G2 - G1	0.39345	0.71290	0.10857	0.8973
G3 - G1	-3.94171	1.92734	4.03070	0.0216*
G3 - G2	-4.33516	2.53233	3.71073	0.0289*

Group 1 = Non Depressed Elderly

Group 2 = Depressed Elderly

Group 3 = Middle Age

*p<.05

**p<.001

that non-depressed elderly have a more positive evaluation of life periods, make significantly fewer cognitive errors and have greater field independence than depressed elderly. The results also suggest that non-depressed elderly may be more integratively complex than depressed elderly although this difference fell short of statistical significance.

Group differences involving middle age subjects occurred only in the case of Reminiscence Frequency II, with older people (depressed and non-depressed) reporting higher frequency of reminiscing than middle-aged subjects.

Age as a covariate appeared to have little effect except in the case of Integrative Complexity and Field Dependence. However, even here non-depressed and depressed elderly appeared to show the greatest difference in cognitive style. This situation is clarified by an inspection of the correlation matrices presented in Tables II-IV. In this regard, age and Field Dependence correlated significantly only for depressed ($r=-.499$) and nondepressed elderly ($r=-.522$). On the other hand age did not correlate significantly with Integrative Complexity for depressed and non-depressed elderly, but did so with middle age subjects ($r=-.411$). Thus, even in the middle age group we may expect that as age increases level of integrative complexity decreases.

Research Question 3.

> What differences exist between non-depressed, depressed and middle-aged subjects on the variables of reminiscence evaluation, reminiscence frequency (2 measures), cognitive errors,

reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect in light of subjects' sex, marital status, education and occupation.

Presentation of the statistical analysis for Research Question 3 proceeds in the following manner. First a synopsis of main and group effects is offered. This is followed by descriptions of the effects of marital status, education and occupation. Significant interaction effects are described where applicable. No significant sex effects were identified. Tables XI - XXXV depict means, sum of squares, degrees of freedom, mean squares, F tests and significance of F for each Two-Way Analysis of Variance. Figures 1-4 show the interaction effects.

Main and Group Effects

Significant main and group effects were identified throughout the series of Two-Way Analysis of Variance applications on the following dependent variables: Reminiscence Evaluation (Tables XI-XV), Cognitive Errors (Tables XVI-XX), Integrative Complexity (Tables XXI-XXV), Field Dependence (Tables XXVI-XXX) and Reminiscence Frequency II (Tables XXXI-XXXIV). No significant differences were identified on the variables of Reminiscence Frequency I, Reminiscence Cognitive Errors and Reminiscence Affect.

Reminiscence Evaluation. In this case middle-aged subjects (mean = 441.5) and non-depressed elderly (mean = 437.4) evaluated periods of life more favorably than depressed elderly subjects (mean = 383.2).

Table XI

Two-Way Analysis of Variance - Group by Sex
Dependent Variable - Reminiscence Evaluation

TOTAL POPULATION MEAN

422.14
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
437.41 (N=27)	383.20 (n=25)	441.48 (N=29)

SEX MEANS

Males	Females
425.04 (N=23)	420.98 (N=58)

SEX

GROUP	Males	Females
Non-depressed Elderly	396.17 (N=6)	449.19 (N=21)
Depressed Elderly	406.25 (N=4)	378.81 (N=21)
Middle Aged	444.15 (N=13)	439.31 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	56007.406	3	18669.135	5.758	0.001**
GROUP	55735.839	2	27867.919	8.596	0.000**
SEX	955.659	1	955.659	0.295	0.589
2-WAY INTERACTIONS	14862.911	2	7431.456	2.292	0.108
GROUP SEX	14862.911	2	7431.456	2.292	0.108
EXPLAINED	70870.317	5	14174.063	4.372	0.002
RESIDUAL	243153.189	75	3242.043		
TOTAL	314023.506	80	3925.294		

* $p<.05$

** $p<.001$

Table XII

Two-Way Analysis of Variance - Group by Marital Status
Dependent Variable - Reminiscence Evaluation

TOTAL POPULATION MEAN	GROUP MEANS		
422.14 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	437.41 (N=27)	383.20 (N=25)	441.48 (N=29)

MARITAL STATUS MEANS

Married	Never Married	Divorced	Widowed
439.42 (N=38)	423.75 (N=4)	392.00 (N=7)	408.00 (N=32)

MARITAL STATUS

GROUP	Married	Never Married	Divorced	Widowed
Non-depressed Elderly	433.50 (N=12)	316.00 (N=1)	370.50 (N=2)	462.58 (N=12)
Depressed Elderly	423.40 (N=5)	492.50 (N=2)	299.00 (N=1)	363.47 (N=17)
Middle Aged	446.62 (N=21)	394.00 (N=1)	426.00 (N=4)	442.00 (N=3)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	68704.980	5	13740.996	5.325	0.000**
GROUP	44589.487	2	22294.744	8.640	0.0
MARITAL STATUS	13653.234	3	4551.078	1.764	0.162
2-WAY INTERACTIONS	67277.221	6	11212.870	4.346	0.001**
GROUP MARITAL STATUS	67277.221	6	11212.870	4.346	0.001**
EXPLAINED	135982.202	11	12362.018	4.791	0.000
RESIDUAL	178041.304	69	2580.309		
TOTAL	314023.506	80	3925.294		

* $p<.05$
** $p<.001$

Table XIII

Two-Way Analysis of Variance - Group by Education
Dependent Variable - Reminiscence Evaluation

TOTAL POPULATION MEAN	GROUP MEANS		
422.14 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	437.41 (N=27)	383.20 (N=25)	441.48 (N=29)

EDUCATION MEANS

Elementary	Junior High	High School	Post Secondary
435.33 (N=3)	394.88 (N=16)	424.97 (N=35)	433.15 (N=27)

EDUCATION

GROUP	Elementary	Junior High	High School	Post Secondary
Non-depressed Elderly	490.00 (N=1)	452.00 (N=4)	425.75 (N=8)	436.14 (N=14)
Depressed Elderly	408.00 (N=2)	369.30 (N=10)	395.82 (N=11)	358.50 (N=2)
Middle Aged	0.0 (N=0)	408.50 (N=2)	444.63 (N=16)	442.92 (N=11)

SOURCE OF VARIATION	SUM OF SQUARES		MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	60239.456	5	12047.891	3.432	0.008*
GROUP	44270.745	2	22135.373	6.305	0.003*
EDUCATION	5187.710	3	1729.237	0.493	0.689
2-WAY INTERACTIONS	8029.440	5	1605.888	0.457	0.807
GROUP EDUCATION	8029.440	5	1605.888	0.457	0.807
EXPLAINED	68268.896	10	6826.890	1.945	0.053
RESIDUAL	245754.610	70	3510.780		
TOTAL	314023.506	80	3925.294		

* $p < .05$
** $p < .001$

Table XIV

Two-Way Analysis of Variance - Group by Occupation
Dependent Variable - Reminiscence Evaluation

TOTAL POPULATION MEAN	GROUP MEANS		
422.14 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	437.41 (N=27)	383.20 (N=25)	441.48 (N=29)

OCCUPATION MEANS

Housewives	Professionals	Other
395.27 (N=22)	439.77 (N=30)	424.28 (N=29)

OCCUPATIONS

GROUP	Housewives	Professionals	Other
Non-depressed Elderly	471.83 (N=6)	437.53 (N=15)	402.67 (N=6)
Depressed Elderly	355.50 (N=14)	426.75 (N=4)	413.71 (N=7)
Middle Aged	444.00 (N=2)	447.55 (N=11)	437.00 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	59249.667	4	14812.417	4.869	0.002*
GROUP	33915.684	2	16957.842	5.574	0.006*
OCCUPATION	4197.921	2	2098.960	0.690	0.505
2-WAY INTERACTIONS	35739.533	4	8934.883	2.937	0.026*
GROUP OCCUPATION	35739.533	4	8934.883	2.937	0.026*
EXPLAINED	94989.200	8	11873.650	3.903	0.001
RESIDUAL	219034.306	72	3042.143		
TOTAL	314023.506	80	3925.294		

* $p<.05$
** $p<.001$

Table XV

Two-Way Analysis of Variance - Group by Reminiscence Frequency (Low or High)
Dependent Variable - Reminiscence Evaluation

TOTAL POPULATION MEAN

422.14
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
437.41	383.20	441.48
(N=27)	(N=25)	(N=29)

REMINISCENCE FREQUENCY MEANS

Low Frequency	High Frequency
411.83	432.70
(N=41)	(N=40)

REMINISCENCE FREQUENCY

GROUP	Low Frequency	High Frequency
Non-depressed Elderly	419.75 (N=12)	453.13 (N=15)
Depressed Elderly	379.07 (N=14)	388.45 (N=11)
Middle Aged	437.67 (N=15)	445.57 (N=14)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	61188.470	3	20396.157	6.128	0.001**
GROUP	52369.169	2	26184.584	7.867	0.001**
REMINISCENCE FREQUENCY	6136.724	1	6136.724	1.844	0.179
2-WAY INTERACTIONS	3204.635	2	1602.318	0.481	0.620
GROUP REMINISCENCE FREQUENCY	3204.635	2	1602.318	0.481	0.620
EXPLAINED	64393.105	5	12878.621	3.869	0.004
RESIDUAL	249630.401	75	3328.405		
TOTAL	314023.506	80	3925.294		

* $p<.05$
** $p<.001$

Table XVI

Two-Way Analysis of Variance - Group by Sex
Dependent Variable - Cognitive Errors

TOTAL POPULATION MEAN

20.68
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
18.96 (N=27)	29.24 (N=25)	14.90 (N=29)

SEX MEANS

Males	Females
21.04 (N=23)	20.53 (N=58)

SEX

GROUP	Males	Females
Non-depressed Elderly	30.50 (N=6)	15.67 (N=21)
Depressed Elderly	27.25 (N=4)	29.62 (N=21)
Middle Aged	14.77 (N=13)	15.00 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	3115.206	3	1038.402	4.432	0.006*
GROUP	3110.939	2	1555.470	6.639	0.002*
SEX	233.764	1	233.764	0.998	0.321
2-WAY INTERACTIONS	812.272	2	406.136	1.733	0.184
GROUP SEX	812.272	2	406.136	1.733	0.184
EXPLAINED	3927.478	5	785.496	3.353	0.009
RESIDUAL	17572.177	75	234.296		
TOTAL	21499.654	80	268.746		

* $p<.05$
** $p<.001$

Table XVII

Two-Way Analysis of Variance - Group by Marital Status
Dependent Variable - Cognitive Errors

TOTAL POPULATION MEAN	GROUP MEANS		
20.68 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	18.96 (N=27)	29.24 (N=25)	14.90 (N=29)

MARITAL STATUS MEANS

Married	Never Married	Divorced	Widowed
17.87 (N=38)	25.75 (N=4)	18.57 (N=7)	23.84 (N=32)

MARITAL STATUS

GROUP	Married	Never Married	Divorced	Widowed
Non-depressed Elderly	25.50 (N=12)	10.00 (N=1)	11.50 (N=2)	14.42 (N=12)
Depressed Elderly	19.40 (N=5)	41.00 (N=2)	20.00 (N=1)	31.29 (N=17)
Middle Aged	13.14 (N=21)	11.00 (N=1)	21.75 (N=4)	19.33 (N=3)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	2914.276	5	582.855	2.449	0.042*
GROUP	2159.647	2	1079.823	4.537	0.014*
MARITAL STATUS	32.834	3	10.945	0.046	0.987
2-WAY INTERACTIONS	2164.244	6	360.707	1.516	0.186
GROUP MARITAL STATUS	2164.244	6	360.707	1.516	0.186
EXPLAINED	5078.520	11	461.684	1.940	0.049
RESIDUAL	16421.134	69	237.987		
TOTAL	21499.654	80	268.746		

* $p<.05$
** $p<.001$

Table XVIII

Two-Way Analysis of Variance - Group by Education
Dependent Variable - Cognitive Errors

TOTAL POPULATION MEAN	GROUP MEANS		
20.68 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	18.96 (N=27)	29.24 (N=25)	14.90 (N=29)

EDUCATION MEANS

Elementary	Junior High	High School	Post Secondary
18.33 (N=3)	26.31 (N=16)	19.40 (N=35)	18.96 (N=27)

EDUCATION

GROUP	Elementary	Junior High	High School	Post Secondary
Non-depressed Elderly	0.0 (N=1)	21.25 (N=4)	15.88 (N=8)	21.43 (N=14)
Depressed Elderly	27.50 (N=2)	31.30 (N=10)	28.36 (N=11)	25.50 (N=2)
Middle Aged	0.0 (N=0)	15.50 (N=2)	15.00 (N=16)	14.64 (N=11)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	3163.452	5	632.690	6.462	0.041*
GROUP	2408.265	2	1204.132	4.685	0.012*
EDUCATION	282.010	3	94.003	0.366	0.778
2-WAY INTERACTIONS	346.458	5	69.292	0.270	0.928
GROUP EDUCATION	346.458	5	69.292	0.270	0.928
EXPLAINED	3509.910	10	350.991	1.366	0.214
RESIDUAL	17989.744	70	256.996		
TOTAL	21499.654	80	268.746		

* $p<.05$
** $p<.001$

Table XIX

Two-Way Analysis of Variance - Group by Occupation
Dependent Variable - Cognitive Errors

TOTAL POPULATION MEAN	GROUP MEANS		
20.68 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	18.96 (N=27)	29.24 (N=25)	14.90 (N=29)

OCCUPATION MEANS		
Housewives	Professionals	Other
28.14 (N=22)	18.50 (N=30)	17.28 (N=29)

GROUP	OCCUPATIONS		
	Housewives	Professionals	Other
Non-depressed Elderly	17.17 (N=6)	21.40 (N=15)	14.67 (N=6)
Depressed Elderly	34.36 (N=14)	23.50 (N=4)	22.29 (N=7)
Middle Aged	17.50 (N=2)	12.73 (N=11)	16.06 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	3263.097	4	815.774	3.361	0.014*
GROUP	1561.326	2	780.663	3.216	0.046*
OCCUPATION	381.655	2	190.827	0.786	0.459
2-WAY INTERACTIONS	761.529	4	190.382	0.784	0.539
GROUP OCCUPATION	761.529	4	190.382	0.784	0.539
EXPLAINED	4024.625	8	503.078	2.073	0.050
RESIDUAL	17475.029	72	242.709		
TOTAL	21499.654	80	268.746		

* $p<.05$
** $p<.001$

Table XX

Two-Way Analysis of Variance -- Group by Reminiscence Frequency (Low or High)
Dependent Variable - Cognitive Errors

TOTAL POPULATION MEAN

20.68
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
18.96 (N=27)	29.24 (N=25)	14.90 (N=29)

REMINISCENCE FREQUENCY MEANS

Low Frequency	High Frequency
16.39 (N=41)	25.07 (N=40)

REMINISCENCE FREQUENCY

GROUP	Low Frequency	High Frequency
Non-depressed Elderly	13.50 (N=12)	23.33 (N=15)
Depressed Elderly	20.43 (N=14)	40.45 (N=11)
Middle Aged	14.93 (N=15)	14.86 (N=14)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	4649.473	3	1549.824	7.498	0.000**
GROUP	3122.350	2	1561.175	7.553	0.001**
REMINISCENCE FREQUENCY	1768.031	1	1768.031	8.553	0.005*
2-WAY INTERACTIONS	1347.045	2	673.522	3.258	0.044*
GROUP REMINISCENCE FREQUENCY	1347.045	2	673.522	3.258	0.044*
EXPLAINED	5996.518	5	1199.304	5.802	0.000
RESIDUAL	15503.137	75	206.708		
TOTAL	21499.654	80	268.746		

* $p<.05$
** $p<.001$

Table XXI

Two-Way Analysis of Variance - Group by Sex
Dependent Variable - Integrative Complexity

TOTAL POPULATION MEAN

65.10
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
66.30 (N=27)	55.36 (N=25)	72.38 (N=29)

SEX MEANS

Males	Females
66.57 (N=23)	64.52 (N=58)

GROUP	Males	Females
Non-depressed Elderly	62.33 (N=6)	67.43 (N=21)
Depressed Elderly	57.00 (N=4)	55.05 (N=21)
Middle Aged	71.46 (N=13)	73.13 (N=16)

SEX

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	4002.894	3	1334.298	6.583	0.001**
GROUP	3933.819	2	1966.910	9.704	0.000**
SEX	55.902	1	55.902	0.276	0.601
2-WAY INTERACTIONS	97.906	2	48.953	0.242	0.786
GROUP SEX	97.906	2	48.953	0.242	0.786
EXPLAINED	4100.801	5	820.160	4.046	0.003
RESIDUAL	15202.409	75	202.699		
TOTAL	19303.210	80	241.290		

* $p<.05$
** $p<.001$

Table XXII

Two-Way Analysis of Variance - Group by Marital Status
Dependent Variable - Integrative Complexity

TOTAL POPULATION MEAN	GROUP MEANS		
	Nondepressed Elderly	Depressed Elderly	Middle-aged
65.10 (N=81)	66.30 (N=27)	55.36 (N=25)	72.38 (N=29)

MARITAL STATUS MEANS

Married	Never Married	Divorced	Widowed
67.18 (N=38)	70.50 (N=4)	72.57 (N=7)	60.31 (N=32)

MARITAL STATUS

GROUP	Married	Never Married	Divorced	Widowed
Non-depressed Elderly	64.33 (N=12)	86.00 (N=1)	84.00 (N=2)	63.67 (N=12)
Depressed Elderly	55.60 (N=5)	58.00 (N=2)	40.00 (N=1)	55.88 (N=17)
Middle Aged	71.57 (N=21)	80.00 (N=1)	75.00 (N=4)	72.00 (N=3)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	4405.481	5	881.096	4.387	0.002*
GROUP	2999.571	2	1499.786	7.468	0.001**
MARITAL STATUS	458.489	3	152.830	0.761	0.520
2-WAY INTERACTIONS	1040.288	6	173.381	0.863	0.526
GROUP MARITAL STATUS	1040.288	6	173.381	0.863	0.526
EXPLAINED	5445.769	11	495.070	2.465	0.012
RESIDUAL	13857.441	69	200.832		
TOTAL	19303.210	80	241.290		

* $p<.05$
** $p<.001$

Table XXIII

Two-Way Analysis of Variance - Group by Education
Dependent Variable - Integrative Complexity

TOTAL POPULATION MEAN	GROUP MEANS		
	Nondepressed Elderly	Depressed Elderly	Middle-aged
65.10 (N=81)	66.30 (N=27)	55.36 (N=25)	72.38 (N=29)

EDUCATION MEANS

Elementary	Junior High	High School	Post Secondary
53.33 (N=3)	57.00 (N=16)	63.94 (N=35)	72.70 (N=27)

EDUCATION

GROUP	Elementary	Junior High	High School	Post Secondary
Non-depressed Elderly	46.00 (N=1)	62.50 (N=4)	64.75 (N=8)	69.71 (N=14)
Depressed Elderly	57.00 (N=2)	52.80 (N=10)	58.73 (N=11)	48.00 (N=2)
Middle Aged	0.0 (N=0)	67.00 (N=2)	67.13 (N=16)	81.00 (N=11)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	5123.758	5	1024.752	5.483	0.000**
GROUP	2050.730	2	1025.365	5.486	0.006*
EDUCATION	1176.766	3	392.255	2.099	0.108
2-WAY INTERACTIONS	1096.563	5	219.313	1.173	0.331
GROUP EDUCATION	1096.563	5	219.313	1.173	0.331
EXPLAINED	6220.321	10	622.032	3.328	0.001
RESIDUAL	13082.889	70	186.898		
TOTAL	19303.210	80	241.290		

* $p<.05$
** $p<.001$

Table XXIV

Two-Way Analysis of Variance - Group by Occupation
Dependent Variable - Integrative Complexity

TOTAL POPULATION MEAN	GROUP MEANS		
65.10 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	66.30 (N=27)	55.36 (N=25)	72.38 (N=29)

OCCUPATION MEANS		
Housewives	Professionals	Other
55.27 (N=22)	73.10 (N=30)	64.28 (N=29)

OCCUPATIONS

GROUP	Housewives	Professionals	Other
Non-depressed Elderly	59.00 (N=6)	70.93 (N=15)	62.00 (N=6)
Depressed Elderly	51.86 (N=14)	66.00 (N=4)	56.29 (N=7)
Middle Aged	68.00 (N=2)	78.64 (N=11)	68.63 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	5999.044	4	1499.761	8.132	0.000**
GROUP	1934.691	2	967.346	5.245	0.007*
OCCUPATION	2052.052	2	1026.026	5.563	0.006*
2-WAY INTERACTIONS	25.794	4	6.449	0.035	0.998
GROUP OCCUPATION	25.794	4	6.449	0.035	0.998
EXPLAINED	6024.838	8	753.105	4.084	0.000
RESIDUAL	13278.372	72	184.422		
TOTAL	19303.210	80	241.290		

* $p<.05$
** $p<.001$

Table XXV

Two-Way Analysis of Variance - Group by Reminiscence Frequency (Low or High)
Dependent Variable - Integrative Complexity

TOTAL POPULATION MEAN

65.10
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
66.30 (N=27)	55.36 (N=25)	72.38 (N=29)

REMINISCENCE FREQUENCY MEANS

Low Frequency	High Frequency
66.51 (N=41)	63.65 (N=40)

REMINISCENCE FREQUENCY

GROUP	Low Frequency	High Frequency
Non-depressed Elderly	74.83 (N=12)	59.47 (N=15)
Depressed Elderly	51.86 (N=14)	59.82 (N=11)
Middle Aged	73.53 (N=15)	71.14 (N=14)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	4196.174	3	1398.725	7.858	0.000**
GROUP	4030.308	2	2015.154	11.321	0.000**
REMINISCENCE FREQUENCY	249.181	1	249.181	1.400	0.240
2-WAY INTERACTIONS	1756.838	2	878.419	4.935	0.010*
GROUP REMINISCENCE FREQUENCY	1756.838	2	878.419	4.935	0.010*
EXPLAINED	5953.012	5	1190.602	6.689	0.000
RESIDUAL	13350.198	75	178.003		
TOTAL	19303.210	80	241.290		

* $p<.05$
** $p<.001$

Table XXVI

Two-Way Analysis of Variance - Group by Sex
Dependent Variable - Field Dependence

TOTAL POPULATION MEAN

11.95
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
11.89 (N=27)	6.28 (N=25)	16.90 (N=29)

SEX MEANS

Males	Females
15.09 (N=23)	10.71 (N=58)

SEX

GROUP	Males	Females
Non-depressed Elderly	14.17 (N=6)	11.24 (N=31)
Depressed Elderly	9.00 (N=4)	5.76 (N=21)
Middle Aged	17.38 (N=13)	16.50 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	1576.192	3	525.397	16.672	0.000**
GROUP	1260.233	2	630.116	19.995	0.000**
SEX	62.786	1	62.786	1.992	0.162
2-WAY INTERACTIONS	18.081	2	9.041	0.287	0.751
GROUP SEX	18.081	2	9.041	0.287	0.751
EXPLAINED	1594.273	5	318.855	10.118	0.000
RESIDUAL	2363.529	75	31.514		
TOTAL	3957.802	80	49.473		

* $p<.05$
** $p<.001$

Table XXVII

Two-Way Analysis of Variance - Group by Marital Status
Dependent Variable - Field Dependence

TOTAL POPULATION MEAN	GROUP MEANS		
11.95 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	11.89 (N=27)	6.28 (N=25)	16.90 (N=29)

MARITAL STATUS MEANS			
Married	Never Married	Divorced	Widowed
14.95 (N=38)	13.00 (N=4)	15.14 (N=7)	7.56 (N=32)

MARITAL STATUS

GROUP	Married	Never Married	Divorced	Widowed
Non-depressed Elderly	13.42 (N=12)	16.00 (N=1)	11.50 (N=2)	10.08 (N=12)
Depressed Elderly	10.40 (N=5)	9.50 (N=2)	12.00 (N=1)	4.35 (N=17)
Middle Aged	16.90 (N=21)	17.00 (N=1)	17.75 (N=4)	15.67 (N=3)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	1744.699	5	348.940	11.193	0.000**
GROUP	711.524	2	355.762	11.411	1.000**
MARITAL STATUS	231.293	3	77.098	2.473	0.069
2-WAY INTERACTIONS	61.961	6	10.327	0.331	0.918
GROUP MARITAL STATUS	61.961	6	10.327	0.331	0.918
EXPLAINED	1806.661	11	164.242	5.268	0.000
RESIDUAL	2151.142	69	31.176		
TOTAL	3957.802	80	49.473		

* $p<.05$
** $p<.001$

Table XXVIII

Two-Way Analysis of Variance - Group by Education
Dependent Variable - Field Dependence

TOTAL POPULATION MEAN	GROUP MEANS		
	Nondepressed Elderly	Depressed Elderly	Middle-aged
11.95 (N=81)	11.89 (N=27)	6.28 (N=25)	16.90 (N=29)

EDUCATION MEANS

Elementary	Junior High	High School	Post Secondary
5.00 (N=3)	5.94 (N=16)	13.11 (N=35)	14.78 (N=27)

EDUCATION

GROUP	Elementary	Junior High	High School	Post Secondary
Non-depressed Elderly	11.00 (N=1)	10.50 (N=4)	11.63 (N=8)	12.50 (N=14)
Depressed Elderly	2.00 (N=2)	2.80 (N=10)	8.64 (N=11)	15.00 (N=2)
Middle Aged	0.0 (N=0)	12.50 (N=2)	16.94 (N=16)	17.64 (N=11)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	1808.414	5	361.683	12.568	0.000**
GROUP	821.758	2	410.879	14.277	0.000**
EDUCATION	295.007	3	98.336	3.417	0.022*
2-WAY INTERACTIONS	134.886	5	26.977	0.937	0.462
GROUP EDUCATION	134.886	5	26.977	0.937	0.462
EXPLAINED	1943.299	10	194.330	6.753	0.000
RESIDUAL	2014.503	70	28.779		
TOTAL	3957.802	80	49.473		

* $p < .05$
** $p < .001$

Table XXIX

Two-Way Analysis of Variance - Group by Occupation
Dependent Variable - Field Dependence

TOTAL POPULATION MEAN	GROUP MEANS		
	Nondepressed Elderly	Depressed Elderly	Middle-aged
11.95 (N=81)	11.89 (N=27)	6.28 (N=25)	16.90 (N=29)

OCCUPATION MEANS

Housewives	Professionals	Other
5.36 (N=22)	14.87 (N=30)	13.93 (N=29)

OCCUPATIONS

GROUP	Housewives	Professionals	Other
Non-depressed Elderly	6.17 (N=6)	13.47 (N=15)	13.67 (N=6)
Depressed Elderly	3.36 (N=14)	13.25 (N=4)	8.14 (N=7)
Middle Aged	17.00 (N=2)	17.36 (N=11)	16.56 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	1984.278	4	496.070	19.315	0.000**
GROUP	660.896	2	330.448	12.866	0.000**
OCCUPATION	470.872	2	235.436	9.167	0.000**
2-WAY INTERACTIONS	124.320	4	31.080	1.210	0.314
GROUP OCCUPATION	124.320	4	31.080	1.210	0.314
EXPLAINED	2108.598	8	263.575	10.262	0.000
RESIDUAL	1849.204	72	25.683		
TOTAL	3957.802	80	49.473		

* $p<.05$
** $p<.001$

Table XXX

Two-Way Analysis of Variance - Group by Reminiscence Frequency (Low or High)
Dependent Variable - Field Dependence

TOTAL POPULATION MEAN

11.95
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
11.89 (N=27)	6.28 (N=25)	16.90 (N=29)

REMINISCENCE FREQUENCY MEANS

Low Frequency	High Frequency
12.34 (N=41)	11.55 (N=40)

REMINISCENCE FREQUENCY

GROUP	Low Frequency	High Frequency
Non-depressed Elderly	14.25 (N=12)	10.00 (N=15)
Depressed Elderly	6.00 (N=14)	6.64 (N=11)
Middle Aged	16.73 (N=15)	17.07 (N=14)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	1537.448	3	512.483	16.563	0.000**
GROUP	1524.765	2	762.382	24.639	0.000**
REMINISCENCE FREQUENCY	24.041	1	24.041	0.777	0.381
2-WAY INTERACTIONS	99.698	2	49.849	1.611	0.207
GROUP REMINISCENCE FREQUENCY	99.698	2	49.849	1.611	0.207
EXPLAINED	1637.145	5	327.429	10.582	0.000
RESIDUAL	2320.657	75	30.942		
TOTAL	3957.802	80	49.473		

* $p<.05$
** $p<.001$

Table XXXI

Two-Way Analysis of Variance - Group by Sex
Dependent Variable - Reminiscence Frequency II

TOTAL POPULATION MEAN

9.49
(N=81)

GROUP MEANS

Nondepressed Elderly	Depressed Elderly	Middle-aged
10.30 (N=27)	10.36 (N=25)	8.00 (N=29)

SEX MEANS

Males	Females
9.09 (N=23)	9.66 (N=58)

SEX

GROUP	Males	Females
Non-depressed Elderly	10.33 (N=6)	10.29 (N=21)
Depressed Elderly	12.75 (N=4)	9.90 (N=21)
Middle Aged	7.38 (N=13)	8.50 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	101.066	3	33.689	3.940	0.011*
GROUP	95.749	2	47.874	5.599	0.005*
SEX	0.209	1	0.209	0.024	0.876
2-WAY INTERACTIONS	35.925	2	17.963	2.101	0.129
GROUP SEX	35.925	2	17.963	2.101	0.129
EXPLAINED	136.991	5	27.398	3.204	0.011
RESIDUAL	641.255	75	8.550		
TOTAL	778.247	80	9.728		

* $p<.05$
** $p<.001$

Table XXXII

Two-Way Analysis of Variance - Group by Marital Status
Dependent Variable - Reminiscence Frequency II

TOTAL POPULATION MEAN	GROUP MEANS		
	Nondepressed Elderly	Depressed Elderly	Middle-aged
9.49 (N=81)	10.30 (N=27)	10.36 (N=25)	8.00 (N=29)

MARITAL STATUS MEANS			
Married	Never Married	Divorced	Widowed
8.71 (N=38)	11.25 (N=4)	10.71 (N=7)	9.94 (N=32)

MARITAL STATUS

GROUP	Married	Never Married	Divorced	Widowed
Non-depressed Elderly	9.75 (N=12)	12.00 (N=1)	11.50 (N=2)	10.50 (N=12)
Depressed Elderly	10.00 (N=5)	12.00 (N=2)	16.00 (N=1)	9.94 (N=17)
Middle Aged	7.81 (N=21)	9.00 (N=1)	9.00 (N=4)	7.67 (N=3)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	135.655	5	27.131	3.017	0.016*
GROUP	83.277	2	41.639	4.630	0.013*
MARITAL STATUS	34.798	3	11.599	1.290	0.285
2-WAY INTERACTIONS	21.996	6	3.666	0.408	0.872
GROUP MARITAL STATUS	21.996	6	3.666	0.408	0.872
EXPLAINED	157.651	11	14.332	1.593	0.120
RESIDUAL	620.596	69	8.994		
TOTAL	778.247	80	9.728		

* $p < .05$
** $p < .001$

Table XXXIII

Two-Way Analysis of Variance - Group by Education
Dependent Variable - Reminiscence Frequency II

TOTAL POPULATION MEAN	GROUP MEANS		
9.49 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	10.30 (N=27)	10.36 (N=25)	8.00 (N=29)

EDUCATION MEANS

Elementary	Junior High	High School	Post Secondary
8.00 (N=3)	10.31 (N=16)	8.89 (N=35)	9.96 (N=27)

EDUCATION

GROUP	Elementary	Junior High	High School	Post Secondary
Non-depressed Elderly	8.00 (N=1)	11.75 (N=4)	8.38 (N=8)	11.14 (N=14)
Depressed Elderly	8.00 (N=2)	10.60 (N=10)	10.09 (N=11)	13.00 (N=2)
Middle Aged	0.0 (N=0)	6.00 (N=2)	8.31 (N=16)	7.91 (N=11)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	135.118	5	27.024	3.217	0.011*
GROUP	98.815	2	49.407	5.882	0.004*
EDUCATION	34.261	3	11.420	1.360	0.262
2-WAY INTERACTIONS	55.134	5	11.027	1.313	0.269
GROUP EDUCATIO	55.134	5	11.027	1.313	0.269
EXPLAINED	190.252	10	19.025	2.265	0.023
RESIDUAL	587.995	70	8.400		
TOTAL	778.247	80	9.728		

* $p < .05$
** $p < .001$

Table XXXIV

Two-Way Analysis of Variance - Group by Occupation
Dependent Variable - Reminiscence Frequency II

TOTAL POPULATION MEAN	GROUP MEANS		
9.49 (N=81)	Nondepressed Elderly	Depressed Elderly	Middle-aged
	10.30 (N=27)	10.36 (N=25)	8.00 (N=29)

OCCUPATION MEANS

Housewives	Professionals	Other
9.86 (N=22)	9.37 (N=30)	9.34 (N=29)

OCCUPATIONS

GROUP	Housewives	Professionals	Other
Non-depressed Elderly	9.67 (N=6)	10.47 (N=15)	10.50 (N=6)
Depressed Elderly	10.14 (N=14)	9.50 (N=4)	11.29 (N=7)
Middle Aged	8.50 (N=2)	7.82 (N=11)	8.06 (N=16)

SOURCE OF VARIATION	SUM OF SQUARES	DF	MEAN SQUARE	F	SIGNIF OF F
MAIN EFFECTS	105.971	4	26.493	2.874	0.029*
GROUP	101.833	2	50.917	5.523	0.006*
OCCUPATION	5.113	2	2.557	0.277	0.759
2-WAY INTERACTIONS	8.493	4	2.123	0.230	0.921
GROUP OCCUPATION	8.493	4	2.123	0.230	0.921
EXPLAINED	114.464	8	14.308	1.552	0.155
RESIDUAL	663.783	72	9.219		
TOTAL	778.247	80	9.728		

* $p<.05$
** $p<.001$

Cognitive Errors. In this instance depressed elderly (mean = 29.24) made more cognitive errors than non-depressed elderly (mean = 18.96) and middle-aged subjects (mean = 14.90).

Integrative Complexity. Higher degrees of integrative complexity were identified for middle-aged subjects (mean = 72.4) and non-depressed elderly (mean = 66.3) than for depressed elderly subjects (mean = 55.3).

Field Dependence. In this case middle-aged subjects (mean = 16.9) and non-depressed elderly (mean = 11.9) demonstrated greater field independence than depressed elderly (mean = 6.28).

Reminiscence Frequency II. In this instance non-depressed elderly (mean = 10.3) and depressed elderly (mean = 10.3) report reminiscing more frequently than middle-aged subjects (mean = 8.0).

Marital Status Effects

The effects of marital status were observed on the dependent variable of Reminiscence Evaluation.

Reminiscence Evaluation. Significant interaction effects were observed between group and marital status in terms of Reminiscence Evaluation (Table XII). In this regard depressed "never married" subjects (mean = 492.5) evaluated periods of life more favorably than middle aged (mean = 394.0) and non-depressed subjects (mean = 316.0) who never married. This finding, however must be viewed with caution. As the number of subjects classified in this

comparison are very low (depressed elderly never married - N=2; non-depressed elderly never married - N=1; middle-aged never married - N=1) conclusions or statements regarding the interaction are prohibited. Non-depressed widowed subjects (mean = 462.6) evaluated periods of life more positively than widowed depressed (mean = 363.5) or middle aged subjects (mean = 442.0). The nature of these interactions are more fully depicted in Figure 1.

Education Effects

Education was categorized in terms of number of years of education. The categories included elementary school (0 - 6 years of education), junior-high (7 to 9 years) high-school (10 to 12 years) and post-secondary (12 plus years). The effects of education were observed on the dependent variable of Field Dependence.

Field Dependence. A significant education effect (Table XXVIII) indicates that subjects with high school (mean = 13.1) or post secondary education (mean = 14.8) are more field independent than subjects with elementary (mean = 5.9) or junior high school education (mean = 5.0).

Occupation Effects

Original categorization of occupations included housewives, professionals, those in technical trades, those in business and sales fields, labour and other. Low numbers of subjects in technical (N=2), business (N=7), labour (N=1) and other (N=3) categorizations allowed for reclassification of these subjects under a more general category of other.

Interaction Effects of Marital Status and Group
on the Variable of Reminiscence Evaluation

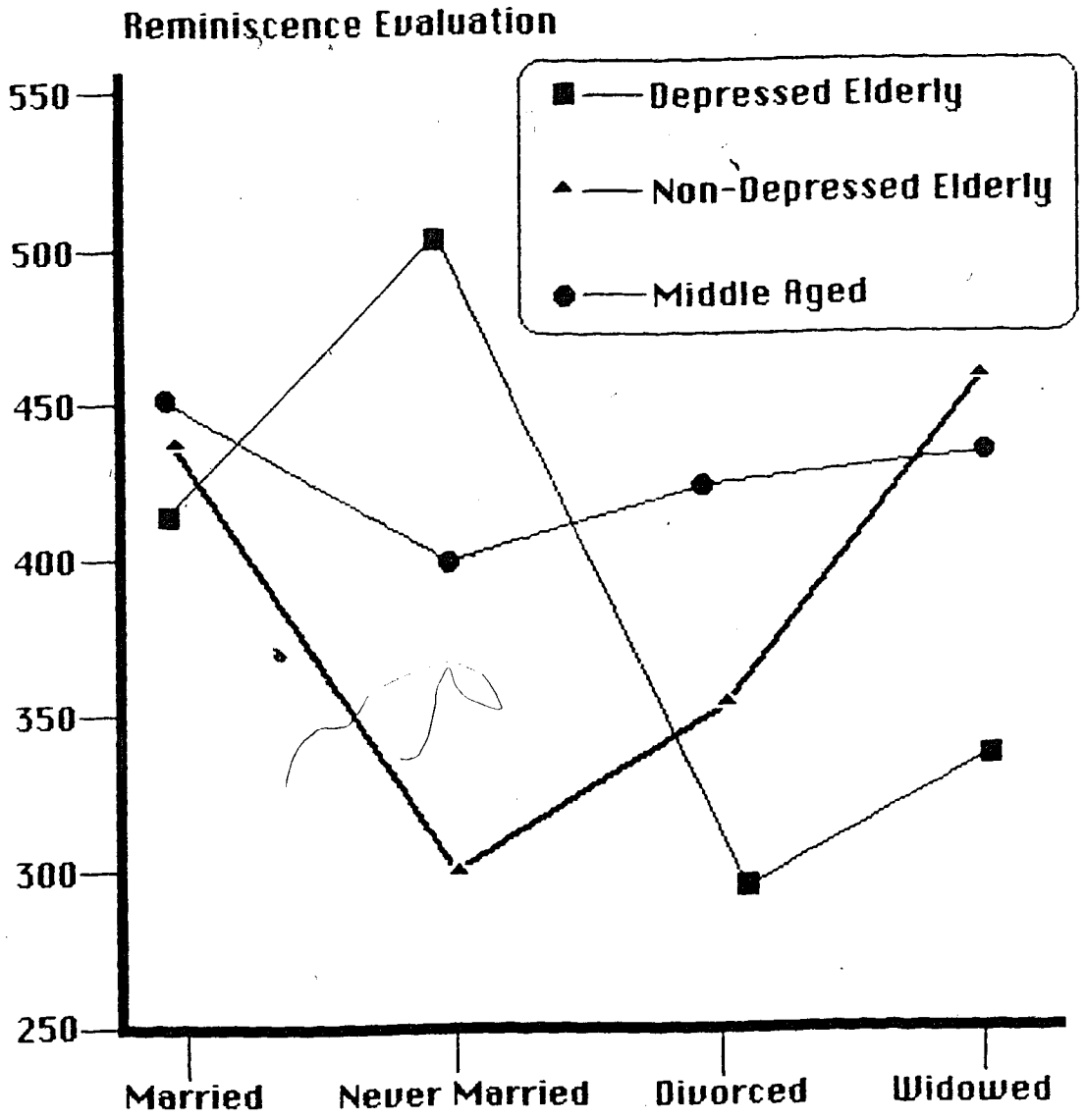


FIGURE 1

Thus, the other category consisted of 13 subjects. The effects of occupation were observed on the dependent variables of Reminiscence Evaluation, Integrative Complexity and Field Dependence.

Reminiscence Evaluation. Significant interaction effects (Table XIV) were observed between group and occupation in terms of Reminiscence Evaluation. In this case middle-aged housewives (mean = 444.0) evaluated periods of life less favorably than non-depressed elderly housewives (mean = 471.8). This finding must be viewed with caution, however, as only 2 subjects were classified as middle-aged housewives and only 6 subjects fell under the category of non-depressed elderly housewives. In a similar fashion, depressed other (mean = 413.7; N=7) occupations (includes technical, business, sales and labor) evaluated periods of life more favorably than non-depressed other (mean = 402.7; N=6) occupations. Again, low numbers of subjects in these categorizations prevents adequate interpretation of the findings. Figure 2 depicts these interaction effects.

Integrative Complexity. A significant effect of occupation (Table XXIV) shows that professional (mean = 73.1) and other occupations (mean = 64.28) have a higher level of integrative complexity than housewives (mean = 55.3).

Field Dependence. A significant effect of occupation (Table XXIX) shows that professional (mean = 14.9) and other occupations (mean = 13.9) have a greater degree of field

Interaction Effects of Occupation and Group
on the Variable of Reminiscence Evaluation

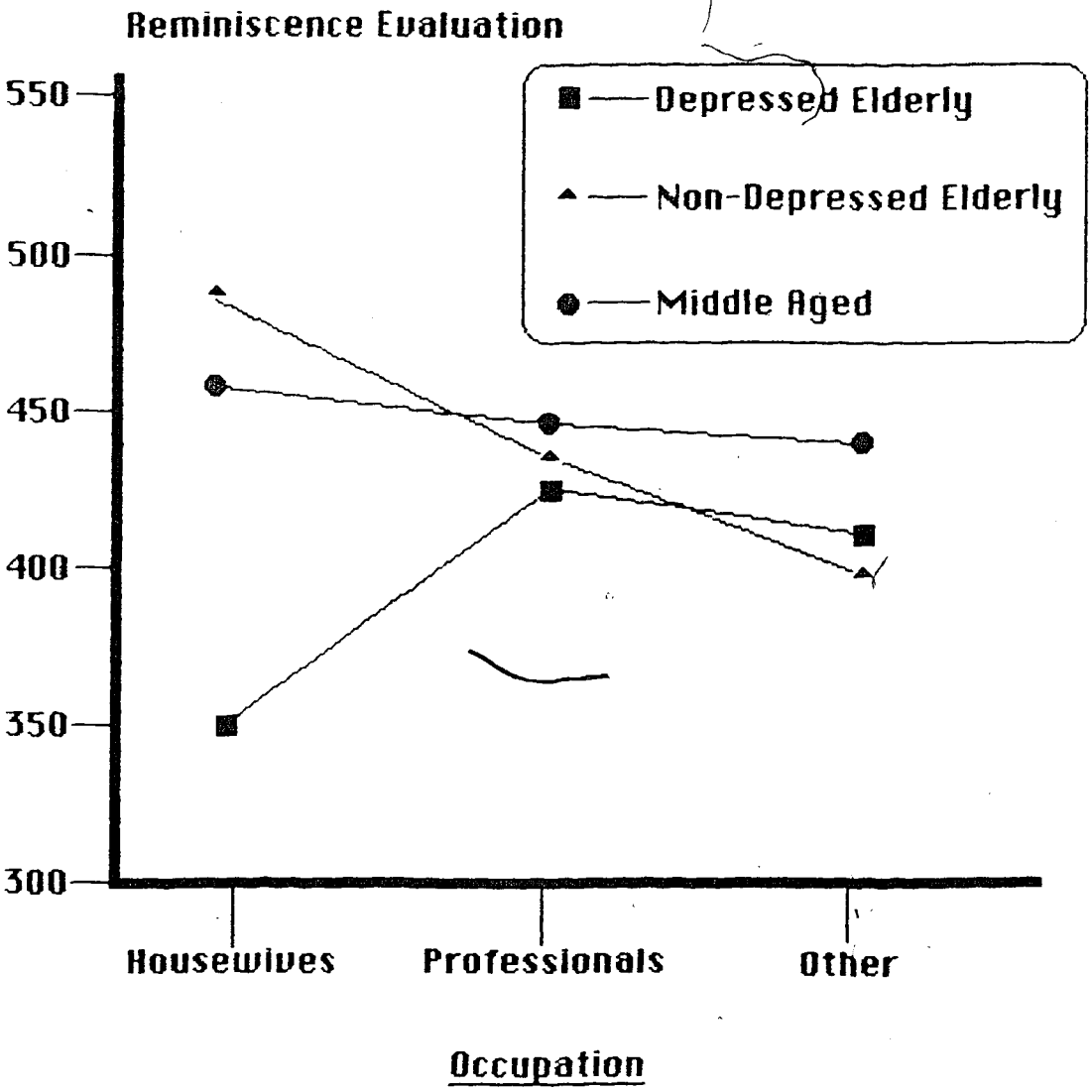


FIGURE 1

independence than housewives (mean = 5.36).

Research Question 4.

> What differences exist between non-depressed elderly, depressed elderly and middle age subjects on the variables of reminiscence evaluation, cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect in light of categorizations of subjects as either "high" or "low" frequency reminiscers.

Effects of Reminiscence Frequency (Low or High Frequency Reminiscers)

For this analysis (Two-Way Analysis of Variance) the total group mean on the Reminiscence Frequency I measure (23.0) was used as a division for Low and High frequency reminiscers. In this respect the effects of this categorization were observed on the dependent variables of Cognitive Errors and Integrative Complexity. Statistical significance was not achieved under these conditions for the dependent variables of Reminiscence Evaluation, Reminiscence Cognitive Errors, Field Dependence or Reminiscence Affect.

Cognitive Errors. A significant reminiscence frequency effect (Table XX) shows that high frequency reminiscers make more cognitive errors (mean = 25.07) than low frequency reminiscers (mean = 16.4). In addition, significant interaction effects were observed between group and reminiscence frequency categorization. In this instance high frequency non-depressed elderly (mean = 23.3) make more cognitive errors than low frequency non-depressed elderly (mean = 13.50). The nature of this interaction is more fully depicted in Figure 3.

Interaction Effects of Low and High Frequency Reminiscing and Group on the Variable of Cognitive Errors

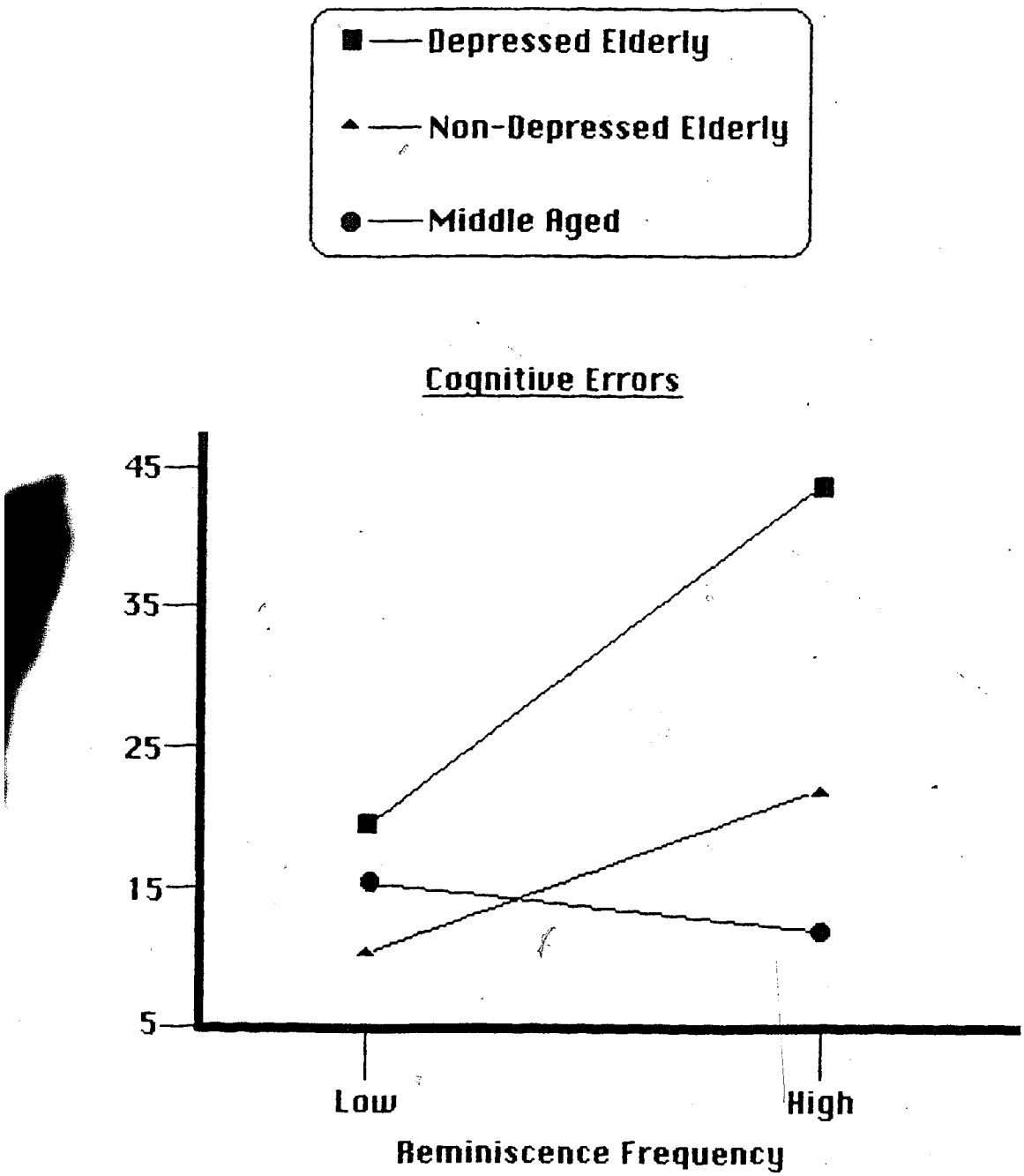


FIGURE 3

Integrative Complexity. Significant interaction effects (Table XXV) were observed between group and reminiscence frequency categorization. In this case non-depressed elderly, low frequency reminiscers (mean = 74.8) are more integratively complex than non-depressed high frequency reminiscers (mean = 59.47). This interaction effect is shown in Figure 4.

Effects of Marital Status, Education and Occupation. When considering the effects of marital status, education, occupation and the classification of subjects into high and low frequency reminiscers, further understanding of reminiscing and cognition is obtained. It must be kept in mind, however, that the numbers of subjects in many of these categories were too low to allow for proper interpretation. Such was the case in regards to marital status, where most subjects could be classified as married (N=38) or widowed (N=32). Only 4 subjects were classed as never married and 7 subjects as divorced. Further division of these subjects by group (non-depressed elderly, depressed elderly and middle-aged) tended to reduce the numbers of subjects per subclassification (e.g. non-depressed, never married, N=1).

A similar situation occurred in regards to education and occupation. In general, only 3 subjects were classed as having elementary school education in contrast to 16 subjects having junior high, 35 subjects having high school level education and 27 subjects having post-secondary school education or training. Division of these educative

Interaction Effects of Low and High Frequency Reminiscing and Group on the Variable of Integrative Complexity

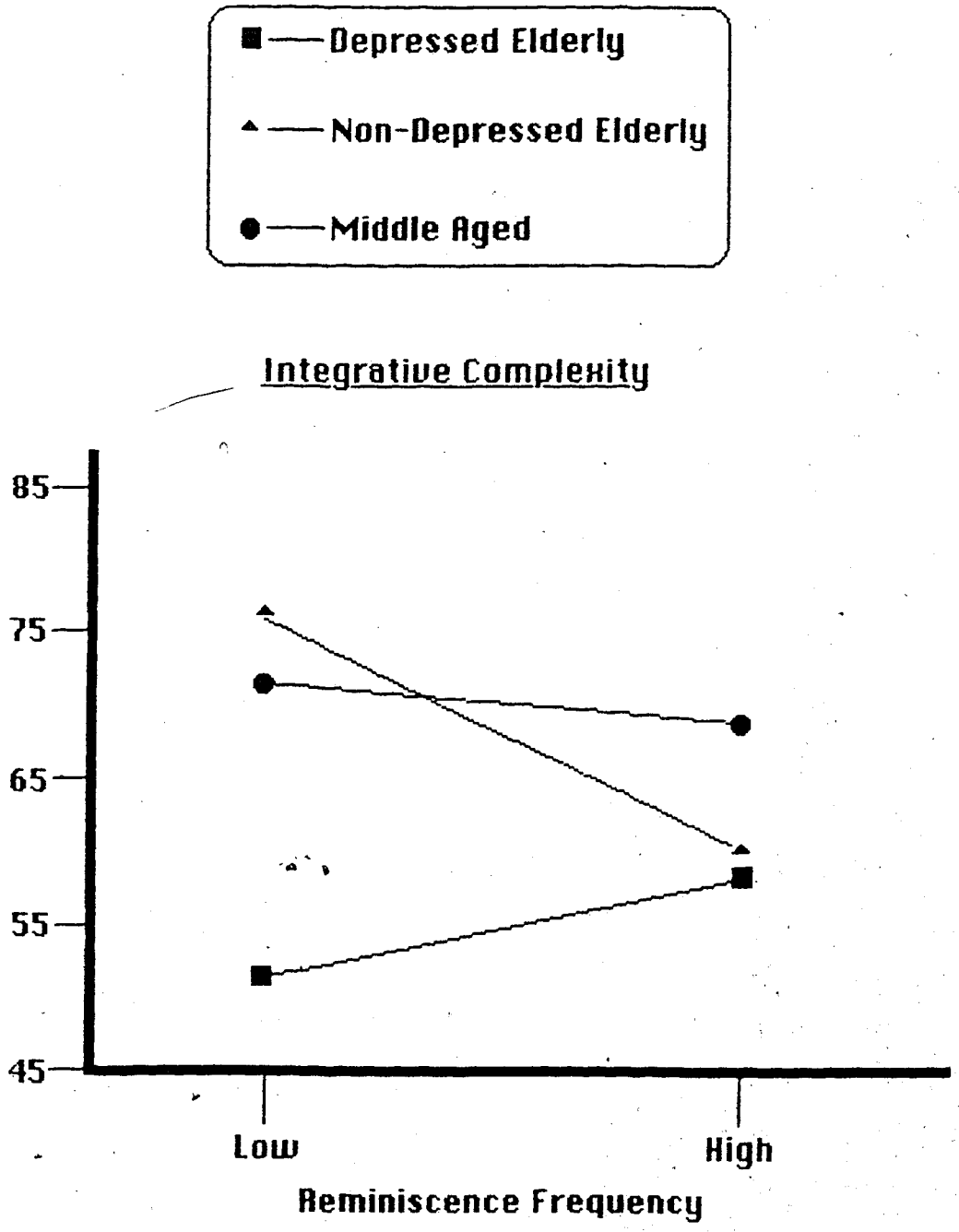


FIGURE 4

categories by group resulted in some subclasses with few subjects (e.g. depressed elderly with post secondary education N=2). With occupation, the reclassification of technical, business, labor and other into a general category of other resulted in a fairly balanced comparison between housewives (N=22), professional (N=30) and other (N=29). When subclasses of groups by education were constructed, however, low numbers of subjects were found in categories such as middle aged housewives (N=2) and non-depressed elderly other occupation (N=6). The effect of these low numbers of subjects was to confound the observed interaction effects.

The effects of education and occupation on factors of cognitive style were expected. As previously noted, subjects with high school and post-secondary education were found to be more field independent than those subjects with elementary school and junior high school education. The effect of occupation tends to mirror this finding such that professional and other occupations were found to be more field independent than housewives. In this regard professional and the majority of subjects in other occupations may have had more educational opportunities than housewives. This may also be the case in terms of the finding that professional and other occupations demonstrated a higher level of integrative complexity than housewives. Greater field independence and higher levels of integrative complexity are commonly thought to be related to higher

levels of education (Goldstein and Blackman, 1978, Witkin, Moore, Goodenough and Cox, 1977).

Cognitive Factors and Frequency of Reminiscence. When considering the effects of whether subjects were low or high frequency reminiscers it was observed that high frequency reminiscers tended to make more cognitive errors than low frequency reminiscers. It will be recalled that the previously conducted Scheffe analysis showed depressed elderly to make significantly more cognitive errors than non-depressed elderly. In light of this finding it is interesting to note that high frequency reminiscing non-depressed elderly make more cognitive errors than low frequency reminiscing non-depressed elderly. Since these findings were not observed in the middle age group (who tend to make as many cognitive errors irrespective of reminiscence frequency categorization) it may be that being old and being a high frequency reminiscer involves making more cognitive errors than being old and a low frequency reminiscer. That is, the presence or absence of psychopathology (depression) and age affect the cognitive distortions of individuals.

Research Question 5.

> What are the differences between non-depressed elderly and depressed elderly in terms of their sex, occupation, age, education and marital status.

Crosstabulated Chi Square statistics identified significant differences between non-depressed and depressed

elderly in terms of age, education and occupation. Significant differences were not identified in relation to sex or marital status. Significant statistics are depicted in Tables XXXV - XXXVII.

Age

In the analysis of age (Table XXXV), depressed and non-depressed elderly were categorized in three groups; 65 to 74 years, 75 to 84 years and 85 plus. In this respect a significant difference was identified in the proportion of depressed and non-depressed elderly in terms of age categorization. Inspection of Table XXXV shows a higher proportion of non-depressed elderly (N=20) than depressed elderly (N=9) in the 65-75 year range. Proportions in other categories were not as large.

Education

A significant difference was observed in the proportion of depressed and non-depressed elderly in terms of education (Table XXXVI). Inspection of Table XXXVI shows a higher proportion of non-depressed elderly (N=14) in the post-secondary category than for depressed elderly (N=2). Proportions in other categories were less prominent.

Occupation

A significant difference was observed in the proportion of depressed and non-depressed elderly in terms of occupation (Table XXXVII). Inspection of Table XXXVII shows a higher proportion of housewives in the depressed group (N=14) than in the non-depressed group (N=6) and a higher

Table XXXV

Chi-Square Analysis of Non-depressed and Depressed Elderly Subjects in Terms of Age

GROUP	COUNT / EXP VAL / ROW PCT / COL PCT / TOT PCT / RESIDUAL / STD RES / ADJ RES	65-74 YEARS	75-84 YEARS	85 PLUS YEARS	RAW TOTAL
Non-depressed Elderly		20	6	1	27
		15.1	8.3	3.6	51.9%
		74.1%	22.2%	3.7%	
		69.0%	37.5%	14.3%	
		38.5%	11.5%	1.9%	
		4.9	-2.3	-2.6	
		1.3	- .8	-1.4	
		2.8	-1.4	-2.1	
Depressed Elderly		9	10	6	25
		13.1	7.7	3.4	48.1%
		36.0%	40.0%	24.0%	
		31.0%	62.5%	85.7%	
		17.3%	19.2%	11.5%	
		-4.9	2.3	2.6	
		-1.3	.8	1.4	
		-2.8	1.4	2.1	
COLUMN TOTAL		29	16	7	52
		55.8%	30.8%	13.5%	100.0%

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN. E.F.	CELLS WITH E.F.<5
8.67976	2	0.0130*	3.365	2 OF 6 (33.3%)

* p <.05
** p <.001

Table XXXVI

Chi-Square Analysis of Non-depressed and Depressed Elderly Subjects in Terms of Education

GROUP	COUNT / EXP VAL / ROW PCT / COL PCT / TOT PCT / RESIDUAL / STD RES / ADJ RES	ELEMENTARY	JUNIOR HIGH	HIGH SCHOOL	POST SECONDARY	RAW TOTAL
Non-depressed Elderly		1	4	8	14	27
		1.6	7.3	9.9	8.3	51.9%
		3.7%	14.8%	29.6%	51.9%	
		33.3%	28.6%	42.1%	87.5%	
		1.9%	7.7%	15.4%	26.9%	
		-.6	-3.3	-1.9	5.7	
		-.4	-1.2	-.6	2.0	
		-.7	-2.0	-1.1	3.4	
Depressed Elderly		2	10	11	2	25
		1.4	6.7	9.1	7.7	48.1%
		8.0%	40.0%	44.0%	8.0%	
		66.7%	71.4%	57.9%	12.5%	
		3.8%	19.2%	21.2%	3.8%	
		.6	3.3	1.9	-5.7	
		.5	1.3	.6	-2.1	
		.7	2.0	1.1	-3.4	
COLUMN TOTAL		3	14	19	16	52
		5.8%	26.9%	36.5%	30.8%	100.0%

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN. E.F.	CELLS WITH E.F.<5
12.31974	3	0.0064*	1.442	2 OF 8 (25.0%)

* $p < .05$
** $p < .001$

Table XXXVII

Chi-Square Analysis of Non-depressed and Depressed Elderly Subjects in Terms of Occupation

COUNT EXP VAL ROW PCT COL PCT TOT PCT RESIDUAL STD RES ADJ RES	HOUSEWIVES	PROFESSIONAL	TECHNICAL	BUSINESS	LABOR	OTHER	RAW TOTAL
GROUP	6	15	0	4	0	2	27
	10.4	9.9	1.0	3.6	.5	1.6	51.9%
Non-depressed	22.2%	55.6%	.0%	14.8%	.0%	7.4%	
Elderly	30.0%	78.9%	.0%	57.1%	.0%	66.7%	
	11.5%	28.8%	.0%	7.7%	.0%	3.8%	
	-4.4	5.1	-1.0	.4	- .5	.4	
	-1.4	1.6	-1.0	.2	- .7	.4	
	-2.5	3.0	-1.5	.3	-1.0	.5	
Depressed	14	4	2	3	1	1	25
Elderly	9.6%	9.1	1.0	3.4	.5	1.4	48.1%
	56.0%	16.0%	8.0%	12.0%	4.0%	4.0%	
	70.0%	21.1%	100.0%	42.9%	100.0%	33.3%	
	26.9%	7.7%	3.8%	5.8%	1.9%	1.9%	
	4.4	-5.1	1.0	-.4	.5	-.4	
	1.4	-1.7	1.1	-.2	.7	-.4	
	2.5	-3.0	1.5	-.3	1.0	-.5	
COLUMN TOTAL	20	19	2	7	1	3	52
	38.5%	36.5%	3.8%	13.5%	1.9%	5.8%	100.0%

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN. E.F.	CELLS WITH E.F.<5
12.98689	5	0.0235*	0.481	8 OF 12 (66.7%)

* $p < .05$
** $p < .001$

proportion of professionals in the non-depressed group (N=15) than in the depressed group (N=4). The number of subjects in the categories of technical, business, labor and other were low enough to be discounted.

Summary of Results Regarding Research Question 5.

In sum, non-depressed elderly subjects may be characterized as being younger, more educated and having been involved in more professionally oriented occupations than depressed subjects.

Summary of Research Results

The present study sought to explore the nature of reminiscence through examination of the factors of reminiscence evaluation, two measures of reminiscence frequency, cognitive errors, reminiscence cognitive errors, integrative complexity, field dependence and reminiscence affect. The investigation proceeded through correlational analyses which included the factors of age and years of education for groups of non-depressed elderly, depressed elderly, and middle-age subjects. In addition, differences between groups on the dependent variables were examined with age as a covariate. Further, differences between groups were investigated in light of sex, marital status, education, and occupation. Finally, differences between non-depressed and depressed elderly were studied in terms of their age, sex, marital status, education and occupation.

Correlation Data

The correlational analyses showed few consistent

findings across groups. A significant negative correlation between age and field dependence was identified for both depressed and non-depressed elderly. This finding suggests that as age increases field dependence increases (decrease in field independence). A negative correlation between age and the second measure of cognitive style (integrative complexity) was observed in the middle-aged group. Thus, it may be that level of integrative complexity also decreases with age. Years of education was found to be positively correlated with field dependence in the depressed elderly group and positively correlated with integrative complexity in the middle-aged group. Greater educational experience, then, is associated with more sophisticated levels of cognitive style and in this respect the findings are consistent with numerous studies which demonstrate the relationship between education and cognitive style (Witkin, Moore, Goodenough and Cox, 1977).

Cognitive Factors, Reminiscence and Demographic Variables

How individuals evaluate periods of life (Reminiscence Evaluation) was found to be negatively correlated with integrative complexity in the non-depressed elderly group and positively correlated with field dependence in the depressed elderly group.

The first measure of reminiscence frequency (Reminiscence Frequency I) was found to be negatively correlated with integrative complexity and positively correlated with the measure of cognitive errors for

non-depressed elderly. The latter finding was also observed in the depressed elderly group. These findings suggest that individual's with sophisticated or well-developed cognitive attributes tend to be less involved in reminiscing activity. The second measure of reminiscence frequency (Reminiscence Frequency II) however was found to correlate positively with field dependence for non-depressed elderly but not for depressed or middle-aged subjects. Affect of reminiscence (Reminiscence Affect) was found to correlate positively with integrative complexity in the depressed elderly group but did not correlate significantly with other variables in either the non-depressed or middle-aged group. Thus, the more cognitively complex depressed elderly may tend to experience a more positive emotional outcome from reminiscing.

Additional information on the nature of reminiscence and cognitive factors was achieved through a series of One-Way Analyses of Covariance with age as the covariate and through a series of Two-Way Analyses of Variance where the groups were examined in light of sex, marital status, education, occupation and whether subjects were high or low frequency reminiscers. In the former analyses age did not appear to be a major factor in terms of group differences on the dependent variables. Significant differences were identified between depressed and non-depressed elderly on the variables of Reminiscence Evaluation, Cognitive Errors, Integrative Complexity and Field Dependence with depressed

elderly demonstrating less positive evaluation of periods of life, more cognitive errors, greater field dependence and a lower level of integrative complexity. Whereas there was no difference between non-depressed elderly and depressed elderly in terms of reminiscence frequency (Reminiscence Frequency II), both groups appear to reminisce significantly more than middle-age subjects. The latter series of statistics showed the effects of marital status, education, occupation and reminiscence frequency categorization. Low numbers of subjects in subcategorizations by group prevented valid interpretation of interaction effects observed in terms of marital status and occupation. Moreover, occupation effects tended to reflect education effects in terms of field dependence, with those having high school and post-secondary education and those in professional or other occupations (which on the whole reflects greater than junior high school education) being more field independent than housewives, who probably have had fewer educative or occupational opportunities. In a similar vein, professional and other occupations also demonstrated higher levels of integrative complexity.

Frequency of Reminiscence (High-Low) and Cognition

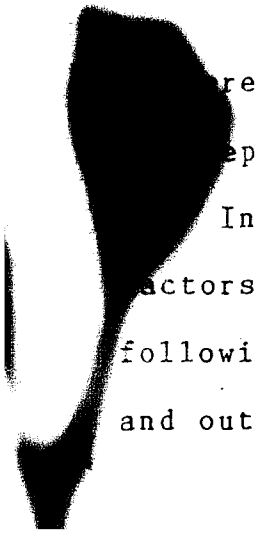
When the effects of categorization of subjects into high or low frequency reminiscers was considered it was found that both non-depressed and depressed elderly who reminisce frequently make more cognitive errors than those categorized as low frequency reminiscers. For depressed

elderly, however, this situation appeared to be even more pronounced. Finally, the effects of the categorization of high and low frequency of reminiscing was observed in terms of integrative complexity with low frequency non-depressed elderly being more integratively complex than high frequency reminiscers.

Depressed Versus Non-Depressed on Demographic Variables

In the concluding analysis a series of Chi Square statistics were employed to further explore differences between depressed and non-depressed elderly. The factors of sex, marital status, age, education and occupation were studied. Significant differences between the groups (indicating differing proportions of subjects) were identified in terms of age, education and occupation. With respect to age, the non-depressed group had more subjects under the age of 75 than the depressed group. In contrast, the depressed group had 16 subjects over the age of 75 whereas the non-depressed group had only 7 subjects over the age of 75.

Examination of the proportion of subjects in education categories found more educated subjects in the non-depressed group. Similarly, more professional subjects were found in the non-depressed elderly group than in the depressed elderly group. The observed differences in age, education and occupation between the two elderly groups serves to emphasize the effects of activity level (institutionalized versus community based) and environment when considering the



rences in cognitive attributes of depressed and
epressed.

In this chapter the results of an exploration of
actors of reminiscence and cognition were presented. The
following chapter will discuss the results of this research
and outline relevant and practical implications.

CHAPTER V

DISCUSSION AND IMPLICATIONS

Introduction

The present chapter serves to discuss the findings of this exploratory study in terms of it's contribution to the theory and research of reminiscence in late life. In addition, the implications that the present study holds for researchers and practioners in the area of the psychology of aging are presented.

General Observations

Reminiscence in old age. In general, the results of the investigation found no significant difference between depressed and non-depressed elderly in terms of how frequently they reminisce. It was found, however, that both groups of elderly reminisce more frequently than a middle-aged sample. This finding lends support to the common notion that while reminiscence is an activity found in other age groups it is particularly salient in the latter part of the life cycle (Havighurst and Glasser, 1972). A similar observation was found in a study by Lieberman and Falk (1971) where the frequencies of reminiscence of a community based group of elderly were significantly greater than for a middle-aged group. Further, Revere and Tobin (1980) found elderly subjects to be more involved in their reminiscences than middle-aged subjects. If "involvement" is considered as an index of reminiscence activity or frequency, then the present findings receive additional

support.

Reminiscence Evaluation and Cognitive Factors. Further differences between elderly subjects and middle-aged subjects were not observed. Differences were identified, however, between the two elderly samples on factors of reminiscence evaluation, and on factors of cognition (distortion, integrative complexity and field dependence). These results suggest a syndrome of negative reminiscence evaluation, cognitive errors, decreased field independence and a lower level of integrative complexity for depressed elderly subjects.

According to the theoretical positions related to field dependence and integrative complexity these depressed elderly may be characterized as being less developed in the analytic sense, more absolutistic in their thinking, having greater difficulty functioning independently without environmental support, and having less structured psychological defences and controls, than the non-depressed. Moreover, the depressed elderly were found to make more cognitive errors than non-depressed. In this regard the depressed elderly would show faulty information processing reflected by errors of logic and thus would systematically misinterpret or distort the meaning of events so as to consistently construe themselves, their world and their experiences in a negative way (Lefebre, 1981).

Reminiscence frequency. The pattern of results involving reminiscence evaluation and cognitive factors may

be further developed when the variable of reminiscence frequency is considered. Results in the correlational analyses found significant positive correlations between reminiscing frequency (Reminiscence Frequency I) and cognitive errors, for both depressed and non-depressed elderly, suggesting that for these samples of elderly, increased reminiscence activity is associated with increased negative interpretation of personal experience. In a similar vein, Lieberman and Falk (1972) observed that elderly in stressful situations (on a waiting list to enter a home for the aged) tended to reminisce more frequently than elderly in less stressing circumstances. In addition, Fallot (1976) identified three styles of reminiscing; an Affirming Style, a Negating Style and a Despairing Style, the latter of which was associated with a tendency to have decreases in elation after reminiscing.

In contrast, it will be recalled that a number of studies found greater frequency of reminiscence to be related to positive aspects of adjustment. McMahon and Rhudick (1967), for example, observed a tendency for non-depressed elderly male veterans to reminisce more than deressed. Lewis (1971), found reminiscers (as opposed to non-reminiscers) to have a greater consistency in present and past self-concept, and Havighurst and Glasser (1972), Coleman (1974), Romaniuk, (1978) and DeMotts (1981) found positive relationships between frequency of reminiscing and positive affect of reminiscing. Fallot (1976) observed

reminiscing to be related to decreases in self-report measures of depression and Boylin, et al. (1976) found reminiscence frequency to be related to higher levels of ego integrity. These studies suggest that when elderly people reminisce they tend to experience or exhibit positive psychological outcomes or characteristics, and thus, reminiscence is thought to serve an adaptive function in late life.

When contrasting the present research findings to these studies it appears that little has been accomplished by way of supporting the notion that reminiscence has adaptive value in the latter part of the life cycle. Indeed, from the present results, it would appear that reminiscing has little adaptive value, at least for the subjects who participated in the study. The proposed syndrome presented from the results suggests that negative evaluations of life through reminiscing are associated with less "sophisticated" cognitive attributes. It is difficult, however, to delineate the nature or role of reminiscence frequency in this circumstance.

Cognitive factors. In the only other research project studying reminiscence in relation to factors of cognition, DeMotts (1981) observed that a positive correlation between a measure of reminiscence frequency and a measure of the cognitive control principle of leveling-sharpening fell short of statistical significance. That is, a trend was observed between higher levels of

reminiscence frequency and cognitive sharpening. This trend suggests that sharpeners (greater memory assimulation) would more readily enjoy reminiscing and thus reminisce more than levelers (decreased memory assimulation). Moreover, DeMotts found significant positive correlations between reminiscence frequency and life satisfaction and positive affect of reminiscence. On the basis of these findings DeMotts concluded that cognitive sharpening in combination with other styles of cognition (e.g. field independence) may result in a cognitive style which facilitates adaptation and adjustment in late life.

The results of the present study provide no consistent support for DeMotts' observations. While the results of this study confirm the idea that cognitive attributes may facilitate adaptation and adjustment the associations between cognitive style, reminiscence frequency and reminiscence affect as observed by DeMotts were not fully realized. Indeed, the pattern of results in the present study suggests an association between high frequency of reminiscing and less developed cognitive abilities.

Participant comments. As previously noted, reminiscence theory suggests that older people go through a period or phase of retrospective analysis which serves to help them achieve a measure of psychological balance or adjustment when faced with the idea of personal mortality. This phase or period is thought to be inherent, and universal. Comments by a number of subjects, in both the

depressed and non-depressed elderly groups about reminiscing, however, have caused the author to query the comprehensiveness of existing theory.

A number of subjects stated that whereas they found themselves reminiscing more than in their earlier years, and that on the whole they did not mind it, they preferred to think about the present or future. Their comments seemed to suggest that if they did not have anything better to think about, they would think about the past. Is it possible then, that the increased involvement in the past that has been observed in the latter part of the life cycle occurs because older people have fewer future oriented activities to be engaged in? Are physical and social restrictions the causes of increased involvement with the past? A number of subjects in the non-depressed group stated that they were "too busy" to reminisce. Is it possible that if the depressed subjects were as busy they may have a different "attitude" about reminiscing?

Summary. Four important factors can be extracted from the results. First, there is confirmation of the idea that older people reminisce more frequently than other age groups (at least, more than middle-age individuals). Second, there is support for the contention that cognitive factors influence psychological adjustment. This observation, however, was in some ways "expected," given the differences in the two elderly samples (depressed versus non-depressed). Third, depressed and non-depressed elderly

were undifferentiated in terms of how frequently they reminisce. Had the non-depressed elderly been shown to reminisce significantly more, then support for the idea that reminiscence serves an adaptive function would have been realized. Finally, comments by a number of elderly from both groups suggest that involvement in reminiscnce may be influenced by levels of activity.

In the following section of the discussion the latter three points are disussed in terms of their theoretical contributions.

Theoretical Contributions

Contributions to theories of cognitive style. In terms of cognitive style, the present results lend some support for the observations by Karp (1967) and Markus (1971), that field independence is affected by factors of age, activity, education, and environment (institutionalization). Although there has been, to date, no information regarding changes in integrative complexity in late life, the results suggest that this form of cognitive style may be influenced in the same ways.

Contributions to reminiscence theory. In general, the results do not support the central theoretical idea of reminiscence theory; that reminiscence serves an adaptive function. The reader is reminded, at this point, however, that it was not the intention of the study to prove or disprove the theory. As previously noted, the central idea of reminiscence theory would have been supported had the

non-depressed elderly been found to reminsce more freqently. What as been accomplised here is, not so much to prove or support, but to underscore the need to refine existing definitions of reminiscence. A most important fact supporting this argument is that the two measures of reminiscnce frequency did not correlate significantly. Indeed, the correlations were so low, for all three groups, that they were almost negligible. This was also true for the correlations between reminiscence affect and reminiscence evaluation. These findings certainly call into question the validity and reliability of the construct.

Perhaps one facet of theory which influences the definition of the construct and will require change is the belief that reminiscence for the purpose of a life review is a universal phenomenon. As Spricer (1981) has noted, many theories of human development (from which much of reminiscence theory is based) view the human condition as natural, inevitable, unchangeable or universal, and thus, are ideological to the point of being virtually useless as models of comprehending human development. In this regard the "theory" of reminiscence, appears to have been born out of "traditional" psychology's "preoccupation with prediction and control rather than understanding." (Spricer, 1981; p.184) What we have failed to understand about reminiscing, is that it is probably a phenomenon particular to the individual. It may result from a host of social or cultural "conditions" and it is not "triggered" solely by an

awareness of death or loss but may be influenced by factors such as the amount of time an individual is involved with present or future oriented activities.

Another issue which requires clarification concerns the differentiation of reminiscence into inter and intrapersonal reminiscence. In the present study the emphasis was on examining factors relating to intrapersonal reminiscence. Focusing on this form of introspection, may have been detrimental in terms of understanding the adaptive significance of reminiscence, as both silent and oral reminiscing may influence each other as well as contribute to psychological adjustment. Further revisions of theory, then, should consider clarificaion of this issue keeping in mind that each form may be highly idiosyncratic and affected by a host of other factors.

Summary. Theoretical contributions were made in terms of cognitive and reminiscence theory. In terms of cognitive theory the results support the idea that cognitive style is influenced by factors such as age, education, and environment. In regards to reminiscence theory, the results of the study emphasize the need to revise definitions of reminiscence, work to clarify inter and intrapersonal reminiscence, and to have a greater appreciation of the individual and the effects of social and cultural factors.

In the following section these issues are further discussed in light of their implications for researchers.

Implications for Researchers

Implications for researchers include further work on definitions of reminiscence, the role of cognition and the need for greater appreciation of sampling and methodological issues.

The Study of Reminiscence. Clearly, existing definitions of reminiscence require further refinement. This will not be an easy task, however, because reminiscence is a complex phenomenon involving a variety of personal, social, cultural and perhaps, environmental factors. Refinement then, will by necessity, occur in an evolutionary manner with pieces to the puzzle being added or subtracted as each new research effort is reported.

Although solving of the puzzle will take time, a number of issues appear to require immediate attention. First, there should be work to develop reliable and valid methods of assessing how frequently people reminisce. This is important because one way of solving the reminiscence-adjustment "equation" is through an understanding of frequency. In developing these methods researchers should attempt to devise procedures to account for frequency in regards to inter and intrapersonal reminiscence. To date, most studies have elected to assess frequency in only one or the other, employing either analysis of conversation or self-report measures. Researchers are encouraged then, to gather data on both types to provide more accurate assessment. More accurate

data could also be generated if researchers conducted indepth single case studies or longitudinal investigations. These methods could provide information on how social or cultural factors shape or influence reminiscing behaviors and how these behaviors may change over time. Single case study methods would permit individuals to define for themselves what reminiscence is and perhaps then allow for greater accuracy in self-reporting of the frequency of reminiscing.

The Study of Cognition and Adaptation. The results of the present study suggest that research on the role of cognition in adjustment and adaptation in late life be continued. Further research into other cognitive styles, such as breadth of categorizing, reflectiveness-impulsivity and constricted versus flexible control may provide us with additional information on how older individuals perceive themselves and the world around them. Similarly, further study of cognitive distortion also appears warranted. In this regard, cognitive errors questionnaires developed specifically for older people would be useful. The items or vignettes in these instruments may be constructed to reflect cognitive distortions relevant to specific situations such as hospitalization or institutionalization, health, family situations or activities of daily living.

Since the study of cognitive style appears to be relatively novel regarding old age, researchers may apply themselves to norming and revising existing instruments or

measures. In addition, longitudinal studies of changes in cognitive style in the latter years would be valuable. If individuals are studied over time, we may begin to appreciate changes in their cognitive functioning, problem solving strategies, attitudes towards life experiences and generally, how they cope with the rigors of old age. This type of research, although perhaps idealistic, may considerably expand one's knowledge of the life process and psychological adjustment (Birren, 1959).

Sampling and Methodological Issues. In the present study there was little control for the effects of factors such as sex, education, or age. Moreover, there is a question as to whether the study compared depressed and non-depressed elderly as these subjects were drawn from differing environments (community based versus institutional). Whereas the exploratory nature of the study and the difficulty recruiting subjects allowed for a certain degree of "leniency" in regards to sampling procedures, researchers are encouraged to place greater emphasis on these problems in future studies, especially if the studies are designed to test specific hypotheses. Obtaining accurate male to female ratios, for example, requires considerable time, planning and effort on the part of researchers, but is necessary if information generated by e study is to be comprehensive. Indeed, greater emphasis ampling is essential at this point in the research as we still unable to determine the effects of sex, age,

marital status, physical health or social and cultural factors. In the latter case researchers could develop methods of assessing the role of reminiscing in terms of communities, ethnic and religious groups and could benefit by collaborating with social and cultural anthropologists.

Implications for Practioners

A number of implications for those who would work with older people have been generated by this study. First, it appears that taking measures of depression and morale are useful and practical methods of assessing psychological adjustment in older people. Moreover, items which reflect these emotional issues can be utilized to identify problem areas and may serve as guides to planning treatment. Secondly, the results of this study suggest that it is important to know the level of conceptual complexity the client can cope with. This knowledge is important when considering types of therapy or therapy formats; types of group therapy or styles of individual counselling.

Since this study has shown the importance of cognitive factors in relation to psychological adjustment, practioners can develop strategies to improve or correct certain cognitive attributes. In this regard clients can be taught to recognize when they are overgeneralizing, catastrophizing or personalizing. They can also be instructed on how to generate alternative and more reasonable cognitions. Indeed, many of the techniques and aids used in Beck's system of cognitive therapy appear to be applicable to older

persons. Generally, practioners should encourage verbalization and focus on strategies which will develop better information processing strategies. Willis, Baltes and Cornelius, (1981), for example, have demonstrated the effectiveness of teaching cognitive skills such as classifying and categorizing to older adults.

Practitioners who use reminiscence therapeutically are encouraged to recognize that reminiscence frequency and affect may vary considerably between individuals. Some patients may prefer to engage in more intrapersonal reminiscence than others. Still other patients may prefer not to reminisce or they may be unsure as to how to proceed to gain maximum effect. These cautionary notes are offered because the author has observed a number of reminiscence therapy groups wherein the sole objective was to get patients to reminisce. The therapists in these groups were under the impression that reminiscing alone would produce therapeutic change! The results in the present study, however, would suggest that therapists need to be more aware of the process of reminiscing and how cognitive factors may be of influence.

Summary and Conclusions

The present study sought to contribute to the existing knowledge of reminiscence in the latter part of the life [illegible]e through investigation of reminiscence frequency, [illegible], evaluation and factors of cognitive distortion and [illegible]ive style within the context of psychological

adjustment. The study was exploratory in nature and thus did not seek to prove or disprove hypotheses regarding reminiscence. In addition, the exploratory format in many ways, allowed the study to "evolve" and permitted the examination of a variety of factors and patterns in the data.

The general questions to be addressed in the study as stated in Chapter 1 are restated here:

1. Do depressed and non-depressed elderly differ in their frequency, affect and evaluations of life periods when reminiscing?
2. Can differences in reminiscence frequency, affect and evaluation between depressed and non-depressed elderly subjects be explained in terms of their cognitive attributes?

In terms of the first question the results in the study found that depressed and non-depressed did not differ in measures of reminiscence frequency or affect. Problems with the reliability and validity of the construct of reminiscence was cited as the reason for this situation and recommendations made for refinement and further research. The two groups did differ, however, in terms of reminiscence evaluation and they also differed in terms of cognitive attributes. From these findings it was concluded that reminscence may indeed be influenced by the cognitive "abilities" of the individual. Differences in the age, education and environment of the depressed and non-depressed

groups, however, underscored the need for further investigation of cognitive factors, but with an emphasis on controlling for these factors.

As a final comment, the author wishes to re-emphasize the novelty of research in the area of reminiscence. Although through this study a greater appreciation of certain cognitive factors, which may be involved in the recall of the past was made, much work remains to be done. This kind of research promises to be exciting and rewarding with further research of theory and treatment oriented strategies awaiting development.

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APPENDIX A

PILOT STUDY CORRELATION MATRIX

Appendix A Pilot Study Correlation Matrix

Correlation Matrix Involving Age, Reminiscence Frequency, Reminiscence Evaluation, Reminiscence Cognitive Errors, Cognitive Errors Questionnaire, Field Dependence, Integrative Complexity, Morale and Depression

	Age	Reminiscence Frequency I	Reminiscence Evaluation	Reminiscence Cognitive Errors	Cognitive Errors Questionnaire	Field Dependence	Integrative Complexity	Morale	Depression
Age									
Reminiscence Frequency	.210								
Reminiscence Evaluation	.333	.277							
Reminiscence Cognitive Errors	.598	.359	-.205						
Cognitive Errors Questionnaire	.172	.416	.089	.370+					
Field Dependence	-.120	-.320	.188	-.082	-.213				
Integrative Complexity	-.165	-.188	-.152	-.218	-.000	-.117			
Morale	-.061	.607	-.384	.614	.512	-.237	-.223		
Depression	.314	-.034	-.489	.524	.093	-.214	.093	.203	

* $p < .05$

+ data transformed for correlation

APPENDIX B

BACKGROUND INFORMATION QUESTIONNAIRE

APPENDIX B

BACKGROUND INFORMATION QUESTIONNAIRE

DATE: _____

NAME: _____

SEX: MALE _____ FEMALE _____

AGE: _____

MARITAL STATUS (check one)

____ Married .... How long? _____ Number of children _____

____ Never Married

____ Divorced ... How long? _____

____ Widowed .... How long? _____

PRESENT OCCUPATION: _____

Age when you plan to retire _____

If retired, what was your occupation before retirement? _____

Age when you retired _____

EDUCATION:

How many years of school have you completed? _____

WHERE DO YOU LIVE? (check one)

____ Own home or apartment .... How long? _____

____ Retirement Housing ..... How long? _____

____ Nursing Home .... How long? _____

____ Urban

____ Rural

HOW WOULD YOU RATE YOUR OVERALL HEALTH?

____ Excellent

____ Very good

____ Average

____ Poor

____ Very poor

HOW OFTEN DO YOU SEE FAMILY AND/OR FRIENDS? (Check one)

____ Never

____ Very little ..... How many times a week? _____

____ Occasionally ..... How many times a week? _____

____ Frequently ..... How many times a week? _____

____ Very frequently .. How many times a week? _____

PRESENT INCOME RANGE (check one)

10,000-20,000 20,000-30,000 30,000-40,000 40,000 plus

REMINISCING HISTORY

My family and relations liked to talk about the old days (circle one)

Always Sometimes Never

Our people admired the lessons of the elderly (circle one)

Always Sometimes Never

Do you like to sit quietly and think about the past? (circle one)

Yes No On occasion (neutral)

APPENDIX C

REMINISCENCE FREQUENCY (II) AND AFFECT QUESTIONNAIRE

APPENDIX C

REMINISCENCE FREQUENCY (II) AND AFFECT QUESTIONNAIRE

All of us from time to time look back over our lives, recalling people and events, thoughts and feelings. Sometimes such recall comes unbidden, as idle thoughts or daydreams. Sometimes we purposely think back, trying to remember and reconstruct. Such retrospection, both purposive and spontaneous, may be called reminiscence.

In your answers to the following questions, define reminiscence as indicated here. Omit only the process of recalling or marshalling facts in order to make a decision. Also, daydreaming about the future is excluded. But daydreaming about the past is included as an aspect of reminiscence.

1. Some of us reminisce more than others. Looking back over the last couple of weeks how much reminiscing would you say you have done? A great deal ____

   Some . . . . ____

   Very little ____

   Has anything occurred during the past year (such as illness or tragedy or increased responsibility) to make you reminisce more or less than usual?

   Yes, tendency to reminisce more ___ . No ___ .

   Yes, tendency to reminisce less ___ . No ___ .

2. As well as you can remember, did you do such retrospective thinking:

At age	Very little	Some	A good deal
a. 30-40	_____	___	_____
b. 40-50	_____	___	_____
c. 50-60	_____	___	_____
d. 60-70	_____	___	_____
e. 70 plus	_____	___	_____

3. Under what circumstances would you say you are inclined to reminisce. Check as many as apply to you.

	Often	Occasionally
a. When you are alone	___	___
When you are with:		
b. Your wife or husband	___	___
c. Old acquaintances	___	___
d. New acquaintances	___	___
People of your own generation		
e. Friends	___	___
f. Relatives	___	___
A younger generation		
g. Friends	___	___
h. Relatives	___	___
People older than your generation	___	___

4. In what ways does reminiscence serve you?

	Often	Occasionally
a. Gives me a good feeling . .	___	___
b. Helps me to understand myself better	___	___
c. Helps me to get over a serious loss	___	___
d. Helps me to understand young people better	___	___
e. Helps me to re-live a pleasant experience	___	___
f. Gives something to talk about	___	___
g. Gives relief from boredom .	___	___

5. Events or experiences you recall during reminiscence may be unpleasant, pleasant, or neutral in affect. Try to think how often these occur, and fill in the table below.

	Often	Sometimes	Almost Never
Pleasant events or experiences	___	___	___
Unpleasant events or experiences	___	___	___
Neutral events or experiences	___	___	___

6. Consider a typical day during the current month. You dwelt mainly on the present, we suppose. But you also thought about the past. Comparing the past with the future, which did you spend more time on?

Check only one answer. Past ___ Future ___

7. Do you like to sit quietly and think about the past?

   Yes ___ No ___ No particular feeling ___

8. When your reminiscence is unpleasant , what are its affects on you?

	Often	Occasionally
a. Keeps me awake at night . .	___	___
b. Makes it hard for me to keep my self-respect . . .	___	___
c. Makes it harder for me to adjust to my present situation	___	___
d. Makes it harder for me to get along with people . . .	___	___

9. What do the words "Future" and "Past" signify to you? Please put a check mark on each of the scales below to indicate where these key words fall on each scale. (See the one example.)

F U T U R E

Example:	Boring	___	___	___	X	___	Interesting
	Bright	___	___	___	___	___	Dull
	Bad	___	___	___	___	___	Good
	Clear	___	___	___	___	___	Confused
	Accidental	___	___	___	___	___	Planned

P A S T

Good	___	___	___	___	___	Bad
Dull	___	___	___	___	___	Bright
Confused	___	___	___	___	___	Clear
Recent	___	___	___	___	___	Long Gone

10. Is there any difference between your retrospective thinking now and in the past? Check ONE response.

With more experience behind me, I enjoy reminiscing more than I did formerly . . . . . ___

I don't enjoy it so much now. It seems to worry me . . . . . ___

There's no difference. It does the same for me now that it did in the past . . ___

11. How busy are you most of the time? (Check one.)

a. Pressed for time . . ___

b. Very busy . . . . . ___

c. Busy . . . . . ___

d. Little to do . . . . ___

e. Time drags by . . . ___

APPENDIX D

REMINISCENCE EVALUATION

AND

REMINISCENCE FREQUENCY I MEASURES

APPENDIX D

REMINISCENCE EVALUATION AND REMINISCENCE FREQUENCY I

The purpose of this study is to measure your evaluations of various periods or times in your life. On each page you will find a different idea regarding reminiscences or memories. You are to evaluate that period of life or reminiscence by using the scales provided. Here is how you are to use the scales:

If you feel that the reminiscence idea at the top of the page is very closely related to one end of the scale you should place your check-mark as follows:

good X : ___ : ___ : ___ : ___ : ___ : ___ : bad

OR

good ___ : ___ : ___ : ___ : ___ : ___ : X : bad

If you feel that the idea is quite closely related to one or the other end of the scale (but not extremely) you should place your check-mark as follows:

fair ___ : X : ___ : ___ : ___ : ___ : ___ : unfair

OR

fair ___ : ___ : ___ : ___ : ___ : X : ___ : unfair

If the idea seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active ___ : ___ : X : ___ : ___ : ___ : ___ : passive

OR

active ___ : ___ : ___ : ___ : X : ___ : ___ : passive

I. WHEN I REFLECT ON MY CHILDHOOD:

GOOD	___	___	___	___	___	___	___	BAD
NEGATIVE	___	___	___	___	___	___	___	POSITIVE
BORING	___	___	___	___	___	___	___	INTERESTING
SUCCESSFUL	___	___	___	___	___	___	___	UNSUCCESSFUL
UGLY	___	___	___	___	___	___	___	BEAUTIFUL
WISE	___	___	___	___	___	___	___	FOOLISH
PLEASURABLE	___	___	___	___	___	___	___	PAINFUL
IMPORTANT	___	___	___	___	___	___	___	UNIMPORTANT

I REMINISCE ABOUT MY CHILDHOOD (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

II. WHEN I REMEMBER MIDDLE AGE:

PLEASURABLE	___	___	___	___	___	___	___	PAINFUL
IMPORTANT	___	___	___	___	___	___	___	UNIMPORTANT
UGLY	___	___	___	___	___	___	___	BEAUTIFUL
BORING	___	___	___	___	___	___	___	INTERESTING
NEGATIVE	___	___	___	___	___	___	___	POSITIVE
GOOD	___	___	___	___	___	___	___	BAD
SUCCESSFUL	___	___	___	___	___	___	___	UNSUCCESSFUL
WISE	___	___	___	___	___	___	___	FOOLISH

I REMINISCE ABOUT MY MIDDLE AGE (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

III. WHEN I REMINISCE ABOUT MY ADOLESCENCE:

WISE	___	___	___	___	___	___	___	FOOLISH
UGLY	___	___	___	___	___	___	___	BEAUTIFUL
GOOD	___	___	___	___	___	___	___	BAD
SUCCESSFUL	___	___	___	___	___	___	___	UNSUCCESSFUL
PLEASURABLE	___	___	___	___	___	___	___	PAINFUL
IMPORTANT	___	___	___	___	___	___	___	UNIMPORTANT
NEGATIVE	___	___	___	___	___	___	___	POSITIVE
BORING	___	___	___	___	___	___	___	INTERESTING

I REMINISCE ABOUT MY ADOLESCENCE (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

IV. REMINISCING ABOUT WORK:

UGLY	___ :	___ :	___ :	___ :	___ :	___ :	___	: BEAUTIFUL
NEGATIVE	___ :	___ :	___ :	___ :	___ :	___ :	___	: POSITIVE
BORING	___ :	___ :	___ :	___ :	___ :	___ :	___	: INTERESTING
SUCCESSFUL	___ :	___ :	___ :	___ :	___ :	___ :	___	: UNSUCCESSFUL
GOOD	___ :	___ :	___ :	___ :	___ :	___ :	___	: BAD
WISE	___ :	___ :	___ :	___ :	___ :	___ :	___	: FOOLISH
IMPORTANT	___ :	___ :	___ :	___ :	___ :	___ :	___	: UNIMPORTANT
PLEASURABLE	___ :	___ :	___ :	___ :	___ :	___ :	___	: PAINFUL

I REMINISCE ABOUT WORK (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

V. WHEN I REMINISCE ABOUT MY MARRIAGE:

IMPORTANT	___	___	___	___	___	___	___	UNIMPORTANT
PLEASURABLE	___	___	___	___	___	___	___	PAINFUL
SUCCESSFUL	___	___	___	___	___	___	___	UNSUCCESSFUL
BORING	___	___	___	___	___	___	___	INTERESTING
NEGATIVE	___	___	___	___	___	___	___	POSITIVE
GOOD	___	___	___	___	___	___	___	BAD
WISE	___	___	___	___	___	___	___	FOOLISH
UGLY	___	___	___	___	___	___	___	BEAUTIFUL

I REMINISCE ABOUT MY MARRIAGE (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

VI. WHEN I RECALL MY EARLY ADULT YEARS:

GOOD	___	___	___	___	___	___	___	BAD
PLEASURABLE	___	___	___	___	___	___	___	PAINFUL
NEGATIVE	___	___	___	___	___	___	___	POSITIVE
WISE	___	___	___	___	___	___	___	FOOLISH
SUCCESSFUL	___	___	___	___	___	___	___	UNSUCCESSFUL
UGLY	___	___	___	___	___	___	___	BEAUTIFUL
IMPORTANT	___	___	___	___	___	___	___	UNIMPORTANT
BORING	___	___	___	___	___	___	___	INTERESTING

I REMINISCE ABOUT MY EARLY ADULT YEARS (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

VII. WHEN I REMEMBER IMPORTANT DECISIONS THAT I MADE IN MY LIFE:

NEGATIVE	___	___	___	___	___	___	___	POSITIVE
IMPORTANT	___	___	___	___	___	___	___	UNIMPORTANT
BORING	___	___	___	___	___	___	___	INTERESTING
SUCCESSFUL	___	___	___	___	___	___	___	UNSUCCESSFUL
GOOD	___	___	___	___	___	___	___	BAD
WISE	___	___	___	___	___	___	___	FOOLISH
PLEASURABLE	___	___	___	___	___	___	___	PAINFUL
UGLY	___	___	___	___	___	___	___	BEAUTIFUL

I REMINISCE ABOUT IMPORTANT DECISIONS THAT I MADE IN MY LIFE (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

VIII. WHEN I REFLECT ON BEING A PARENT:

GOOD ___ : ___ : ___ : ___ : ___ : ___ : ___ : BAD

WISE ___ : ___ : ___ : ___ : ___ : ___ : ___ : FOOLISH

UGLY ___ : ___ : ___ : ___ : ___ : ___ : ___ : BEAUTIFUL

SUCCESSFUL ___ : ___ : ___ : ___ : ___ : ___ : ___ : UNSUCCESSFUL

BORING ___ : ___ : ___ : ___ : ___ : ___ : ___ : INTERESTING

IMPORTANT ___ : ___ : ___ : ___ : ___ : ___ : ___ : UNIMPORTANT

NEGATIVE ___ : ___ : ___ : ___ : ___ : ___ : ___ : POSITIVE

PLEASURABLE ___ : ___ : ___ : ___ : ___ : ___ : ___ : PAINFUL

I REMINISCE ON BEING A PARENT (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

IX. REMEMBERING RETIREMENT:

IMPORTANT ___ : ___ : ___ : ___ : ___ : ___ : ___ : UNIMPORTANT

WISE ___ : ___ : ___ : ___ : ___ : ___ : ___ : FOOLISH

BORING ___ : ___ : ___ : ___ : ___ : ___ : ___ : INTERESTING

GOOD ___ : ___ : ___ : ___ : ___ : ___ : ___ : BAD

SUCCESSFUL ___ : ___ : ___ : ___ : ___ : ___ : ___ : UNSUCCESSFUL

UGLY ___ : ___ : ___ : ___ : ___ : ___ : ___ : BEAUTIFUL

PLEASURABLE ___ : ___ : ___ : ___ : ___ : ___ : ___ : PAINFUL

NEGATIVE ___ : ___ : ___ : ___ : ___ : ___ : ___ : POSITIVE

I REMINISCE ABOUT RETIREMENT (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

X. WHEN I THINK I'VE BEEN SUCCESSFUL IN MY LIFE:

PLEASURABLE	___ :	___ :	___ :	___ :	___ :	___ :	___ : PAINFUL
UGLY	___ :	___ :	___ :	___ :	___ :	___ :	___ : BEAUTIFUL
NEGATIVE	___ :	___ :	___ :	___ :	___ :	___ :	___ : POSITIVE
IMPORTANT	___ :	___ :	___ :	___ :	___ :	___ :	___ : UNIMPORTANT
WISE	___ :	___ :	___ :	___ :	___ :	___ :	___ : FOOLISH
BORING	___ :	___ :	___ :	___ :	___ :	___ :	___ : INTERESTING
GOOD	___ :	___ :	___ :	___ :	___ :	___ :	___ : BAD
SUCCESSFUL	___ :	___ :	___ :	___ :	___ :	___ :	___ : UNSUCCESSFUL

I REMINISCE ABOUT MY SUCCESS IN LIFE (CIRCLE ONE)

FREQUENTLY (SEVERAL TIMES A DAY)	OFTEN (ALMOST EVERY DAY)	OCCASIONALLY (A FEW TIMES A WEEK)	SELDOM (A FEW TIMES A MONTH)	VERY RARELY (A FEW TIMES A YEAR)

APPENDIX E

MEASURE OF INTEGRATIVE COMPLEXITY - PERSONAL TOPICAL INVENTORY

APPENDIX E

MEASURE OF INTEGRATIVE COMPLEXITY - INTERPERSONAL-TOPICAL INVENTORY

You will be given some situations and topics to which we would like you to respond. The responses are given in pairs. You are to choose one response from each pair . Choose the response that most closely fits your opinion or feeling and indicate your choice by circling the letter "A" or "B" corresponding to the response chosen. Always choose one member of each pair . Never choose both members of the pair and do not skip over any of the pairs. If you agree with both, choose the one you agree with most strongly. If you do not agree with either, choose the one you find the least disagreeable of the two.

Example:

Here is an example of the way questions will be asked and the way they should be answered. The manner in which you will indicate your choice between the two given responses is illustrated below:

When I am confused . . .

	Pair No.	
A	(i)	B
I try to find a solution and end the confusion		I completely ignore the fact that I am confused

Pair No.

A	(ii)	B
I break out into a nervous sweat		I remain calm at all times

How to respond:

First : Decide which response you agree with most.

Second : Indicate which response you agree with most by circling the identifying letter. Thus, if in comparing the first pair of statements, you agree with the statement, "I try to find a solution and end the confusion," more than with the statement, "I completely ignore the fact that I am confused," you would circle letter "A" (above the chosen statement). Having chosen one (never both, never neither) statement from the first pair of statements, you would then move on to the second pair. If, in considering the second pair, you find that you agree more with the statement, "I remain calm at all times," (as compared to the statement, "I break out into a nervous sweat") you would circle the letter "B".

On the pages that follow there are 30 different pairs of responses. There are six pairs to one page. You are to select one response from each pair, the one that more accurately shows your opinion or feeling and record your choice by circling the letter indicating the statement chosen. Be frank and indicate, in each case, your true feeling or opinion or the reaction which you actually would make in the situation. Do not indicate how you should feel or act; rather, indicate how you do feel and act.

Make sure that you are aware of the situation or topic that each pair of responses refers to. You will find the situation or topic identified at the top of each page. All items on the page refer to the situation or topic appearing at the top of that page.

When you are finished, your paper should contain 36 circles. Check back and make sure that you have made 36 choices, no more no less. Remember: (1) Respond only once for each pair; that is, choose <u>one</u> member of the pair, never both, never neither. Indicate your choice by circling either "A" or "B".

(2) When you are finished you should have made 36 choices.

Work at your own rate of speed but work straight through the inventory without stopping. Once you have completed a page do not return to it.

YOU MAY BEGIN

1. Imagine that someone has criticized you. Choose the response from each pair that comes closest to your feelings about such criticism. Indicate your choice by circling either "A" or "B".

When I am criticized ...

Pair No.

(1)

A	B
I try to take the criticism, think about it, and value it for what it is worth. Unjustified criticism is as helpful as justified criticism in discovering what other people's standards are.	I try to accept the criticism but often find that it is not justified. People are too quick to criticize something because it doesn't fit their standards.

(2)

A	B
I try to determine whether I was right or wrong. I examine my behavior to see if it was abnormal. Criticism usually indicates that I have acted badly and tends to make me aware of my own bad points.	It could possibly be that there is some misunderstanding about something I did or said. After we both explain our viewpoints, we can probably reach some sort of compromise.

(3)

A	B
I listen to what the person says and try to accept it. At any rate, I will compare it to my own way of thinking and try to understand what it means.	I feel that either I'm not right, or the person who is criticizing me is not right. I have a talk with the person to see what's right or wrong.

(4)

A	B
I usually do not take it with good humor. Although, at times, constructive criticism is very good, I don't always think that the criticizer knows what he is talking about.	At first I feel that it is unfair and that I know what I am doing, but later I realize that the person criticizing me was right and I am thankful for his advice. I realize that he is just trying to better my actions.

---

(5)

A	B
I try to ask myself what advantages this viewpoint has over mine. Sometimes both views have their advantages and it is better to combine them. Criticism usually helps me to learn better ways of dealing with others.	I am very thankful. Often I can't see my own errors because I am too engrossed in my own work at the time. An outsider can judge and help me correct the errors. Criticism in everyday life usually hurts my feelings, but I know it is for my own good.

---

(6)

A	B
It often has little or no effect on me. I don't mind constructive criticism too much, but I dislike destructive criticism. Destructive criticism should be ignored.	I try to accept and consider the criticism. Sometimes it has caused me to change myself; at other times I have felt that the criticism didn't really make much sense.

---

2. Imagine that you are in doubt. Choose the response from each pair that comes closest to your feelings about such doubt. Indicate your choice by circling either "A" or "B".

When I am in doubt ...

Pair No.

---

(7)

A	B
I become uncomfortable. Doubt can cause confusion and make one do a poor job. When one is in doubt he should ask and be sure of himself.	I find myself wanting to remove the doubt, but this often takes time. I may ask for help or advice if I feel that my questions won't bother the other person.

(8)

A	B
I don't get too upset about it. I don't like to ask someone else unless I have to. It's better to discover the correct answer on your own.	I usually go to someone who knows the correct answer to my question. Sometimes I go to a book which will set me straight by removing the doubt.

(9)

A	B
I try to reason things out and check over the facts. Often I approach others to get ideas that will provide a solution.	I think things over, ask questions and see what I can come up with. Often several answers are reasonable and it may be difficult to settle on one.

(10)

A	B
I realize that I'll have to decide on the correct answer on my own. Others try to be helpful, but often do not give me the right advice. I like to judge for myself.	I usually try to find out what others think, especially my friends. They may not know the answer, but they often give some good ideas.

(11)

A	B
I look over the problem and try to see why there is a doubt. I try to figure things out. Sometimes I just have to wait awhile for an answer to come to me.	I try to get some definite information as soon as possible. Doubt can be bad if it lasts too long. It's better to be sure of yourself.

---

(12)

A	B
I consider what is best in the given situation. Although one should not rush himself when in doubt, he should certainly try to discover the right answer.	I act according to the situation. Sometimes doubt can be more serious than at other times and many of our serious doubts must go unanswered.

---

3. Imagine that a friend has acted differently toward you. Choose the response from each pair that comes closest to your feelings about such an action. Indicate your choice by circling either "A" or "B".

When a friend acts differently toward me ...

Pair No.

---

(13)

A	B
I am not terribly surprised because people can act in many different ways. We are different people and I can't expect to understand all his reasons for acting in different ways.	I am usually somewhat surprised but it doesn't bother me very much. I usually act the way I feel towards others. People worry too much about others' actions and reactions.

---

(14)

A	B
I find out why. If I have done something wrong I will try to straighten out the situation. If I think he's wrong, I expect him to clear things up.	I feel that I may have caused him to act in a different way. Of course, he may have other reasons for acting differently which would come out in time.

---

(15)

A	B
I first wonder what the trouble is. I try to look at it from his viewpoint and see if I might be doing something to make him act differently toward me.	It is probably because he has had a bad day, which would explain this different behavior; in other cases he may just be a changeable kind of person.

---

(16)

A	B
It is probably just because something is bothering him. I might try to cheer him up or to help him out. If these things didn't work, I would just wait for him to get over it.	I try to understand what his different actions mean. I can learn more about my friend if I try to figure out why he does things. Sometimes the reasons may not be very clear.

---

(17)

A	B
There has to be a definite reason. I try to find out this reason, and then act accordingly. If I'm right I'll let him know it. If he's wrong, he should apologize.	I usually let him go his way and I go mine. If a friend wants to act differently that's his business, but it's my business if I don't want to be around when he's that way.

(18)

A	B
I don't get excited. People change and this may cause differences. It is important to have friends, but you can't expect them to always be the same.	I like to get things back to normal as soon as possible. It isn't right for friends to have differences between them. Whoever is at fault should straighten himself out.

---

4. Think about the topic of people in general. Choose the response for each pair that comes closest to your thoughts about people. Indicate your choice by circling either "A" or "B".

This I believe about people ...
Pair No.

---

(19)

A	B
Whatever differences may exist between persons, they can usually get along if they really want to. Although their ideas may not agree, they probably still have something in common.	People can learn from those who have different ideas. Other people usually have some information or have had some experience which is interesting and can add to one's knowledge.

---

(20)

A	B
People can act all sorts of ways. No single way is always best, although at certain times a particular action might be wiser than others.	Each person should be able to decide the correct thing for himself. There are always a few choices to be made and the individual himself is in the best position to pick the right one.

---

(21)

A	B
Some people think they know what's best for others and try to give advice. These people shouldn't make suggestions unless asked for help.	There are certain definite ways in which people should act. Some don't know what the standards are and therefore need to be straightened out.

---

(22)

A	B
I can tell if I am going to get along with a person very soon after meeting him. Most people act either one way or another and usually it is not difficult to say what they are like.	It's hard for me to say what a person is like until I've known him a long time. People are not easy to understand and often act in unpredictable ways.

---

(23)

A	B
People have an outside appearance that usually isn't anything like what can be found on the inside, if you search long and hard enough.	Each person is an individual. Although some people have more good or bad points than others, no one has the right to change them.

---

(24)

A	B
People can be put into categories on the basis of what they're really like. Knowing the way a person really is helps you to get along with him better.	People are unlike one another in many respects. You can get along with people better and better understand them if you are aware of the differences.

5. Think about the general topic of leaders. Choose the response from each pair that comes closest to your thoughts about leaders. Indicate your choice by circling either "A" or "B".

Leaders ...

Pair No.

(25)

A	B
Leaders do not always make the right decisions. In such cases, it is wise for a man to look out for his own welfare.	Leaders are necessary in all cases. If a leader cannot make the right decisions another should be found who can.

(26)

A	B
Leaders cannot provide all the answers. They are like other people — they have to try to figure out what action is necessary and learn from their mistakes.	Leaders make decisions sometimes without being sure of themselves. We should try to understand this and think of ways to help them out.

(27)

A	B
I like a leader who is aware of how the group feels about things. Such a leader would not lead any two groups in exactly the same way.	A person should be able to put his confidence in a leader and feel that the leader can make the right decision in a difficult situation.

(28)

A	B
There are times when a leader shouldn't make decisions for those under him. The leader has the power to decide things, but each man has certain rights also.	A leader should give those under him some opportunity to make decisions, when possible. At times, the leader is not the best judge of a situation and should be willing to accept what others have to say.

---

(29)

A	B
Some leaders are good, others are quite poor. Good leaders are those who know what is right for the man under them. These leaders deserve the respect of every man.	Leaders cannot be judged easily. Many things go to make up good leadership. Most people fall short in some way or another, but that is to be expected.

---

(30)

A	B
Leaders are needed more at certain times than at others. Even though people can work out many of their own problems, a leader can sometimes give valuable advice.	Some people need leaders to make their decisions. I prefer to be an individual and decide for myself when possible. Most leaders won't let you do this.

---

6. Imagine that someone has found fault with you. Choose the response from each pair that comes closest to your feelings about such a situation. Indicate your choice by circling either "A" or "B".

When other people find fault with me ...
Pair No.

---

(31)

A	B
It means that someone dislikes something I'm doing. People who find fault with others are not always correct. Each person has his own ideas about what's right.	It means that someone has noticed something and feels he must speak out. It may be that we don't agree about a certain thing. Although we both have our own ideas, we can talk about it.

(32)

A	B
I wonder if they are serious and why they have found fault with me. I then try to consider what they've said and make changes if it will help.	If enough people point out the same fault, there must be something to it. I try to rid myself of the fault, especially if the criticizers are people "in the know."

(33)

A	B
They have noticed something about me of which I am not aware. Although criticism may be hard to take, it is often helpful.	They are telling me something they feel is correct. Often they may have a good point which can help me in my own thinking. At least it's worthwhile to consider it.

(34)

A	B
I may accept what is said or I may not. It depends upon who is pointing out the fault. Sometimes it's best to stay out of sight.	I accept what is said if it is worthwhile, but sometimes I don't feel like changing anything. I usually question the person.

(35)

A	B
I like to find out what it means; since people are different from one another, it could mean almost anything. A few people just like to find fault with others but there's usually something to be learned.	There is something to be changed. Either I am doing something wrong or else they don't like what I'm doing. Whoever is at fault should be informed so that the situation can be set straight.

---

(36)

A	B
I don't mind if their remarks are meant to be helpful, but there are too many people who find fault just to give you a hard time.	It often means that they're trying to be disagreeable. People get this way when they've had a bad day. I try to examine their remarks in terms of what's behind them.

CHECK AND MAKE SURE THAT YOU'VE CHOSEN ONE MEMBER OF EACH PAIR (A TOTAL OF 36 CIRCLES.)

APPENDIX F

COGNITIVE ERRORS QUESTIONNAIRE

APPENDIX F

COGNITIVE ERRORS QUESTIONNAIRE

This questionnaire describes a number of situations that might occur in daily life, each followed by a thought in "quotations" that a person in the situation might have. Underneath this is a group of statements that describes how similar the thought is to how you would think in that situation.

Please read each situation and imagine that it is happening to you. Then, read the thought (which is in "quotations") following that situation. Circle the statement underneath each thought that best describes how similar that thought is to how you would think in that situation.

Because you may not have had the experiences described in some of the situations, it is important that you imagine that it is happening to you. Be sure that you don't rate the situation, just rate how much the thought (which is in "quotations") is like the way you would think.

As an example, read the following:

A. You have just come out of the store and notice a dent in your car that wasn't there before you went in. You think to yourself, "Oh no, the car is wrecked."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

If that thought ("Oh no, the car is wrecked.") was somewhat like the way you would think in that situation, you would circle: somewhat like I would think.

Please start on the next page and rate every thought.

1. Your boss just told you that because of a general slowdown in the industry, he has to lay off all of the people who do your job including you. You think to yourself, "I must be doing a lousy job or else he wouldn't have laid me off."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

2. You are a manager in a small business firm. You have to fire one of your employees who has been doing a terrible job. You have been putting off this decision for days and you think to yourself, "I just know that when I fire her, she is going to raise hell and will sue the company."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

3. Last week you painted the living room and your spouse said it really looked great. When you were cleaning up, you found that you had got paint on the rug and thought, "Boy, this wasn't a very good painting job."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

4. You noticed recently that a lot of your friends are taking up golf and tennis. You would like to learn, but remember the difficulty you had that time you tried to ski. You think to yourself, "I couldn't learn skiing, so I doubt if I can learn to play tennis."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

5. You and your spouse recently went to an office party at the place where your spouse works. You didn't know anybody there and had a terrible time. When your spouse asks you if you want to go to the neighbours to visit, you think, "I'll have a terrible time just like at that office party."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

6. You just finished spending three hours cleaning the basement. Your spouse however, doesn't say anything about it. You think to yourself, "(S)he must think I did a lousy job."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

7. Last night, your spouse said (s)he thought you should have a serious discusssion about sex. You think to yourself, "(S)he hates the way we make love."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

8. You have been working for six months as a car salesperson. You had never been a salesperson before and were just fired because you had not been meeting your quota. You thought, "Why try to get another job, I'll just get fired."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

9. Your job requires a lot of travel. You had hoped to drive 400 miles today but you hit bad weather that slowed you down. When you stopped for the night, you thought, "I didn't make that 400 miles; Today was a complete waste."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

10. You have just finished nine holes of golf. Totaling your score, you recall that although you got a par on seven holes, you got two over par on the last two holes. You think to yourself, "Today I really played poorly."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

11. You went fishing for the first time today with some of your friends who love fishing. Nobody got anything, and the group seemed to be discouraged. You thought to yourself on the way home, "I guess I made too much noise or did something that scared the fish off."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

12. Your friends are all going out to ride their snowmobiles. Last time you went you ran out of gas, and you think to yourself, "What if I run out of gas again; I'll freeze to death."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

13. You have three children who generally do quite well in school. One of your children came home today and told you that he had to stay after school because he got into a fight. You think to yourself, "He wouldn't have gotten that detention if I disciplined him more."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

14. You are taking your coffee break when your boss stops by and reminds you of some work that has to get done today. You think to yourself, "If I don't start getting back to work earlier, I'm going to lose this job."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

15. You have noticed that many of your friends have begun playing tennis and are now urging you to play too. You had taken golf lessons with your spouse last year and had difficulty learning to play golf. You think to yourself, "I had so much trouble learning golf, I doubt if I could learn tennis."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

16. Your seven-year-old son normally does very well in school. Last week, he brought home a paper which he had done incorrectly and was supposed to do over. You think to yourself, "Oh no, now he's having trouble in school. I better make an appointment with his teacher."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

17. Earlier today, your spouse asked to have a serious talk with you after work about some things that were troublesome at home. You had no idea what's going on and you think, "We don't communicate enough; Our marriage is going to fall apart."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

18. On your last job, you had not received a raise even though a co-worker with similar experience had. You are now up for a raise in your present job and think, "I didn't get a raise the last time and I probably won't now."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

19. Your teenage daughter has just asked if two of her friends can stay overnight. You recall that you got very upset when your son had some friends over for pizza several weeks ago and they had made a lot of noise. You think, "If they come over, I'll get upset again."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

20. You run a day care center. Today, the mother of a child you have been having difficulty with calls and notifies you that she has quit work and will be withdrawing her child from your program. You think, "She probably thinks I wasn't handling him as well as I should."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

21. You took your children to the neighborhood pool for the afternoon. Although your kids urged you to swim with them, you were enjoying laying in the sun. Later you look up and see them arguing over a float. You think to yourself, If I had gone in the water, they probably wouldn't be fighting now."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

22. You went shopping for some new clothes today and were unable to find anything you liked. You think, "What a waste of a day."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

23. You met with your boss today to discuss how you have been doing on your job. He said that he really thought you were doing a good job, but asked you to try to improve in one small area. You think to yourself, "He really thinks I'm doing a lousy job."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

24. Last time you went skiing you took a hard fall and got shook up. You're supposed to go skiing this weekend but think, "I'll probably fall and break my leg and there will be no one to help me."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

APPENDIX G

REMINISCENCE COGNITIVE ERRORS QUESTIONNAIRE

This questionnaire describes a number of reminiscences that might occur when people think about the past. Each reminiscence is followed by a thought in "quotations" that a person might have about that situation. Underneath this is a group of statements that describes how similar the thought is to how YOU would think about that reminiscence.

Please read each reminiscence-situation and imagine that it is happening to you. Then, read the thought (which is in "quotations") which follows. Circle the statement underneath each thought that best describes how similar that thought is to how you would think about that situation.

Because you may not have had the experiences described in some of the situations, it is important that you imagine that you have.

Be sure that you don't rate the situation, just rate how much the thought (which is in "quotations") is like the way you would think.

AS AN EXAMPLE, READ THE FOLLOWING :

A. The last time you looked at pictures of the past you got depressed. Your spouse wants you to sort through some old pictures tonight. You think to yourself, "If I look at old pictures again I'll get down and depressed again."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

If that thought ("If I look at old pictures again I'll get down and depressed again") was somewhat like the way you would think in that situation, you would circle: somewhat like I would think

Please start on the next page and rate every thought.

1. You recall a time in your adolescent years when you neglected your chores or duties. You think, "I was irresponsible."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

2. You remember in your adolescent years that growing up was at times difficult for you and your friends. You think, "If I had been a better friend it would have been a much easier time for everyone."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

3. You remember occasions in your adult years when you overate or drank too much. You think to yourself, "I'll probably die of heart disease."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

4. Your childhood was fairly normal. You remember good times and bad. When you remember some of the bad times you think to yourself, "I had a lousy childhood."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

5. In reminiscing about your young-adult years, you recall occasions when you missed good opportunities. You think, "I missed far too many good opportunities."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

6. When you think back to the depression years you remember how hard it was for most people. You think to yourself, "If I had helped out more it would have been easier for people."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

7. You recall incidents in your adolescent years when you made mistakes. You think, "If people ever found out I would be rejected outright."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

8. When you look back over your life you note that you did many good deeds and lived a fairly normal and successful life. You recall, however, occasions when you were less than honest. You think to yourself, "My life has been a waste."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

9. Although your adolescence was quite normal you remember ups and downs. When you remember the downs you think, "My teenage years were a disaster."

   This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

10. In thinking about your childhood you recall occasions when you acted inappropriately. You think to yourself, "Because I did those things I'll probably have a stroke."

    This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

11. You recall occasions when your family would argue. You think to yourself, "If I had been a better person they would not have fought."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

12. In reminiscing about your middle age years you remember a time when you acted immaturely. You think, "I never grew up, I've been acting like a kid all my life."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

13. You recall having a fairly good and happy childhood. You reminisce, however, about a time when you were teased by other children. You think, "I was never liked by others."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

14. When you look back over your life and evaluate your successes you think to yourself, "I was never successful."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

15. When you think back over your life you observe that many catastrophic events, wars, and strife occured during your time. You think to yourself, "As a member of the human race I too am responsible for much of the suffering."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

16. In reminiscing about your middle age years, you recall a time when you were dissatisfied with your marriage. You think, "If my spouse ever found out he(she) would have left me."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

17. You remember an occurence in your childhood when you disobeyed your parents. You think to yourself, "I was a terrible child."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

18. You recall that none of your family ever became extremely wealthy. You think "If I had only worked harder and given them more time and money they would have been more successful."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

19. Your married life has been quite good and fulfilling. You reminisce, however, about a situation where you had an argument with your spouse. You think, "I never got along really well with my spouse, my marriage has been stormy."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

20. When people look back and evaluate their lives, they usually recall successes as well as failures. Sometimes they can only recall the failures. When this happens to you you think, "I must have a terrible character flaw to think this way."

This thought is:

almost exactly like I would think	a lot like I would think	somewhat like I would think	a little like I would think	not at all like I would think

APPENDIX H

PHILADELPHIA GERIATRIC CENTER

MORALE SCALE-REVISED

APPENDIX H

PHILADELPHIA GERIATRIC CENTRE MORALE SCALE - REVISED

		CIRCLE	
1)	LITTLE THINGS BOTHER ME MORE THIS YEAR	YES	NO
2)	THINGS KEEP GETTING WORSE AS I GET OLDER	YES	NO
3)	HOW MUCH DO YOU FEEL LONELY?	MUCH	NOT MUCH
4)	I SOMETIMES WORRY SO MUCH THAT I CAN'T SLEEP	YES	NO
5)	I HAVE AS MUCH PEP AS I HAD LAST YEAR	YES	NO
6)	I SEE ENOUGH OF MY FRIENDS AND RELATIVES	YES	NO
7)	I HAVE A LOT TO BE SAD ABOUT	YES	NO
8)	I SOMETIMES FEEL THAT LIFE ISN'T WORTH LIVING	YES	NO
9)	I AM AFRAID OF A LOT OF THINGS	YES	NO
[illegible]	S YOU GET OLDER YOU ARE LESS USEFUL	YES	NO
11)	LIFE IS HARD FOR ME MUCH OF THE TIME	YES	NO
12)	I GET MAD MORE THAN I USED TO	YES	NO
13)	AS I GET OLDER, THINGS ARE BETTER/WORSE THAN I THOUGHT THEY WOULD BE	BETTER	WORSE
14)	HOW SATISFIED ARE YOU WITH YOUR LIFE TODAY?	SATISFIED	NOT SATISFIED
15)	I TAKE THINGS HARD	YES	NO
16)	I AM AS HAPPY NOW AS WHEN I WAS YOUNGER	YES	NO
[illegible]	I GET UPSET EASILY	YES	NO

APPENDIX I

BECK DEPRESSION INVENTORY

APPENDIX I

BECK DEPRESSION INVENTORY

Name _____ Date _____

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK INCLUDING TODAY! Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. BE SURE TO READ ALL THE STATEMENTS IN EACH GROUP BEFORE MAKING YOUR CHOICE.

1. 0 I do not feel sad.
   1 I feel sad.
   2 I am sad all the time and I can't snap out of it.
   3 I am so sad or unhappy that I can't stand it.

2. 0 I am not particularly discouraged about the future.
   1 I feel discouraged about the future.
   2 I feel I have nothing to look forward to.
   3 I feel that the future is hopeless and that things cannot improve.

3. 0 I do not feel like a failure.
   1 I feel I have failed more than the average person.
   2 As I look back on my life, all I can see is a lot of failures.
   3 I feel I am a complete failure as a person.

4. 0 I get as much satisfaction out of things as I used to.
   1 I don't enjoy things the way I used to.
   2 I don't get real satisfaction out of anything anymore.
   3 I am dissatisfied or bored with everything.

5. 0 I don't feel particularly guilty.
   1 I feel guilty a good part of the time.
   2 I feel quite guilty most of the time.
   3 I feel guilty all of the time.

6. 0 I don't feel like I am being punished.
   1 I feel I may be punished.
   2 I expect to be punished.
   3 I feel I am being punished.

7. 0 I don't feel disappointed in myself.
   1 I am disappointed in myself.
   2 I am disgusted with myself.
   3 I hate myself.

8. 0 I don't feel I am any worse than anybody else.
   1 I am critical of myself for my weaknesses or mistakes.
   2 I blame myself all the time for my faults.
   3 I blame myself for everything bad that happens.

9. 0 I don't have any thoughts of killing myself.
   1 I have thoughts of killing myself, but I would not carry them out.
   2 I would like to kill myself.
   3 I would kill myself if I had the chance.

10. 0 I don't cry any more than usual.
    1 I cry more now than I used to.
    2 I cry all the time now.
    3 I used to be able to cry, but now I can't cry even though I want to.

11. 0 I am no more irritated now than I ever am.
    1 I get annoyed or irritated more easily than I used to.
    2 I feel irritated all the time now.
    3 I don't get irritated at all by the things that used to irritate me.

12. 0 I have not lost interest in other people.
    1 I am less interested in other people than I used to be.
    2 I have lost most of my interest in other people.
    3 I have lost all of my interest in other people.

13. 0 I make decisions about as well as I ever could.
    1 I put off making decisions more than I used to.
    2 I have greater difficulty in making decisions than before.
    3 I can't make decisions at all anymore.

14. 0 I don't feel I look any worse than I used to.
    1 I am worried that I am looking old or unattractive.
    2 I feel that there are permanent changes in my appearance that make me look unattractive.
    3 I believe that I look ugly.

15. 0 I can work about as well as before.
    1 It takes an extra effort to get started at doing something.
    2 I have to push myself very hard to do anything.
    3 I can't do any work at all.

16. 0 I can sleep as well as usual.
    1 I don't sleep as well as I used to.
    2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
    3 I wake up several hours earlier than I used to and cannot get back to sleep.

17. 0 I don't get more tired than usual.
    1 I get tired more easily than I used to.
    2 I get tired from doing almost anything.
    3 I am too tired to do anything.

18. 0 My appetite is no worse than usual.
    1 My appetite is not as good as it used to be.
    2 My appetite is much worse now.
    3 I have no appetite at all anymore.

19. 0 I haven't lost much weight, if any, lately.
    1 I have lost more than 5 pounds. I am purposely trying to lose weight.
    2 I have lost more than 10 pounds. by eating less.
    Yes ___ No ___ .
    3 I have lost more than 15 pounds.

20. 0 I am no more worried about my health than usual.
    1 I am worried about physical problems such as aches and pains: or upset stomach: or constipation.
    2 I am very worried about physical problems and it's hard to think of much else.
    3 I am so worried about my physical problems that I cannot think about anything else.

21. 0 I have not noticed any recent change in my interest in sex.
    1 I am less interested in sex than I used to be.
    2 I am much less interested in sex now.
    3 I have lost interest in sex completely.

APPENDIX J

CONSENT FORM

APPENDIX J

CONSENT FORM

This is designed to be a study to examine the functional utility of reminiscence among older individuals.

You are invited to be a participant in this study because you are 65 years of age or older. The data for this study will be obtained by the use of several self-report measures, and a test requires you to find a simple form when it is hidden within a complex pattern. In total you should require no more than 1 to 1 1/2 hours to complete the questionnaires. Participation in this study will in no way involve any physical strain or hardship. If you agree to participate your personal identify will be protected and will be strictly confidential.

You are making a decision whether or not to participate. Your signature indicates that you have decided to participate having read the information above.

Date _____ Signature _____

_____

Signature of Researcher