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RETIREMENT SATISFACTION AND THE TIMING OF THE RETIREMENT AGE:  
AN ANALYSIS OF RETIREES AND OLDER WORKERS  
FROM A FORTUNE 500 FIRM

by  
DONNA ELAINE STUTEVILLE

A dissertation submitted in partial fulfillment of the  
requirements for the degree of

DOCTOR OF PHILOSOPHY  
in  
URBAN STUDIES


Portland State University



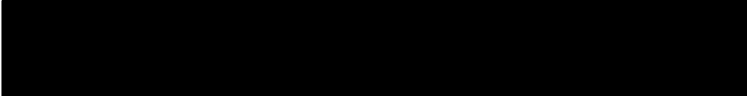
1984 Donna Elaine Stuteville

TO THE OFFICE OF GRADUATE STUDIES AND RESEARCH:

The members of the Committee approve the dissertation of Donna Elaine Stuteville presented July 17, 1984.


  
Charles White, Chairman

  
Lois F. Copperman

  
Douglas G. Montgomery

  
Charles A. Tracy

APPROVED:

  
Kenneth J. Dueker, Acting Dean, School of Urban and Public Affairs

  
Jim F. Heath, Associate Vice President for Academic Affairs

AN ABSTRACT OF THE DISSERTATION OF Donna Elaine Stuteville for the  
Doctor of Philosophy in Urban Studies presented July 17, 1984.

Title: Retirement Satisfaction and The Timing of The Retirement Age:  
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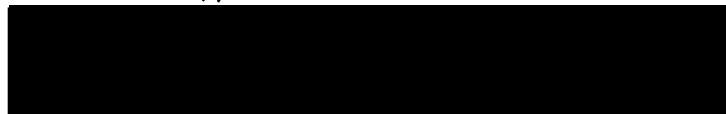
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Charles White, Chairman



Lois F. Copperman



Douglas G. Montgomery



Charles A. Tracy

This study focuses the effects of demographic characteristics, health status, income, work attitudes, and leisure activity involvements have on satisfaction in retirement and the retirement timing decision.

Specifically, this study investigates the determinants of satisfaction in retirement of retirees and the determinants of the timing of the retirement decision for both retirees and older workers.

In addition, the study analyzes the differential impact of retirement satisfaction and the timing of retirement between men and women.

The review of the literature revealed that no single variable alone is the predictor of retirement satisfaction and the timing of the retirement decision. Therefore, a conceptual model was developed to measure the two central research questions. The conceptual model is based on five categorical factors as the determinants of retirement satisfaction and timing. The five main factors in the model are: demographic characteristics, health status, income level, work attitudes and leisure activity involvement.

Multi-item scales were developed from data on 231 retirees and 908 older workers. The two samples were currently and/or formerly employed with the same high technology, Fortune 500 firm. The adequate number of both males and females in the two samples provide the opportunity to do a comparative analysis between men and women.

Using the data from the two samples, the statistical procedure, multiple linear regression was employed to analyze the significant predictors of retirement satisfaction and timing. Specifically, regression was used to assess the effects of the selected independent variables found in the literature to influence retirement satisfaction and timing. Discriminant function equations were developed to further investigate the timing of the retirement decision for both retirees and older workers.

It was clear from the data analysis that the independent variables selected explained a low percentage of the variance in both retirement satisfaction and the timing of the retirement decision. The

comparative analysis between men and women did suggest that the retirement experience for women is different from men. The findings suggest that the variables that contribute to the two outcomes lay outside the conceptual model.

However, the findings suggest that satisfaction in retirement is partially determined by gender, health status, income, work attitudes and leisure activity involvement. The research findings indicate variables that contribute significantly to the timing of the retirement decision, but no one variable or combination of variables have strong predictive power. This implies that the independent variables found in the literature are not the key determinants of retirement satisfaction or retirement timing.

Policy implications and suggestions for future research are discussed. The major implications of the research suggest a need for using the significant variables in conjunction with a re-examination of possible additional variables in future research.

The aging of the population and the trend toward early retirement have implications that will impact the financial stability of both private and public pension systems. Improved policy calls for a new understanding of the major predictors of both retirement satisfaction and retirement timing.

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To my family, I express sincere appreciation for all they have given throughout the dissertation research process.

## PREFACE

The data for this dissertation research is part of a larger study, "Transition From Work to Retirement: Innovative Business Practices", funded by the U. S. Department of Health and Human Services, Administration on Aging (#90-AR-0021). For working purposes, the larger study is called "Pioneering Firms". Findings of the Pioneering Firms research project are not described in this dissertation as they are not relevant to the dissertation research.

Some of the sources cited in the Literature Review (Chapter II) of the dissertation were obtained from the OARS (On-line Academic Reference Service) computer literature search done by the staff at the Portland State University library.

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## CHAPTER I

### INTRODUCTION

The purpose of this research is to investigate the determinants of satisfaction in retirement and the determinants for the timing of the retirement decision. The concept of retirement satisfaction or dissatisfaction has been developed in the literature to describe an overall reaction to one's life after withdrawal from the labor force (Atchley 1976; Streib and Schneider 1971). The concept of the timing of the retirement decision is the conditions or factors influencing the age at which an individual retires.

Retirement satisfaction has been a concern for both social gerontologists and policy makers. A great deal of public and private money has been utilized to improve the quality of life in the retirement years. Programs developed to provide services to older persons can be enhanced by the utilization of research results that indicate the major predictors of retirement satisfaction. For example, policies that encourage socialization and social integration of older persons are based on the perspective that "successful" aging is the pursuit of social activity. If, in fact, satisfaction stems from some other factor or factors, then policies based on this perspective will be only marginally successful. It is the examination of the effects of possible influences on retirement satisfaction which is the core of this research.

Similarly, the timing of the retirement decision is an issue of both academic and policy interest. Retirement timing is defined in this research as the age retirees did retire and the age older workers planned to retire. For the purpose of the dissertation the retirement decision age is described in three categories -- early, on-time, and deferred. An early retirement age refers to retirement before age 65. On-time age of retirement refers to age 65 (the age designated by the Social Security Act as to when an individual is eligible for full benefits). A deferred retirement age is retirement after age 65.

Thus the two objectives of this research are to investigate determinants of retirement satisfaction and the timing of the retirement decision which have been suggested in the literature and which influenced the content of public policy. One component of this analysis is the comparison between men and women.

Retirement policies have become even more prominent on the public agenda because among the major changes that have occurred in the United States is the increasing number of individuals age 65 and older. By the year 2000, it is projected that 17 percent of the population will be 65 years of age and older. There are also major shifts occurring in the U. S. labor force: a decline in the number of older persons who work past 65; large numbers of persons retiring early (pre-age 65); increasing numbers of women in the workforce. The demographic trend of increasing number of older individuals coupled with changing retirement patterns will influence future labor force participation rates, employment policies and practices, and retirement income policies.

Retirement Issues have been nationally recognized and publicized with few individuals being unfamiliar with the issues and consequences of public options. As discussed earlier, the increase in the number of older persons in the United States and the continuing trend toward early retirement will increasingly burden both public and private retirement programs. It has been suggested that the retirement problem specifically related to social security funding is well-known, but has largely been neglected. The dramatic change in the age composition of the U. S. labor force is the apparent major problem impacting the social security system. Retirement income programs both public and private have lured older workers into retirement. Currently and in the future there will be a need to examine whether the U. S. can afford to continue to lose skilled workers and continue to support them in a comfortable retirement (Copperman and Keast 1983).

The retirement experience is becoming an increasingly important area of academic study. The continued aging of the population and the trend toward early retirement are two important realities for which the societal consequences are not yet well understood. In addition, the extreme cost of supporting retired persons is a concern both financially as well as politically. The tax burden needed in the future to support even the present benefits of the "pay as you go" retirement system will consume a large percent of the nation's income (Copperman and Keast 1983).

Retirement as a social institution is linked to the federal sanction of retirement depicted by the Social Security Act of 1936. In addition, the development of private pension plans has contributed to

the institutionalization of retirement. Retirement is defined as cessation from work and the completion of a role for which payment is received.

Interest in retirement as a social institution has become an important issue in the United States since the inception of social security legislation in 1936. The interest has markedly increased primarily because of rising costs of public and private pension systems. The aging of the American population and the shift of the retirement age appears to be an on-going trend. Public policy will continue to influence the retirement timing decision and services that are designed to improve the retirement attitude.

Thus, retirement has become an important concern for the American people. Increased interest in the timing of the retirement decision and its consequences is due to concern over costs of maintaining public and private pension systems. As individuals live longer and retire early the present financing of the retirement system will need to change. It appears obvious that there exists multiple demographic, economic, and social factors which shape the retirement decision, as well as retirement satisfaction. This research will attempt to provide some insight to this area.

#### Major Themes In The Literature

Chapter II provides a review of the literature in aging and retirement. The first part reviews and critiques the major perspective in social gerontology. The concepts that are presented have to some degree impacted the study of retirement. The second part of the chapter

provides an in-depth review of the research completed on retirement satisfaction and the timing of the retirement decision.

The central critique of these perspectives is that each falls short of providing an adequate understanding of the determinants of retirement satisfaction or the timing of the retirement decision. Carroll Estes (1979) concluded that the central themes in social gerontology have been criticized on their theoretical and/or methodological bases. In addition, Estes argued that there is little empirical support for the various perspectives. This critique and its apparent ramifications of the perspectives on aging are discussed in Chapter II. The major difficulty with these perspectives is that they rely too heavily on the physical aging process itself as the primary determinant of retirement satisfaction and the timing of the retirement decision.

The various perspectives discussed in Chapter II are models upon which retirement policies have been developed. The major criticism of the validity of these models is that they are in general descriptive and lack any predictive power.

Previous research on retirement satisfaction and the timing of the retirement decision finds that the determinants of the two outcomes is a function of complex and possibly interrelated factors. The factors presented in this research are income adequacy, pre-retirement planning, former or current job attitudes, leisure activity involvement, health status, and various demographic variables. No single factor appears to be the best predictor of either retirement satisfaction or the timing of the retirement age.

Specifically, Chapter II presents a discussion of the three major aging perspectives: disengagement, activity, and aging as a subculture. The three perspectives are reviewed in detail and critiqued on the basis of their ability to predict retirement satisfaction and the timing of the retirement decision.

The second part of Chapter II is a summary of the major research particular to the understanding of retirement satisfaction and timing. The studies present diverse findings in regard to the predictors of satisfaction in retirement and the predictors of the timing of retirement. The studies are organized in three topic areas: retirement satisfaction, retirement timing decision, and female experience in retirement. In general for retirement satisfaction the studies suggest prior occupational role, income, health, and leisure activity involvement are the key predictor variables. Most research on the retirement timing decision identify the factors of health and income as the two primary determinants which predict the age at which individuals retire. There exists limited knowledge relative to the work and retirement experience of women. The few studies of women suggest that the retirement experience for women may be different from men.

The studies discussed in Chapter II show there exists many alternatives and little agreement in the literature as to the primary determinants of satisfaction and the timing of retirement. Few studies recognize findings that identify similar predictors. Also, the studies that did recognize similar predictor variables have different rankings of importance attached to the variables. The gaps and diverse findings presented in the literature provide the basis for this research. In

short, there is a need to utilize multiple predictor variables to measure the two outcomes.

Few studies recognize that retirement is a major issue for both men and women. The majority of research has focused almost exclusively on male older workers and retirees. As discussed earlier, the labor force participation rate of women has increased rapidly. In combination with this trend the longer life expectancy for women will result in larger numbers of older women workers and retirees. Therefore, the retirement experience of women will be an important focus of study.

The perspectives in social gerontology generally provide limited explanations for major events in the aging process. Many perspectives indicated that dissatisfaction or withdrawal from active participation in later life is an effect of the physical aging process. The purpose of this research will be to show that satisfaction or dissatisfaction in later life is a function of more complex factors and that no one factor acts independently. In addition, the timing of the retirement decision is one of the most important choices an individual encounters.

Chapter III details the methodology employed in the research. The firm from which the samples were drawn is discussed, the characteristics of the two samples, and the survey instrument are presented. The research evidence in Chapter II suggests no single variable predicts retirement satisfaction or retirement timing. Therefore, a conceptual model was developed based on the work done by Elwell and Maltbie-Crannel (1981) on the impact of role loss upon life satisfaction and the elderly. The conceptual model developed for this research employs the five basic factors of demographic characteristics,

health status, income level, work attitudes and leisure activity involvement as predictors of satisfaction and timing.

Index construction is used for many variables in this research. Indices were constructed to measure the outcome measure of retirement satisfaction. In addition, indices were developed to measure many of the predictor variables: job attitudes, health status, leisure activity involvement and pre-retirement planning. All indices were constructed using the summative method of scale construction. In the summative method of scale construction, all items in an index are weighted equally. Finally, all scales were evaluated as to their internal consistency and reliability.

In addition, Chapter III discusses the data analytical techniques employed. A variety of techniques were used to test the research questions. The two major analytical techniques used in the research are multiple regression analysis and discriminant analysis. Scales were constructed to measure the determinants of retirement satisfaction and the timing of the retirement decision. Single items often provide only a partial understanding of a complex construct. Indices can assist the research by providing a comprehensive and accurate assessment of constructs.

#### Research Findings And Future Implications

The analysis of the survey data is presented in Chapter IV. The significant predictors of the two research questions are explored in conjunction with the conceptual model presented in Chapter III. The findings suggest that the major predictors of retirement satisfaction

are household income, self-reported health, and job attitudes. The analysis for the timing of the retirement decision did not reveal any strong predictor variables. The findings on the differential impact of retirement satisfaction and retirement timing between men and women indicates that there are differing predictor variables for women as compared to men.

Chapter V presents the policy implications of the research and suggestions for future research. The aging of the population and the trend toward early retirement have implications that will impact the financial stability of both public and private pension systems. If policy makers want to keep older workers in the labor force, the research shows policies must be implemented that focus on the financial incentives of the retirement timing decision. The age composition of the labor force is a direct correlate to the funding of federal social security and private pensions.

The implications of this research suggest that the models predicting retirement satisfaction and the timing of retirement need to be reconceptualized. Prior research indicated specific variables as the predictors of satisfaction and timing. This research utilized the variables in combination as well as developing complex constructs to measure many of the variables. However, the models all produce low explanations of the variance. The low explanation power of the variable appears to be significant.

The findings suggest that the variables that contribute to retirement satisfaction and the retirement timing decision lay outside the conceptual model developed in this research.

In conclusion, previous research suggestions as to the determinants of retirement satisfaction and the timing of the retirement decision. These studies also suggest possible linkages among the factors of determination and retirement satisfaction and the timing issue. However, it appears that the suggested determinants are not substantiated by the results of the studies. Hence, the first phase in the development of this research is a look at the underlying concepts of the current research studies predicting retirement satisfaction and timing.

## CHAPTER II

### LITERATURE REVIEW

The purpose of this chapter is twofold. The first purpose is to review and critique the major theories in social gerontology as they pertain to this dissertation research. Secondly, a review of the major retirement literature on retirement satisfaction and the timing of the retirement decision is presented.

Research interest in retirement has developed not only in the United States but in all industrial societies. In less than seventy years, the phenomenon of retirement in the United States has grown from a rare occurrence to a social institution. According to Donahue, Orbach, and Pollak (1960), retirement

is a phenomenon of modern industrial society. Previous socioeconomic systems in man's history have had varying numbers of older people, but none has ever had the number or proportion of aged that obtains in the industrialized societies of the present day (p. 331).

Retirement as a social institution is defined as the permanent existence of large proportions of older individuals who are not active members of the labor force and are receiving public and/or private payment benefits. The large numbers of older persons who retire have, therefore, become the focus of research interest in social gerontology.

## DISCUSSION OF MAJOR SOCIAL PERSPECTIVES OF AGING

The following sections will be devoted to a critical review of the major social perspectives of aging. The perspectives to be addressed are:

- o Disengagement Theory
- o Activity Perspective
- o Aged As A Subculture

The major foci of this research are to analyze the determinants of retirement satisfaction and to analyze the determinants of the timing of the retirement decision. The major social perspectives of aging offer alternative views and competing models. The concepts will be presented on the basis of their ability to explain the predictors of retirement satisfaction and the retirement timing decision.

### Disengagement Theory

The theory of disengagement is defined as the withdrawal of older individuals from active participation in the society. This withdrawal is described as an inevitable and inherent part of the aging process. Cumming and Henry (1961), the founders of disengagement theory, argued that changes occur in the personality of all older persons; older persons inevitably and universally withdraw from the "going-ons" of society. The authors of the theory argued that this withdrawal occurred at the correct time that society needed the withdrawal to occur. Hence, it was viewed as normal for older individuals to retire at a designated age and younger persons to take their roles.

Cumming and Henry (1961) originally formulated the theory based on a cross-sectional survey of individuals age 50 and over who resided in the midwestern United States. Cumming and Henry suggested that the process of aging is inevitable and resulted in decreased interaction between the aging individual and the social system in which the individual resides. Some researchers have found the disengagement theory to be highly relevant to the study of retirement for retirement is society's approval to withdraw from the active participation in life (Sheldon, McEwan, and Ryser 1975).

Today, many social gerontologists believe the disengagement theory has limited credibility. However, it is still a concept valued in the development of the theoretical literature for it spurred competing perspectives and a focus on the field of aging (Hendricks and Hendricks 1977).

Disengagement theory with its major assertion that the process of aging results in withdrawal from active participation in society has been criticized extensively. Much research has shown that older persons in general remain active in their later years. The process of aging in itself does not lead to an inevitable lifestyle of withdrawal from society (Estes 1979; Rose 1965; Hendricks and Hendricks 1977). Older persons do experience in retirement a narrowing of their roles, but it appears that disengagement theory may be applicable to only a small proportion of the aged population. The larger proportion of the aged population continue to have an active lifestyle after the completion of the work role.

Disengagement theory appears to be insufficient for the purpose of this research in explaining the determinants of retirement satisfaction and the timing of the retirement age. The perspective is insufficient in that it lacks precise explanations which would lead to the withdrawal from active participation of older persons. The process of growing old brings about varying ages of labor force withdrawal; even excluding health as a reason, the perspective does not explain the late or early withdrawal from the labor force of some persons. In addition, the perspective does not provide specific determinants that would affect the withdrawal. Advanced age as the only determinant of the retirement decision is too generalized a concept to adequately explain wide variations in retirement ages.

As stated above, the process of aging does not appear to be the primary determinant of retirement satisfaction or retirement timing. The perspective of disengagement argued that older individuals choose to retire because of an awareness of their limited time before death (Hendricks and Hendricks 1977). The wide variation in retirement ages and the active involvement of retirees in leisure activities refutes this concept. Many older persons are involved in active lives and many have engaged in second careers. It is not apparent that disengagement or withdrawal is prevalent in the majority of lives of older persons. The disengagement perspective does not provide sufficient guidance to explore retirement satisfaction and retirement timing.

The concept of disengagement does not provide an adequate explanation of retirement satisfaction. The concept argued that morale diminishes as the disengagement process gains momentum. The process of

growing old is the primary predictor of retirement satisfaction according to the disengagement perspective proposed by Cumming and Henry. The narrow explanation power of one predictor does not address the complexity of retirement satisfaction. In looking at growing old as the determinant of the retirement timing decision disengagement theory does not take into account major factors that have impact on the decision. For example, financial incentives contained within social security legislation and private pension plans affect the retirement decision. The benefit structure of social security and many pension programs encourages early retirement. Economic incentives influence individual retirement behavior. Disengagement theory does not address the other possible factors that determine retirement satisfaction and the retirement timing decision.

#### Activity Perspective

The activity perspective in general is similar to disengagement theory in its narrow perspective. It argued that by keeping older individuals mentally and physically active, they will remain socially and psychologically healthy and not withdraw from society. The proponents of activity perspective ascertained that high levels of life satisfaction were directly related to high activity levels (Maddox 1970; Palmore 1970). In summary, activity theory suggested that well-adjusted and happy older individuals are also individuals that are socially active.

Recent research has shown that some older persons are passive and seem disengaged, but are happy; other older persons are involved in

social activities but are unhappy (Atchley 1971). It has not been empirically shown that involvement in social and leisure activity in retirement alone will lead to life satisfaction. Also not proven is the proposition that high levels of retirement satisfaction are related to active involvement in leisure activities. Life satisfaction appears to be a more complex phenomenon than activity theory can explain. It appears that individual factors do not act independently, and alone, are insufficient determinants of satisfaction.

The activity perspective relates to retirement satisfaction and appears not to explain the retirement timing decision. Activity is proposed to be the single most important factor that determines satisfaction in the retirement years. Older persons after the end of the work role will exhibit high levels of satisfaction as long as they continue to maintain high levels of social involvement. The activity perspective does not explore other possible factors which may contribute to retirement satisfaction such as income levels or health status thus the activity perspective appears too narrow to provide an adequate explanation of satisfaction. There exists additional factors that are important to satisfaction which were not explored by activity theorists.

#### Aged As A Subculture

One of the main criticisms of the theory of disengagement was presented by A. M. Rose (1965) in his study of social relations between older individuals and society. Rose argued that even though society could potentially force disengagement on a large number of older people, there are factors which act as counteracting influence on the potential

withdrawal. These factors, according to Rose, are improved health resources and improved financial security via private pensions and social security.

The activity approach assumes that if the aging individual will continue to adhere to middle age expectations and activities, satisfaction in the later years will remain high. The aged as a subculture theorists assert that the development of a distinctive aged peer group will be the primary predictor of satisfaction in the retirement years. Rose stated that prior status previously important in older person's lives are not as meaningful in the subculture setting. Health and physical mobility are the status symbols in aged subcultures, whereas occupation, education or economic status are less important (Hendricks and Hendricks 1977).

Rose argued that federal, state, and local laws have established retirement policies that have the potential to block older individuals from integrating back into the larger society. Housing policies, for example, that isolate large numbers of aged persons in a single housing complex could lead to total isolation of the elderly. This isolation, however, promotes an identification of the aged with their own peer group. Rose explained that the strong peer group relationship among the aged in America is directly related to the adjustment process of the aged. Rose contends there is a strong relationship between peer group participation rates and satisfaction in retirement.

The aged as a subculture is limited in providing insight into retirement satisfaction. Adjustment to retirement and satisfaction in retirement are not explained thoroughly by this approach. It has not

been proven that participation in subculture settings is the key factor in retirement happiness (Estes 1979; Sheldon, McEwan, and Ryser 1975). Studies show that some older individuals withdraw from active participation in society and some older individuals do not, and the determinants are complex. As in the two preceding perspectives, this concept, utilizing only a single indicator, is inadequate in explaining complex phenomenon such as retirement satisfaction.

In addition, the concept legitimizes retirement policies that create age-segregated communities. It has been suggested that the aged as a subculture perspective has been used to block older persons from remaining integrated within the larger society. So far, it has not been proven that segregating the aged increases satisfaction. In sum, the aged as a subculture is not a useful predictive tool in measuring retirement satisfaction.

Carroll Estes (1979) suggested that the three aging perspective of disengagement, subculture, and activity, have had tremendous impact on aging policy and programs. Disengagement theory and the aged as a subculture provided a rationale for excluding the elderly from the mainstream of society. The disengagement concept gave credence to such policies as mandatory retirement and social services that provide custodial care of the elderly. The activity perspective gave impetus to the senior center movement to encourage socialization.

Estes further suggested that disengagement theory dictates limited policy intervention or intervention that assists the aged in the withdrawal process. The activity perspective supports programs that are designed to keep the aged socially active. Life sustaining services

such as adequate income and health services are not perceived by activity theorists as essential. Estes concluded her arguments by stating that the three perspectives are limited in advancing the understanding of the aging process and in some cases the perspectives in her opinion have negatively impacted public policies for the aged.

### Summary

Each of these approaches fall short of providing an adequate understanding of retirement satisfaction and/or retirement timing decision. According to Estes (1979), the main theoretical approaches in gerontology have been too concerned with the social-psychological aging process; their main focus has been on individual behavior and the inherent problems of aging. As Estes (1979) describes aging research "the inadequacy...comes from its focus on what old people do rather than on the social conditions and policies that cause them to act as they do" (p. 11).

The issues discussed by Estes (1979) suggest that social gerontology provides only partial explanation and that perspectives in gerontology may be too narrow in scope to guide research in retirement. In sum, it appears that traditional social gerontology perspectives provide only a partial base to understanding the retirement phenomenon.

## DISCUSSION OF MAJOR RETIREMENT LITERATURE

Some literature in social gerontology viewed retirement as a problematic event. Streib and Schneider (1971), in the preface to their book Retirement in American Society, suggested that the institution of retirement is both an individual and national problem.

The literature includes diverse and often contradictory findings in regard to the predictors of life satisfaction following retirement and the predictors of the timing of retirement. This section is devoted to discussing the literature on retirement. This section will present the contributions of social gerontologists and other theorists to the field of retirement.

The three parts of this section will explore the following major areas found in the retirement literature. The first section will present an overview of the determinants of satisfaction in retirement and will also attempt to define the term retirement satisfaction. The second section in this chapter will review the determinants of the retirement timing decision.

The last section in this chapter will explore female experience in the retirement phenomenon. Research in the field of retirement has not to a large extent investigated women in the labor force. Hence, little is known in regard to their retirement experiences. There is good reason to believe that men and women differ in substantial ways in their retirement decision and adjustment thereafter. One reason the experiences of men and women are different is that society has placed a different value on the work and occupational roles of men and women. Additionally it appears there are sex differences in socialization, health, financial resources and other determining factors. In addition, retirement for women may be of special policy relevance.

## RETIREMENT SATISFACTION

A number of studies have explored the issues of satisfaction in retirement. Streib and Schneider (1971) argued that retirement is seen as a problematic event. It has been suggested that an increased sense of dissatisfaction is occurring among the retired (Barfield and Morgan 1969; Streib and Schneider 1971). Studies about retirement satisfaction show varying results depending on how satisfaction in retirement is defined and the types of determinants that are used to predict retirement satisfaction. Retirement satisfaction for the purpose of this dissertation research is defined as the degree of contentment a retired worker experiences with the various aspects of life after he or she has left the workplace. In general, retirement satisfaction has been measured by the degree of satisfaction reported by older individuals concerning their standard of living, leisure time activities, health and former job and life in general.

### Retirement Satisfaction Perspectives

Bell (1978-1979), in an article on life satisfaction and occupational retirement, describes three theoretical perspectives in social gerontology employed in the study of retirement satisfaction. The three frameworks are: crisis theory, continuity theory and consistency theory. Bell argued that crisis theory emphasizes work roles as an integral part of life satisfaction. Occupational related roles maintain life satisfaction and when the role changes so does the satisfaction level. Retirement (the loss of the work role) can have a negative impact on life satisfaction. The work done by Streib and

Schneider (1971) is an example of this theory. Streib and Schneider concluded that retirement has a drastic effect on the older person.

Continuity theory, on the other hand, deemphasizes the negative aspects of retirement. In essence an individual has multiple roles which provide life satisfaction. From the crisis theory standpoint retirement is a new social role which is very unique from previous roles in life. The outcomes of this theory for retirement satisfaction are very apparent according to Bell. Because the occupational role is an integral part of an individual's life the loss of the work roles and the entrance to the unknown role of retired is expected to impact negatively on life satisfaction. He further suggested pre-retirement satisfaction will carry over into the retirement experience. The continuity theorists deemphasize the negative aspects of retirement because the pre-retiree is in a position to become familiar with the role well in advance of his/her retirement. In addition, continuity theory recognizes the existence of specific roles and expectations of the retiree group. This means that retirement will eventually be a non-disruptive event with respect to life satisfaction.

Consistency theory as described by Bell (1978-1979) argued that retirement may cause life dissatisfaction, but adaptive behaviors in individuals will occur that reestablish the consistency. Life satisfaction will then increase. The consistency theorists suggested that an individual will tend toward a state of simplicity and harmony, always striving toward a delicate balance. According to this theory, if an individual expects an event to occur and it does not, he will experience dissonance, but will work toward reestablishing consistency.

As a result, representative of this theory view pre-retirement attitudes as one of the most important predictors of retirement satisfaction. Bell concluded that each individual theoretical perspective should be utilized in combination "for a more appropriate theory of retirement and life satisfaction" (p. 45). Bell suggests that retirement research should include:

1. Study of physical, financial and social indicators of the retiree.
2. The individual's prior occupational involvement and the satisfaction obtained from that involvement.
3. The individual's perception of the retirement experience.

Bell tested the three theories on a sample of 145 males residing in an urban community. Occupationally the sample was somewhat overly representative of upper occupational levels. The first interview was conducted prior to retirement, the second interview was conducted after retirement, and a third interview was conducted two years after retirement. Bell's findings suggested that to adequately determine the predictors of life satisfaction in retirement research designs should utilize a combination of hypotheses from the three theories presented. In sum, Bell argued that more consideration should be given to status and the work role of the older individual.

#### Prior Occupational Role And Satisfaction

The crisis theory as discussed previously emphasizes the importance of occupation role behaviors in the maintenance of life satisfaction. Research efforts have attempted to show a correlation between satisfaction with the prior work role and retirement satisfaction. Lehr and Dreher (1969), in their longitudinal study of

non-institutionalized retired men and women found that retired persons who are dissatisfied with retirement reported that they were dissatisfied with their former work career. The retirees that were unhappy had experienced large degrees of job stress. Another study (Sheldon et al 1975) of the predictors of retirement satisfaction based on a sample of 500 male and female retirees in the Boston area found both men and women who reported high retirement satisfaction levels also reported high satisfaction with their jobs. The above research argues that prior occupational satisfaction is highly related to life satisfaction in retirement.

Similar findings were reported in a study of university faculty. Life satisfaction was positively correlated with the job rewards of income and memory of social contacts with co-workers (Torbatl and Torbatl 1979). Poitrenaud, Vallery-Mason, Valleron, Demeestere and Lion (1979), in their research on retired managers and executives, suggested that satisfaction in one's professional life was one of the eight possible determinants related to life satisfaction (Bell 1978-1979; Cohn 1979). Glamser (1976; 1981) argued that there exists a complete lack of any relationship between retirement satisfaction and commitment to work. Glamser sampled older male workers over age 60 who were employed in an East Coast manufacturing plant. She did a follow-up survey six years later. She found the correlation between commitment to work and retirement satisfaction was somewhat low and nonsignificant. She found however that retirement satisfaction was highly correlated with social activity. The combination of prior work experiences and job rewards is only one dimension of retirement satisfaction. Satisfaction and

Involvement in community life, friendships, health status, age, marital status, etc. determine life satisfaction in retirement (Mutran 1981).

An additional factor to consider when measuring the relationship between prior occupational experience and retirement satisfaction is occupational level. Occupational level is the relative ranking of work positions within a prestige hierarchy. Research has shown varying results between what differences in occupational levels could help explain the differences. Several research efforts have looked at occupational differences of older workers and pre-retirement attitudes, but little research has looked at occupational level of retirees and satisfaction in retirement. Spreitzer and Snyder (1974) in a national survey found that level of occupation was significantly a stronger predictor of "life satisfaction among older persons compared to persons under age 65" (p. 456). They postulated that "perhaps occupation partly determines one's overall life style which, in turn conditions one's retirement and transition into the role of the aged" (p. 456). There exists a limited amount of research looking at the relation between occupational level differences and degrees of retirement satisfaction of retirees.

#### Health Status And Retirement Satisfaction

In most of social gerontology research, the health status of the older individual is an important factor in all aspects of the older person's life. Parnes (1981) in his longitudinal analysis of older men reported that males overall are not dissatisfied with their lives. The findings of his study indicated that life satisfaction is considerably lower for the retired respondents than for those respondents who are

currently employed. A modified set of results, however, were found when the group of men who left the labor force because of health problems were dropped from the analysis. The resulting comparative analysis between healthy male retirees and healthy employed males shows little difference in level of satisfaction. Parnes' (1981) findings indicate that the least satisfied retirees were those who retired because of poor health status.

The Schmitt, Coyle, Rauschenberger, White study (1979) analyzed two groups of civil service employees; one group was a set of recent retirees and the second group was older workers. Schmitt et al identified that health status accounted for three times as much variance in retirement satisfaction in comparison to work satisfaction and work motivational variables. Lehr et al (1969) in their longitudinal study of retirement satisfaction of primary school teachers and steelworkers reported steelworkers who felt healthier were more satisfied with retirement.

In summary, the research contended that health status may be highly predictive of retirement satisfaction (Kimmel, Price and Walker 1978). Sheldon et al (1975) and Kimmel et al (1978) argued that the health status of the retired individual is an important variable in predicting retirement life satisfaction and appeared much more important than other variables such as occupational levels.

#### Leisure Activity Involvement And Retirement Satisfaction

Leisure activity involvement can be an essential replacement for the absence of work. The relationship between activity involvement and retirement satisfaction has been a main theme in retirement literature.

Leisure activity involvement is any pursuit which is voluntary and is engaged in for its intrinsic enjoyment (Peppers 1976). The activity concept as discussed earlier in this chapter postulates that life satisfaction in older individuals is related to continued activity and social contacts. The involvement in leisure activities replaces the loss of the work role.

According to Peppers' sample of 206 male retirees, there exists a strong relationship between the level of leisure activity involvement and the degree of satisfaction in retirement. Peppers also looked at what type of activities retirees were engaging themselves and which particular activity had the most positive effect on retirement happiness. The four highest ranking activities of the retirees were: visiting friends, watching TV, odd jobs at home and group travel. Peppers suggested that leisure activities which involve social contacts with other individuals have the most positive contribution toward life satisfaction. Peppers also asked the male retirees to rank their pre-retirement activity involvements. He argued that between the pre-retirement activities and the post-retirement activities there existed little difference. It appeared that individuals do not significantly change their leisure activity involvement as they grow older. Peppers contends this finding "seems to give substantive support to the continuity theory of aging..." (p. 444). Leisure activity involvement seems to be a function of earlier life activity patterns and seems not to be a function of retirement. Individuals have a relatively stable pattern in terms of social activity behavior.

In a 1978 survey of 400 individuals in a southern metropolitan area, Fly (1981) found that retired individuals who have more leisure activities are more highly satisfied with their retirement life. Fly also found that high degrees of leisure activity involvement contributed to retirement satisfaction even when he controlled for gender, socioeconomic status, and prior job satisfaction. However, when Fly looked at age and social activities he found that as age increases, life satisfaction increases, but amount of leisure activities decreases. This finding suggests that even when the amount of social activity decreases, it appears that activity is correlated with life satisfaction.

In summary, the research linking leisure activity involvement and retirement satisfaction suggest that an important role is lost due to an individual's retirement. The replacement value of leisure activities may to some degree replace the loss experienced by withdrawal from the work place. However, Bosse and Ekerdt (1981), found from a national survey that the analysis showed retirees did not perceive themselves as more involved in leisure activities compared to older persons who remained in the work force. Sheppard (1976) critiqued retirement satisfaction research by stating that the arbitrary choice of leisure activity involvement as an indisputable index of adjustment is not necessarily reliable.

Thus, the findings on the importance of leisure activity involvement is somewhat vague. Some research suggests there exists a strong relationship between retirement satisfaction and leisure activity involvement. On the other hand, there exists research that argues that

leisure activity involvement is not a valid predictor of happiness in retirement. Nevertheless, a large proportion of aging programs in the U. S. provide leisure activities to older individuals as their major service. These programs are based on the notion that social activity involvement is highly related to life satisfaction in retirement.

#### Other Factors Related To Retirement Satisfaction

Additional factors were discovered in the review of the literature on retirement satisfaction. Price, Walker, and Kimmel (1979) in a study of recent retirees from seven large U. S. and Canadian corporations, looked at the relationship of many variables to retirement satisfaction. They found that health status, income level, and prior attitudes toward retirement were important variables in predicting retirement satisfaction. Their respondents had higher educational and income levels than the average American retiree. The researchers argued that health status in combination with age and income are the most salient factors for predicting retirement satisfaction.

Streib and Schneider's study (1971) in contrast was based on the assumption that retirement is a major disruption in adult later life and creates potentially dissatisfaction in later life for the individual. The authors analyzed retirement satisfaction among their sample (1,486 males and 483 females) and found that fewer women are satisfied with retirement when compared to men. They also reported that individuals who retired early showed higher degrees of satisfaction with retirement than individuals who retired later. The major factors Streib and Schneider identified to affect a high level of satisfaction were:

a high occupational level, the feeling of financial security, and a positive pre-retirement attitude regarding retirement life.

Research dealing with the impact of role loss on life satisfaction was undertaken by Elwell and Maltbie-Crannell (1981). They surveyed both male and female respondents nationally who were 50 years of age and older. To operationalize the variable life satisfaction, the authors used a five item Likert scale which measured the respondent's satisfaction with their residence, leisure activity involvement, health status, and social relationships. Health status was measured by a self-reported item based on the respondent's evaluation of his or her health status. The findings suggested that the loss of a major role in life is a stressful experience which affects life satisfaction. The work done by Elwell and Maltbie-Crannell (1981) was the basis for the conceptual model of this research. The model is discussed in detail in Chapter III.

Research on the effectiveness of retirement planning programs has shown them to have some effect on satisfaction with retirement (Fillenbaum 1971). The major goal of retirement planning programs is to improve adjustment in retirement and reduce problems that may occur. Monk (1971) in a study on professional men age 50 to 59 suggested that retirement preparation may ease the transition into retirement life and also ease the trauma that will occur. In support of Monk's findings, Willis (1979) concluded that both job satisfaction and attitudes toward retirement can be greatly improved as a result of formal pre-retirement planning programs. Most research on retirement planning programs has been done with older workers. In using older workers it is difficult to

postulate the actual level of satisfaction in retirement; whether the attendance in retirement planning courses leads to life satisfaction in retirement (Glasmer 1976; Skoglund 1979).

### Summary

The research on the predictors of retirement and retirement satisfaction are quite varied. Health, occupation, work attitudes, income, and leisure activity involvement have been found to have varying degrees of importance on the outcome of retirement satisfaction.

The research on the importance of leisure activity involvement supports the utilization of activity theory. On the other hand the importance of pre-retirement planning supports consistency theory. Bell's (1978-1979) argument in incorporating a variety of theoretical approaches when examining retirement satisfaction appears valid. Retirement satisfaction is a complex phenomenon and requires the use of multiple indicators.

### Timing Of The Retirement Decision

The retirement timing decision, as retirement satisfaction, is important because it affects both the size and composition of the future labor force. The age at which individuals retire affects the future obligations of social security and private pension funds. Few studies have examined the question of the retirement timing decision to explain the factors related to the age at which individuals retire.

The retirement research conducted by the Social Security Administration is the largest in the United States. The Social Security Act has mandated the large research program. The Retirement History

Study, Social Security Administration's most recent research project, provides the most comprehensive set of data on the retirement process and the effects of retirement. The Retirement History Study is a ten year study of a large sample of older workers. Unfortunately, the data collected produced only broad findings. Many researchers have critiqued the research project because it does not examine intensively the factors affecting the retirement process.

The Retirement History Study does not examine critically how social security and other laws such as the repeal of mandatory retirement impact retirement patterns. The eligibility for social security benefits is one of the major factors that affect the age at which an individual retires. Retirement benefits can encourage capable older workers to withdraw from the labor force (Copperman and Keast 1983). Social security has some of the greatest impact on the retirement decision and has sponsored the majority of the retirement literature. It appears that potential objectivity can be lost in this situation. Ideally, retirement research should be conducted by a less involved source of support.

Sheppard (1976) argues research dealing with the retirement timing decision "rarely goes into fine enough detail beyond the generally studied factors such as expected retirement income, marital status, illness or incapacity levels, chronological age itself, and broad occupational categories" (p. 302). Sheppard suggested the retirement timing decision is related to a multitude of demographic, social-psychological, and economic factors.

Data provided by Reimers (1976) indicated that the mean age of retirement has decreased in males across the cohorts born in the periods between 1866 and 1900. This reduction in the age of retirement was reported to be based on the effects of improved health and availability of benefits from social security and other pension plans. The trend of the past two decades toward early retirement is continuing and researchers argue that the reasons may be complex and interrelated.

Additionally, Reimers contended that the variance of the retirement age in males over time has decreased. Again, the availability of retirement income from social security will reduce the potential broad range of retirement ages. The current retirement ages established by the Social Security Administration encourages the retirement ages of 65 and 62. At age 65 a male is eligible for full benefits and at age 62 for somewhat reduced benefits. The retirement credit of a mere one percent a year to older workers to delay the retirement decision acts as an incentive to retire at 65 (Copperman and Keast 1983).

Research by Walker (1976) on retirees from seven large North American Corporations reported that older workers who delayed past the "normal" retirement age of 65 did so because of such factors as: fear of inflation and high levels of satisfaction with their job.

In the subcase analysis of executives who retired early, Walker and Price (1976) report the factors which contributed to this decision were diminishing health status and high degrees of job pressures. The authors suggested that in general retirement timing decision is associated with the key variables of health, job, and income. The

findings were partially supported in a study on retirement in academia by Patton (1977). Patton contended that the timing of the retirement age is based on financial resources and health. In sum, if an individual has financial security and is in poor health the outcome is an early retirement.

Research done by Schmitt et al (1979) analyzed two groups of civil service employees on the determinants of the timing of the retirement decision; the two groups consisted of retired and current older workers. He identified that the individuals who retired prior to age 65 primarily tended to be females and had non-working spouses. According to this research females retire early. In addition, they found that high levels of work pressures are related to an early retirement age.

Ekerdt, Bosse, and Moge (1980) focused on older individuals' perceptions of the ideal retirement age. The authors suggested that the ideal age of retirement fluctuates depending on economic policies and pension benefits. The better the economic condition is the lower the ideal retirement age. The Ekerdt et al sample consisted of older male workers in the Boston area at two time periods (1965 and 1975) who were in good health and had shown job stability. The authors reported that their sample was not totally representative; the respondents were of higher socioeconomic levels than the general population. They concluded that early retirement age was dictated by the availability of an adequate retirement income and the occurrence of physical health problems.

Parnes (1981) in his book Work and Retirement reported that there existed no desire or expectation among most of the male respondents to work past age 65. His data indicated the increasing trend toward early retirement. Parnes also reported that high rates of inflation may arrest or even reverse the trend toward early retirement, but he has seen no evidence of this phenomenon as yet. At this time all indicators show that the trend toward early retirement ages continues unabated as reported by labor force participation rates.

Another perspective on the timing of the retirement decision was presented by Graney and Cottam (1981). The authors' main objective was to explain early withdrawal from the labor force by changes in socioeconomic and population characteristics of the U.S. The authors explained that the early retirement phenomenon was affected by:

1. The change from an urban-rural economy to an industrial state.
2. Occurrence of occupational obsolescence.
3. Decline in number of self-employed individuals.
4. Increases in pensions and Social Security benefits.
5. Increasing proportion of older people in the population.

Graney et al argued that these above macroscopic changes are the determinants of an "early" retirement age.

In summary most research on the retirement timing decision identify the factors of health and income as the two primary determinants which predict the age at which individuals retire. Only the study by Graney et al (1981) considered the socioeconomic and populations changes as factors in the timing of retirement.

### Women's Work And Retirement Experiences

Studies on work and retirement of women has been neglected by empirical research (Lehr and Dreher 1969). A demographic trend of importance is the increase in participation of women in the labor force. Gerontological literature has reported little information on women with employment experience. Little is known about their work and retirement experiences.

Cumming and Henry (1961) argued that retirement from work is not an important problem for women because they do not, in general, have a long term history of participating in the labor force. Other theorists in the literature continue to support the view that work and retirement are not meaningful concepts to women (Donahue, Orbach and Pollack 1960; Palmore 1971). Therefore, these theories identify the primary role of a woman as being in the home. Early literature (conducted prior to 1970) excluded the examination of working women (Jaslow 1976). Work and retirement for women has become an important area for research now and in the future because of the growing proportion of women in the labor force.

Prentis (1980) investigated retirement perceptions of white collar working women. The respondents of the survey consisted of 1235 white collar working women from 20 to 60 years of age. Prentis suggested that the majority of younger women in the sample looked forward to retirement and perceived early retirement as favorable. Early retirement for white collar women was associated with adequate income levels, good health and high levels of social contacts. While the findings are valuable, the major weakness is the fact that the

respondents were primarily from the younger cohorts of working women (median age = 42). The research did not provide information on the actual retirement experiences of older women. The research was not longitudinal nor did it survey any retired women. The information provided by the subjects on the retirement experience was prospective.

One of the few studies on the retirement experiences of women was conducted by Carol Cutler Riddick (1980). She examined the effects of role disengagement on life satisfaction of older women. She used a national sample of women 65 years of age and older. Riddick concluded that high degrees of involvement in leisure activities was the primary determinant of retirement satisfaction, followed by good health and adequate income levels. The author argued that the findings support the rejection of disengagement theory for women.

Johnson and Price-Bonham (1980) in a study of employed women over the age of 50, used as a premise that work for women has varying degrees of importance both socially and personally. Each subject ranked the importance of occupational and family roles. The authors used the variables that were historically found to be related to male's retirement attitudes. These variables were: job attitudes, occupational status, and participation in leisure activities. The results of the study were inconclusive. The sample size (n=49) was small and all the women were in middle range or above occupational levels. The authors suggested that social activity involvement was the key predictor of retirement satisfaction.

A part of the Duke Longitudinal Study of Aging looked at 212 white, middle-class retired women (Fox 1977). The focus of the study

was to examine the effects of retirement on "psychological well-being". Fox used in the sample retired women, older working women, and homemakers. The findings of this study are as follows:

1. Retired women have lower family incomes than homemakers or working women.
2. Retired women perceive their health as significantly worse than working women.
3. Retired women have fewer social contacts than homemakers.

In general, Fox (1977) argued that retirement may have problematic consequences for women in terms of lower income, poorer health, and diminished social contacts. There exist some questions in regard to this conclusion because Fox's findings may not be appropriate to generalize to the entire population of women.

The limited number of studies on older women tend to assume that older women are "more likely to be less well-educated, and more likely to have inadequate income" (Atchley 1976, p. 205). A study on the comparison of older women to older men on attitudes toward work and retirement was done by Atchley (1976). The sample he used consisted of retired older men and women teachers and retired men and women from a midwestern telephone company. Atchley's findings concluded that there existed no significant difference between men and women on the importance of work. Older women tended to retire prior to the retirement date established by the employer. He also found that loneliness is significantly more prevalent among older women than men, and that women showed a greater amount of negative retirement satisfaction than did men. This comparative research on men and women

controlled for age, marital status, education, and income levels. Atchley felt the variables were the major determinants between older men and women's happiness in retirement, so he controlled for these variables to see if any additional variables were predictors of retirement satisfaction. He found no additional predictor variables.

In a cross-sectional analysis of 2398 women respondents (age 65 and older), Jaslow (1976) found employed older women had a higher degree of life satisfaction than did non-working (homemakers) women. He argued that the explanation was that working women tended to be healthier and financially "better off" than non-working women. Jaslow argued that his findings support the hypothesis that "work may have a salutary influence on psychosocial well-being in old age" (p. 218). His research suggested that the assumption that work is only a meaningful concept to men may be in error. Jaslow feels that the exclusion of the study of women in retirement research has been a function of the extent of women's participation in the labor force and that women historically retired (if they did work) earlier than men. Now and in the future, work is an important role for women and the society as a whole; home oriented roles are no longer the primary roles for women. Jaslow argued that employment of older women is a contributing factor of life satisfaction not the consequence.

As can be seen there exists limited knowledge relative to the working and retirement experiences of women. The work role in the literature for women has often been viewed as a secondary role; when women retire it may not have the significant impact it does for men. It

has become evident by the research examined that retirement has implications for women and should be studied further.

### Summary

The literature on retirement presents many alternatives and little agreement in reporting the predictors of retirement satisfaction and the timing of the retirement decision. Most research assumes prior to the study that retirement is a problematic event for older individuals. A major event in adult life is retirement from the work role, but health status and income adequacy do not necessarily decline and continue to decline until death. Health status and income adequacy seem to be major factors in the retirement literature, but additional factors need to be analyzed.

Older women and retired women have been somewhat ignored in the studies on retirement. Few analyses have examined how women relate to both retirement satisfaction and the timing of retirement.

While previous research in gerontology has examined the factors associated with retirement a great deal of refined analysis is needed to explore both the determinants of retirement satisfaction and the determinants of the retirement timing decision.

The major findings in the research indicated that several variables may contribute to the two major outcomes: retirement satisfaction and the timing of the retirement decision. As mentioned throughout this chapter, health and income status may be important factors in predicting retirement satisfaction and the timing of the retirement decision. The literature also cites additional variables that may impact the outcome such as leisure activity involvement, job

rewards, and various demographic variables. The findings presented in the research provide a basis for analyzing multiple predictors for the two major outcomes. In essence, the ordering of the variables in the conceptual model are based on the review of the literature. Chapter III will provide a discussion of the conceptual model in detail. The role of the model is to answer the central research questions: 1. What are the determinants of satisfaction in retirement? 2. What are the determinants of the timing of the retirement decision? 3. Do the determinants differ for women as compared to men?

## CHAPTER III

### RESEARCH METHODOLOGY

The chapter describes and explains the methodology employed in the dissertation research. The research evidence in Chapter II suggests no single variable predicts retirement satisfaction or retirement timing. Therefore, a model was developed based on the work done by Elwell and Maltbie-Crannell (1981). This chapter presents the conceptual model used in the research. A description of the firm from which the subjects were sampled, the subjects' demographic characteristics, and the sampling techniques employed are discussed. The survey instruments used in the research are presented. Finally, the data analytic techniques employed are explained and the operationalization of the specific variables used in the analysis is detailed.

### RESEARCH QUESTIONS

The first research question is: What are the variables which determine retirement satisfaction of recently retired individuals? Based on the research evidence in Chapter II, income, good physical health, job satisfaction, and leisure activity involvement have been proposed as the predictors of retirement satisfaction. One of the purposes of this research is to see whether previous research findings hold true for the retiree sample.

The second research question is: What are the variables that determine the age at which an older individual retires from the labor force? Again, most prior research on the retirement timing decision identifies the factors of health and income as the two primary determinants of the retirement age.

The third research question is an expansion of the first two research questions. Do the variables which determine retirement satisfaction and the timing of retirement differ between men and women? As discussed earlier, limited information is available as to the retirement experiences and decisions of women.

#### Conceptual Model

The conceptual model has attempted to utilize the varying aspects of the overall retirement phenomenon. The research evidence described in Chapter II suggests that no single variable (i. e., health status, income, occupation) alone predicts satisfaction in retirement or the timing of the retirement decision. The conceptual model of the research is employing five basic factors as predictors of retirement satisfaction and the timing of the retirement decision. The five main factors are:

Demographic characteristics

Health status

Income level

Work attitudes

Leisure activity involvement

In the prediction of satisfaction in retirement the contribution of pre-retirement planning activities was utilized.

The conceptual model (Figure 1 and Figure 2) was based on work done by Elwell and Maltbie-Crannell (1981) on the impact of role loss upon life satisfaction in the elderly. The model developed by Elwell et al (1981) suggested that role loss, be it either work related or domestic, is a stressful experience which affects life satisfaction. This research will measure loss of the work role on life satisfaction. The same basic conceptual model will be used to measure the correlates of the timing of the retirement decision.

The proposed model conceptualizes antecedent and intervening factors having impact upon both retirement satisfaction and the timing of the retirement decision. Men and women may also have different factors determining the two outcome measures. Following is a detailed discussion of the conceptual model and the linkages portrayed.

The conceptual model takes into account two types of factors. The first of these are the antecedent variables. Antecedent variables are those variables which precede the outcome and the intervening events. The demographic characteristics of the two samples were viewed as preceding the other variables. More specifically, the variables include age, gender, occupation, education, and marital status.

Age has been posited as a major factor contributing to satisfaction in retirement life and retirement timing. Education and occupation have also been examined as key factors effecting retirement satisfaction and the timing of the retirement decision. Marriage is one of the major institutions in American life and not being married or being married can impact the two outcomes. Research discussed in Chapter II suggest that significant demographic variables impacting

retirement satisfaction and the timing of the retirement decision are age, gender, occupational status, educational level, and marital status. The intervening factors in the models were viewed as the variables which occurred between the demographic variables and the outcomes. These factors are health, income, work attitudes, and leisure activity involvement.

Income level and health status are seen to be affected by the demographic characteristics. Research contends, that health and income are important mediating factors for retirement satisfaction and the timing of the retirement decision. In general, research suggests the two variables are related and impact to varying degrees the two outcomes.

In addition to affecting income and health, the demographic characteristics appear to relate to work activities and social participation. A great deal of research suggests that attitudes toward work are directly correlated to retirement satisfaction and the timing decision. Much research has been done linking social involvement with the two outcomes. Some research has suggested that leisure activity involvement is the key variable in determining retirement satisfaction and timing.

The conceptual model predicting retirement satisfaction has pre-retirement planning activities as an intervening factor linked with job attitudes and social activities. The goal of retirement planning programs is to improve adjustment and reduce potential problems in retirement. The impact of formal pre-retirement planning activities is somewhat unclear. Some research suggests that job attitude in

combination with pre-retirement programs relate to satisfaction. For this reason the pre-retirement variable was used in the same set of variables as job attitudes.

Figure 1 and Figure 2 summarize the theoretical model that has been developed in this research. The model was inspired by work done by Elwell and Maltbie-Crannell (1981), and the variables identified in the model were based on the research discussed in Chapter II. It is postulated that demographic characteristics, health and income, and work and leisure activities are interrelated, but all independently impact retirement satisfaction and the timing of the retirement decision.

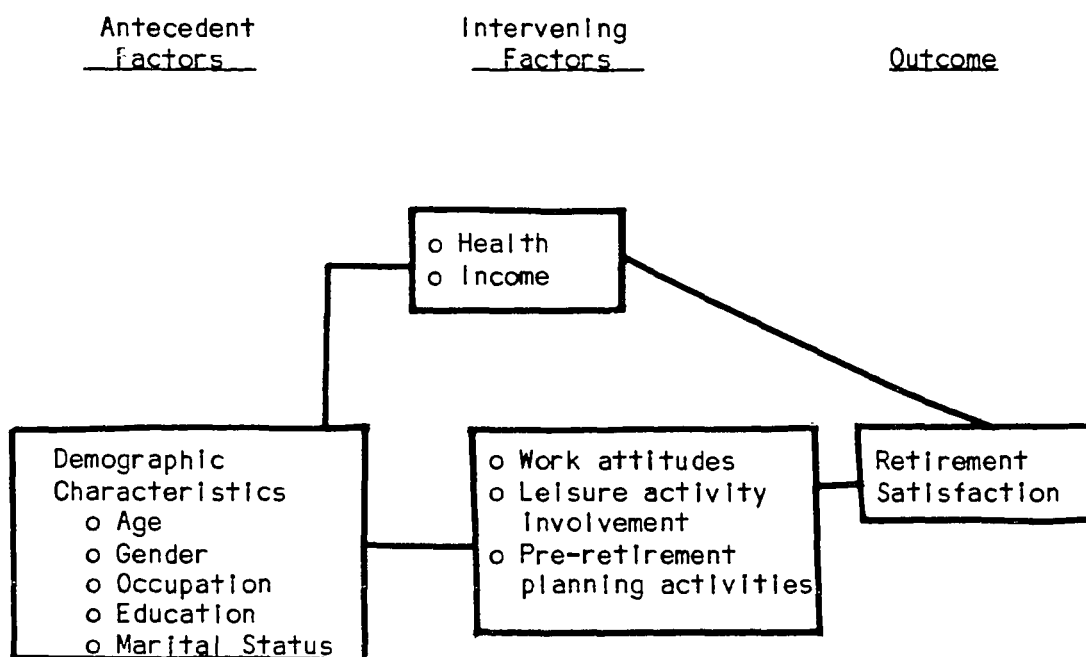
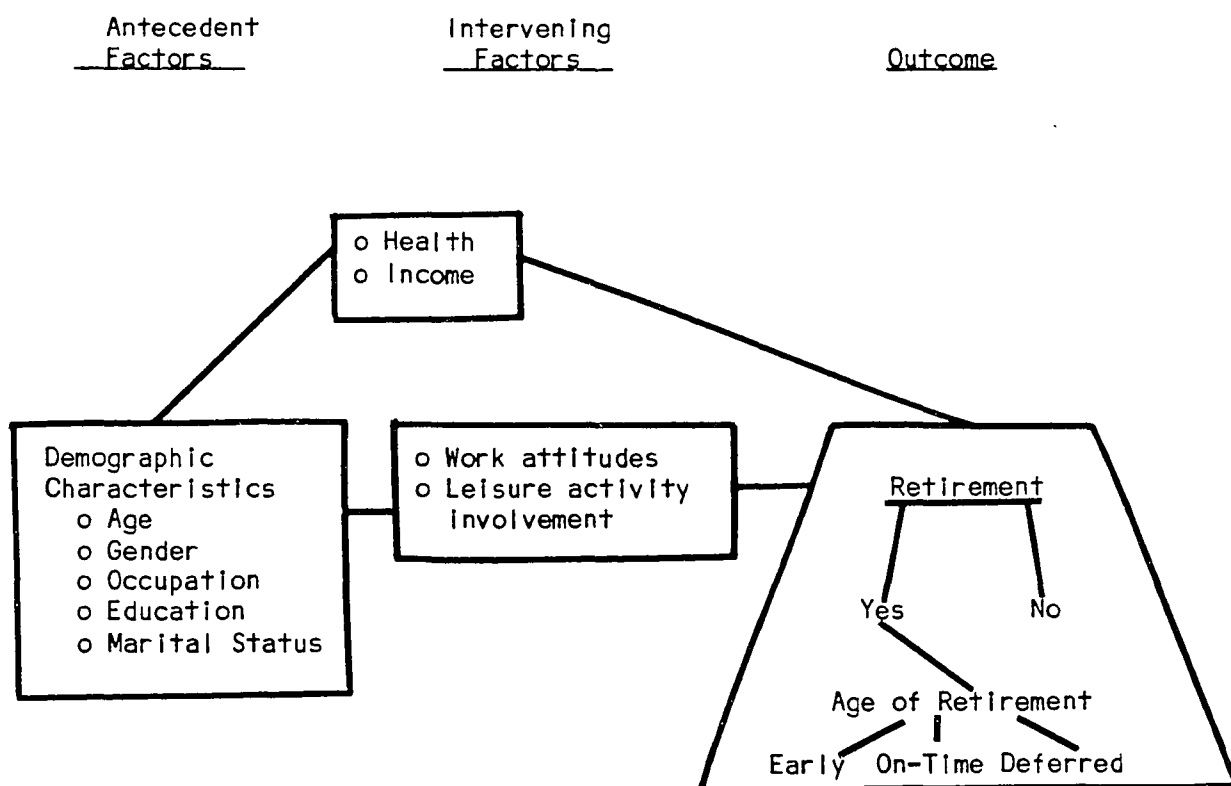


Figure 1. Conceptual model predicting retirement satisfaction in the U. S.



**Figure 2.** Conceptual model predicting the retirement timing decision in the U. S.

In summary, the purpose of this dissertation research is built around two central questions: (1) What are the determinants of satisfaction in retirement? (2) What are the determinants of the timing of the retirement decision? As previously discussed, women have somewhat been ignored in most retirement research. Additionally, this research analyzes the differential effects of the retirement experience on men and women. To understand how the conceptual model is analyzed and tested, an explanation of the two samples and the data analytic techniques are discussed next.

## FIRM AND SAMPLES

### Description of the Firm

The two samples used for this research were drawn from the same western, high technology firm. The firm is a successful, high technology enterprise and has been in existence for over 25 years. The firm employs over 10,000 workers throughout the U. S. and abroad and has experienced growth in the recent past.

The large size of the firm dictates that it employ workers in a wide range of occupations. There are persons employed in positions directly related to production of the firm's products and persons employed in supportive type positions, i. e., personnel, management, and research. The firm employs a broad range of occupational positions demanding different educational requirements and a broad range of salary levels.

The firm practices employment policies that ignore age as criterion. The non-discriminating sections of the firm's policy that pertain to age of older workers are as follows:

1. Age-neutral hiring practices
2. Age-neutral educational and training programs
3. Age-neutral promotional practices
4. Absence of mandatory retirement
5. Availability of part-time employment
6. Availability of job reassignment and redesign
7. A pre-retirement planning program

Insight into the firm's general personnel policies is important in understanding the results of this research. The firm practices a

general policy of ignoring age as a criterion in personnel decisions. As a result hiring, promotion, and training are considered regardless of the employee's chronological age. Mandatory retirement policies do not exist in the firm. Even though there exists no mandatory retirement policy permanent employees are eligible to retire and receive retirement benefits at age 50 if they are "fully vested". Fully vested is defined by the firm's policy as six continuous years of employment. An employee who reaches age 65 or is classified as disabled will be fully vested even if he or she did not complete the six continuous years of employment. The retirement benefit plan was adopted in the early 1970's and has gone through only minor revisions to date. The firm, according to their policy, defines retirement age -- early: after age 50 and before age 65; normal: age 65; deferred: after age 65. These age definitions are in accordance with the definitions used in this research on the timing of the retirement age.

Because mandatory retirement is not a practiced policy in this firm, the two samples in this study are responding not in terms of expectations of enforced labor force withdrawal. The respondents answered the survey questionnaire in terms of personal preferences and the several influences which constitute the focus of this research. This method of response is a strength of the study. Despite the fact that the age of retirement in the private and non-federal public sectors of 70 is permitted by federal law there exist increasing numbers of employers that have policies that ignore age as a criterion for personnel decisions. Retirement decisions in this type of non-discriminating firm are more likely to be based on the determinants

which are analyzed in this research, instead of non-voluntary labor force withdrawal policies.

In short, the firm from which the two samples were drawn is a highly successful business which is cognizant of the contribution of its employees in maintaining its profitability. In an interview with a firm manager, it was reported that older workers are treated as any other workers. They are not considered a special class nor are they viewed as undesirable.

### Sampling Techniques

As stated earlier the respondents in this research are made up of two samples. The first sample consists of 231 individuals who had retired from the firm approximately eight years or less before the survey was conducted. The original sample size of 312 was reduced to 300 with deaths and severe illnesses occurring before the survey was started. 231 individuals returned the completed survey questionnaire for a response rate of 77%.

The second sample was randomly drawn from a population of 3,041 older workers (age 45 and over) from the same firm. An age-stratified random sampling technique was utilized to obtain the older worker sample. This type of sampling technique was employed to over-sample from the higher age groups. 1,206 older employees were then drawn from a computer listing provided by the firm. The original sample size of 1,206 was reduced to 1,157 with deaths and terminations occurring between the period of drawing the sample and conducting the survey. 908 older workers returned the completed survey questionnaire for a response rate of 78.5%.

### Description of the Sample

The respondents in this research consist of 231 retirees and 908 older workers from the same western, high technology firm. The respondents from the two samples represent a wide range of demographic characteristics which are discussed below.

The respondents represent the full range of positions available at the firm. Table I below shows the eight major occupational categories and how many men and women are represented in each occupational category for both samples.

In the two samples there exist similarities in the ages of the older workers and retirees. In both samples there are persons who are 51 years old to 79 years old. There is no individual in the retiree sample who is 50 years of age or younger. Table II shows the age categories of the two samples. The mean age of the retirees sample is 62.5 years of age. The mean age of the older workers sample is 57.3 years of age.

The gender of the two samples is presented in Table III. There are 54.1 percent female retirees and 52.1 percent female older workers. There are 45.5 percent male retirees and 46.0 percent male older workers. The somewhat equal distribution of males and females provided the opportunity to do a comparative analysis between men and women.

Table IV presents the educational levels of the two samples. The older workers, as might be expected, have slightly larger percents of college educated individuals.

TABLE 1  
OCCUPATION BY GENDER FOR TWO SAMPLES

Retirees

<u>Occupation</u>	<u>Male</u>	<u>%</u>	<u>Female</u>	<u>%</u>
Production	22	9.8	73	32.6
Craft	14	6.3	1	0.4
Sales	2	0.9	0	0.0
Managerial	14	6.3	5	2.2
Office/Clerical	1	0.4	9	4.0
Professional	10	4.5	4	1.8
Service	16	7.1	9	4.0
Technical	23	10.3	21	9.4
	<hr/>	<hr/>	<hr/>	<hr/>
Total	102	45.5	122	54.5

Missing = 7

Older Workers

<u>Occupation</u>	<u>Male</u>	<u>%</u>	<u>Female</u>	<u>%</u>
Production	45	5.5	227	27.9
Craft	33	4.1	3	0.4
Sales	6	0.7	3	0.4
Managerial	91	11.2	31	3.8
Office/Clerical	7	0.9	67	8.2
Professional	80	9.8	9	1.1
Service	66	8.1	30	3.7
Technical	62	7.6	54	6.6
	<hr/>	<hr/>	<hr/>	<hr/>
Total	390	47.9	424	52.1

Missing = 50

TABLE II  
AGE BY GENDER

<u>Age Category</u>	<u>Retirees</u>		<u>Older Workers</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
To 50	0	0	49	47
51 - 55	9	7	114	132
56 - 62	28	45	180	214
63 - 65	36	47	43	57
66 - 70	29	25	21	16
71 - 79	3	0	8	3
Total	105	124	415	469

TABLE III  
GENDER OF TWO SAMPLES

<u>Gender</u>	<u>Retirees</u>		<u>Older Workers</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
Male	105	45.5	418	46.0
Female	125	54.1	473	52.1
Missing Information	1	0.4	17	1.9
Total	231	100.0	908	100.0

TABLE IV  
EDUCATION BY GENDER

<u>Education Level</u>	<u>Retirees</u>		<u>Older Workers</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
None thru 8th	5	2	18	28
Some high school	20	23	38	69
High school graduate	36	73	104	203
Some college	31	24	129	127
Bachelors degree	4	1	43	7
Some graduate school	3	1	36	8
Masters	1	1	20	4
Doctoral	2	0	4	6
Other	1	0	6	0
Total	103	124	398	452

Marital status of the two samples is presented in Table V. The average age of the spouse of the male respondent in the retiree sample is 60.1 years of age. For the female respondent the average age of the spouse is older at 63.9 years of age. For the older worker sample the average age of the spouse of the male respondent is 53.4 years and for the female respondent, the average age is 59.3. As would be expected the wives of the male respondents in both samples are younger.

TABLE V  
MARITAL STATUS BY GENDER

<u>Marital Status</u>	<u>Retirees</u>		<u>Older Workers</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Married	97	87	373	254
Divorced	3	12	25	119
Widowed	4	22	7	88
Never Married	1	2	8	7
Total	104	123	413	468

Table VI shows the category of years retirees had worked at the firm surveyed. It also shows the number of years at the time of the survey that older workers were employed with the firm. As one would expect, the mean length of employment was slightly higher for the retiree sample.

Current and retired workers were asked to provide the category of their own yearly gross income. In addition, respondents were asked to provide the category of their own income and their household income. Table VII shows the income for the two samples in 1980. Table VIII shows gross income for the two samples.

TABLE VI  
YEARS EMPLOYED WITH FIRM -- TWO SAMPLES

<u>Category of Years</u>	<u>Retirees</u>			<u>Older Workers</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
1 - 5	3	1	4	96	173	269
6 - 10	18	17	35	43	63	106
11 - 20	39	75	114	129	159	288
21 - 25	30	21	51	106	73	179
Over 25	13	3	16	37	11	48
Missing Information	5	6	11	7	11	18
Mean Length of Employment	18.4	16.4	17.3	15.1	11.2	13.1

TABLE VII  
GROSS INCOME OF TWO SAMPLES FOR 1980  
OWN AND HOUSEHOLD

Retirees

<u>Income Category</u>	<u>Own</u>		<u>Household</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
\$10,000 or less	105	45.5	33	14.3
\$10,001 to \$15,000	47	20.3	55	23.8
\$15,001 to \$20,000	27	11.7	33	14.3
\$20,001 to \$25,000	17	7.4	21	9.1
\$25,001 to \$30,000	6	2.6	20	8.7
\$30,001 to \$35,000	6	2.6	14	6.1
\$35,001 to \$40,000	2	0.9	13	5.6
\$40,001 to \$45,000	0	0.0	5	2.2
\$45,001 to \$50,000	0	0.0	1	0.4
\$50,001 to \$55,000	1	0.4	3	1.3
\$55,001 to \$60,000	0	0.0	1	0.4
\$60,001 or more	3	1.3	5	2.2
Missing Information	17	7.4	27	11.7

Older Workers

<u>Income Category</u>	<u>Own</u>		<u>Household</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
\$10,000 or less	88	9.7	40	4.4
\$10,001 to \$15,000	242	26.7	122	13.4
\$15,001 to \$20,000	186	20.5	128	14.1
\$20,001 to \$25,000	141	15.5	119	13.1
\$25,001 to \$30,000	95	10.5	111	12.2
\$30,001 to \$35,000	47	5.2	94	10.4
\$35,001 to \$40,000	23	2.5	67	7.4
\$40,001 to \$45,000	16	1.8	56	6.2
\$45,001 to \$50,000	3	0.3	33	3.6
\$50,001 to \$55,000	4	0.4	24	2.6
\$55,001 to \$60,000	6	0.7	8	0.9
\$60,001 or more	6	0.7	24	2.6
Missing Information	51	5.6	82	9.0

TABLE VIII

OWN GROSS INCOME OF TWO SAMPLES FOR 1980  
MALE AND FEMALERetirees

<u>Income Category</u>	<u>Male</u>		<u>Female</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
\$10,000 or less	26	24.8	79	63.2
\$10,001 to \$15,000	21	20.0	26	20.8
\$15,001 to \$20,000	17	16.2	10	8.0
\$20,001 to \$25,000	14	13.3	3	2.4
\$25,001 to \$30,000	6	5.7	0	0.0
\$30,001 to \$35,000	5	4.8	1	0.8
\$35,001 to \$40,000	2	1.9	0	0.0
\$40,001 to \$45,000	0	0.0	0	0.0
\$45,001 to \$50,000	0	0.0	0	0.0
\$50,001 to \$55,000	1	1.0	0	0.0
\$55,001 to \$60,000	0	0.0	0	0.0
\$60,001 or more	3	2.9	0	0.0
Missing Information	10	9.5	6	4.8

Older Workers

<u>Income Category</u>	<u>Male</u>		<u>Female</u>	
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
\$10,000 or less	13	3.1	75	15.9
\$10,001 to \$15,000	44	10.5	197	41.6
\$15,001 to \$20,000	57	13.6	128	27.1
\$20,001 to \$25,000	106	25.4	35	7.4
\$25,001 to \$30,000	85	20.3	10	2.1
\$30,001 to \$35,000	44	10.5	3	0.6
\$35,001 to \$40,000	21	5.0	2	0.4
\$40,001 to \$45,000	15	3.6	1	0.2
\$45,001 to \$50,000	3	0.7	0	0.0
\$50,001 to \$55,000	4	1.0	0	0.0
\$55,001 to \$60,000	6	1.4	0	0.0
\$60,001 or more	6	1.4	0	0.0
Missing Information	14	3.3	22	4.7

The retiree sample consists of individuals who had retired from the firm approximately 8 years or less before the study was conducted in 1980. Table IX shows how many years the respondents were retired when answering the survey questions. The mean number of years retired is 1.5.

TABLE IX  
NUMBER OF YEARS RETIRED AT TIME  
OF SURVEY - RETIREES

<u>Number of Years Retired</u>	<u>Total Retirees</u>		<u>Men</u>		<u>Women</u>	
	<u>#</u>	<u>%</u>	<u>#</u>		<u>%</u>	
Less than 1 year	49	21.2	25		24	
1 year	74	32.0	35		39	
2 years	67	29.0	29		38	
3 years	35	15.2	14		21	
4 years	1	0.4	0		1	
5 years	1	0.4	1		0	
6 years	1	0.4	1		0	
7 years	0	0.0	0		0	
8 years	1	0.4	0		1	
Missing Information	2	0.9	1		1	

As stated earlier in this section, the two samples show a great deal of variation in their demographic characteristics. Even though the retirees and the current older workers were sampled from only one firm, they are somewhat representative of the retired and current workers of the U. S. (Harris 1979; U. S. Department of Labor 1979).

#### SURVEY INSTRUMENTS

Following is a description of the two survey instruments employed in this research. Complete copies of the two questionnaires are found in Appendix A and Appendix B. In May, 1981, survey

instruments were administered to the two samples. Both survey instruments were accompanied by a cover letter signed by the firm's Director of Human Services. The letter explained that the survey was part of a research project undertaken by Portland State University and that the results would be useful to the firm in designing future retirement education and related programs.

The first survey instrument was made up of 239 items and was mailed to the sample of 300 retirees. The second survey instrument consisted of 244 items and was mailed to older workers via the firm's in-house mailing system. The two survey instruments contained questions primarily dealing with employment experiences and retirement issues. Some of the questions were developed by the research team, others were taken directly or modified slightly from survey instruments found in the literature. Table X shows the items in the survey questionnaires and the source(s) from which they are derived.

The two survey instruments are made up of five main sections. The sections deal with the following topics: Job Description, Retirement Planning, Health, Hypothetical Employment Options, and Demographic Information.

#### DATA ANALYTIC TECHNIQUES AND VARIABLE IDENTIFICATION

A variety of analytic techniques were used to analyze the data from the two samples. This section describes the variables used and the techniques employed. The various research questions were tested by use of SPSS (Statistical Package for the Social Sciences) on the Honeywell computer at Portland State University.

TABLE X  
LITERATURE SOURCE OF QUESTIONS  
USED IN RESEARCH

<u>Question</u>	<u>Source</u>
1. Demographic and personal background questions	PSU Research Team
2. Financial security	Price, Walker and Kimmel; 1979
3. Work orientation	Streib and Schneider; 1971
4. Retirement orientation	Shkop; 1980
5. Retirement feelings	Price, Walker and Kimmel; 1979
6. Self-report health	Parnes; 1981
7. Subjective health	Parnes; 1981
8. Job attitude	Anschell; 1980
9. Social and leisure activities	Anschell; 1980
10. Pre-retirement planning	Anschell; 1980

#### Variable Identification

Following are the operational definitions of the dependent variables and the major independent variables used in the analysis. Many of the variables were created by index construction and the method is discussed following the identification of the variables.

Dependent Variables. The first outcome measure is retirement satisfaction. The outcome measure of retirement satisfaction assesses the feelings of individuals after they leave the labor force. Four summative scales have been constructed to measure actual retirement satisfaction for the retirees sample. The scales measure the various facets of satisfaction in retirement, financial security, work orientation, retirement orientation, and general retirement feelings.

The outcome measures are four separate facets of retirement satisfaction:

Financial security: This index measuring financial security contains 14 items which describe the respondents' feelings about their financial situation. A high score on this index indicates a positive feeling in regard to financial security in retirement.

Work orientation: This index measuring work orientation contains 3 items which describe the respondents' feelings about "missing" their job. The items were recoded such that a high score measures a lack of work orientation or missing one's job. Therefore, the respondent exhibits a retirement orientation.

Retirement-leisure orientation: This index measuring retirement orientation contains 6 items which measure the respondents' feelings about retirement and leisure. A high score on this index indicates a positive feeling toward leisure life.

Retirement feelings: This index on retirement feelings contains 13 items which measure general feelings about retirement life, i. e., interesting, exciting. A high score on this index indicates a positive feeling in regard to the retirement life in general.

Table XI shows the Pearson Correlation coefficients among the scales and all are below .30. The low correlations indicate that four separate phenomena are being measured and therefore are used separately in the analysis.

TABLE XI  
PEARSON CORRELATION COEFFICIENTS OF  
FOUR OUTCOME INDICES

	Work orientation	Retirement feelings	Financial security
Retirement orientation	0.2719* (n=204)	0.1753* (n=195)	0.1194* (n=210)
Work orientation		0.2768* (n=182)	0.2540* (n=197)
Retirement feelings			0.2654* (n=193)

\*  $p \leq .05$

The second outcome measure is the timing of the retirement decision. The retirees were asked three separate questions as to the age they planned, preferred and actually did retire. It should be taken into account that the retirees' responses to the questions on planned and preferred age of retirement were given in retrospect. Conversely, the retirees were not surveyed prior to their actual retirement. Older workers were asked two questions dealing with the age they planned and preferred to retire. Table XII shows the means and standard deviations of the retirement age responses.

TABLE XII  
MEANS AND STANDARD DEVIATIONS OF TWO SAMPLES  
RETIREMENT AGE

<u>Question</u>	<u>Retirees</u>		<u>Older Workers</u>	
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>
Age prefer to retire?	61.839	5.838	62.417	5.519
Age plan to retire?	62.360	4.687	63.722	3.741
Age did retire?	61.043	4.574	-----	-----

The timing of retirement is measured by a single indicator. For the retirees, it is the age at which the respondents did retire. For the older workers sample, it is the age they planned to retire. Table XII shows the means and correlation coefficients of planned, preferred, and actual retirement age responses. The single indicator of timing is categorized into three divisions: early, on-time, and deferred.

Independent Variables. The first predictor is health status. This construct is represented by two scales. One scale measures self-reported health status and the second measures subjective health. The two scales are identical for both retirees and older workers. The index measuring self-reported health measures the extent to which physical health problems limit the respondents' ability to perform designated tasks. The second index measure, subjective health, measures the respondents' self-perception about their health compared to others of the same age and to their health as compared to five years ago.

The second independent variable is job attitude. This construct is measured using two scales. The scales are comparable across the two survey instruments. As one would expect, the retirees' survey instrument focused on feelings about the pre-retirement job, while the older workers' survey instrument focused on their current job. The first scale, which is labeled job descriptors, assesses feelings about the physical demands of the job and job pressures. The second scale labeled job rewards assesses the importance of the job in meeting social and personal needs.

The third predictor is leisure activity involvement. This construct is measured by four indices. The questions and response

format are identical for both samples. The leisure activities indices measure the extent to which respondents feel activities are important in their present life. Leisure activity involvement is categorized into four divisions: outside activities, social relationships, cultural activities and sport activities.

The fourth major independent variable is pre-retirement planning involvement. It assesses the degree to which the retirees' sample undertook retirement planning activities prior to their actual retirement. Pre-retirement planning involvement is measured by one scale.

The last set of independent variables are demographic variables. Income for both samples is measured by two questions. The first income question refers to the respondent's own gross yearly income for 1980. The second income question refers to the respondent's household, gross yearly income for 1980. Both income questions are ranked into twelve categories. Education is ranked into eight categories from 8th grade education to doctoral degree. Marital status is divided into four categories: married, divorced, widowed, never married. Occupation is divided into eight categories.

The occupation categories at the time of development of the survey instrument were not ranked hierarchically. The relationship between two variables can be investigated by examining their joint frequency distribution or crosstabulation. Table XIII shows the ranking derived from the crosstabulation of own, gross income and occupation.

TABLE XIII  
RANKING OF OCCUPATION CATEGORIES FROM  
HIGHEST TO LOWEST

Professional/Managerial  
Sales  
Technical  
Craft  
Service  
Office/Clerical  
Production

O.D. Duncan's Socioeconomic Index developed in coordination with the crosstabulation outcome was used to rank-order occupation in this research. Duncan constructed the occupational socioeconomic index using prestige rankings, education, and income (Miller 1977). According to Miller (1977) a researcher interested in using ranking of occupation is urged to use Duncan's Socioeconomic Index. The Duncan Index has been widely used and is considered to be superior to any other index of its type. It has been found that the Duncan index is highly stable over time and stable across social systems. Table XIV below shows that ranking of occupations based on the Duncan Socioeconomic Index and the crosstabulations done by this research.

TABLE XIV  
FINAL RANKING OF OCCUPATION  
FROM HIGHEST TO LOWEST

Professional, Technical  
Managerial  
Office/Clerical, Sales  
Craft  
Production  
Service

Index Construction Techniques. Scales or indices refers to any measure which combines the values of two or more variables or items into

a composite. Scales have been constructed to measure retirement satisfaction, job attitudes, health status, leisure activities involvement, and pre-retirement planning involvement. In Appendix C there is a detailed description of each Index.

Index construction is used for many of the variables in this research. Babbie (1973) argued that the construction of indices is beneficial to social research. Indices, according to Babbie, have the following advantages:

1. Single Indicators may produce bias measurements of a given variable; a composite measure from several variables may solve problems.
2. A composite measure can provide for greater explanatory power in analysis.
3. A composite measure can provide for efficient data reduction, especially if there is a large questionnaire involved.

In short carefully constructed indices can aid the research by providing more comprehensive and accurate assessments of constructs. Single Items may only provide a partial assessment of a given variable. For example, it would be difficult to accurately assess an individual's health if only one item was being utilized in the analysis. It is difficult for a single indicator to measure accurately a complex construct.

All scales were constructed using the summative method of scale construction. The summative method of scale construction adds all the items in a given index and divides the total score by the number of

items answered. All items are weighted equally in summative scale construction. Babbie (1973) suggested that items in a given index "should be weighted equally unless there are compelling reasons for differential weighting...equal weighting should be the norm" (p. 264).

The steps used in the construction of the indices are: First, the items included in the summative scales were chosen a priori on face validity. Each of the items in a particular scale appeared on its face validity to measure the identified construct, i. e., job rewards. The second step in index construction is the examination of bivariate relationships among the items. Bivariate relationships among individual items chosen in a given index were estimated using Pearson Correlation coefficients. The last step was to use the SPSS subprogram reliability to evaluate the internal consistency of the additive scales. According to Nunnally (1978) an internal consistency of approximately .70 is needed for a scale to be considered a reliable composite variable. If a scale has an internal consistency of less than .70, the scale probably does not contain homogenous items. A lower consistency does not mean a particular scale cannot be used in analysis; it means that the results need to be carefully interpreted. Table XV shows the internal consistency estimates of all the scales.

The items in the financial security index and the retirement feelings index have "can't decide" as one of the possible responses. Since a "can't decide" response was not useful to the analysis the responses were recoded as if the information was missing. Table XVI shows the internal consistency estimates of financial security and retirement feelings indices by using estimates for the missing

information. As can be seen, the reliability of the two scales is comparable regardless of the method used.

Alternate methods of index construction were considered prior to the completion of this research. The items in the two survey instruments that pertained to self-reported health were taken from research done by Parnes (1981). Parnes named the self-reported health scale the "impairment index". His impairment index consisted of 12 self-reported health questions and 7 questions relating to symptoms of health problems. Parnes employed a differential weighting method of index construction. The health items in this research do not contain all the items included in Parnes' impairment index. Also Parnes' index asked for a dichotomous response where the health items in this research had a possible range of responses from one to five. After looking at the inter-item correlations of the self-reported health scale and the factor loadings, it was concluded that the summative method of scale construction would be used on the self-reported health indices because the corrected-item correlations were highly comparable to the factor loadings. (See Table XVII.) In short, differential weighting of the individual items' contribution to the index was not called for.

TABLE XV  
INTERNAL CONSISTENCY ESTIMATES OF SCALES

<u># of Items</u>	<u>Index</u>	<u>Retirees</u> (n=231)	<u>Older Workers</u> (n=908)
14	Retirement Satisfaction a) Financial security	.885* (n=103)	_____
3	b) Work orientation	.793 (n=212)	_____
6	c) Retirement - leisure orientation	.768 (n=221)	_____
13	d) Retirement feelings	.859* (n=93)	_____
11	Health status (self-report)	.879 (n=218)	.865 (n=812)
3	Health status (subjective)	.672 (n=225)	.717 (n=875)
4	Job Attitude a) Job descriptors	.627 (n=209)	.515 (n=859)
9	b) Job rewards	.776 (n=211)	.736 (n=826)
2	Social and Leisure Activities a) Outside activities	.527 (n=209)	.454 (n=832)
	b) Social relationships	.459 (n=207)	.322 (n=813)
2	c) Cultural activities	.369 (n=215)	.487 (n=839)
2	d) Sport activities	.600 (n=209)	.588 (n=829)
7	Pre-retirement planning	.736 (n=190)	_____

The sample size listed is for respondents with complete data on a given scale.

\* See Table XVI.

TABLE XVI  
INTERNAL CONSISTENCY ESTIMATES OF FINANCIAL SECURITY  
AND RETIREMENT FEELING SCALES

	<u>With Complete Information</u>	<u>With Missing *</u> <u>Information</u>	<u>With Missing **</u> <u>Information</u>
Financial security	.885 (n=103)	.835 (n=213)	.823 (n ranges 142 to 203)
Retirement feelings	.859 (n=93)	.858 (n=198)	.859 (n ranges 161 to 204)

\* The reliability coefficients were based on inclusion of missing data; missing information was estimated by using scale means for respondents who had at least 66% of the items included in the scale.

\*\* The reliability coefficients were calculated from the correlation matrix using the following formula:

$$\alpha = \frac{K \overline{r_{ij}}}{1 + (K-1) \overline{r_{ij}}} \quad \text{where } K \text{ is the number of items}$$

included in the scale, and  $\overline{r_{ij}}$  is average correlation coefficient.

TABLE XVII

COMPARISON OF INTER-ITEM CORRELATIONS AND FACTOR LOADINGS  
SELF-REPORTED HEALTH SCALESRetirees

<u>Items</u>	<u>Corrected Item Correlation</u>	<u>Factor Loads</u>
1	.70	.75
2	.71	.77
3	.70	.76
4	.57	.60
5	.68	.73
6	.68	.74
7	.63	.68
8	.65	.70
9	.52	.55
10	.33	.35
11	.24	.25

Older Workers

<u>Items</u>	<u>Corrected Item Correlation</u>	<u>Factor Loads</u>
1	.70	.77
2	.70	.78
3	.70	.76
4	.54	.57
5	.70	.76
6	.60	.64
7	.60	.66
8	.59	.62
9	.41	.44
10	.34	.38
11	.28	.30

The corrected inter-item correlation is the Pearson correlation coefficient of each item in the scale and the item's relationship to the composite score of the scale. It is referred to as a "corrected" correlation because the scores of the item being correlated have been previously withdrawn from the composite score. Table XVIII to Table XXII show the corrected inter-item correlations of the comparable and

identical scales created for both retirees and older workers. The correlations for many items are highly comparable between the two samples.

TABLE XVIII

CORRECTED ITEM CORRELATIONS  
SELF-REPORT HEALTH INDEX

<u>Items</u>	<u>Retirees</u>	<u>Older Workers</u>
Walking	.695	.697
Using stairs	.711	.697
Standing	.700	.703
Sitting	.572	.537
Stooping	.679	.703
Lifting or carrying weights	.683	.600
Lifting or carrying heavy weights	.629	.604
Reaching	.654	.589
Using hands	.519	.412
Seeing	.330	.345
Hearing	.239	.278

TABLE XIX

CORRECTED ITEM CORRELATIONS  
SUBJECTIVE HEALTH

<u>Items</u>	<u>Retirees</u>	<u>Older Workers</u>
Present health	.617	.595
Health compared to 5 years ago	.331	.436
Health compared to others	.521	.586

TABLE XX  
CORRECTED ITEM CORRELATIONS  
JOB DESCRIPTOR INDEX

<u>Items</u>	<u>Retirees</u>	<u>Older Workers</u>
Job pressure	.404	.291
Physical demands	.423	.498
Work pace	.498	.496
Routine and repetitive	.314	.131

TABLE XXI  
CORRECTED ITEM CORRELATIONS  
JOB REWARDS INDEX

<u>Items</u>	<u>Retirees</u>	<u>Older Workers</u>
Interesting	.478	.319
Job security	.310	.181
Social needs	.496	.406
Personal growth	.650	.586
Status	.540	.600
Income	.138	.334
Useful	.581	.547
Esteem	.647	.519
Occupy time	.347	.343

TABLE XXII  
LEISURE ACTIVITIES INVOLVEMENT  
CORRECTED ITEM CORRELATIONS

<u>Items</u>	<u>Retirees</u>	<u>Older Workers</u>
Outside activities	.363	.301
Social relationships	.305	.191
Cultural activities	.231	.326
Sport activities	.428	.173

For an individual's responses to be included in any given index they had to answer at least 66% of the individual items. It was felt for purposes of this research if a respondent did not answer at least two-thirds of the items in an index they would not be used in the analysis.

In this research there are relatively few respondents with missing data, so excluding them from the construction and analysis of the indices will not result in having biased samples. In general, it was felt that if respondents failed to answer at least two-thirds of the items in an index their responses were not useful to this analysis. In regard to the subject of how to handle missing data, Babbie (1973) suggested that if there exists a limited number of respondents with missing data, excluding them from the analysis is probably the appropriate decision.

#### Components of the Indices

A predominant number of the variables utilized in the research are indices. Each dependent and independent variable was previewed earlier in this chapter in the section titled Variable Identification. This following section will provide a description of the respondent's

score on the individual items of the indices as well as an overall interpretation of each index. The comparison between men and women is a major theme in the research, therefore, the significant differences between the two groups will be presented. Appendix B provides the frequency distribution of each index.

Retirement Satisfaction. The outcome measure of retirement satisfaction consists of four summative scales. The four scales are:

1. Financial Security
2. Work Orientation
3. Retirement-leisure Orientation
4. Retirement Feelings

Financial security is a 14 item scale which describes the respondent's feelings about their financial situation. A high score on this scale is interpreted as a positive attitude toward the financial situation. The scale has items such as "well off, steady, good pension plan, self-supporting" which indicate positive feelings toward the respondent's financial situation. The scale contains terms such as "barely live on income, insecure, need outside help" that suggest negative feelings toward the respondent's financial situation. The mean of the financial security scale for men and women retirees is very comparable. For men the mean was 1.86 and for women it was 1.83. The item in the scale that was different for men and women was the score on the phrase "good pension plan". Over 32 percent of the women responded no to this question compared to 16 percent of the men. The male respondents apparently feel they have a good pension plan in relation to the female respondents.

The work orientation index is made up of three items which describe the respondent's feelings about missing their job. The items in the scale suggest that a high score measures the absence of missing the job. The items of this index ask retired respondents if they often, sometimes or hardly ever miss work or worry about not having a job. The mean score between men and women was somewhat different. When the respondents were asked if they miss the feeling of doing a good job the women were more likely to miss their job. Over 19 percent of the female sample responded they often missed the feeling of doing a good job compared to 10 percent of the male respondents.

Retirement-leisure orientation is a six item scale which measures respondent's feelings about retirement and leisure life. A high score on this scale suggests a positive feeling toward retirement life. This scale contains such statements as "leisure time activities are more interesting than work" and "more leisure time is good for people". Respondents were asked to indicate the degree to which they agreed or disagreed with the six leisure related statements.

The respondents were somewhat neutral overall in regard to the statements. In analyzing the difference between men and women, there was little or no difference.

Retirement feelings is a 13 item scale measuring feelings about retirement life. A high score indicates a positive feeling toward retirement life. Respondents responded to terms such as retirement activity is "exciting, challenging, creative" or "useless, limited, boring". The mean score for the scale is 1.86 for men and 1.83 for women. This suggests that both groups possess a positive feeling toward retirement life.

Health Status. The construct termed health status is represented by two scales. One scale is identified as self-reported health and the second is identified as subjective health. Research analysts have not agreed on the relative importance of health in retirement satisfaction or the timing of retirement. In addition, they have not agreed on the appropriate variables to use to measure health status. This research utilized two accepted measures of health status.

Herbert Parnes (1981) argued that two suitable measures exist to measure health status. One is subjective health measures and the second is impairment indexes. Parnes contends that impairment indexes are better suited than any other health measures when explaining labor force behavior. He states that using a health measure that questions older workers if they have general health problems or limitations has fundamental flaws. Parnes states that this type of unspecific health measure is not comparable across members of the survey population. Secondly, he argues that these measures do not provide evidence of difference in individual health levels. Based on arguments provided by Parnes the two health measures used were a subjective health measure and an impairment index referred to as self-reported health.

Subjective health in this research consists of three items that describe the respondent's health compared to others and compared to their own health five years ago. In the retirees' sample, the male respondents rated their health lower than the female respondents. The same response holds true for the older workers' sample. The male sample is older than the female sample and this health difference could be due

to age. On the other hand, some research has associated levels of income with health status, but in this research the male respondents generally have higher incomes than the female respondents.

The self-reported health index was modeled after Parnes' Impairment Index. This index contains 11 items that measure respondent's limits or lack of limits. Examples of physical conditions respondents were asked to react to were "walking, standing, lifting, seeing, and hearing".

The self-reported scale for the retirees' sample indicated that both males and females possessed few health limitations. A score of 5 indicated no limits and a score of 1 indicated much limitation. The mean score for the retired male respondents was 3.9 and for the female respondent was 4.2. According to the scores on the self-reported scales men felt their health limits their ability somewhat more than did the female respondents.

In looking at the older worker sample on the self-reported health scale, men and women scored much closer than did the retiree sample. The male older workers' average score was 4.2 and the average score for the female respondents was 4.1.

A majority of the female older workers, 68 percent, responded positively to one question in the self-report health index. The 68 percent responded that their health limits their ability to lift or carry weights. A less percentage of males, 22 percent, responded positively to this question. In the retiree sample almost 90 percent of the female respondents answered positively to the lifting of heavy weights question. For the male retiree the response rate was approximately 22 percent.

A majority of female retirees responded positively to the question in regard to their health limiting their ability to stand for long periods of time. Over 58 percent responded that their health somewhat limited their standing ability. The overall percentage of retirees and older workers reporting work or activity limiting health problems is low overall.

Work Attitudes. Attitudes toward work was measured by two scales. The first scale named job descriptors measuring feelings about job pressures and demands. The job descriptor scale contains four items. The items in the scale ask respondents to rate the degree of job pressure, the physical demands of the job, the work pace and the routine of the job.

In looking at the retirees' sample the mean score for men on the job descriptor scale is 3.1 and for the female respondents the mean is 3.5. This indicates that the male respondents felt somewhat more job pressures and demands. A majority of male respondents, over 73 percent, responded positively to the statement that their former job caused a great deal of pressure. The female retirees responded somewhat positively to two questions. To the job pressure statement 74 percent of the females responded the statement was true or somewhat true. To the routine and repetitive statement about their former job 21 percent of the females answered this was very true.

The average scores for the older worker samples are comparable. The male and female respondents had similar mean scores (3.7 males, 3.8 females) on the job descriptor scale. On the job pressure statement 41 percent of the male respondents answered positively compared to 34 percent of the female respondents.

The second job attitude scale contains nine items and is labeled job rewards. The job rewards scale assesses the importance of the job or former job in meeting personal type needs. The items in this scale ask respondents to indicate the importance of their job in meeting social needs, personal growth, status, recognition or feeling of being useful.

For the retirees the mean score on the scale for men and women was identical. This indicates that men and women felt that their former job met social and personal needs. The retirees response to this question was retrospective.

The older workers' sample answered the items in the scale based on their current job. Men and women only differed slightly on the mean score for the scale. Women felt their job met slightly more social and personal needs than did men (men 3.7 and women 3.9).

Leisure Activity Involvement. Leisure activity involvement is measured by four two item indices. The leisure activity indices measure the extent to which respondents feel activities are important. For example, activities listed were such things as club membership, sport activities, music, museum, or movie. The four divisions of leisure activity are: outside activities, social relationships, cultural activities, and sport activities. A high score indicates that the leisure activity is important.

For the retiree sample, as one would expect, sport activities were scored higher by the male respondents. The female respondents average score was higher on the social relations and cultural activities scale than the male respondents.

For the older worker sample the females' average score was higher for outside activities and cultural activities. Again the mean score of the male respondent was higher for the sport activities index.

Pre-retirement Planning. The final index constructed was for the retirees sample only. The pre-retirement planning involvement index was made up of seven items that measure the retirees' involvement in retirement planning activities prior to their actual retirement. The item in the index asked respondents if they were involved in such planning tasks as: money management, health care plans, retirement activities, or alternatives to retirement.

Some research literature has examined the effect of planning for retirement. Unfortunately most studies on pre-retirement planning have concerned themselves with acceptance or rejection of specific formal approaches. The pre-retirement index in this research measures the extent to which retirees were involved in any type of pre-retirement preparation.

The mean score for men and women retirees on the retirement planning scale were quite comparable. Both male and female respondents were actively involved in some general form of retirement planning activity. For the female respondents, 35 percent responded they had not established a retirement savings program compared to 12 percent of the male respondents. Over 48 percent of the women discussed retirement alternatives with family or friends compared to 62 percent of the male respondents. It appears by looking at the frequency distribution of several items in the pre-retirement planning index men and women take somewhat different approaches, but both are involved in some planning activities prior to retirement.

This section has provided an in-depth look at the indices constructed. A discussion of the similarities and differences between the average score of women and men was presented. The overall interpretation of the index was reviewed and the uniqueness of responses on individual items in the index was highlighted.

### Statistical Methods

The specific statistical techniques utilized in the research are explained below.

Univariate analysis. Frequency distributions were examined prior to employing hypothesis testing statistical techniques. Frequency distributions examine only one variable at a time. The absolute and relative frequencies provide a general description of the two samples. The general descriptions of the two samples were presented earlier in this chapter. The means were used to summarize many of the characteristics and behaviors of the two samples.

Bivariate analysis. Joint frequency distributions (crosstabulations) are used to a limited extent in this research. Crosstabulations can be used to examine the association among two or more variables (Babbie 1973). Crosstabulations were used to rank the variable of occupation, and to assist in selection of an income variable.

The Pearson Correlation coefficient is another measure of association between two variables. The larger the absolute value of the correlation, the stronger the association is between the variables. Correlations between the items considered to be included in the constructed indices were examined using the Pearson Correlation

coefficient. This process was discussed earlier in this chapter in the section about Index construction.

Multivariate analysis. The first multivariate technique employed in this research is multiple regression analysis. Multiple regression is a complex mode of analysis that analyzes the contribution of two or more independent variables to explain the variance of a single dependent variable. Multiple regression is used in this research in determining the contribution of the independent variables to the four facets of retirement satisfaction which are: financial security, work orientation, retirement orientation, and general retirement feelings. Multiple regression is also used to determine if there exists differing patterns between men and women on the predictors of retirement satisfaction and the timing of retirement.

The second multivariate technique employed in this research is discriminant analysis. In a discriminant analysis the dependent variable represents group membership. A discriminant function in simple terms tells the group to which each member probably belongs. According to Kerlinger (1975) the discriminant function provides the "best" prediction of the "correct" group membership of each respondent.

Discriminant analysis was used in testing the hypothesis dealing with the timing of retirement. The identical scales and demographic variables were used to predict if respondents from the two samples could be correctly classified as retired or as an older worker. Discriminant analysis was also used on the two samples separately to determine if the independent variables significantly discriminate the timing of the retirement age: early, on-time or deferred.

### Summary of Research Methodology

This chapter has presented the three major research questions:

1. What are the variables which determine retirement satisfaction of recently retired individuals?
2. What are the variables that determine the age at which an older individual retires from the labor force?
3. Do the variables which determine retirement satisfaction and the timing of retirement differ between men and women?

The proposed conceptual model utilized five basic factors as predictors of retirement satisfaction and timing. More specifically the factors include: demographic characteristics, health status, income level, work attitudes and leisure activity involvement. The conceptual model was developed to answer the major research questions.

This chapter also provides a description of the high technology firm from which the subjects were sampled and the random sampling techniques employed. The demographic characteristics of the two samples are described in detail. The complete survey instruments employed in this research had many questions that were taken directly or modified slightly from survey instruments found in the literature.

The final part of the chapter discussed the data analytic techniques employed and the operationalization of the variables. Index construction is used for many of the variables in this research. It appears that carefully constructed indices can aid the research by providing more comprehensive and accurate assessments of a given construct. The overall interpretation of each composite measure as well as individual variables were presented to assist in the interpretation of the multivariate analysis.

## CHAPTER IV

### RESEARCH FINDINGS

This chapter provides a discussion of the findings of the dissertation research. The discussion is organized around two central questions: (1) What are the correlates of satisfaction in retirement? and (2) What are the correlates of the timing of the retirement decision? As discussed in Chapter II, a minimal body of literature exists on the differential effects of the retirement phenomenon on men and women. Due to this phenomenon, men and women will be analyzed both as a total group and individually.

This chapter details the results of the research analyses. First, a description of the variables used in the final analysis is presented. Secondly, the results of the regression and discriminant analyses are investigated and discussed. Lastly, the significant predictors of the two central research questions are presented in conjunction with the research questions and the conceptual model presented in Chapter III.

#### Variable Adjustment Process

Figure 1 and Figure 2 presented in Chapter III are the conceptual models for all the analyses. The variables used to predict the outcome measures were divided into the following major categories:

1. Demographic characteristics
2. Health status
3. Income level
4. Work attitudes
5. Leisure activity involvement

This section describes the techniques utilized to drop or retain variables for the analyses.

The majority of the variables discussed in Chapter II are used in the analysis. The independent or predictor variables in both the regression and discriminant equations were entered in the order presented in the conceptual model. The demographic characteristics of age, marital status, gender and occupation were entered first. The two indices measuring health were entered second. Third, was the income variable. The fourth were the two indices measuring work related attitudes. Lastly were the four, two variable, indices measuring leisure activity involvement. The Pearson correlation coefficients for all the independent variables considered in the analysis appear in Table XXIII.

TABLE XXIII

INTERCORRELATIONS AMONG DEMOGRAPHIC, HEALTH, INCOME, WORK AND  
LEISURE ACTIVITY VARIABLES FOR RETIREES AND  
OLDER WORKERS SAMPLES

1. Age		.20*	.08	.25*	.15	.23*	.08	.29*	.11*	.17*	.16	.02	.07	.03
2. Marital Status	.14*		.27*	.04	.10	.13*	.01	.34*	.08	.06	.07	.02	.08	.15*
3. Gender	.01	.40*		.14*	.19*	.13*	.04	.15*	.14*	.02	.12*	.16*	.12*	.08
4. Education	.13*	.07*	.29*		.45*	.20*	.12*	.27*	.09	.15*	.10	.05	.08	.06
5. Occupation	.16*	.12*	.30*	.41*		.15*	.06	.31*	.23*	.02	.10	.15*	.11*	.00
6. Self-Report Health	.08*	.02*	.05	.05	.03		.59*	.23	.17*	.09	.13*	.02	.00	.09
7. Subjective Health	.15*	.11*	.12*	.17*	.16*	.43*		.12*	.08	.15*	.02	.02	.02	.04
8. Household Income	.26*	.49*	.34*	.34*	.36*	.20*	.06*		.10	.01	.20*	.01	.05	.10
9. Job Descriptors	.01	.09*	.12*	.11*	.23*	.14*	.11	.15*		.01	.04	.12*	.05	.02
10. Job Rewards	.11*	.09*	.12*	.13*	.08*	.01	.12*	.12*	.05		.04	.02	.05	.04
11. Outside Activities	.02	.08*	.17*	.02	.07*	.02	.02	.10*	.04	.11*		.23*	.34*	.06
12. Social Relationships	.01	.11*	.08*	.00	.04	.00	.04	.01	.04	.16*	.29*		.29*	.36*
13. Cultural Activities	.03	.14*	.16*	.20*	.14*	.01	.09*	.03	.03	.10*	.27*	.25*		.20*
14. Sport Activities	.07*	.01	.13	.04	.13*	.07*	.04	.09*	.06*	.10*	.12*	.32*	.20*	

Note: Correlation coefficients above the diagonal describe relationships within the retirees' sample; figures below the diagonal represent correlation coefficients for the older workers' sample.

### Correlated Variables

The self-reported health index and the subjective health measure two differing aspects of individual's health status. Self-reported health and subjective health are highly correlated for both samples. For multiple regression to produce the best prediction estimates, none of the independent variables should be perfectly correlated with other independent variables (Lewis-Beck 1980). The two health indices for both samples (retirees  $r=.59$ ; older workers  $r=.43$ ) are intercorrelated, but even the largest coefficient of correlation lies a good distance from perfect collinearity of 1.0. In addition, the two health indices in this research have differing patterns of correlation with the outcome variable. This is especially noticeable in the older workers' sample. Therefore, the two health indices are entered in the regression equation in one step.

In addition, the education and occupation variables, components of the demographic characteristics, are highly correlated (retirees  $r=.45$ ; older workers  $r=.41$ ). Empirically, it would be expected that education and occupation are highly correlated. Conceptually, the two variables measure somewhat different constructs. The variables are not so highly correlated to justify the usage of only one of them. The variables of education and occupation also have differing patterns of correlation with the outcome variables especially when analyzing the differences between men and women. In looking at the correlation coefficients between income and education for women, income and education are not as highly correlated (retirees  $r=.34$ ; older workers  $r=.29$ ) as they are for men (retirees  $r=.49$ ; older workers  $r=.38$ ).

### Variables Dropped

The pre-retirement planning index was dropped from the analysis of satisfaction in retirement for several reasons. The stepwise specification process was initially used to select the most useful predictor variables of retirement satisfaction. The preliminary stepwise regression results showed the pre-retirement planning index in all cases explained the least amount of variance with all the dependent variables. The most important reason is when looking at the correlation coefficients of pre-retirement planning with the four outcome measures of retirement satisfaction, the coefficients were all below .06. It appears that for this sample, pre-retirement planning is not an appropriate predictor of satisfaction in retirement. In addition, the pre-retirement planning index did not significantly correlate with any of the variables chosen for analysis.

Much research effort has been devoted to testing the significance of pre-retirement planning activities on satisfaction in retirement. Generally, the literature suggests there is a clear and urgent need for retirement preparation programs (Atchley 1976b; Prentis 1980). The role of pre-retirement programs is to improve adjustment and reduce potential problems in retirement. This research, however, suggests that the impact of pre-retirement planning activities is unclear. It seems that the need for retirement preparation has been assumed, but little evaluation of the impact of the programs has been completed. This study suggests that pre-retirement planning is not a correlate of retirement satisfaction. It could be that existing retirement efforts do not contribute to retirement satisfaction.

As discussed in Chapter III, the variable of income for both samples is measured by two questions. The first question refers to the respondents' own income and the second question refers to the respondents' household income. The second question, household income, was chosen for use in the analyses. For both samples crosstabulations were done comparing marital status (married or not married) with own and household income. The crosstabulation results generally showed that the own and household income variables are closely associated.

In short, for the retirees, 31.1% of the married respondents reported their own and household income in the same category. For the non-married retirees, 94.1% of the respondents reported their own and household income in the same category. For the older workers' sample, the percentages are 27.0% and 83.8% respectively. Therefore, if own income is used in the analysis, it will not correctly reflect the real income situation of the respondent. The greater percentage of married respondents in both samples reported household income higher than their own reported income. For this reason, household income was chosen as a more accurate predictor of income and was, therefore, used in the analyses.

Table XXIV shows the Pearson correlation coefficients between the four outcome variables of retirement satisfaction and the independent variables. The independent variables have differing patterns of correlation with the four outcome variables. Table XXV includes the correlation coefficients between the timing of retirement variable and the independent variables for both samples.

TABLE XXIV

CORRELATION COEFFICIENTS AMONG RETIREMENT SATISFACTION MEASURES  
AND THE INDEPENDENT VARIABLES

A. Financial Security	.02	.12*	.04	.02	.03	.20*	.17*	.38*	.21*	.16*	.16*	.00	.10	.18*
B. Work Orientation	.10	.08	.11*	.05	.01	.06	.08	.07	.16*	.06	.16*	.07	.10	.00
C. Retirement Orientation	.03	.05	.07	.02	.01	.01	.01	.08	.01	.05	.24*	.12*	.03	.11*
D. Retirement Feelings	.01	.03	.06	.11*	.05	.16*	.11*	.23*	.30*	.04	.06	.08	.06	.20*

TABLE XXV

CORRELATION COEFFICIENTS AMONG THE TIMING OF RETIREMENT MEASURES  
AND THE INDEPENDENT VARIABLES

A. Age Did Retire (Retirees' Sample)	.97*	.20*	.10	.19*	.12*	.24*	.10	.22*	.09	.16*	.14*	.03	.07	.02
B. Age Plan To Retire (Older Workers' Sample)	.54*	.12*	.02	.01	.15*	.04	.19*	.16*	.05	.22*	.03	.01	.02	.07*

For all the statistical analyses, gender and marital status were used as dummy variables. Males were coded as one and females were coded as zero. In addition, persons who responded to the marital status question with an answer of widowed, divorced or never married were classified as non-married and coded as zero; those who responded as being married were coded as one.

This section provided an explanation of the techniques used to retain or drop specific variables. The pre-retirement index is no longer part of the model in the prediction of retirement satisfaction. The income measure used in the prediction of both retirement satisfaction and the timing of the retirement decision is household income. Finally, the two health indices remain in the conceptual model. The proposed model presented in Chapter III established a causal ordering among the sets of variables and this order did not vary in the final series of analyses.

#### MULTIPLE REGRESSION FINDINGS

Multiple regression analysis is a statistical technique which analyzes the relationship between a dependent variable and a set of predictor variables. In this research multiple regression analysis is used to find the best linear predictors of retirement satisfaction and the best linear predictors of the age of retirement.

As discussed previously, for all the regression analyses, the predictor variables were used in a hierarchical fashion as presented in the conceptual model. The significance level for entry was set at .10. Variables which do not significantly contribute to the regression

equation are not entered into the analysis. Given a ratio of 10 variables to 908 cases in the older workers sample, a method for entry beyond that dictated by the conceptual model had to be chosen so that capitalization on chance was at a minimum. Selecting .10 for entry is more stringent than the default option of .05 and permits entry of variables which contribute to the regression equation without the entry of variables that provide redundant information (Cohen and Cohen 1975).

#### Layout of the Findings

The research findings for all the regression analyses are presented in the following manner. First, the dependent variable is reviewed. Secondly, a table is presented of the individual results of the analysis. The table lists the variables that were selected in the regression equation, the beta weight, the regression coefficient (as indicated by  $b$ ), and the  $R^2$  for the entire model. Finally, the significant predictor variables and the analysis between the male and female samples are discussed.

The betas in all the multiple regression result tables which follow are presented as the standardized partial regression coefficients. The coefficients show the expected change in retirement satisfaction or the age of the retirement decision for a standard deviation change in any predictor variable while holding the other independent variables constant. The regression coefficient is the unit of change in the dependent variable associated with the change in the independent variable as entered.

The first stage of the multiple regression analysis is organized around the four facets of retirement satisfaction. For each facet there

will also be a discussion of the differential effects of retirement satisfaction between men and women. In general, retirement satisfaction is the measure of positive feelings retirees express after leaving the labor force.

The intent of utilizing stepwise regression procedure was to reduce problems of multi-collinearity. In addition the procedure enabled this research to find the best combination of variables for predicting the dependent phenomenon. In sum, the use of stepwise regression enabled this research to develop a reliable predictive model with the least collinearity. The correlation coefficients among variables for men and women can be viewed in Appendix C.

The following independent variables were entered into all the regression equations: occupation, marital status, gender, education, household income, self-report health, subjective health, job descriptors, job rewards, outside activities, social relationships, and sport activities. However, all the variables are not included in the regression tables if the F-ratios were insufficient ( $p \leq .05$ ). In other words there exists variables that were not entered into the stepwise analysis because they failed to contribute significantly to the regression equation.

#### Financial Security

The first facet of retirement satisfaction that is analyzed is financial security. Financial security is a 14-item index that measures the respondents' feelings in regard to their retirement financial situation. Results of the multiple regression analysis is presented in Table XXVI. The equation resulting from this procedure explained 23% of

the variance. The significant predictors of the financial security facet of retirement satisfaction are self-reported health, household income, job descriptors, and job rewards.

When analyzing the difference between men and women, it appears that household income contributed to the explanation of financial security in both samples. A  $R^2$  of .13 was produced in the male sample and a  $R^2$  of .14 was produced in the female sample. It should be noted that in both the samples the contribution of the other variables explained a low percentage of the variance in financial security.

TABLE XXVI  
MULTIPLE REGRESSION ANALYSIS PREDICTING  
RETIREMENT SATISFACTION

	BETA	b
<hr/>		
Retiree Sample (N=160)		
Self-report Health	.12	.04*
Household Income	.36	.03**
Job Descriptors	.18	.04**
Job Rewards	.14	.04*
$R^2 = .23$		

The most important facet of retirement satisfaction in the investigation of financial security is that men and women in general do not differ on the primary determinant. These findings demonstrate that household income contributes to the explanation of financial security in both men and women. Table XXVII shows the results of the comparison between men and women.

### Work Orientation

The second facet of retirement satisfaction that is analyzed is work orientation. Work orientation is a 3-item index which describes the respondents' feelings about missing their job. Results of the multiple regression analysis are presented in Table XXVIII and Table XXIX. Gender explained only 3% of the variance in work orientation in the total retiree sample. When looking at the regression analysis between men and women, educational level accounted for 12% of the variance in the male sample and 6% in the female sample. The job descriptor index explained an additional 10% of the variance, but was nonsignificant in the male sample.

TABLE XXVII  
MULTIPLE REGRESSION ANALYSIS PREDICTING  
RETIREMENT SATISFACTION

	BETA	b
<hr/>		
Male Sample (N=70)		
Self-reported Health	.25	.04*
Household Income	.38	.03**
R <sup>2</sup> = .19		
Female Sample (N=90)		
Household Income	.37	.03**
Job Rewards	.24	.06*
Job Descriptors	.19	.03*
R <sup>2</sup> = .23		

TABLE XXVIII  
MULTIPLE REGRESSION ANALYSIS PREDICTING  
RETIREMENT SATISFACTION

	BETA	b
<hr/>		
Retiree Sample (N=153)		
Gender	.16	-.13*
$R^2 = .03$		

TABLE XXIX  
MULTIPLE REGRESSION ANALYSIS PREDICTING  
RETIREMENT SATISFACTION

	BETA	b
<hr/>		
Male Sample (N=70)		
Education	-.30	-.07**
Cultural Activities	-.23	-.10*
$R^2 = .17$		
Female Sample (N=83)		
Education	.25	.14*
Job Descriptors	.32	.15**
$R^2 = .16$		

The findings show no variable contributed to the explanation of work orientation. The difference between men and women are the importance of cultural activities versus job descriptors. For males and females education level contributed to retirement satisfaction. For the male sample education explained 12% of the variance compared to

6% for the female sample. The scale cultural activities explained an additional 5% of the variance for the male sample and for the female sample the job descriptor index explained an additional 10%. In sum, for the male sample 17% of the variance in the work orientation facet of retirement satisfaction can be accounted for by the variance in the linear combination of the variables education and cultural activities. For the female sample the variance accounted for is 16% and the combination of the independent variables are education and job descriptors.

#### Retirement-Leisure Orientation

The third facet of retirement satisfaction that is analyzed is retirement-leisure orientation. Retirement-leisure orientation is a 6-item index which measures the respondents' feelings about leisure life. The results are presented in Table XXX and Table XXXI. The equation resulting from this procedure explained 13% of the variance in retirement-leisure orientation. It would seem appropriate that leisure types of activities would provide some prediction power of retirement-leisure orientation.

Despite the similarity in the overall proportion of variance in retirement-leisure orientation explained by leisure type variables, a small between sample difference did appear. Education explained 5% of the variance in the female sample but was nonsignificant in the male sample and nonsignificant in the total sample.

TABLE XXX  
MULTIPLE REGRESSION ANALYSIS PREDICTING  
RETIREMENT SATISFACTION

	BETA	b
<hr/>		
Retiree Sample (N=167)		
Outside Activities	.32	.29*
Social Relationships	.22	.26*
R <sup>2</sup> = .13		

TABLE XXXI  
MULTIPLE REGRESSION ANALYSIS PREDICTING  
RETIREMENT SATISFACTION

	BETA	b
<hr/>		
Male Sample (N=74)		
Outside Activities	-.30	-.29**
Sport Activities	.26	.27*
R <sup>2</sup> = .16		
Female Sample (N=93)		
Education	.15	.17
Outside Activities	.26	.21*
R <sup>2</sup> = .11		

### Retirement Feelings

The final facet of retirement satisfaction that is analyzed is retirement feelings. Retirement feelings is a 13-item index that measures the respondents' feelings about their retirement situation in general. Results of the multiple regression analysis are presented in Table XXXII. The final equation resulting from this explained 17% of the variance. The significant predictors of the retirement feelings facet of retirement satisfaction are self-reported health, job descriptors and cultural activities.

TABLE XXXII  
MULTIPLE REGRESSION ANALYSIS PREDICTING  
RETIREMENT SATISFACTION

	BETA	b
<hr/>		
Retiree Sample (N=152)		
Self-report Health	.15	.04*
Job Descriptors	.34	.07**
Cultural Activities	.18	.04*
R <sup>2</sup> = .17		

When observing the differences between men and women it appears that health contributed an R<sup>2</sup> of .22 in the male sample. An R<sup>2</sup> of .20 was produced in the female sample. The significant predictors of the retirement feelings facet for women are job descriptors and cultural activities. The most important finding in this investigation of the general retirement feelings is that men and women do differ on the major predictors of retirement satisfaction. The results of the multiple

regression analysis comparing men and women is presented in Table XXXIII. It is interesting to see that health status is an important variable to men but nonsignificant to women in explaining retirement satisfaction.

TABLE XXXIII  
MULTIPLE REGRESSION ANALYSIS PREDICTING  
RETIREMENT SATISFACTION

	BETA	b
<hr/>		
Male Sample (N=67)		
Self-report Health	.47	.09**
R <sup>2</sup> = .22		
Female Sample (N=85)		
Job Descriptors	.38	.09**
Cultural Activities	.25	.07*
R <sup>2</sup> = .20		

#### Discussion of Retirement Satisfaction

The regression analyses that have been presented are useful for differentiating the contribution of the various variables on the four facets of retirement satisfaction. Previous literature and research postulated that only one variable is the primary correlated of retirement satisfaction. The results of this research conclude several variables have an impact on the retirement satisfaction experience of the retirees sample.

The results of the regression in this research show that no single variable alone contributes a large portion of the variance in the

four facets of retirement satisfaction. However, the findings do demonstrate that retirement satisfaction is largely contingent upon several variables: retirees' health status, household income, job attitudes, education and leisure activities.

#### RETIREMENT TIMING DECISION

The second part of the multiple regression analysis is organized around the timing of the retirement decision. The retirement timing decision analyzes the actual age of retirement for the retirees' sample. In addition, the differential impact of the timing of the retirement decision between men and women will be analyzed.

##### Retirees

Results of the multiple regression analysis are presented in Table XXXIV. The equation resulting from this procedure explained only 9% of the variance. The significant predictors in the regression equation are marital status, education, and self-reported health. The low contribution of the set of variables may indicate that the unexplained variance may be due to the effect of unmeasured variables in the timing decision.

Despite the low overall variance that is explained in the regression equation on the total retiree sample, the comparison between men and women provides interesting results. For the female sample, the equation resulting from the regression procedure explained 19% of the variance. Marital status contributed significantly to the explanation of the timing of the retirement decision in the female sample only producing an  $R^2$  of .14. In the female sample, educational level

explained an additional 5% of the variance. It should be stressed that marital status and the educational level variables were not associated with the timing of the retirement decision in the male sample. It seems apparent to conclude that for female retirees the retirement timing decision is predicted on marital status and educational level.

TABLE XXXIV  
MULTIPLE REGRESSION ANALYSIS PREDICTING THE TIMING OF  
RETIREMENT FOR THE RETIREE SAMPLE

	BETA	b
<hr/>		
Retiree Sample (N=169)		
Marital Status	-.18	-2.31*
Education	-.11	- .48
Self-Report Health	-.17	-1.01*
R <sup>2</sup> = .09		
Male Sample (N=76)		
Household Income	-.25	- .40*
R <sup>2</sup> = .06		
Female Sample (N=93)		
Marital Status	-.37	-3.94**
Education	-.24	-1.44*
R <sup>2</sup> = .19		

Older Workers

Results of the multiple regression analysis are presented in Table XXXV. The final equation resulting from the regression analysis explained 12% of the variance. The significant predictors of the timing of the retirement decision for the total older workers' sample are occupation, marital status, subjective health, job rewards, job descriptors, and involvement in sport activities.

TABLE XXXV

MULTIPLE REGRESSION ANALYSIS PREDICTING THE  
TIMING OF RETIREMENT FOR THE OLDER WORKER SAMPLE

	BETA	b
<hr/>		
Older Worker Sample (N=632)		
Occupation	-.16	- .47**
Marital Status	-.11	-1.35**
Subjective Health	.21	-1.48**
Job Rewards	.15	1.56**
Job Descriptors	.09	.69**
Sport Activities	-.08	- .58*
R <sup>2</sup> = .12		
Male Sample (N=309)		
Occupation	-.16	- .51**
Subjective Health	.23	1.97**
Self-report Health	-.12	-1.22*
Household Income	-.13	- .30*
Job Descriptors	.19	1.51**
Job Rewards	.15	1.56**
R <sup>2</sup> = .16		
Female Sample (N=323)		
Marital Status	-.16	-1.73**
Occupation	-.13	- .43*
Subjective Health	.19	1.51**
Job Rewards	.18	1.53**
R <sup>2</sup> = .12		

From the differential effect of the retirement timing decision between men and women it appears that subjective health contributed to the explanation of the planned retirement decision in both samples. An  $R^2$  of only .05 was produced in both the male and female sample. It should be noted that in both the samples several variables contributed to the explanation of the retirement timing decision. However, it appeared that subjective health status was the largest contributor.

An important facet in the investigation of the retirement timing decision is that in both the retirees' and older workers' female sample, marital status contributed significantly to the explanation of the decision. This finding indicated that a difference relative to major retirement timing predictors exists between men and women.

#### DISCRIMINANT ANALYSIS FINDINGS

Given that the regressions equations for the retirees and the older workers showed low  $R^2$  an alternate approach was tried. Discriminant analysis is a statistical technique which provides the ability to study the differences between two or more groups of subjects with respect to many variables simultaneously (Klecka 1980). In particular, this research wanted to find out if it is possible to discriminate the retirement timing decision on the basis of demographic, income, health, job, and leisure-activity variables. The discriminant analysis is used to measure how well the set of variables discriminate and which variables are most powerful.

Discriminant analysis was used on the retirees and older workers separately to determine which independent variables discriminate the

timing of the retirement decision: early, on-time, or deferred. Unfortunately, for both samples the classification results are somewhat inconclusive. Table XXXVI indicates that the lambdas are close to 1.0.

TABLE XXXVI  
DISCRIMINANT ANALYSIS SUMMARY  
OF WILKS' LAMBDA

	VARIABLE IN	WILKS' LAMBDA
RETIREEES	Job Rewards	0.97 *
	Outside Activities	0.93 *
OLDER WORKERS	Occupation	0.98 *
	Educational Level	0.96 *
	Marital Status	0.95 *
	Gender	0.94 *
	Subjective Health	0.89 *
	Household Income	0.85 *
	Job Rewards	0.84 *
	Job Descriptors	0.83 *
	Outside Activities	0.83 *
	Sport Activities	0.82 *

\*  $p \leq .05$

The SPSS subprogram discriminant produces a plot of the cases in the form of a histogram. The plot of the discriminant scores are shown in Figure 3 (retirees) and Figure 4 (older workers). Examination of the plot shows the degree to which the independent variables predict the retirement timing decision: early, on-time, or deferred. The two plots are a visual representation of why a percentage of the retirees' group and older workers' group were classified incorrectly. The centroids in both Figure 3 and Figure 4 are very close to one another and the cases are overlapped to a large degree. The plots show that the independent variables are somewhat limited in discriminating the early, on-time, or

deferred retirement decision. The plot of the discriminant scores in Figure 3 and Figure 4 show the clustering and overlapping of the three types of retirement decisions (1 = early, 2 = on-time, 3 = deferred, # = unknown, \* = centroid). Table XXXVII below shows the classification results generated by the discriminant analysis.

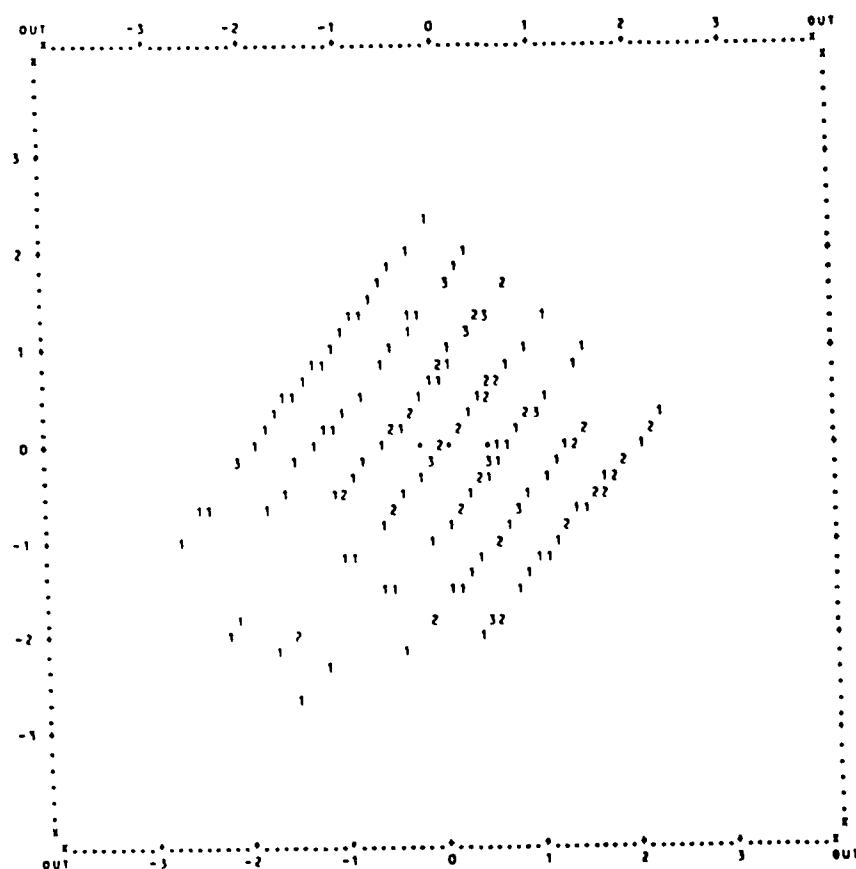


Figure 3. Scatterplot of retirees' sample.



The classification tables show that the discriminating variables predict the early retirement decision for both samples, but do not discriminate accurately the on-time or deferred timing decisions.

As discussed earlier in this section, the values of Wilks' lambda that have values which are close to zero denote a high degree of discrimination. As the Wilks' lambda moves toward its maximum value of 1.0, it is interpreted as discriminating less. When the values of lambda equal 1.0, there exists no group difference and the group centroids are identical (Klecka 1980).

Table XXXVI shows the values of the Wilks' lambda on the variables that were eligible for inclusion in the discriminant analysis for the two samples. None of the values of the lambda are 1.0, but neither are any of the variables highly discriminating.

#### Discussion of Discriminant Analysis

The percentage of correctly classified cases in combination with the Wilks' lambda are used to indicate the amount of discrimination contained in the variables. The magnitude of the percentage classified correctly in relation to the expected percentage of correct classification is an important finding. When there are three groups, it can be expected to get 33% of the predictions correct by pure random assignment (Klecka 1980). For the retirees' sample, over 71% of the cases were classified correctly and for the older workers' sample the cases classified correctly was 64%. However, the values for the Wilks' lambda are interpreted as not highly discriminating. Therefore, it must be concluded that the independent variables are not significant in discriminating the three types of retirement decisions: early, on-time,

and late. The classification procedures that were presented earlier in this section do, however, show an adequate percentage of correct classifications.

The use of this method of discriminant analysis in future research could be useful to predict the timing of the retirement decision. A set of satisfactory discriminating variables would need to be developed. The possibility of obtaining the appropriate variables is discussed in the final chapter.

#### SUMMARY OF REGRESSION AND DISCRIMINANT ANALYSIS

Regression analysis was used to determine the significant predictors of the four facets of retirement satisfaction. In general, the major predictors of retirement satisfaction are household income, self-reported health, and job attitudes. The two major predictors, income and health, support the findings in the literature concerning the correlates of retirement satisfaction of retirees. The findings of the major predictors of retirement satisfaction help to assess the validity of existing research. However, additional findings of this research suggest the presence of additional relevant variables that contribute to retirement satisfaction. This is indicated by the low  $R^2$  for all the regression equations.

When analyzing the differential impact of retirement satisfaction between men and women, interesting results appeared. The first facet of retirement satisfaction, financial security, resulted in household income being the most important predictor for both samples. For the second facet of retirement satisfaction, work orientation, educational level was a significant predictor for both samples, but job

educational level was a significant predictor for both samples, but job descriptors was found to be significant for only the female sample. The retirement-leisure orientation facet of retirement satisfaction indicated that educational level for women only contributed to the outcome. The final facet of retirement satisfaction, retirement feelings self-reported health, was significant for men only. The significant predictor for women on this facet of retirement satisfaction was the variable job descriptors.

The findings on the differential impact of retirement between men and women supports the limited research in this area. The predictors of retirement satisfaction are different for women as compared to men. In terms of a substantive interpretation, it is understandable why household income would be more salient to both samples. Income is a major predictor of satisfaction in the retirement years. It appears that health status is a significantly stronger predictor of retirement satisfaction among men compared to women. The reported health characteristics of men on both health indices were lower than for women. In short, health status has significant effects on retirement satisfaction for men.

The comparative regression analysis showed that job descriptors were significant predictors of two of the facets of retirement satisfaction for women. It is interesting to note that the relationship between satisfaction and the former job for women is strong. The job descriptor index was described in Chapter III as the feelings the respondents had in regard to the physical demands of the former job and former job pressures. It appears that the job descriptors index was a strong predictor of retirement satisfaction for women. The average

scores of the job descriptors index was higher for women compared to men. The job related index showed that women on the average had less job pressures and job demands.

In summary, the multiple regression analysis for the retirees sample on retirement satisfaction suggests that several independent variables predict retirement satisfaction. No one variable alone is the major contributor to the four facets of retirement satisfaction.

The regression analysis for the timing of the retirement decision in both the retirees and older workers did not reveal any strong predictors. The  $R^2$  for the retirees model was .06 and the  $R^2$  for the older workers model was .12. In terms of an interpretation of these results, perhaps the determinants of the retirement timing decision were not captured by the measures used here. The final chapter will discuss possible other factors that could be used as predictors of the retirement timing decision. However, the results of the regression analysis for the older worker sample did show that occupation, marital status, subjective health, job rewards, job descriptors, and involvement in sport activities in combination explained a significant 12% of the variance.

As stated, the results of the regression analysis for both samples is not impressive. The prediction power of the variables are significant. In evaluating the weakness in the predictive power of the individual variables, perhaps the strong predictive variables lie outside the conceptual model. However, an important finding in that analysis of retirement timing is the differential impact of the variables between men and women. In looking at the outcome of the regression analysis of the retired female sample, marital status and

education contributed to 19% of the variance. It appears that whether a woman is married or not married is a significant predictor of the retirement timing decision.

The discriminant analysis was done to further investigate the timing of the retirement decision for both retirees and older workers. The purpose of the analysis was to determine if the independent variables discriminate the timing of the retirement decision which were classified as early, on-time, or deferred. The results of the discriminant analysis were somewhat inconclusive. It appears that none of the variables adequately discriminated the timing of retirement. It appears that the variables used do not distinguish the age category at which a retiree did retire or an older worker planned to retire.

This chapter has presented the detailed findings of the regression and discriminant analysis. The findings indicated changes are needed in the conceptual model presented in Chapter III. For retirement satisfaction, the model using the four facets of retirement satisfaction in composite is represented in Figure 5. The conceptual model for the female sample the model is represented in Figure 6. The conceptual model presented in Chapter III was not developed for women only, but it is interesting to view the differences. For the retirement satisfaction model for the retiree sample overall the demographic characteristics have been reduced. The variable gender was the only significant predictor. In looking at the intervening factors, the pre-retirement planning index has been discarded. For the female retiree sample, education is the only demographic characteristic in the revised model. Health status and the pre-retirement planning indices have been removed.

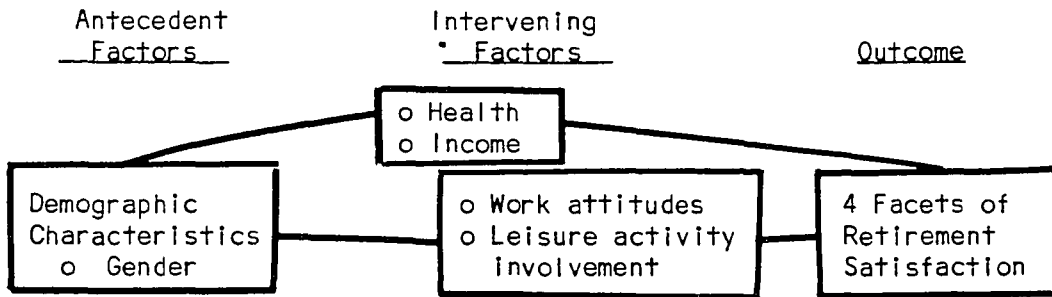


Figure 5. Revised conceptual model predicting retirement satisfaction.

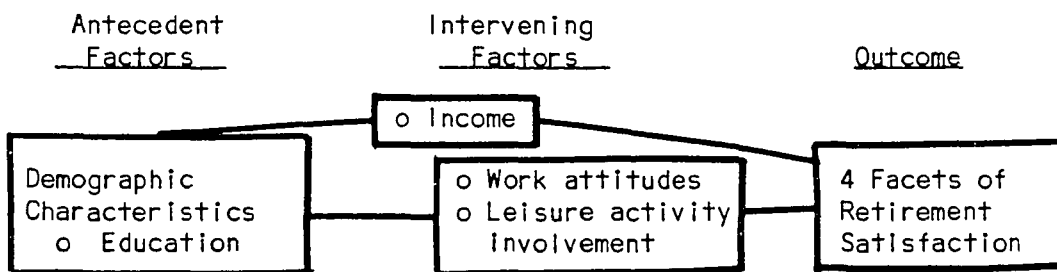


Figure 6. Conceptual model predicting retirement satisfaction for the female sample.

The revised model for the timing of the retirement decision is presented in Figure 7. The model for the timing of the retirement decision contains three demographic characteristics: marital status, educational level, and occupation. There exists no further changes in this model.

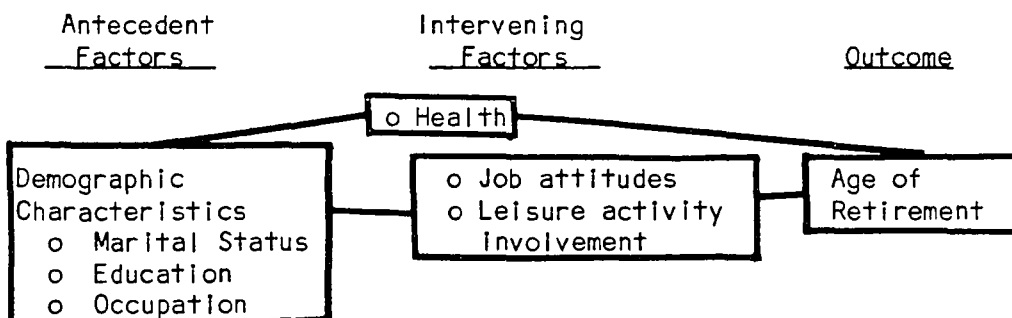


Figure 7. Revised conceptual model predicting the timing of the retirement decision.

The two conceptual models presented in Chapter III required minimal revision after the analyses were completed. In summary, the two outcome variables, retirement satisfaction and the timing of the retirement decision, are the function of several demographic predictors and selected intervening variables such as Income and job attitudes. The model as previously stated did not need major revisions in its format but the low  $R^2$  indicates that the major predictors of retirement satisfaction and timing have not as yet been determined.

Chapter V interprets the various research findings that have been presented in conjunction with the prior research findings discussed in Chapter II. The final chapter summarizes the contrasts in the research findings, discusses possible policy implications and makes suggestions for future research.

## CHAPTER V

### CONCLUSIONS

#### POLICY IMPLICATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This chapter is divided into three major sections. Section one will summarize and interpret the major research findings discussed in Chapter IV. Section two will outline the policy implications of these findings. Section three will recommend suggestions for future research.

The basic purpose of the research was to determine and analyze the predictors of retirement satisfaction and the predictors of the timing of the retirement decision. The findings showed an interesting mix of variables that predicted the outcome measures. The findings of this research somewhat replicated prior research in showing the relative strength of health and income variables as predictors of retirement satisfaction. The timing of the retirement decision analysis suggested that a number of predictor variables in combination determined the outcome. Marital status was a substantially stronger predictor of the retirement timing decision for women than it was for men. The association between the timing of the retirement decision and the various independent variables came as no surprise, though the explanation power of the predictor variables was somewhat low.

A secondary purpose of the research was the testing of some alternate types of statistical methods. In general, a large proportion of gerontological research has not used a large variety of statistical

methods. The index construction techniques applied in this research have been used in other social sciences, especially psychology. Gerontology research has seldom used index construction techniques. The construction and usage of indices for the research definitely enhanced the research findings. Indices assist the research by providing more accurate assessments of constructs. Single items often provide only a partial assessment of a construct. It is extremely difficult for a single item to measure a complex variable. The indices developed for this research had good reliability coefficients and could be used for alternate types of analysis.

#### INTERPRETATION OF RESEARCH FINDINGS

This section of Chapter V will provide a general interpretation of the major research findings. The scope of the data of this project was extremely large as can be seen by the two questionnaires found in Appendices A and B. Therefore, the findings presented in this chapter are only those which are directly related to the development of the conceptual model and the testing of the research questions.

##### Correlates of Retirement Satisfaction

The findings of this research indicate that satisfaction in retirement is partially determined by gender, health status, income, work attitudes, and some forms of leisure activity involvement. The findings somewhat replicated earlier research in showing the relative strength of income.

The major difference is that for this research very little of the variance is explained by any of the variables. This research

utilized the constructs described in the literature and attempted to measure the constructs in a comprehensive method. The index construction technique employed was discussed in Chapter III. It appears to be an important finding that the  $R^2$  in all the regression equations are significant, but explained a low percentage of the variance in retirement satisfaction. The determinants of retirement satisfaction need to be re-examined in order to improve the models predictive power.

The three aging perspectives, disengagement, aged as a subculture, and activity appear to have had tremendous impact on aging policy. However, the three perspectives fall short of providing an adequate understanding of retirement satisfaction and the retirement timing decision. The perspectives have relied too heavily on the physical aging process as the primary determining factor and the perspectives have been descriptive and do not present variables that have predictive power in explaining retirement satisfaction or timing. The methodology employed can be criticized on limited sample sizes and types. Also, few studies employed multivariate analysis.

The research on the predictors of retirement satisfaction is quite varied. Health, occupation, work attitudes, income and leisure activity involvement have various affects on retirement satisfaction. Lehr and Dreher (1969) found a correlation between former work attitudes and retirement satisfaction. This research shows that the two work attitude indices: job descriptors and job rewards are correlated with the financial security facet of retirement satisfaction. Glasmer (1976) on the other hand found a relationship between retirement satisfaction

and leisure activity involvement. For this research the social activities index was correlated with the retirement orientation facet of retirement satisfaction.

In most research, the health status of an individual is found to be an important predictor in retirement satisfaction. The literature indicates that health status of the retired individual is more important than any other variable. In looking at the results of this research health status did appear as a significant variable in several of the facets of retirement satisfaction.

The three theoretical perspectives most generally employed in the study of retirement satisfaction are crisis theory, continuity theory and consistency theory. The three perspectives were discussed in Chapter III. In general, crisis theory predicts the decline in life satisfaction due to retirement. Continuity theory recognizes the existence of a specific retirement role and consistency theory suggests an individual in retirement will tend toward a state of balance and harmony. Bell (1978-1979) presented the three frameworks in an article on life satisfaction and retirement. Bell argued that crisis, continuity and consistency theory should be used in combination in retirement research. He argued that an individual's work role is an integral part of one's life and impacts life satisfaction. In addition, he stated that retirement research should include demographic, financial, and social indicators as well as work role indicators when measuring retirement satisfaction. Bell feels the three frameworks in combination provide a better theory in the study of retirement and life satisfaction.

In reviewing the regressions results of the prediction of retirement satisfaction, Bell's framework appears to hold true. Job Indicators impact to a degree satisfaction in the retirement life as well as other demographic and social indicators. It seems logical to concur that the three perspectives: crisis, continuity, and consistency, provide a better framework in combination to measure retirement satisfaction.

#### Correlates of Retirement Timing

The findings in regard to the correlates of the retirement timing decision explained only 9% of the variance in the retiree sample and 12% of the variance in the older worker sample. As suggested earlier, it is quite possible that the variables that contribute to the retirement timing decision were not measured in this research; if indeed there exists a systematic pattern of variables that predict the timing of the retirement decision.

It seems evident that there exist specific reasons why individuals retire at the age they do. Clearly, for most older individuals the retirement decision stems from a complex mixture of many reasons. Perhaps the findings of this research provide a hint to the actual motivations behind the retirement decision.

The research findings show variables predicting the retirement decision. No one variable or combination of variables have strong predictive power. The retirement plans of older persons appear to be affected by the work situation. The individual does not appear to stay employed or retire because of a pleasant or unpleasant work experience. Work attitudes as a predictor does not support previous findings.

Most research on the retirement timing decision identify the factors of health and income as the major determinants which predict the retirement age. The overall variance for predicting retirement timing for both retirees and older workers was low. However, this study shows that subjective health was the largest contributor to the variance in both samples. Income did not appear as a significant variable in the equations. Graney and Cottman (1981), unlike most researchers, argued that timing of the retirement decision is affected by socioeconomic and policy changes. This research supports the notion that the major determinants of retirement timing are located outside the factors of health and income.

Sheppard (1976) suggested that research on the retirement timing decision rarely goes into enough detail, and does not examine multiple factors. He argued that the retirement timing decision is impacted by multiple demographic, social and economic factors.

The majority of the research on the retirement timing decision identify the factors of health and income as the two primary determinants which predict the age at which individuals retire. For the retirees' sample marital status, education level and health status explained 9% of the variance in retirement timing. Income did not contribute significantly. For the older workers' sample the equation resulting from the regression analysis explained 12% of the variance. Income was not a significant variable in this equation either.

The availability of income and/or pension benefits could be the most critical factor influencing when a person plans to retire. The availability of retirement income may be the largest predictor to

influence the timing of retirement. It has been suggested that the amount and type of retirement incomes that are most likely to affect the timing of retirement age are pension eligibility requirements for normal and early retirement, and penalties or inducements to defer the retirement age.

The research has analyzed the possible predictive power of variables that relate to individual older persons. Variables outside individual control may be the strongest predictors of retirement timing.

#### Retirement Experience of Women

The results of this research suggest that the retirement experience of women differs from the retirement experience of men. The explanation for the discrepancy in the importance of specific variables for the prediction of retirement satisfaction and retirement timing in the two samples seems to lie in the larger context of the meaning of work.

For women, it seems that work has a stronger relationship with retirement satisfaction than it does for men. For some women, the work role is more fulfilling than family roles. Employment is a significant factor to many women and it can impact the transition into retirement. Because women's life expectancy is longer than for men, most older women will have a longer retirement life.

The increase in the labor force participation of women will result in retirement becoming a significant life experience. Recent research suggests that the predictors of satisfaction and the timing of retirement are different for women (Szinovacz 1982). This research supports this argument.

In this investigation for the two female samples, the variable marital status contributed significantly to the explanation of the retirement timing decision. For women, the variables that exhibited the strongest predictive power were variables not evidenced in the majority of research (i. e., marital status).

In sum, women retirees and older workers show differences in the type and strength of variables predicting retirement satisfaction and the timing of the retirement decision. This suggests more research is needed to investigate the unique retirement experience of women.

#### PUBLIC POLICY

Research data are crucial in formulating public policy and programs. Gerontological literature suggests that retirement constitutes a crisis when an individual must relinquish a primary role. This research data suggests that retirement may be an adjustment, but it appears for this sample that retirement may not be the problematic event that previous research has suggested it is. In looking at the frequency distributions of the retirees and older workers on Indices (Appendix C), the respondents are moderate to high on all scales. They feel they are in good health, they like their work, and are involved in several leisure type activities.

There exists multiple demographic, economic, and social factors which shape the retirement decision as well as retirement satisfaction. This research has provided some insight into the importance of specific factors. In addition, the research has shown the need to investigate the retirement experience further.

As discussed in Chapter 1, retirement policy has been nationally discussed and debated. The increase in the number of older persons coupled with the trend toward early retirement will continue to burden the social security tax system. There appears to be almost as many proposed reforms as there are bureaucrats to propose them. Unfortunately, there appears to be no consensus on what a reasonable national retirement policy should entail. There is little agreement at what age Americans should retire, who should pay, or whether the system should guarantee retirees maintain the standard of living they enjoyed prior to retirement. In sum, recent trends toward early retirement and the increase in the number of older persons threatens the financial stability of both the public and private pension systems. Public policy can do little about demography, but policy can influence retirement decisions.

Primarily, in looking at the retirement age decision, the availability of retirement benefits may be the major factor in influencing when a person plans to retire. The benefits an older worker can receive appear to influence his or her retirement age. This especially occurs the closer he or she approaches the "normal" retirement age. Public pension plans and other federal legislation affect the retirement age.

For example, in 1961, legislation reduced the possible pensionable age for males to 62 (with reduced benefits) under the Social Security Act. As a result, today, over 80% of social security retirement benefits are made to persons under age 65. In 1961, only 12% of social security benefits were made to the under 65 age group. This

is evidence that government legislation has encouraged and contributed to the phenomenon of early retirement.

Another example of the power of government is in 1978, Congress raised the mandatory retirement age from 65 to 70 years old. This legislation to date has had little change on the economy or the work force. The fear that raising the mandatory retirement age would seriously impact work opportunities for younger workers did not come true. In general, older workers are continuing to retire "early". The social security retirement benefits provide no financial incentive for older individuals to keep working so raising the retirement age makes little difference.

The growing burden of financing social security and the lengthened life span of older adults may result in possible changes in the social security program. The social security system has several options: increase payroll deductions, increase the benefit age, reduce the amount of benefits, change the class of beneficiaries, or find alternate methods for financing the system. In advance of possible changes in retirement benefit policies, it is important to identify the attitudes which older individuals have toward the retirement decision. It seems important to know the major determinants of retirement satisfaction and the timing of retirement before new policies are formulated and implemented. Public policy should reflect the major factors which contribute to retirement satisfaction and timing.

In short, legislation and government regulations influence to a large extent the retirement patterns and satisfaction levels of older persons. Government makes important decisions affecting the area of

social security. Government regulations set parameters within which major employers develop employment and pension policies (Copperman and Keast 1983). Government provides funding for a variety of social and health services for older persons. Research findings in regard to the predictors of retirement satisfaction and retirement timing could provide guidance to the development of appropriate public policy.

According to a recent study by Copperman and Keast (1983), the dramatic change in the composition of the U. S. labor force is the major problem affecting the social security system. Retirement income programs have been attracting older workers to retire early. One of the national policies now in place to reverse the trend is the 1977 law outlawing mandatory retirement before age 70 for most workers. This law, however, had little effect on retirement patterns. If the goal is to increase work at older ages, policy must focus on the financial incentives of retirement plans. In addition, the research findings for both the retirees and older workers samples provide some limited indication as to possible factors contributing to the retirement decision. A broad policy approach to encourage a later retirement age would include consideration of the significant variables.

Current policies and programs designed to benefit the elderly are based on former research efforts. It appears that policy for the aged has been based on concepts that have been somewhat refuted in the literature. Improved policy calls for a new understanding of the major predictors of retirement satisfaction. As discussed earlier, the total variance explained by each of the equations predicting retirement satisfaction is low. The use of cross sectional data, the lack of a

measure of time, the average young age of the respondents, and the overall adequate financial situation of the retirees may have limited results.

In addition, this research showed little evidence that pre-retirement planning programs have a significant impact on the retirement experience of the respondents. It seems apparent that no retirement preparation program that involves a one-time investment is likely to have a long-term impact on retirement satisfaction. It could be possible that a well-designed program over a period of years could impact satisfaction in retirement.

Policies at the personal level for women are usually unwritten, but have tremendous affect on lives (Szinovacz 1983). Many women have been socialized to believe a man will provide for them throughout their lifetime. This research suggested that the marital status variable for women was a significant predictor of retirement satisfaction and timing. A policy implication is that women need to plan and assume responsibility for their own retirement experience. Because of lower life expectancies for men and the high divorce rate, retirement benefit programs must change current inequities. The large percentage of women that were married and the long-term employment of the women respondents may have limited the results of this research.

#### FUTURE RESEARCH

The major implications of this research suggest a need for using the significant variables coupled with a re-examination of possible alternative variables. In spite of the apparently low explanation power

of the independent variables, the variables are significant. If variables such as health, income, and marital status were developed into a model with other "new" variables the explanation power could be improved for both predicting retirement satisfaction and timing.

Future analysis should look at samples of retirees and/or older workers over time. It is possible that the absence of time in this research may have weakened the research findings. One or two follow-up studies on the same two samples could have provided a stronger significance to the interpretation of the results. If investigation would follow samples of older workers and retirees throughout the retirement transition years as well as post-retirement years, the short and long term effects of retirement could be known. Comparative research as well as longitudinal research will enable the field of social gerontology to differentiate between significant indicators determined by retirement and those attributable to the general process of aging. Longitudinal type research is very costly, and final results take many years to formulate. An alternate approach would be the use of more retrospective questions. Examples of these type of questions can be examined in the retirees' questionnaire (Appendix A).

The outcome measure of retirement satisfaction is impacted by many factors such as health, economic status, work attitudes and leisure activities, as well as an individual's demographic characteristics. Because some of the research results were weak, a preliminary regression analysis was done using retirement age as an independent variable. The regressions analyses were done in the same method described in Chapter IV. The variable, retirement age, was used as the first variable to

enter in the hierarchical model. As explained earlier, for the retirees' sample, the variables explained only 6% of the variance in the outcome variable retirement age. This weak result prompted the use of retirement age as a predictor of the four facets of retirement satisfaction. Unfortunately, the preliminary regressions results showed that retirement age did not contribute as a predictor variable enough to be entered in any of the regression equations. However, for future research, a large variance in retirement ages could possibly improve the results of the above described regression equation.

Another suggestion for future research is the utilization of an earlier age cohort of workers. The two samples used for this research were between the ages of 50 and 79. The largest group of respondents were between the ages of 56 and 65. These individuals are one of the first groups of persons (born 1916 to 1925) to have spent their working lives under the entitlement of social security retirement benefits. The effect of the change in social security benefits is not known. Comparative analysis among older and younger workers and retirees could provide insight into this. Future studies would be enhanced if a larger range in age was utilized in selecting a sample.

Another extension of retirement research would be to measure the attitudes toward retirement of women who have been continuous in the workforce from early adulthood. For the older workers' sample the average number of years a male was employed with the firm was 15.1 years. For the female respondents the average was 11.2 years. For the retirees' sample the average number of years employed was 18.6 and for females it was 16.4. For the female respondents in both samples the

number of years worked was less than males. However, currently middle-aged women are spending more time in the work force and younger women's work patterns are becoming more continuous. For these reasons, obtaining a larger sample of working women should be the goal of future research. Research efforts on retirement have paid insufficient attention to women older workers and retirees. More research is needed to investigate the retirement experience of women.

A final suggestion for future research would be measuring the implications of retirement on marital relationships. The majority of retired persons are married. For this research almost 80% of the retirees are married and almost 70% of the older workers. Since individuals' work roles impact to a large degree family lives, it is expected that the retirement of one spouse would have a major impact on the marital relationship. The few studies dealing with the impact on retirement on marital relations were limited to husband's retirement on wives (Szinovacz 1982). Research in this area is needed.

To summarize, based on the findings of this research, additional efforts should also be made to investigate other independent variables and the utilization of larger and broader sample sizes and longitudinal type studies. The increased labor force participation of women has made female retirement a significant phenomenon. Research on the retirement of women should be emphasized.

Retirement has become one of the most important events in a person's life cycle. It appears obvious there exists many demographic, economic and social factors which mold the timing of the retirement decision and the occurrence of satisfaction in the retirement years.

The factors determining retirement satisfaction and the timing of the retirement decision continue to merit further research exploration. Since the field of retirement research is still a new area, further research and exploration into the major determinants of retirement satisfaction and the timing of the retirement are needed.

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APPENDIX A  
RETIREE QUESTIONNAIRE

PLEASE NOTE:

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These consist of pages:

Appendix A, pages 141-169

Appendix B, pages 171-203

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APPENDIX C  
INDICE DETAIL

PEARSON CORRELATION COEFFICIENTS AMONG VARIABLES

RETIREMENT SATISFACTION

RETIREMENT - LEISURE ORIENTATION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Occupation		-.05	.47	.19	.08	.15	.24	.12	-.10	-.07	-.01	-.11	.21	-.14
2. Marital Status	.14		-.11	.15	.14	-.10	-.11	-.10	.08	.21	.08	.11	.04	.22
3. Gender	.34	.03		.26	.00	.05	.15	.11	-.18	-.11	.07	-.07	.21	-.21
4. Education	.30	.45	.27		.02	.23	.02	.35	.33	.13	-.09	.10	.14	.06
5. Household Income	-.02	.06	.20	-.01		-.06	-.09	-.05	.18	.08	.08	.21	.02	.09
6. Job Rewards	-.07	.00	.17	-.11	-.21		.10	.72	-.15	-.01	.06	-.12	-.02	.04
7. Subjective Health	.16	.11	.01	.09	.07	.02		.21	.14	-.14	-.05	-.17	.10	-.06
8. Job Descriptors	.12	.16	.23	.12	-.06	.59	.11		-.25	-.11	-.01	-.18	-.02	.07
9. Self Report Health	-.11	-.36	-.25	-.33	.14	-.04	.03	-.20		-.03	.10	.05	.05	.07
10. Retirement - Leisure Orientation	.16	.00	.21	.08	.03	.04	.07	.03	-.10		-.30	.20	-.10	.25
11. Outside Activities	.00	-.20	-.23	-.12	.00	-.07	-.04	-.15	.21	-.29		.05	.35	.02
12. Social Relationships	-.04	.04	.07	.11	-.22	.08	-.10	.04	-.01	.14	.18		.06	.30
13. Cultural Activities	.13	-.13	.11	.15	-.01	.04	.05	.05	.14	.10	.29	.46		.10
14. Sport Activities	.13	.04	.10	.19	-.06	.04	.02	.17	.02	.05	.05	.42	.37	

Correlation coefficients above the diagonal show relationships with the male sample; figures below the diagonal represent correlation coefficients for the female sample.

PEARSON CORRELATION COEFFICIENTS AMONG VARIABLES

RETIREMENT SATISFACTION

WORK ORIENTATION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Occupation		-.05	.47	.18	.07	.05	.31	.15	-.12	-.12	-.02	-.18	.17	-.20
2. Marital Status	.13		-.11	.17	.16	-.09	-.13	-.09	.07	-.06	.08	.12	.05	.22
3. Gender	.34	.00		.24	-.04	-.01	.22	.16	-.18	-.34	.06	-.09	.19	-.26
4. Education	.33	.45	.26		.01	.23	.07	.29	-.30	-.16	-.08	.10	.14	.06
5. Household Income	.03	.12	-.15	.02		.07	-.08	-.11	.21	-.17	.13	.21	-.01	.19
6. Job Rewards	-.10	-.01	.11	-.13	-.19		.12	.61	-.13	.11	.10	-.16	-.03	.05
7. Subjective Health	.10	.09	-.02	.04	.15	.06		.31	.09	-.07	-.09	-.13	.12	-.14
8. Job Descriptors	.10	.16	.20	.11	-.04	.59	.08		-.23	.08	-.04	-.12	-.04	-.02
9. Self Report Health	-.10	-.43	-.18	-.38	-.01	.02	.13	-.22		.13	.10	.07	.07	.09
10. Work Orientation	.07	-.14	.24	.12	-.07	.02	.31	.06	.08		-.07	-.07	-.28	.16
11. Outside Activities	.01	-.21	-.22	-.11	.15	-.03	-.01	-.12	.29	-.17		.06	.36	.06
12. Social Relationships	-.06	.04	.03	.08	-.23	.07	-.12	.06	.03	-.01	.16		.06	.29
13. Cultural Activities	.21	-.15	.17	.08	-.08	.04	.08	.13	.08	.07	.31	.45		.14
14. Sport Activities	.14	.03	.08	.13	-.04	.02	-.03	.19	.04	-.05	.04	.33	.30	

Correlation coefficients above the diagonal show relationships with the male sample; figures below the diagonal represent correlation coefficients for the female sample.

PEARSON CORRELATION COEFFICIENTS AMONG VARIABLES

RETIREMENT SATISFACTION

RETIREMENT FEELINGS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Occupation		-.05	.50	.19	.01	.14	.24	.16	-.14	.12	.03	-.14	.17	-.16
2. Marital Status	.15		-.11	.18	.18	-.09	-.11	-.09	.07	-.15	.09	.14	.06	.25
3. Gender	.32	.00		.25	-.05	.00	.17	.16	-.16	.18	.05	-.11	.20	-.25
4. Education	.31	.45	.26		-.07	.19	.06	.27	-.36	.23	-.09	.04	.17	.01
5. Household Income	-.03	.04	-.21	-.02		-.13	-.01	-.18	.18	-.16	.14	.17	.02	.09
6. Job Rewards	-.08	-.02	.20	-.11	-.22		.13	.60	-.12	.27	.08	-.14	.04	.09
7. Subjective Health	.17	.13	.06	.10	.10	.01		.27	.19	.27	-.06	-.19	.09	-.08
8. Job Descriptors	.14	.15	.22	.14	-.05	.60	.12		-.27	.47	-.01	-.15	-.01	.01
9. Self Report Health	-.16	-.37	-.26	-.34	.16	-.04	.01	-.20		-.13	.16	.11	.12	.09
10. Retirement Feelings	.01	.00	.07	.14	.08	-.01	.36	.05	.02		.09	.00	.06	.03
11. Outside Activities	-.03	-.15	-.24	-.11	.00	-.01	-.04	-.10	.18	-.05		.06	.40	.01
12. Social Relationships	-.05	.08	.06	.12	-.24	.10	-.08	.07	-.01	.22	.14		.06	.25
13. Cultural Activities	.07	.10	.07	.16	.00	-.03	.05	.11	.12	.23	.24	.45		.09
14. Sport Activities	.09	.05	.06	.19	-.05	.04	-.02	.20	.00	.21	.01	.40	.32	

Correlation coefficients above the diagonal show relationships with the male sample; figures below the diagonal represent correlation coefficients for the female sample.

PEARSON CORRELATION COEFFICIENTS AMONG VARIABLES

RETIREMENT SATISFACTION

FINANCIAL SECURITY

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Occupation		-.06	.50	.19	.04	.15	.26	.16	-.13	.17	.02	-.08	.19	-.08
2. Marital Status	.13		-.13	.17	.16	-.09	-.11	-.09	.06	.02	.07	.13	.04	.24
3. Gender	.34	.04		.27	-.05	.08	.19	.21	-.23	.05	.01	-.01	.14	-.18
4. Education	.31	.46	.26		.00	.21	.03	.29	-.32	.42	-.10	.06	.1	.04
5. Household Income	-.03	.06	-.19	.00		-.08	.00	-.11	.20	.05	.11	.19	-.02	.15
6. Job Rewards	-.09	.00	.14	-.14	-.19		.12	.60	-.11	.20	.111	-.15	.07	.04
7. Subjective Health	.17	.12	.00	.08	.10	-.01		.25	.16	.22	-.02	-.12	.17	.15
8. Job Descriptors	.12	.16	.21	.11	-.03	.57	.07		-.24	.24	-.02	-.15	-.04	.04
9. Self Report Health	-.12	-.40	-.23	-.33	.13	.00	.04	.18		-.06	.08	.07	.04	-.03
10. Financial Security	-.07	.10	.09	.37	.24	.07	.24	.19	.10		-.25	.06	.07	-.01
11. Outside Activities	.01	-.20	-.21	-.10	-.02	-.02	-.01	-.09	.20	-.13		.01	.34	.12
12. Social Relationships	.04	.08	.07	.12	-.24	.10	-.08	.07	.00	-.02	.16		.01	.20
13. Cultural Activities	.15	-.11	.14	.17	-.03	.01	.08	.12	.13	.21	.26	.45		.09
14. Sport Activities	.11	.05	.09	.19	-.08	.04	.00	.20	.02	.15	.04	.41	.39	

Correlation coefficients above the diagonal show relationships with the male sample; figures below the diagonal represent correlation coefficients for the female sample.

PEARSON CORRELATION COEFFICIENTS AMONG VARIABLES

RETIREMENT TIMING

OLDER WORKERS

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Occupation		.04	.39	.35	.09	.02	.21	-.11	-.03	.08	.22	.05	-.10
2. Marital Status	-.02		.10	.16	.03	.12	.04	.04	.00	-.10	-.12	-.04	-.14
3. Education	.28	-.01		.32	.10	.06	.11	-.07	.07	.04	.28	-.02	.06
4. Household Income	.16	.61	.12		.20	.03	.16	-.07	-.07	.08	.14	.06	.07
5. Self-Report Health	.22	.10	.16	.15		.44	.22	.01	-.02	-.05	.03	-.03	.10
6. Subjective Health	.10	.10	.02	.12	.51		.14	.06	.03	.02	.12	-.01	.19
7. Job Descriptions	.22	.11	.01	.13	.16	.19		-.11	-.04	.04	.04	.01	.02
8. Job Rewards	.01	-.02	-.06	-.01	.07	.15	.02		.16	.18	.15	.20	.21
9. Outside Activities	-.02	.02	-.05	-.02	-.07	-.15	.04	-.01		.30	.25	.151	-.01
10. Social Relationships	-.09	.01	-.02	.05	.06	.05	.09	.09	.18		.30	.30	.03
11. Cultural Activities	.19	.10	.24	.04	.11	.10	.09	.03	.11	.16		.2	.03
12. Sport Activities	.14	.02	.02	.10	.18	.18	.05	.05	.11	.38	.28		-.07
13. Age Prefer to Retire	.10	.14	.06	-.07	.10	.19	.02	.21	-.01	-.03	.01	-.07	

Correlation coefficients above the diagonal show relationships with the male sample;  
figures below the diagonal represent correlation coefficients for the female sample.

PEARSON CORRELATION COEFFICIENTS AMONG VARIABLES

RETIREMENT TIMING

RETIREEES

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Occupation		.06	.49	.18	.06	.12	.26	.17	-.05	-.11	.18	-.17	-.11
2. Marital Status	.14		-.12	.15	.15	-.10	-.11	-.10	.08	.11	.04	.22	.07
3. Education	.34	.03		.26	-.02	.02	.17	.19	.03	-.06	.18	-.24	-.11
4. Household Income	.30	.45	.27		.02	.22	.02	.31	-.09	.09	.13	.05	-.25
5. Job Rewards	-.02	.06	-.20	-.01		-.05	-.10	-.10	.10	.19	.02	.11	.20
6. Subjective Health	-.07	.01	.17	-.11	-.21		.08	.60	.08	.10	.01	.05	-.13
7. Job Descriptors	.16	.11	.02	.10	.07	.02		.24	-.07	-.16	.08	-.08	.10
8. Self-Report Health	.12	.16	.23	.12	-.06	.59	.11		-.06	-.10	-.03	-.02	-.21
9. Outside Activities	.01	-.20	-.23	-.12	.01	.07	.04	.15		.06	.36	.04	.10
10. Social Relationships	-.04	.04	.07	.11	-.22	.08	-.10	.04	.18		.08	.27	.06
11. Cultural Activities	.13	-.13	.11	.15	-.01	-.04	.05	.05	.29	.46		.11	.10
12. Sport Activities	.13	.04	.10	.19	-.06	.04	-.02	.17	-.05	.42	.37		.08
13. Age Retired	-.08	-.37	-.25	-.27	.11	-.07	-.01	-.22	.18	.01	.14	-.06	

Correlation coefficients above the diagonal show relationships with the male sample; figures below the diagonal represent correlation coefficients for the female sample.

## FINANCIAL SECURITY INDEX

INDEX DESCRIPTION: Financial security measured the respondents (retirees) with respect to the extent they felt their financial situation in retirement was satisfactory. A high score on this index was interpreted as being satisfied with the retirement financial situation.

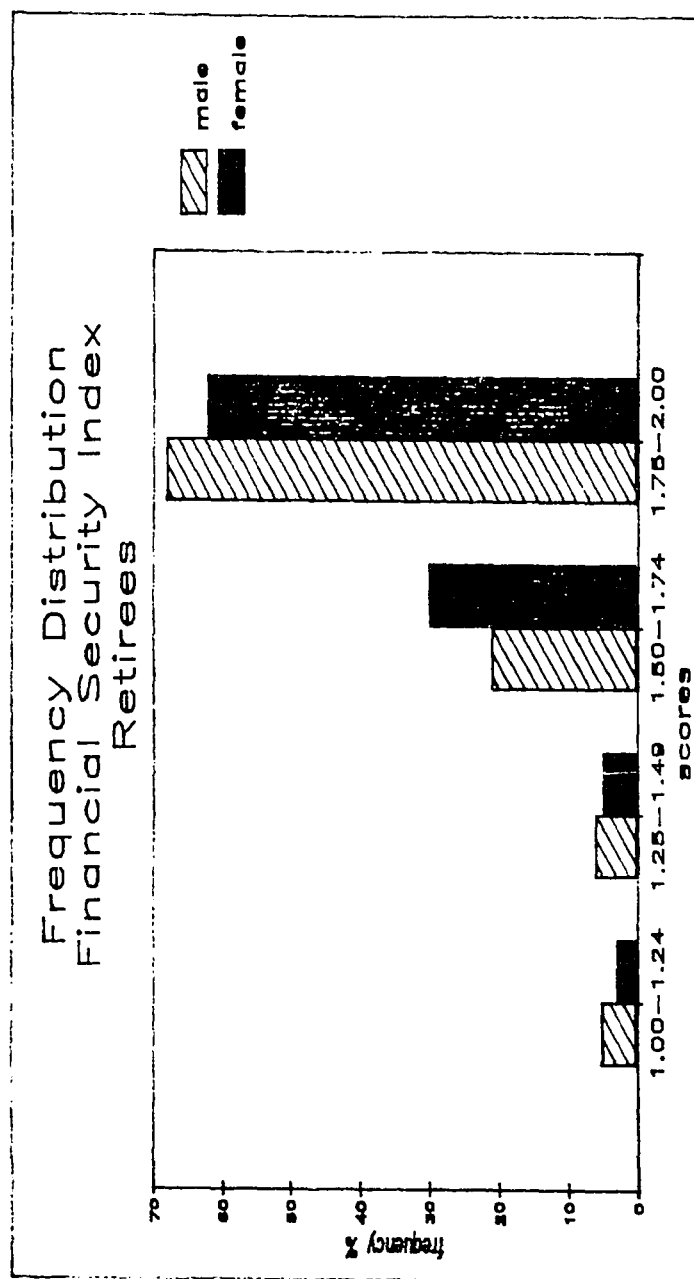
NUMBER OF ITEMS INCLUDED IN THE INDEX: 14

SPECIFIC QUESTION NUMBERS IN THE INDEX: 224 - 237

INTERNAL CONSISTENCY OF THE INDEX: .885 (n=103)

RANGE OF INDEX: 1 to 2

MEAN: 1.767 MEDIAN: 1.833 MODE: 2.000 STANDARD DEVIATION: .211



## WORK ORIENTATION INDEX

INDEX DESCRIPTION: The work orientation index measured the respondents feelings about their prior job. A high score on this index indicated that the respondent did not miss or want to return to work.

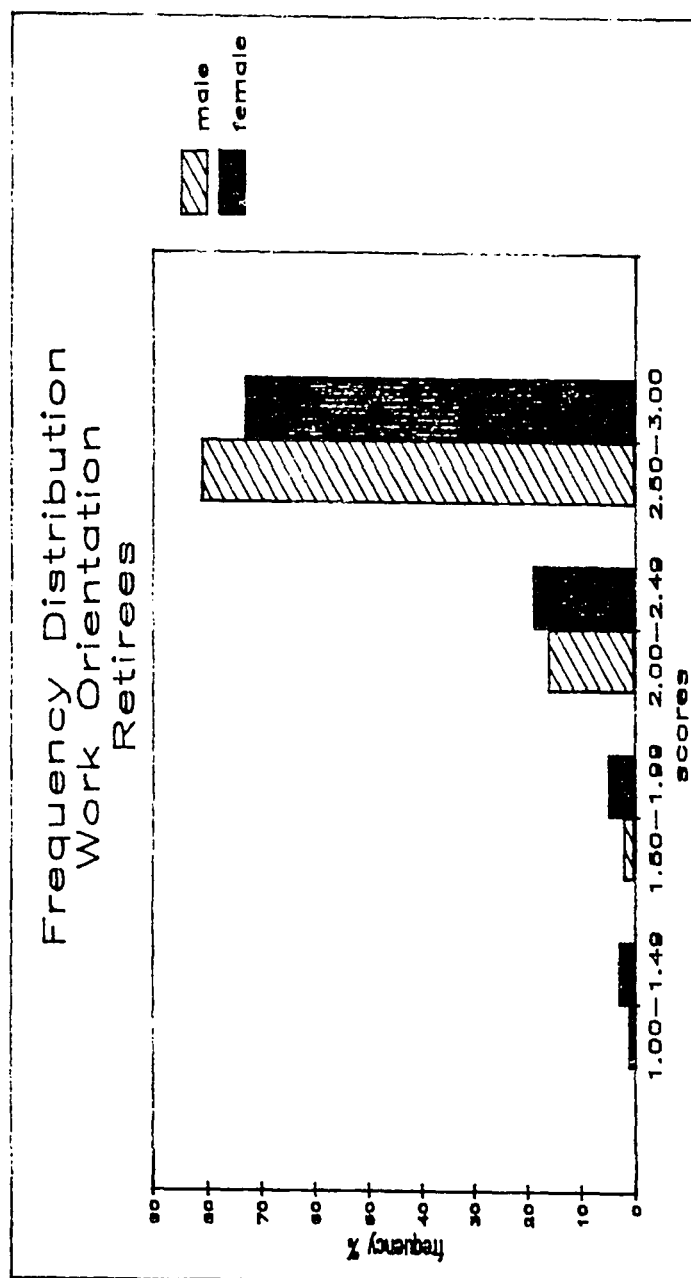
NUMBER OF ITEMS INCLUDED IN THE INDEX: 3

SPECIFIC QUESTION NUMBERS IN THE INDEX: 106 - 108

INTERNAL CONSISTENCY OF THE INDEX: .796 (n=212)

RANGE OF INDEX: 1 to 3

MEAN: 2.721 MEDIAN: 2.869 MODE: 3.000 STANDARD DEVIATION: .403



## RETIREMENT FEELINGS INDEX

INDEX DESCRIPTION: The retirement feelings index measured the extent of satisfaction the respondents (retirees) felt regarding their retirement life.

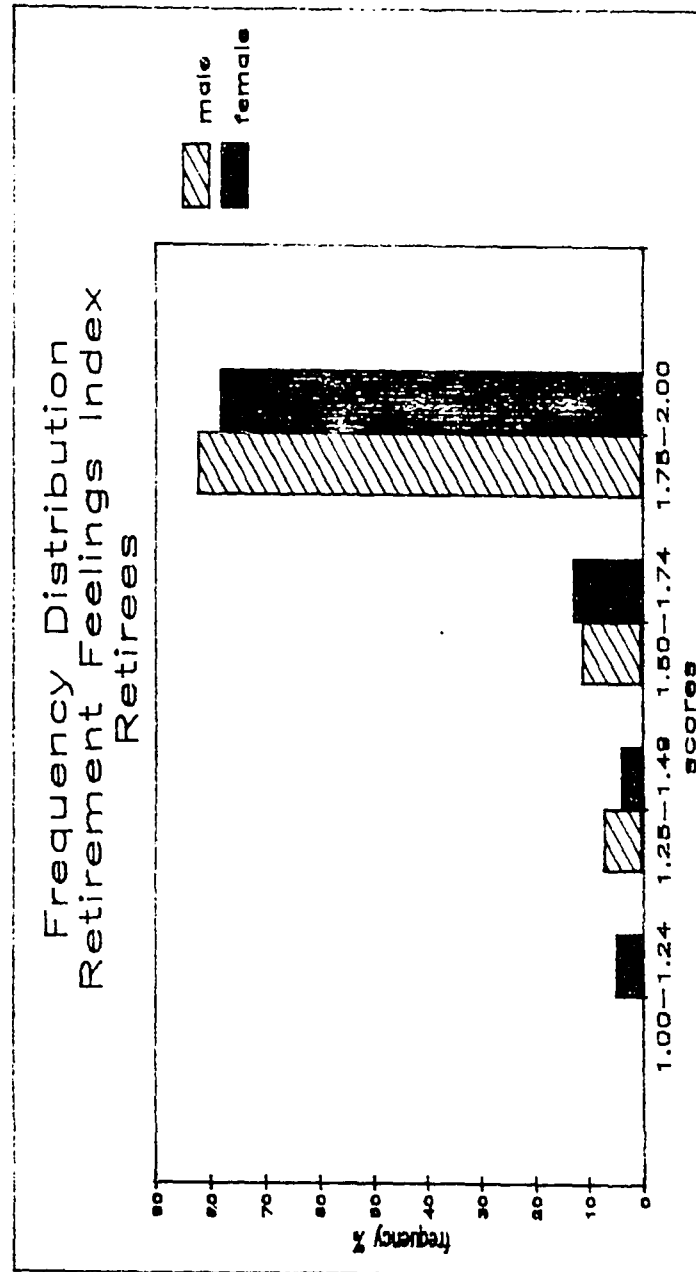
NUMBER OF ITEMS INCLUDED IN THE INDEX: 13

SPECIFIC QUESTION NUMBERS IN THE INDEX: 211 - 223

INTERNAL CONSISTENCY OF THE INDEX: .859 (n=93)

RANGE OF INDEX: 1 to 2

MEAN: 1.846 MEDIAN: 1.915 MODE: 2.000 STANDARD DEVIATION: .205



## RETIREMENT-LEISURE ORIENTATION INDEX

INDEX DESCRIPTION: The retirement-leisure orientation index measured the degree to which the respondents (retirees) felt retirement and leisure were important in their lives. A high score on this index means high levels of leisure and retirement orientation.

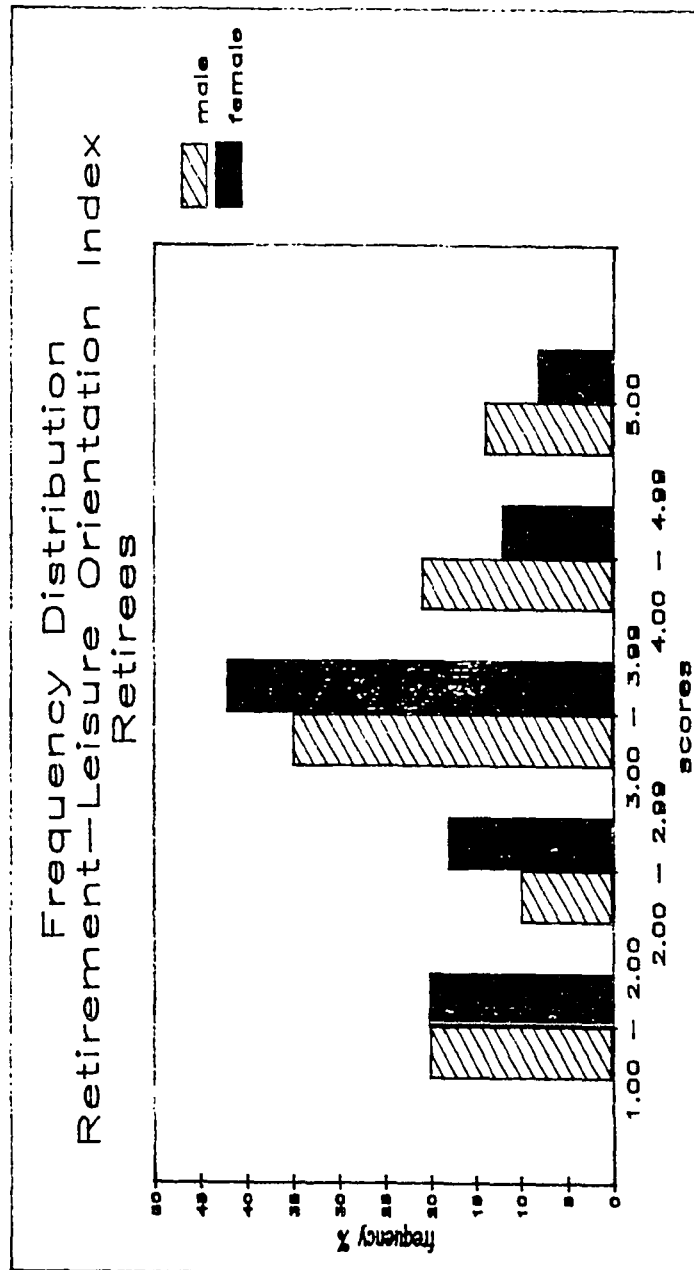
NUMBER OF ITEMS INCLUDED IN THE INDEX: 6

SPECIFIC QUESTION NUMBERS IN THE INDEX: 110 - 113, 117, 118

INTERNAL CONSISTENCY OF THE INDEX: .768 (n=221)

RANGE OF INDEX: 1 to 5

MEAN: 3.110 MEDIAN: 3.007 MODE: 3.000 STANDARD DEVIATION: .830



## JOB DESCRIPTORS INDEX (RETIREEES)

INDEX DESCRIPTION: The job descriptors index measured the degree of job pressures the respondents felt in regard to their job. A high score reflected minimum job pressure.

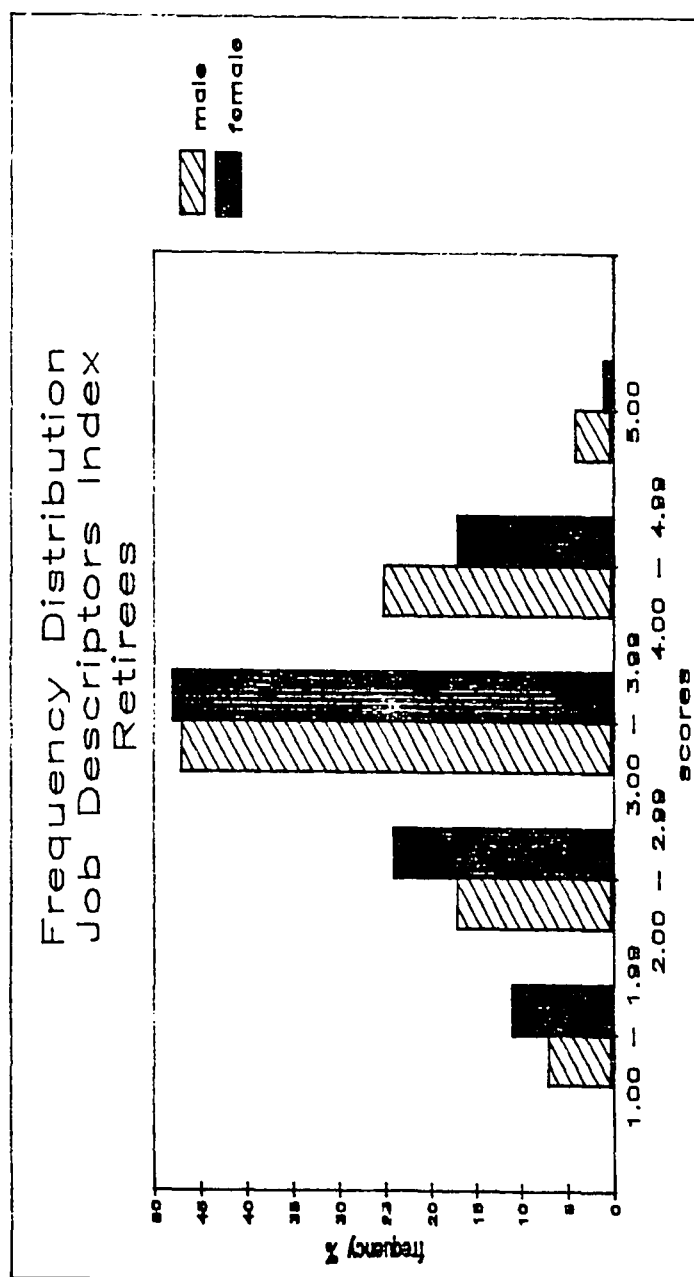
NUMBER OF ITEMS INCLUDED IN THE INDEX: 4

SPECIFIC QUESTION NUMBERS IN THE INDEX: 8 - 11

INTERNAL CONSISTENCY OF THE INDEX: .627 (n=209)

RANGE OF INDEX: 1 to 5

MEAN: 3.233 MEDIAN: 3.467 MODE: 3.500 STANDARD DEVIATION: .923



## JOB REWARDS INDEX (RETIREEES)

INDEX DESCRIPTION: The job rewards index measured the extent to which the respondents felt their jobs met social and economic needs.

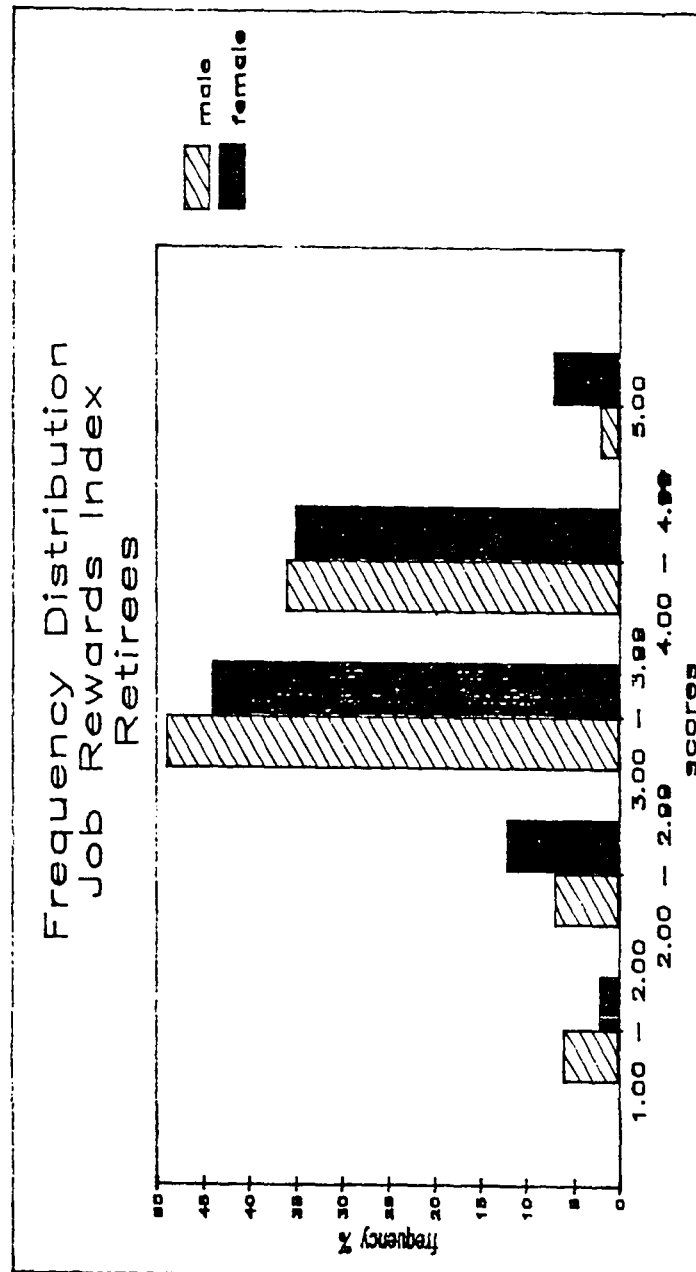
NUMBER OF ITEMS INCLUDED IN THE INDEX: 9

SPECIFIC QUESTION NUMBERS IN THE INDEX: 12 to 20

INTERNAL CONSISTENCY OF THE INDEX: .776 (n=211)

RANGE OF INDEX: 1 to 5

MEAN: 3.729 MEDIAN: 3.783 MODE: 3.889 STANDARD DEVIATION: .747



## SELF-REPORT HEALTH INDEX (RETIREEES)

INDEX DESCRIPTION: The self-report health index measured the extent to which a physical health condition limited the respondent from performing designated tasks. A high score on this index indicated minimum limitations.

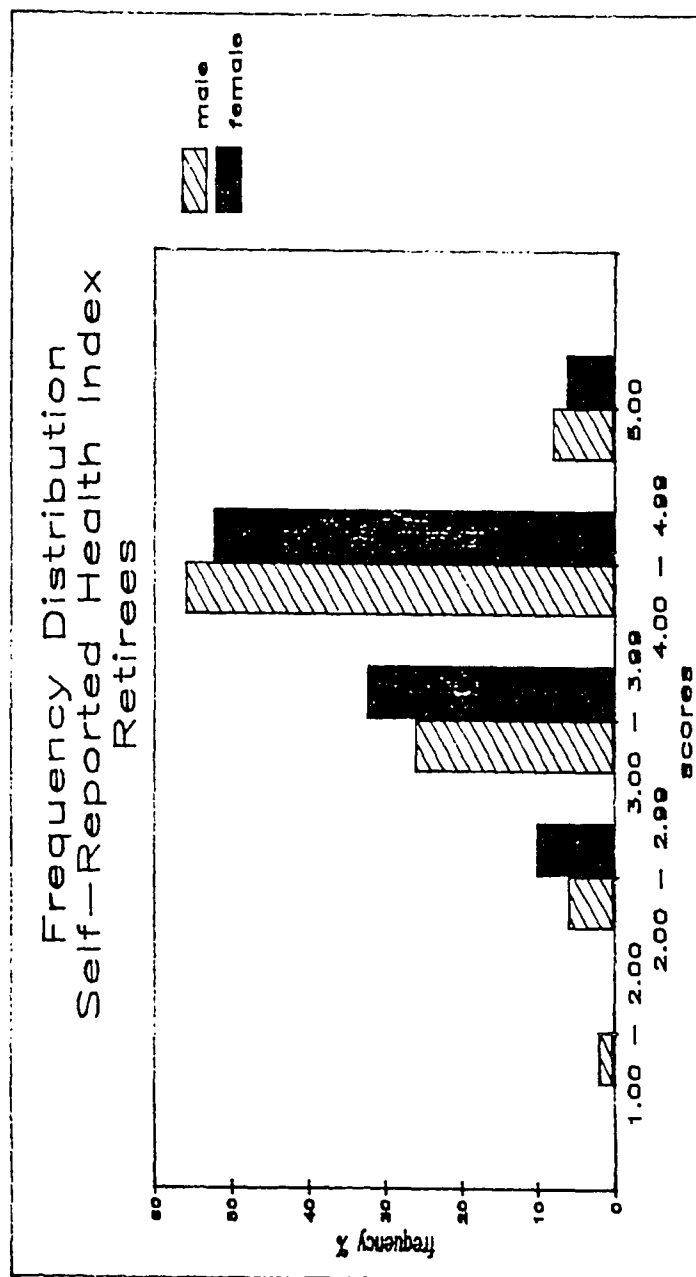
NUMBER OF ITEMS INCLUDED IN THE INDEX: 11

SPECIFIC QUESTION NUMBERS IN THE INDEX: 82 - 92

INTERNAL CONSISTENCY OF THE INDEX: .879 (n=218)

RANGE OF INDEX: 1 to 5

MEAN: 3.983 MEDIAN: 4.182 MODE: 5.000 STANDARD DEVIATION: .764



## SUBJECTIVE HEALTH STATUS (RETIREEES)

INDEX DESCRIPTION: The subjective health index measured the respondent's state of health as compared to others and to five years ago. A high score on this index indicated the respondent's health was excellent.

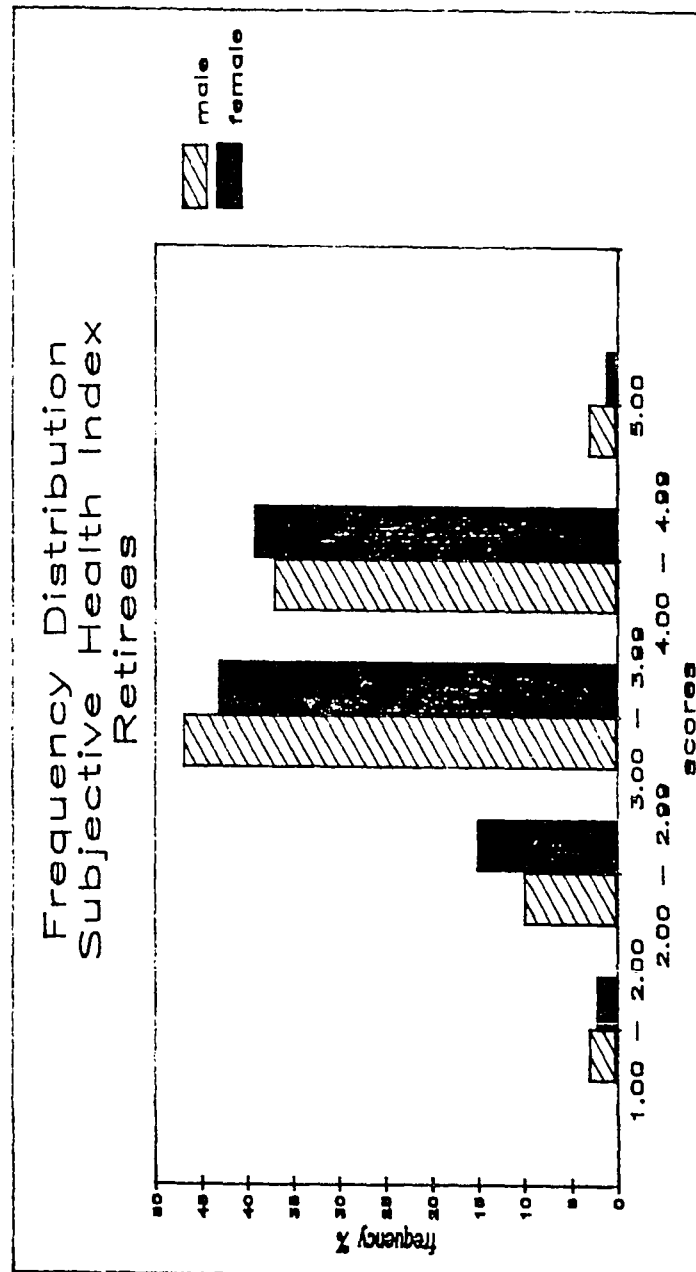
NUMBER OF ITEMS INCLUDED IN THE INDEX: 3

SPECIFIC QUESTION NUMBERS IN THE INDEX: 76 - 78

INTERNAL CONSISTENCY OF THE INDEX: .672 (n=225)

RANGE OF INDEX: 1 to 5

MEAN: 3.560 MEDIAN: 3.665 MODE: 3.667 STANDARD DEVIATION: .753



SOCIAL AND LEISURE ACTIVITIES INVOLVEMENT INDEX  
(RETIREEES)

INDEX DESCRIPTION: The social and leisure activities involvement index was comprised of four indices. The indices measured the extent to which the respondents felt social and leisure activities were important. A high score indicated that leisure and social activities were quite important.

NUMBER OF ITEMS INCLUDED IN THE INDEX: 2 per index

SPECIFIC QUESTION NUMBERS IN THE INDEX:

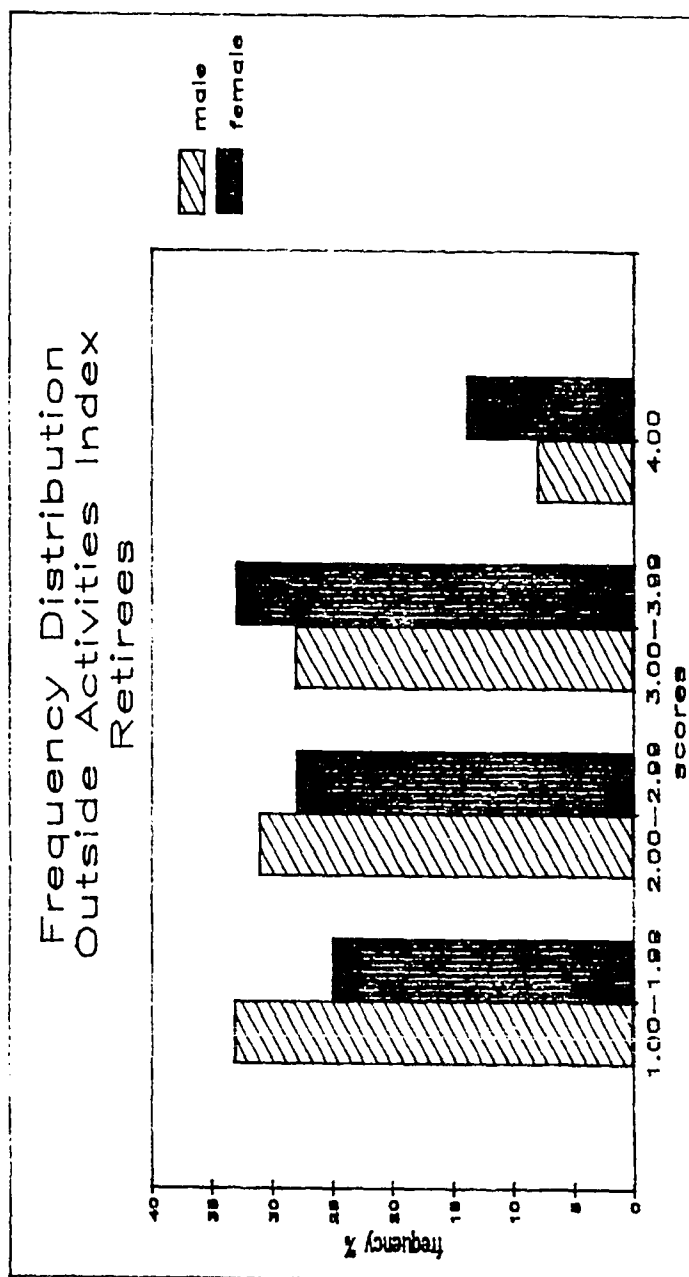
Outside Activities	(Scale 1)	200, 209
Social Relationships	(Scale 2)	201, 204
Cultural Activities	(Scale 3)	202, 208
Sport Activities	(Scale 4)	205, 206

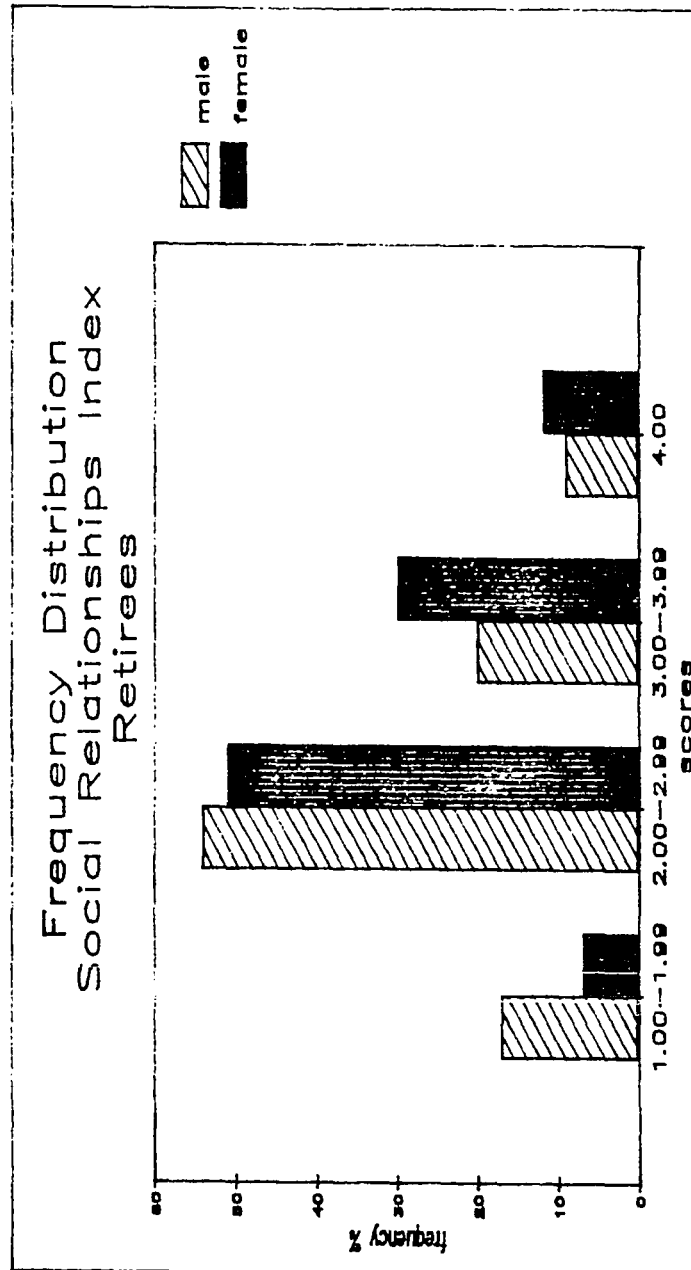
INTERNAL CONSISTENCY OF THE INDEX:

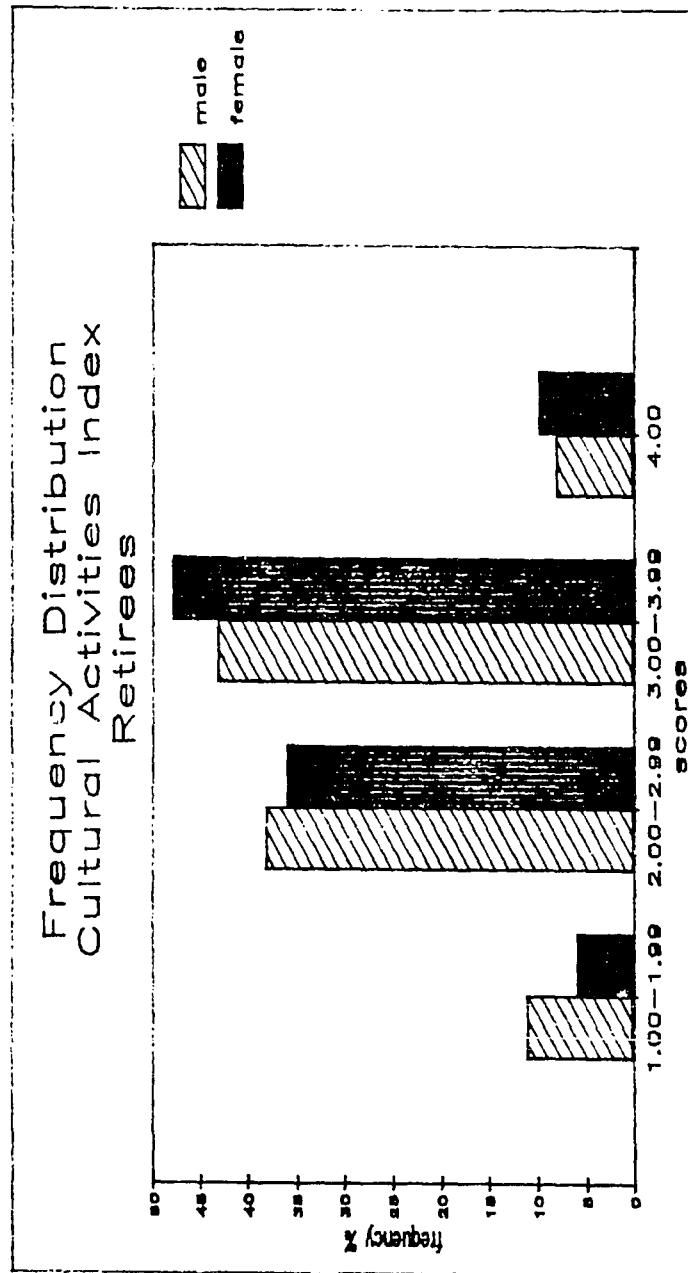
Scale 1	.527 (n=209)
Scale 2	.459 (n=207)
Scale 3	.369 (n=215)
Scale 4	.600 (n=209)

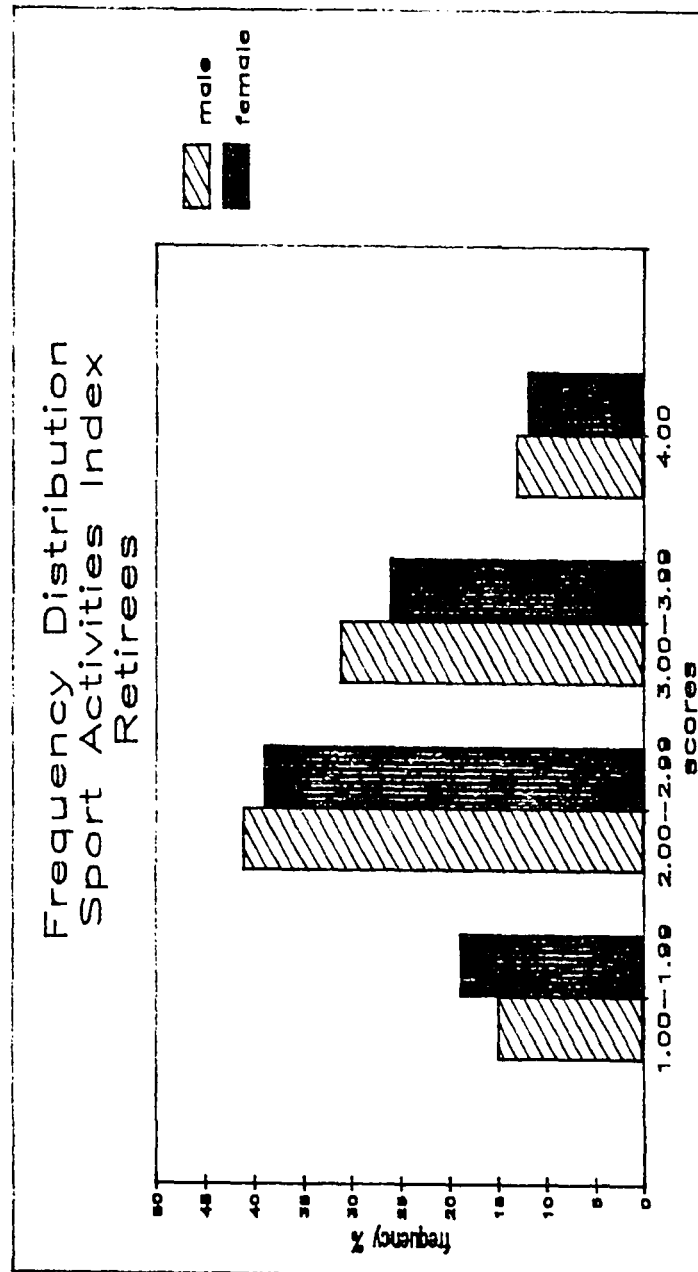
RANGE OF INDEX: 1 to 4

MEAN:	Scale 1	2.429	MEDIAN:	Scale 1	2.485
	Scale 2	2.586		Scale 2	2.504
	Scale 3	2.794		Scale 3	2.829
	Scale 4	2.509		Scale 4	2.472
MODE:	Scale 1	1.000	STANDARD DEVIATION:	Scale 1	.993
	Scale 2	2.500		Scale 2	.754
	Scale 3	3.000		Scale 3	.713
	Scale 4	2.000		Scale 4	.682









## PRE-RETIREMENT PLANNING INDEX

INDEX DESCRIPTION: Pre-retirement planning measured the respondents (retirees) with respect to the extent they undertook retirement planning activities. Respondents receiving the highest score on the index undertook all the activities included in the index.

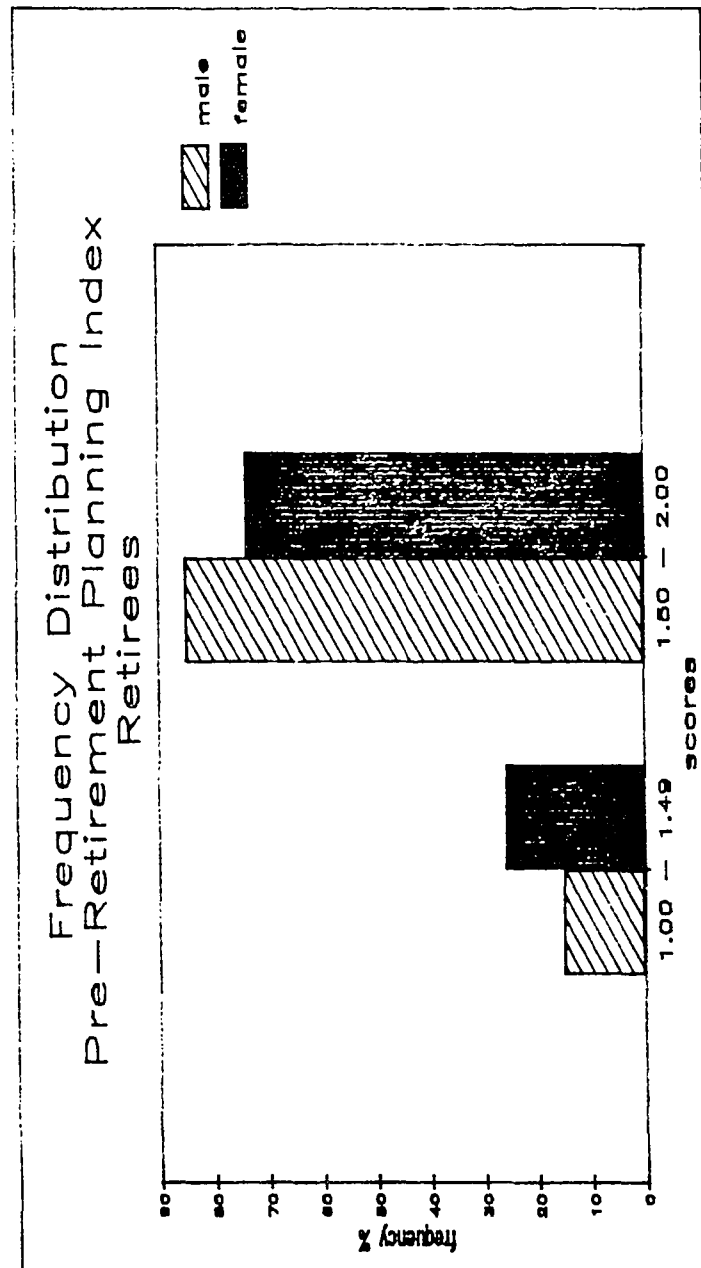
NUMBER OF ITEMS INCLUDED IN THE INDEX: 7

SPECIFIC QUESTION NUMBERS IN THE INDEX: 46 - 52

INTERNAL CONSISTENCY OF THE INDEX: .736 (n=190)

RANGE OF INDEX: 1 to 2

MEAN: 1.702 MEDIAN: 1.730 MODE: 2.000 STANDARD DEVIATION: .277



## JOB DESCRIPTORS INDEX (OLDER WORKERS)

INDEX DESCRIPTION: The job descriptors index measured the degree of job pressures the respondents felt in regard to their job. A high score reflected minimum job pressure.

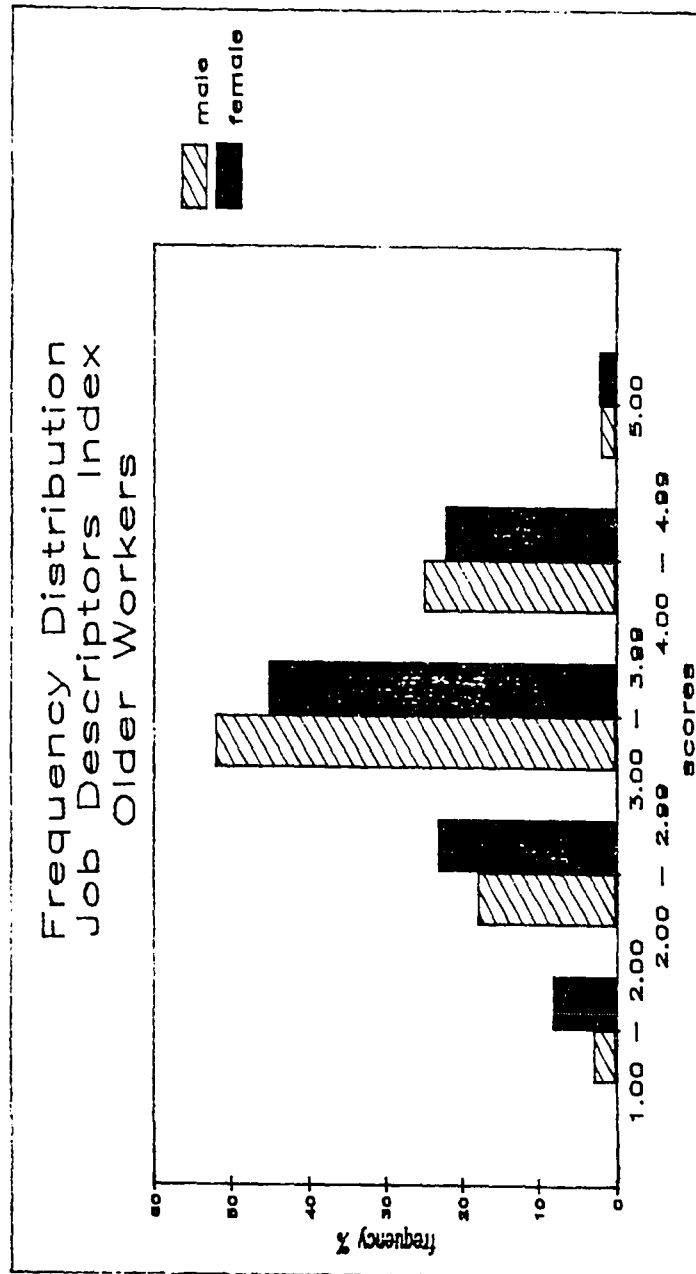
NUMBER OF ITEMS INCLUDED IN THE INDEX: 4

SPECIFIC QUESTION NUMBERS IN THE INDEX: 31 - 34

INTERNAL CONSISTENCY OF THE INDEX: .515 (n=859)

RANGE OF INDEX: 1 to 5

MEAN: 3.297 MEDIAN: 3.281 MODE: 3.000 STANDARD DEVIATION: .821



## JOB REWARDS INDEX (OLDER WORKERS)

INDEX DESCRIPTION: The job rewards index measured the extent to which the respondents felt their jobs met social and economic needs.

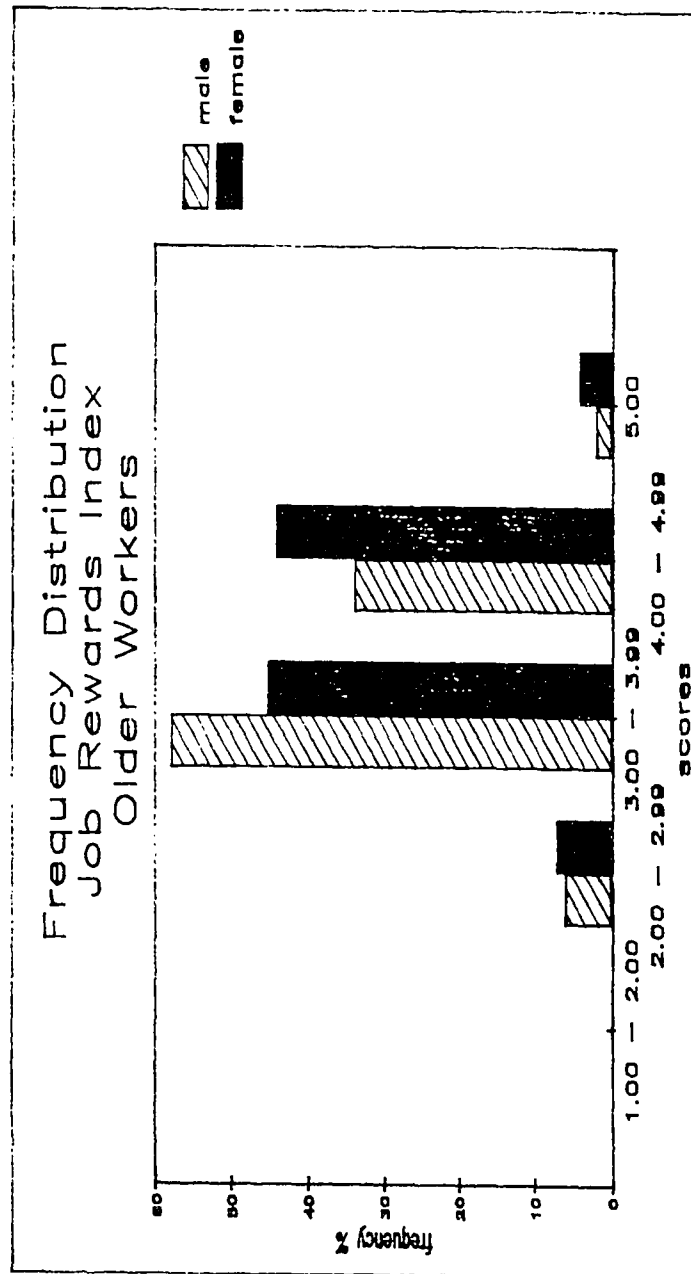
NUMBER OF ITEMS INCLUDED IN THE INDEX: 9

SPECIFIC QUESTION NUMBERS IN THE INDEX:

INTERNAL CONSISTENCY OF THE INDEX: .736 (n=826)

RANGE OF INDEX: 1 to 5

MEAN: 3.815 MEDIAN: 3.783 MODE: 3.444 STANDARD DEVIATION: .616



## SELF-REPORT HEALTH (OLDER WORKERS)

INDEX DESCRIPTION: The self-report health index measured the extent to which a physical health condition limited the respondent from performing designated tasks. A high score on this index indicated minimum limitations.

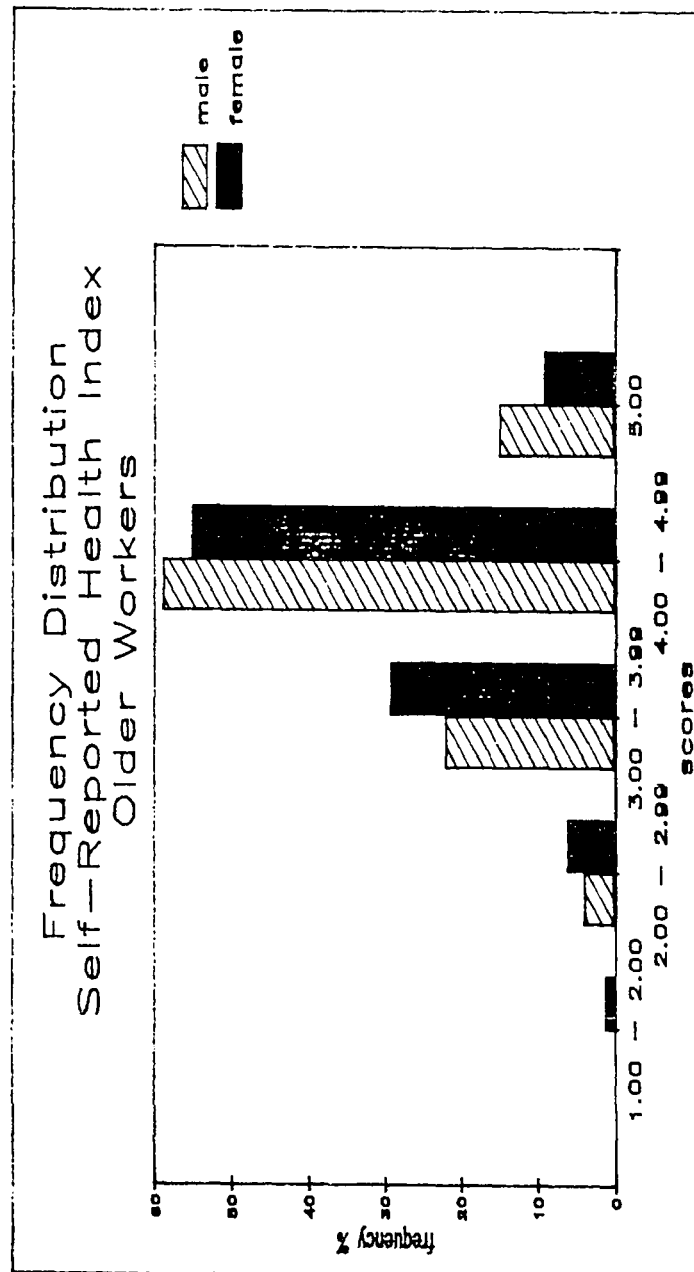
NUMBER OF ITEMS INCLUDED IN THE INDEX: 11

SPECIFIC QUESTION NUMBERS IN THE INDEX: 86 - 96

INTERNAL CONSISTENCY OF THE INDEX: .865 (n=812)

RANGE OF INDEX: 1 to 5

MEAN: 4.201 MEDIAN: 4.364 MODE: 5.000 STANDARD DEVIATION: .699



## SUBJECTIVE HEALTH STATUS (OLDER WORKERS)

INDEX DESCRIPTION: The subjective health index measured the respondent's state of health as compared to others and to five years ago. A high score on this index indicated the respondent's health was excellent.

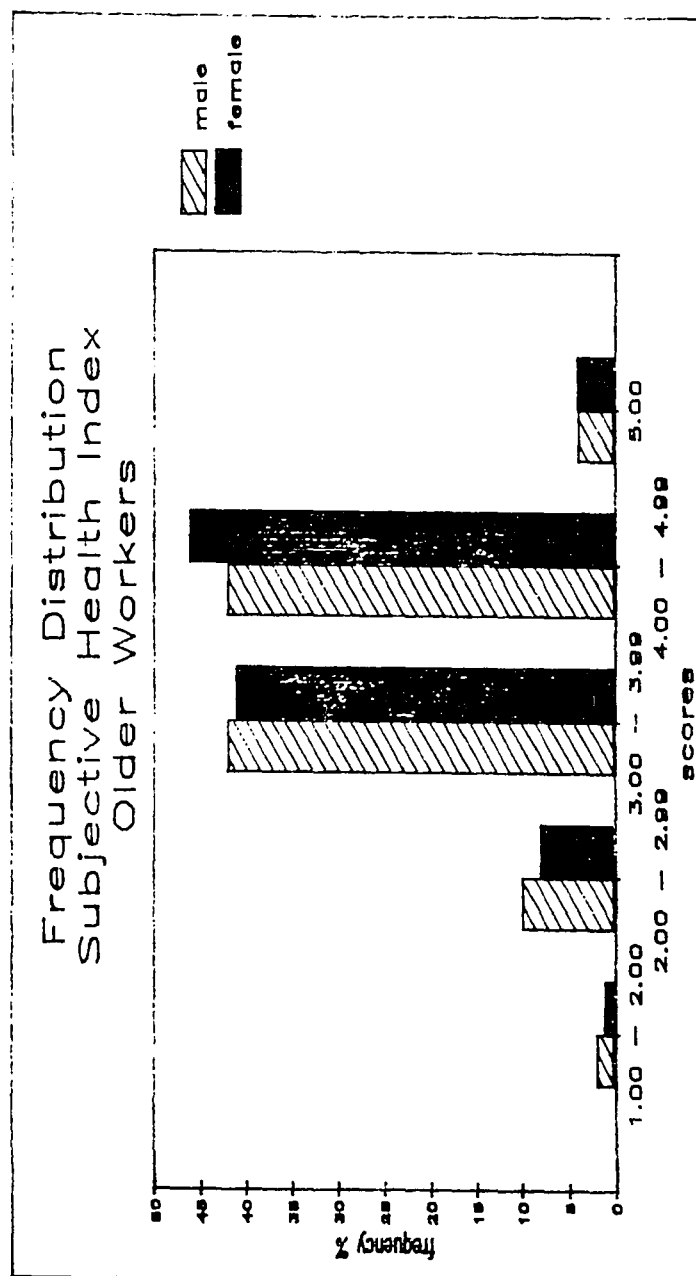
NUMBER OF ITEMS INCLUDED IN THE INDEX: 3

SPECIFIC QUESTION NUMBERS IN THE INDEX: 81 to 83

INTERNAL CONSISTENCY OF THE INDEX: .717 (n=875)

RANGE OF INDEX: 1 to 5

MEAN: 3.722 MEDIAN: 3.736 MODE: 4.333 STANDARD DEVIATION: .705



SOCIAL AND LEISURE ACTIVITIES INVOLVEMENT INDEX  
(OLDER WORKERS)

INDEX DESCRIPTION: The social and leisure activities involvement index was comprised of four indices. The indices measured the extent to which the respondents felt social and leisure activities were important. A high score indicated that leisure and social activities were quite important.

NUMBER OF ITEMS INCLUDED IN THE INDEX: 2 per index

SPECIFIC QUESTION NUMBERS IN THE INDEX:

Outside Activities	(Scale 1)	217, 226
Social Relationships	(Scale 2)	218, 221
Cultural Activities	(Scale 3)	219, 225
Sport Activities	(Scale 4)	222, 223

INTERNAL CONSISTENCY OF THE INDEX:

Scale 1	.494 (n=832)
Scale 2	.322 (n=813)
Scale 3	.487 (n=839)
Scale 4	.588 (n=829)

RANGE OF INDEX: 1 to 4

MEAN:	Scale 1	2.391	MEDIAN:	Scale 1	2.394
	Scale 2	2.471		Scale 2	2.440
	Scale 3	2.903		Scale 3	2.951
	Scale 4	2.544		Scale 4	2.572
MODE:	Scale 1	2.000	STANDARD DEVIATION:	Scale 1	.869
	Scale 2	2.500		Scale 2	.871
	Scale 3	3.000		Scale 3	.872
	Scale 4	3.000		Scale 4	.858

