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# The Effects of Environmental Stress on Financial Planning for Retirement

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THE EFFECTS OF ENVIRONMENTAL STRESS ON FINANCIAL PLANNING  
FOR RETIREMENT

by

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A Dissertation Submitted to the Faculty of  
Old Dominion University in Partial Fulfillment of the  
Requirements for the Degree of

Doctor of Philosophy

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## Abstract

During the past several decades vast changes have occurred in the labor market. Unusually high unemployment rates, changes in labor force composition and the migration of workers to new industries, are typical topics of concern. This study deals with the development of a model to explain the consequences of environmental stress and psychological strain on retirement financial planning behaviors, an area of investigation which has received little or no attention in the literature, but in which as much importance portends as the traditional topics of concern. Several measures of environmental stress, psychological strain and measures of coping behaviors are developed as endogenous variables in a model with several measures of individual differences as exogenous variables. A stratified, random sample design was used to select 364 employees from Norfolk General Hospital. Results were analyzed using path analysis. The results supported the major hypothesis of causal linkages between measures of environmental stress, psychological strain and coping behaviors. The final Psychological Model of Retirement Financial Planning Behavior suggests several consequences for the development of employee assistance programs.

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## CHAPTER 1

## Introduction

Environmental stress can be conceptualized as pressure from the environment which impacts individuals, creating psychological strain, a state of emotional tension. Sensitivity to economic stress, lack of future-oriented economic optimism and lack of discretionary income are likely environmental stressors which may induce psychological strain among workers. Psychological strain is likely to affect retirement financial planning activities, stated willingness to continue working in order to acquire sufficient financial assets for retirement, and feelings of self-reliance regarding ability to provide for financial needs in retirement. Subsequently, current psychological views regarding why people work or continue to work beyond retirement eligibility appear inadequate when the realities of environmental stress are taken into account. In a most simplistic model, some people may work because it provides the only opportunity to acquire the financial resources necessary to support their retirement.

Research on the relation of economic aspects of retirement to retirement satisfaction indicates skewed demographic distributions in which females, minorities, and those from lower income levels disproportionately report low retirement satisfaction due to insufficient incomes. These groups likely experience increased environmental

economic stress and are likely to have increased psychological strain as a result of the inability to cope and control their financial welfare in retirement. Walker and Price (1974) suggest existing research does not give systematic attention to retirement across income groups.

This dissertation considers how environmental stress affects current workers and their participation in retirement planning activities, their stated willingness to continue working to acquire financial assets sufficient for retirement, and their thoughts about who is responsible for assuring that retired workers have sufficient financial assets to meet their needs. Specifically, the validity of certain hypothesized relationships between environmental stress, psychological strain, and specific behaviors and beliefs will be tested. Differences between specific demographic groups will be explored.

#### General Background

Older workers are caught today between the jaws of a vise. Mandatory retirement policies, work disincentives in pension plans, and pressures exerted upon them to leave the workforce early close in from one direction. Dramatic fluctuations in inflation and portents of retirement benefit reductions induce pressure from the other side. The result is that workers are coerced and enticed to withdraw from the workforce, while at the same time, the economic necessity of being able to provide for retirement needs requires workers to remain active in the labor-for-

wage exchange. This conflict of opposing forces is not easily understood when both research and descriptive literature tend to articulate only the first side of the conflict while ignoring the implications of the second.

According to the Select Committee on Aging (1980, p. 14), approximately 10 percent of the population was over 65 in 1980, yet these people constituted 22.3 percent of all persons in America with incomes below the 1980 poverty level of \$3,999 for individuals. Despite numerous advances in assistance, a 1985 Congressional Budget Office report showed that in 1983, the last year for which official data are available, there were still 35.3 million poor people, of whom 3.7 million were 65 or older. This same report suggested that eliminating the 1986 cost-of-living adjustment in federal benefit programs would save \$6.6 billion but would push 530,000 people, two-thirds of whom would be elderly, into poverty. Why do large numbers of people enter retirement so ill-prepared?

First, the working years, from about age 20 to 65, constitute the only opportunity to acquire financial assets, including Social Security, upon which most of us will depend in our retirement years. Delayed entry into the workforce, an early exodus from the workforce, or disruptions in one's employment history, portend a lowering of the available assets with which the average American will be able to support their standard of living during retirement. Acclimation to a seven percent national

unemployment rate, higher regional unemployment rates, a forty-five percent unemployment rate for Black males between the ages of 20 and 25, and a high number of middle-aged women entering the workforce for the first time, delay for many the opportunity to begin financial planning for retirement and shorten the years available to participate in financial planning activities.

Secondly, federal legislation to prevent age discrimination in employment has failed to resolve significant issues. According to the Select Committee on Aging (1981, p.9):

- o Fifty-one percent of all workers still face an employer-imposed mandatory retirement age;
- o Forty-two percent of all workers covered by pensions receive no (or minimal) pension benefit increases for work performed after age 65;
- o workers who forfeit Social Security benefits in order to remain employed after age 65 will never regain those lost benefits.

These obstacles to future financial security force current workers to begin financial planning early in their careers, assign a higher proportion of available wages to the acquisition of retirement assets and diversify their savings approaches to assure adequate resources for retirement. For some, this is not a critical issue.

What has developed in this country is a two-class

system of retirement. One group, about twenty-four percent, live at or below the poverty level during their employment years and rely almost exclusively upon Social Security benefits in retirement. The other group, the larger one, has an adequate standard of living, with employee pension plans and/or assets from savings/investments to provide for their retirement years. However, even in this larger group many may find themselves less optimistic in the future as inflation robs them of the value of their assets and increased longevity extends the period over which those assets must be distributed.

In the year 2000, there will be 87.1 million Americans, 45 and over, compared with 73.5 million in 1984 (Congressional Budget Office, 1985, p. 47). With the growing number of older Americans may come increasing demands for economic security in retirement.

In the following sections different perspectives on retirement will be explored. Each perspective represents one part of the panorama of psychological, sociological and economic pictures of retirement.

#### Administrative Perspective

In the 1950's, when many of the private pensions began for hourly rate employees, the age of 65 was carried over from Social Security as the eligibility standard for benefits and, in many cases, the age at which mandatory retirement was required. This mandatory retirement age, however, seems to have been arbitrarily set in some cases.



Representatives from General Motors testified at a congressional hearing on March 16, 1977, that when their first hourly-pension plan was established in 1950, the age for automatic retirement was compromised at 68 after ages 70 and 65 had been discussed (Select Committee on Aging, 1977, p. 56).

In 1977 both General Motors and Ford Motor Company reported fewer than two percent of their hourly wage employees postponed retirement until the mandatory age of 68 (Fritz, 1978). At least 89 percent of their employees retired before age 65 due to union imposed age requirements. Many of these individuals opted for early, reduced Social Security benefits.

In industries where the combination of pension plan benefits and Social Security benefits provide high pre-retirement replacement values, Fritz (1978) found a propensity for workers to retire early. He reports that from 1975 to 1978, only twenty percent of Exxon employees worked until age 65, the mandatory age; in 1976, at General Foods thirty percent of its retirees remained until 65, the mandatory age; while at IBM, from 1970 to 1976, twenty percent of nearly 7,000 retirees left at the mandatory age of 65.

Despite what appears to be a financially induced mass exodus from the workforce, the fact remains that only thirty percent of men and thirteen percent of women recently entitled to Social Security benefits also received

a private pension benefit (Select Committee on Aging, 1980). Additionally, many private pension plan benefit amounts are integrated with the amount of Social Security benefits. The result is that individuals often have their private pension benefits reduced by the amount of their Social Security entitlements. Additionally, while Social Security benefits are adjusted for Cost-of-Living (COL), most private pension benefits are fixed entitlements. Also, coverage under private pension plans is generally restricted to higher income or heavily unionized groups. Only ten percent of workers with income between \$5,000 and \$10,000 are covered by private pension plans; most of these are government employees. Conversely, seventy-eight percent of workers earning \$25,000 and more are covered by pension plans (Select Committee on Aging, 1980, p. 60).

Lower paid workers, who may need pension funds the most, are the least likely to accumulate these resources during their working years. Additionally, current rules require virtually all workers to remain with the same employer for at least 10 years to become "vested" in a retirement system--a requirement which is often impossible to meet since the average tenure for American workers is seven years (Select Committee on Aging, 1980, p. 47). Periods of unemployment, years absent from the workforce to raise children, and frequent job changes may prevent many workers from accruing sufficient time for investiture with a firm. The unpaid contributions forfeited by these short-

term workers are often used to subsidize the pensions of persons who remain with the plan over many years. When the pension benefits of these long-term workers are computed on the basis of the highest and usually most recent salary, the total retirement benefits received exceed the limits of their own contributions. For example, a worker who contributes to a pension plan for thirty years and then retires, with benefits computed at fifty percent of their current wage, will, after a short time, receive more in benefits than the value of their own contributions over the thirty years of working. These benefits are paid with funds from workers who have forfeited contributions by withdrawing from the pension plan early, or by the contributions of workers who die early in retirement, leaving unused contributions in the pension plan. In the private pension system income is often transferred from the transient or intermittent worker to the more stable one.

National surveys (Harris, 1979) reveal that many older workers would prefer to work past normal retirement age, often even with reduced work schedules, in order to meet financial obligations. Yet the demands of younger workers for organizational advancement opportunities often force organizations to consider reducing the age for mandatory retirement, thus forcing older workers out of the workforce. The results can often be costly. Sheppard (1971) found that a firm which would drop its retirement age from 65 to 60, with full benefits, would face a forty

to fifty percent increase in pension costs.

Not surprisingly, most organizational responses to employee preretirement planning avoid comprehensive discussions of the economics of retirement. While Fitzpatrick (1980) found that an overwhelming majority of employees age 40 and over felt a need to attend a retirement planning program in order to discuss the economics of retirement, most companies find that focusing attention on such topics is not to their advantage simply because such a focus would illuminate deficiencies in the abilities of current pension plans to meet the financial needs of the retiree. Instead, most companies have taken the position that the financial welfare of a prospective retiree is a matter of individual planning, which requires attention over one's entire employment history. The current employer, often the last link in a chain which covers numerous organizations over many years of employment, is often reluctant to intervene in a problem which is seen as cumulative, personal and not a result or condition of one's current employment. Allocating current organizational resources for such an intervention is often seen as both an invasion of workers' privacy and an unnecessary organizational burden, when previous employers, (or the worker) have failed to take advantage of past opportunities to provide or participate in planning activities.

Monk (1979) identified five types or models of

preretirement planning programs. In each of these models, the primary focus of attention was the social/ego needs of the retiree. They differed only in terms of "how" self-esteem and social activity was to be maintained during the retirement years.

Siegel and Rives (1980) reviewed several organization financial planning programs for retirees. They found that while these programs claimed to cover post-retirement financial planning, over ninety percent of the programs were unable to determine exact individual pension or Social Security entitlements. The complexity of determining individual entitlements and an inability to predict future changes in the rules governing entitlements were reasons most often cited for this deficiency. The programs reviewed were largely presented to workers in a mass-meeting lecture and were essentially devoid of individual examples or input from the workers themselves. Additionally, Hall (1980) found that most corporate retirement planning programs occur late in the employment history, usually about five years before retirement. Age 45 to 50 is increasingly becoming too late to begin retirement financial planning because there may not be sufficient working years remaining to take advantage of many investment opportunities. Also, programs would be better served if communication was established with people who had already retired and were able to relate first-hand "realisms."

Walker and Price (1974) conclude that other than establishing superficial counseling programs, little attention has been given directly to critical retirement financial issues. Yet, Fitzpatrick (1979) claims that such programs may represent the only significant exposure a worker has as a preretiree to information that could seriously affect future security and happiness. Additionally, he found that organizations are reluctant to provide continued programs of counseling for workers once they are retired.

Because of inadequate organizational planning and attention to workshop content, workers often enter retirement unaware of its economic demands. Additionally, as older workers approach their retirement years they may feel neglected by an employer who fails to provide the kind of information they desire.

#### Union Perspective

In a landmark case in 1971, the Supreme Court upheld the unions' position, and the 6th Circuit Court of Appeals' decision, that unions are not obligated to bargain for pension benefits on behalf of retirees, precisely because the demands of the retirees may run counter to the needs of younger, currently employed workers for higher wages (Kasschau, 1976). The result of this Supreme Court decision was to close the door on retirees' expectations that years of union membership would assure continued union representation of their interests during retirement.

Claque, Palli and Kramer (1971) observe that unions have been very slow to respond to older workers' demands for supplementary retirement income. In fact, they point out the position of the unions has been similar to that of the Social Security Administration with regard to continued employment following retirement. Union retirement benefits are often reduced significantly for each dollar "earned" while retired. The effect on the retired worker is that they are prevented from re-entering the workforce even though their economic requirements may necessitate such action.

The unions' position has repeatedly been one of protection for current workers at the expense of those older workers who are approaching or have reached retirement. The distribution of financial resources available, from the unions' point of view, dictates that the needs of current, younger voting members must receive priority, even at the expense of the retired worker.

#### Governmental Perspective

According to Johnson (1974), the choice of 65 as the age for retirement is traceable in large part to the Old Age and Survivors Pension Act sponsored by Otto von Bismarck, the first chancellor of the German Empire. In 1889, following a disastrous Franco-Prussian War which left the country heavily populated by disabled veterans and a large number of elderly unable to care for themselves, such a plan was a political necessity. This legislation

represented the first time a national government in the Western world assumed an obligation for the financial support of its older citizens and created the need to define "old age." Great Britain passed similar legislation in 1908, initially using age 70, but later reducing it to sixty-five. Other nations followed Bismarck's lead. The United States followed suit in 1935 with its Social Security system, spurred largely by the demands of the depression.

Today the normal retirement age, as defined by public policy, varies by country, as well as by sex and type of work. The age range is primarily 60-70, with 65 being the most common. In most cases the original rationale for choosing 65 seems to have been a political compromise which few expected would become a significant issue since the average life expectancy in the late 19th century was only 54.7 years for white males.

In 1967 the Age Discrimination in Employment Act was enacted and defined as a protected age group those individuals who were at least 40 years of age, but less than 65. Choice of these ages also seems to have been somewhat arbitrary. The original bill submitted to Congress was an outgrowth of a study the Secretary of Labor was required to make pursuant to section 715 of the Civil Rights Act of 1964. It had age limits of 45-65 but provided additional authority to the Secretary to adjust the limits up or down. At Senate hearings on this bill, Secretary



Wirtz noted that adjusting the age upward would be helpful in protecting those workers older than 65 who wanted and needed to work in order to meet financial necessities. Instead of permitting this adjustment, the Senate required the Secretary to make a special study of this problem and report back within 6 months. Despite a reaffirmation of the Secretary's previous position filed in the later report, no such adjustment was made by the Congress (Select Committee on Aging, August 1977).

Instead of providing a mechanism for improving workers' capacity to continue self-support, as originally conceived, the outcome of this action, in fact, has been to strengthen workers' dependence on Social Security benefits. While Social Security was not designed to be the sole source of retirement income for those over 65, the fact is that, for many, it remains so. In addition, there are built-in disincentives to continued labor force participation by recipients. Social Security regulations penalize older workers by reducing benefits one dollar for every two dollars earned over \$7320 for those over age 65, and \$5400 for those under 65 (Social Security Administration, 1985). Even so, this provision of the law is unevenly applied. For example, individuals who have an employment history as a "consultant" can continue their activity into retirement with a ceiling on earnings of \$15,000.

While some efforts have been made to raise basic Social

Security benefits, these gains are often offset by deleting future cost-of-living allowances. As recently as 1980, the maximum basic entitlement for an individual, without a cost-of-living allowance, equalled only eighty-one percent of the previous year's poverty line (Select Committee on Aging, 1980, p.18). Commencing with the 1984 tax year, further reductions in overall benefits have occurred since up to one-half of Social Security benefits received may be taxed for those with other sources of income. As the ratio of retirement benefits to cost-of-living declines for the retiree, health maintenance costs continue to rise at a rate typically higher than the COL index, and the blessing of a longer expected life is mixed by the need to meet medical expenses for a longer period of time.

Opportunities available to participate in other forms of retirement financial planning are often negligible for poor and many middle-income wage earners. The Select Committee on Aging stated in a 1980 report that the tax deductions offered to IRA participants are not likely to benefit low income groups since the minimum enrollment requirements prevent many of these people from participating. Low income individuals simply do not have sufficient discretionary income to invest in IRAs and thus benefit from the tax advantages or the retirement income.

The U. S. House of Representatives Select Committee on Aging, in a 1981 special report, acknowledged the seriousness of the problem. According to this report,

current retirement policies force a continued decline in workforce participation by older persons. The result of this action is that longer periods of retirement are now anticipated under conditions of unusually sustained inflation. Early retirement increases financial stress on individuals and threatens the solvency of Social Security and pension plans. Moreover, it is not only the elderly who are placed in this economic vise.

Current workers can no longer look forward with confidence to a full 45 years of potential earnings for acquiring retirement assets. Some contributing factors include flexible work schedules, extended education, phased retirement, reduced work hours, losses in wage negotiations, and continued high unemployment, all of which combine to present a dim future for many American workers. Increased longevity and advances in medical health care enable a longer period of retirement, while at the same time, for many, fewer years are available to acquire retirement assets. Women, who have traditionally had intermittent workforce participation, or delayed entrance into the workforce, and Black males under 25, with an unemployment rate of forty-five percent are the most affected by reductions in the number of years available to store up financial resources for retirement. The average worker today may enter their retirement years far less prepared than their earlier counterparts.

## Individual Perspective

Retirement Satisfaction

Research at the individual level of analysis dealing with retirement issues has been contaminated by several deficiencies. First, most of the research has dealt with the ego/social needs, e.g., satisfaction with retirement, of individuals approaching retirement or already retired. Secondly, research dealing with preparation for retirement has been limited by focusing on individuals within five years of retirement. Finally, research which addresses the psychological effect of economic pressures on the retirement financial planning of current workers is notably lacking. The following represent viewpoints from current literature focusing on individuals and the retirement process.

Retirement satisfaction has received considerable attention (Barfield and Morgan 1976, 1978; Ederdt, Rose, Bossee and Costa 1976; Kimmel, Price and Walker 1978). Barfield and Morgan (1978), when surveying auto workers, discovered a "U" shaped relationship between self-reported retirement satisfaction and post-retirement income level. They concluded individuals in lower income categories might be less likely to express dissatisfaction with their retirement experience since disproportionally they represented those persons who escaped from relatively unrewarding workforce experience, and thus found retirement, at whatever income, no worse than, and quite

likely more satisfying than, their working years. These findings suggest the transition from working poor to retired poor may not be as traumatic for the minorities which have traditionally been over-represented at the lower earnings levels (Select Committee on Aging, 1980). At the other end of the curve, workers with high post-retirement incomes showed great satisfaction with retirement, as could be expected. Difficulties were discovered most often by those in the middle income bracket who showed lower satisfaction with retirement as an accompaniment of a relative decline in quality of life. Apparently, for these individuals there is less replacement of their pre-retirement income and they are more susceptible to changes in inflation.

According to Glasmer (1981), these findings generally confirm previous surveys conducted by the University of Michigan Survey Research Center and the 1971 Cornell Study of Occupational Retirement. In all cases, retirement satisfaction was highly related to the financial resources available to the individual. Ederdt et al. (1976) observed that attitudes about the appropriate timing of retirement changed as workers grew older. Older workers tended to want to delay retirement more than younger ones. While some of this variance was explained as reluctance to leave the "work environment," considerable variance was attributed to confronting more immediately the prospect of not being financially prepared for retirement. Barfield

and Morgan (1978) confirm this finding by citing the uncomfortably high inflation rates which affected the outlook of potential retirees. Glasmer (1976) obtained similar results. His survey of retired persons indicated that money was the major item missed, and when people had been assured of adequate income they retired earlier than a mandatory age.

### Psychological Issues

Foley (1972) suggests the psychological crisis for those approaching retirement is the awareness of a change in life-style which retirement portends. While that study did not address the issue of potential changes in economic well-being, the implications are clear. As Glasmer (1976) points out, it is quite possible that what has been characterized as fear of retirement, resistance to retirement, and negative attitudes toward retirement may very well be a realistic fear of impending poverty.

In addition to the effects of environmental stress, there is evidence people approaching retirement experience an impending loss of internal locus of control over their future well-being. Neugarten and her associates (1964) describe the period from 40 to 70 as being marked by a shift in a perception of the environment from one that rewards boldness and risk taking to one that is complex and dangerous. This feeling was investigated by Perlmutter and Monty (1977) with the conclusion that a lack of control over the immediate environment led to feelings of

helplessness and impaired functioning. They suggested that a person might work harder to gain control of a situation if the opportunity to do so is thought to be present in the environment. A similar view was expressed by Stotland and Blumenthal (1964) who suggested that people who feel in control are less anxious than those who do not have this belief. However, Rotter (1966) has pointed out that there are considerable individual differences in the perception of control, and this may subsequently influence the individual's motivation to gain control.

The result of environmental stress and the loss of an internal locus of control may be "psychological strain." This view is supported by Stagner (1981) who classifies pressures from the environment as "stressors," while the affective, physiological and cognitive changes induced in the individual are termed "strain." In his model the degree of strain is moderated by the individual's perception of the stressor.

Coping is conceptualized as any voluntary activity directed against the external stress which protects the individual from its effects. For example, if one is psychologically strained by the environmental stress of inadequate financial planning for retirement, coping may involve efforts to participate in a pension plan, acquire a savings account, purchase an IRA, or invest in real estate, stocks, or bonds. All of these coping mechanisms must be put in place relatively early if they are to "make a

difference"; compounding and reinvesting of resources are essentially meaningless "at the last minute" before departing the workforce.

According to Stagner (1981), the presence of strain, a lack of internal locus of control and the development of coping mechanisms can be measured. Reported experiences such as felt tension, anxiety, and the inability to make decisions have been used to measure strain. Hostility attributed to a lack of opportunity and feelings of being overwhelmed by the environment have been used to measure a loss of internal locus of control. Coping mechanisms have been measured by the diversity and extent of individual behaviors directed toward lessening the effect of environmental stress. Since both strain and coping mechanisms can be measured, what is needed are measurements of environmental stress in order to construct a model relating the effects of environmental stress to psychological strain and subsequent retirement financial planning behaviors.

Murray (1938) developed the concept of environmental stress. According to this theory, the environment contains both positive opportunity and negative consequences for the individual. The effect of these opposing forces upon the individual is termed "environmental press." While this concept has never been specifically applied to the financial planning process for retirement, its utility should be apparent. There are environmental stressors

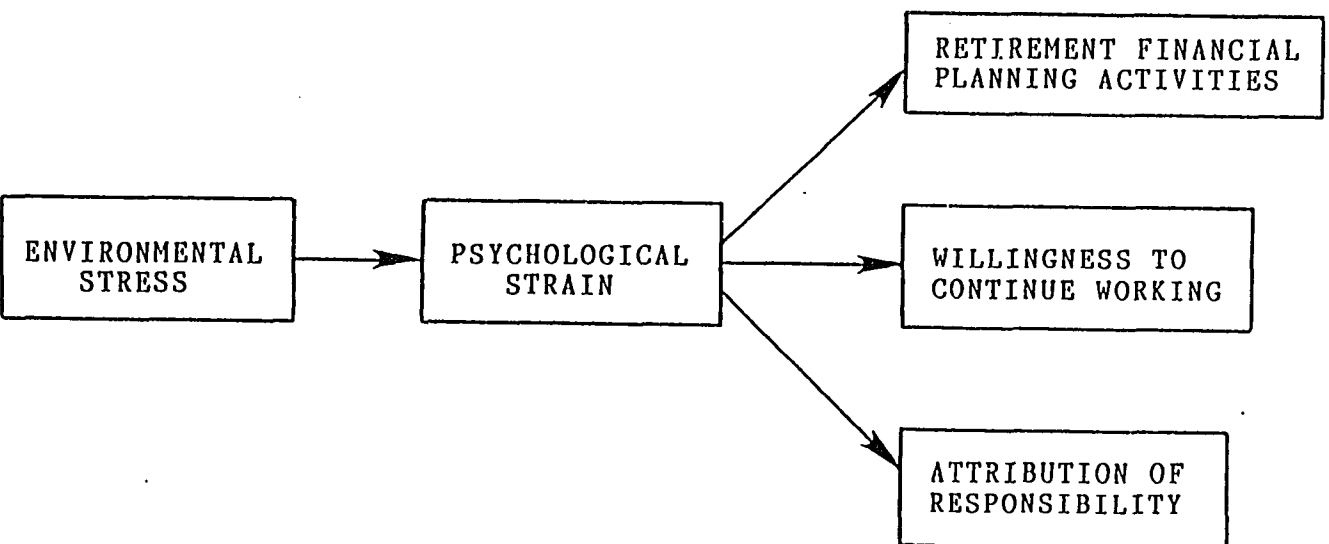


which press the worker toward retirement, while at the same time, there is an opposing reluctance to dissolve ties to the benefits of employment.

#### The Model

Figure 1 offers a schematic representation of the relationship of environmental stress and psychological strain with retirement financial planning activities, willingness to continue working to acquire retirement assets, and attribution of responsibility for retirement welfare. According to this model, individuals experience environmental stress and form cognitions based upon that experience. These experiences and cognitions increase or decrease psychological strain and result in coping mechanisms which are measured in retirement financial planning activities, a stated willingness to continue working to acquire sufficient financial assets for retirement, and assignment of responsibility for subsequent retirement financial welfare. Table 1 is an operationalization of this basic model showing the demographics used as exogenous variables to measure beliefs and experiences related to the endogenous variables of environmental stress, psychological strain and retirement financial planning activities, willingness to continue working and attribution of responsibility. Detailed descriptions of these variables are provided in Chapter 2. Figure 2 is the basic model showing the hypothesized structural parameters.

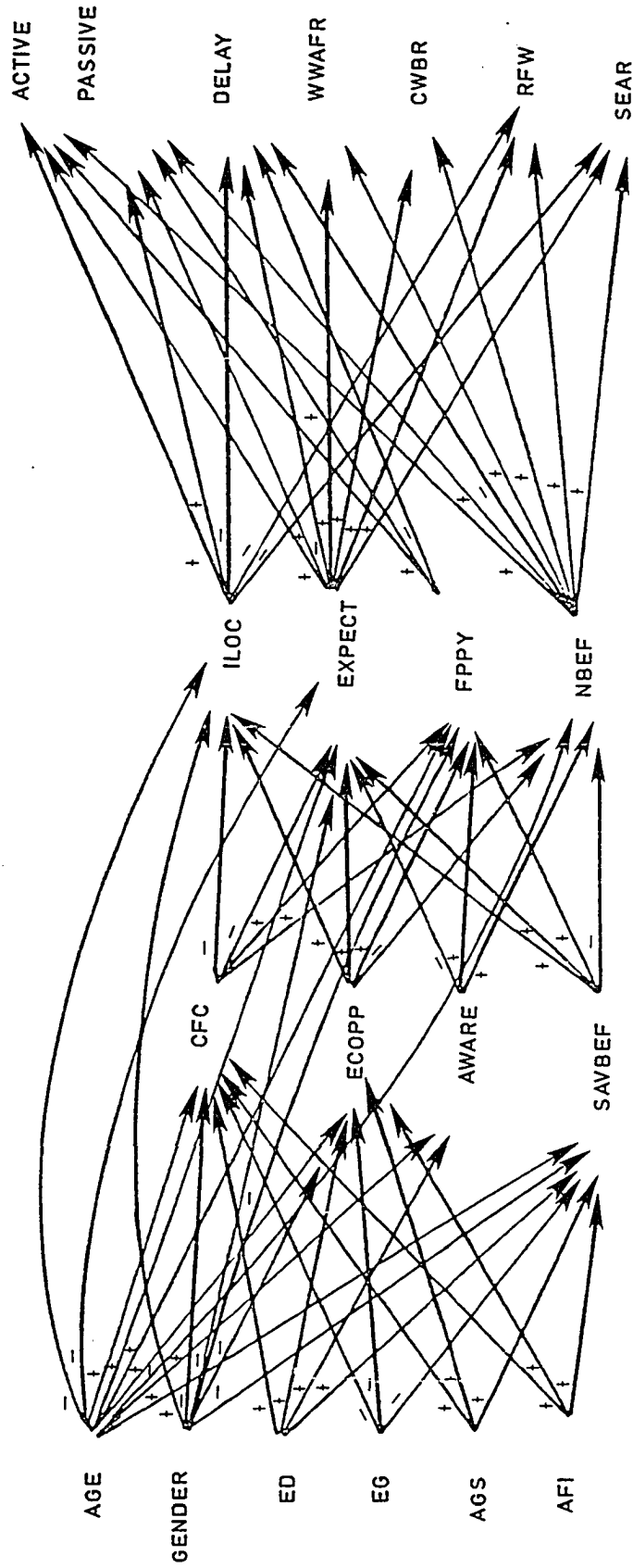
Figure 1. Relationship of the environment to psychological strain and outcome measures



**Table 1**  
**Variables in Basic Model**

Erogenous Variables	Endogenous Variables				
	Environmental Stress	Psychological Strain	Financial Planning Behaviors	Willingness to Continue Work	Attribution of Responsibility
1. Age	1. Current Financial Concerns	1. Importance of Retirement Financial Planning	1. Active Planning Behaviors	1. Currently	1. Who is Responsible ?
2. Gender	2. Amount of Perceived Environmental Opportunity	2. Negative Beliefs About the Economic Future	2. Passive Planning Behaviors	2. Past Retirement	2. Value of Assistance
3. Education	3. Experiment with Retirees	3. Locus of Control	3. Delay of Planning Behaviors		
4. Annual Gross Salary	4. Exposure to Financial Planning	4. Expectations About Economic Retirement			
5. Annual Family Income					
6. Ethnic Group					

Figure 2  
Basic Model With Hypothesized Structural Parameters



### Hypothesis Testing

#### Major Hypotheses

The model shown in Figure 2 will be confirmed by the data obtained from full-time workers at Norfolk General Hospital in Norfolk, Virginia. That is, the model will accurately reflect the variable relationships in the data. Direct causative connections will occur between the exogenous variables and the endogenous variables of psychological strain. Direct and indirect causative connections will exist between the exogenous variables and the endogenous variables of psychological strain and environmental stress. Individuals who report high environmental stress will also report increased psychological strain and will be more active in their financial planning for retirement than those individuals who report low environmental stress and subsequent low psychological strain.

#### Secondary Hypotheses

Individuals who report increased environmental stress and subsequent psychological strain, but who lack sufficient income to prepare financially for retirement, will report a greater willingness to work to acquire financial resources, or will report a greater reliance upon assistance from others. They will report fewer environmental opportunities and more interest in workshops on the non-financial aspects of retirement. Older individuals with lower incomes will show greater

environmental stress and increased psychological strain since they have fewer years remaining in which to financially plan for retirement. Minorities, despite often disproportionately representing those with lower incomes and shorter employment histories, will not report increased environmental stress and psychological strain, since the transition from working poor to retired poor may not be seen as traumatic. Finally, women entering the workforce will be as concerned as their male counterparts about financial preparations for retirement.

#### Contribution Expected to Research on Retirement

There are several deficiencies in current research which are addressed in this dissertation. First, there is a notable lack of research, using current workers, which addresses the relationship between environmental stress, psychological strain and retirement financial planning. Secondly, group differences which may moderate this relationship have not been addressed. Third, while the concept of environmental stress has received some attention in the literature, its application has largely been in terms of defining psychological and/or sociological stressors; their relationship to specific behavior output is often lacking. Finally, the relationship between psychological strain and specific retirement planning activities has not been established. These deficiencies are specifically addressed in this research.

Research on work and retirement has been constricted

by the prevalence of three approaches. First, research regarding why people work has focused primarily on the ego/social needs satisfied by work. Secondly, research on retirement has also tended to focus on the ego/social needs of the retiree. Finally, research on retirement planning has focused on those workers within five to ten years of retirement. These approaches obscure the relationship between environmental stress, psychological strain and the need to continue working in order to provide adequate financial assets for retirement. Given the complexity of the economic world in which we live, it appears reasonable that those who are stressed by the environment will exhibit a greater willingness to continue working to acquire financial assets for retirement or increase their participation in retirement planning activities. These same individuals are likely to feel more inadequate in being able to acquire sufficient financial assets for their retirement and place demands upon others for assistance.

## CHAPTER 2

## Methods

The Test Site and Sampling Procedures

Norfolk General Hospital is a large, metropolitan, full-service hospital with a full-time staff of approximately 1665. This staff size fluctuates <sup>+</sup> 10% each month because the hospital serves as a training site for Eastern Virginia Medical School and several nursing schools. Norfolk General is a subsidiary of Alliance Health Service Corporation, which also manages one other hospital in the Tidewater area.

Eighty-three percent of the full-time employees at Norfolk General Hospital are female. The average age of full-time workers is 36. Their average tenure with Norfolk General Hospital is 7.7 years.

The current pension plan went into effect June 1, 1975. It is a non-contributory pension plan and all full-time workers are covered. Presently, thirty-eight percent of the workers are vested at the minimum 10 year mark. Retirement occurs on the first day of the month on or following the 65th birthday. Benefits are computed using the average monthly compensation based upon the five highest years of service. This figure is multiplied by two percent for each year of service for the first twenty years. An additional one percent per year is added for service between 20 and 30 years. This total is then reduced by two and one-half percent of the Social Security



entitlement multiplied by the years of service up to 20 years. As an example, a current worker retiring after 30 years service, with an average monthly compensation of \$800.00, would receive a pension benefit of \$193.40, plus Social Security entitlements of \$413.00 per month for a monthly retirement income of \$606.40. Employees may retire at age 55, but may only receive 50% of their pension benefits. Finally, pension benefits are only guaranteed for 10 years following retirement. After that period, benefits may continue at the discretion of the pension plan administrator.

Employees at Norfolk General are categorized into seven occupational groups: service/maintenance, clerical, professional/technical, exempt non-supervisory, non-exempt supervisory, exempt supervisory, department heads and administrative staff. The terms "exempt" and "non-exempt" refer to whether or not the person is paid additional pay for overtime.

For purposes of analysis, to ensure that there were sufficient numbers of participants within each sampling groups, it was necessary to combine members of categories on some dimensions. The dimensions involved were similarity of pay and/or responsibilities. The seven occupational groups of employees were divided into five groups, labelled I, II, III, IV, and V. Group I (n=43) consisted of administrative staff (n=9) and department heads (n=34). Group II (n=311) consisted of exempt

supervisors (n=112), exempt non-supervisors (n=90) and non-exempt supervisors (n=109). Group III (n=792) consisted of professional/technical personnel. Group IV (n=213) consisted of clerical personnel. Group V (n=302) consisted of service/maintenance personnel.

A computer print-out provided by the hospital gave the employment status, sex, income, home address and phone number of all employees in alphabetical order within each of the original seven occupational categories. A stratified, random-sampling procedure (Kish, 1963, p.118) was used to select full-time employees as subjects from each occupational group for the pilot-test (N=50). Individuals used in the pilot-test were not used again in the study sample.

The pilot-test questionnaire was mailed to the home address of selected employees. A cover letter explaining the purpose of the survey was included. Previous to this, the Department of Human Resources at Norfolk General Hospital presented the study plan to a meeting of all department heads and requested they encourage employee participation. Ten days after mailing the pilot-test questionnaire each employee in the pilot-test was called at home and asked if they had returned their survey. Of the fifty employees in the pilot-test, the phone calls found only two individuals who refused to participate. Within 20 days of initial mailing, a total of 29 surveys had been received. These were subsequently analyzed as pilot-test

data.

To determine the sample size for the study each occupational group was weighted by dividing the number of full-time employees in that group (less those used in the pilot test) by the total number of full-time hospital employees. It was originally intended to sample with  $\pm 5\%$  predictive precision (Yamane 1967, p. 192). This requires a sample size of 300 given a population of 1661. Given the return rate from the pilot test, it became obvious that it would cost too much money to send out the number of questionnaires needed to achieve this sample size, and that the required time to follow-up that mailing would be prohibitive. Therefore, the hospital decided to use  $\pm 7\%$  predictive precision, which required only 94 surveys for analyses. The stratum weights were then multiplied by recommended sample size of 94 and rounded upward to the nearest whole number to determine the portion of each stratum needed for the study sample. For example, there are 303 personnel in Category II, which yielded .19 as the stratum weight, which was then multiplied by the sample size (94). The product (18) was the number of individuals in the population stratum to be included in the sample. The results of this procedure are shown in Table 2.

To ensure these minimum sample requirements were met, it was decided to mail out four times more surveys than were needed to meet the required return rate for each stratum. To obtain the names of those in each stratum who

Table 2

Study Sampling Procedure


---

Occupational Group	Available Staff	Used in Pilot	Available for Study Sample	Weight	Sent Out	Returned
Admin. Staff/ Dept. Head	43	5	38	.02	9	9
Exempt Super/ Non-Ex. Super/ Ex. Non Super	311	8	303	.19	72	25
Prof/ Tech	792	23	769	.48	167	51
Cler	213	7	206	.13	48	18
Serv/ Main	<u>302</u>	<u>7</u>	<u>295</u>	<u>.18</u>	<u>68</u>	<u>26</u>
Totals	1661	50	1611	100	364	129

---

were to be mailed study survey questionnaires, the minimum required number was multiplied by four and a random number, 5, was generated by the computer. Excluding those who participated in the pilot-test, every fifth name was identified, starting with the first name on the available employees listing for each stratum, until 364 names were selected. Questionnaires were then mailed to these employees. (See Appendix A for a copy of the questionnaire.)

Prior to administering the questionnaire to the study sample, several changes were made in the survey instrument used in the pilot-test. These changes were necessary for several reasons. First, psychometric analyses of the pilot test data revealed several items could be deleted from scales, thus shortening several scales. These deletions also increased the alpha of the scales involved. Second, the printing format was changed to improve readability and reduce the length of the questionnaire. Third, the wording on some of the questions underwent minor changes to improve comprehension.

The survey package, which included an introductory letter from the Director of Human Resources at Norfolk General Hospital, the survey questionnaire and a postage-paid pre-addressed return envelope was sent to a total of 364 full-time employees.

Initial returns were poor. After two weeks, a follow-

up letter was sent out to the study sample. In addition, one-third were randomly selected to receive a phone inquiry asking if they had returned their questionnaire. Following two more weeks a total of 134 surveys were returned, of which 129 surveys were usable.

### Instruments

Items were written for each scale with the exception of the Internal Locus of Control scale which included items from the Rotter (1966) Locus of Control Scale and those developed by Nowicki and Strickland (1973).

All items were responded to on a five-point, agreement-type scale utilizing response anchors particular to each instrument. Approximately 30% of the items were negatively worded in order to counteract response bias and were reverse coded prior to analysis. Higher scale scores indicate greater amounts of each variable (e.g., "5" indicates higher economic stress; "1" indicates lower psychological strain.)

### Exogenous Variables

Measures of individual differences were collected as exogenous variables for analyses. Measures of individual differences are perceived as important for identifying groups or individuals in need of retirement financial planning interventions within Norfolk General Hospital. Six individual differences were measured:

1. Age.
2. Gender.

3. Educational Attainment.
4. Ethnic Group.
5. Annual Gross Salary.
6. Annual Family Income.

Individual differences were measured with an appropriately anchored scale, or a fill-in-the-blank item.

#### Endogenous Variables

Five dimensions of environmental stress were used as endogenous variables.

Environmental Economic Stress. The world in which we live portends economic stress for the individual as well as provides a source of economic opportunity which can be exploited when financially planning for one's retirement.

Four dimensions of economic stress were measured:

1. Current Financial Concerns measures the stated concern individuals express about the adequacy of their current ability to buy the things they need on a regular basis as well as their concern about the cost-of-living. The adequacy of one's income to meet day-to-day demands are more potent measures of behavior modifiers than actual macro-economic measures since they are more personal. (See Appendix A, items 36, 40, 42 and 46.)
2. Perceived Environmental Economic Opportunity measures perceptions of the environmental economic opportunity available to acquire sufficient income to meet one's needs, or to invest one's savings through various options, as influences on one's behavior. (See Appendix A, items 38,41,44.)
3. Awareness of the Financial Condition of Retirees includes vicarious experiences such as watching television or reading which enhance our understanding and influence our retirement financial planning behaviors as well as our personal experiences based upon actual contact with retired persons. (See Appendix A, items 11,

15, 18, 22, 26, 28, 33 and 34.)

5. Savings Behaviors are the financial planning behaviors of our parents, or our own experiences with financial planning which influence our more specific financial planning for retirement. (See Appendix A, items 68 and 79.)

The dimensions of environmental stress were measured on five-point agreement-type scales. Various response formats were employed (e.g., agreement, importance, likelihood, extent) to reduce response bias.

Four dimensions of psychological strain were used as endogenous variables.

Psychological Strain. Psychological strain is the result of increased environmental stress and is an intervening variable when measuring coping behaviors. Four dimensions of psychological strain were measured:

1. Expectations About Economic Retirement are the expectations about economic retirement which reflect the degree of psychological strain. Positive expectations indicate little psychological strain. (See Appendix A, items 12, 17, 23 and 29.)
2. Importance of Retirement Financial Planning reflects the importance we attach to retirement financial planning which reflects our level of psychological strain. The higher the importance the more evident increased psychological strain becomes. (See Appendix A, items 56, 61, 64.)
3. Negative Beliefs About the Economic Future are the beliefs we hold about economic conditions in the future which evidence our level of psychological strain. (See Appendix A, items 47 and 50.)
4. Internal Locus of Control is the amount of internal control we feel we can exert over our own retirement financial future. (See Appendix A, items 1, 2, 4, 8 and 9.)



Three dimensions of Coping Behavior were used as endogenous variables.

Retirement Financial Planning Activities. These activities range from intention to plan through passive planning to active planning. Each succeeding level requires more behavioral action on the part of the individual; that is, movement from a cognitive level of merely thinking about performing an action at some later date to actual specific behaviors in which the individual regularly engages, such as regular participation in a savings plan specifically established for accruing financial resources for retirement. The scales measuring Retirement Financial Planning Activities are:

1. Active Planning Activities are specific, purposeful behaviors directed toward acquiring financial resources for retirement including the acquisition of property, making investments, participating in a savings plan, buying an IRA, or going to financial workshops to learn how to save for retirement. (See Appendix A, items 53 and 54.)
2. Passive Planning Activities are cognitive behaviors directed toward acquiring information about financial planning for retirement accompanied by minimum behavioral outcomes such as watching a television program or reading articles about financial planning for retirement. (See Appendix A, items 66, 72, 76 and 78.)
3. Delayed Planning is a deferral, cognitively or behaviorally, of financial planning for retirement with a stated purpose of becoming more actively involved at a later date. (See Appendix A, items 52, 62, 70, 74 and 75.)

Willingness to Continue Working. Willingness to continue working in order to acquire financial assets for retirement

represents an alternative to financial planning. The dimensions of Willingness to Continue Working are:

1. Current Willingness to Work to Acquire Financial Resources for Retirement measures a person's stated acknowledgement that a priority for working today is to acquire financial resources to invest for or prepare for retirement. (See Appendix A, items 10, 19, 20, 31 and 60.)
2. Willingness to Work Past Eligibility for Retirement to Acquire Financial Resources to Meet Expected Needs measures a person's acknowledgment they expect to continue working beyond retirement eligibility for financial reasons. (See Appendix A, items 25 and 27.)

Attribution of Responsibility. Individuals may perceive they will need assistance from some outside source in order to make ends meet in their retirement. That is, they may perceive individual effort, for one reason or another, will not be sufficient. These same individuals are likely to place a higher value on society's present efforts to assist the elderly poor, since they may perceive the need to avail themselves of these services in the future. The dimensions of Attribution of Responsibility are:

1. Attribution of Responsibility- measures a person's stated attribution of responsibility to either the members of the person's immediate family, the government, or the employer for ensuring they have sufficient financial assets to meet their basic needs in retirement. (See Appendix A, items 55, 67 and 77.)
2. Value of Society's Efforts to Assist the Elderly Poor- measures a person's stated value which they place on society's efforts to help those who are currently poor and elderly in this country. (See Appendix A, items 39, 43 and 48.)

#### Psychometric Analysis

Following the return of the surveys from the study

sample the data were analyzed to determine scale characteristics. Of particular interest were the scales Current Willingness to Work to Acquire Financial Resources (WWAFR), Current Willingness to Work Beyond Retirement (CWBR), Attribution of Responsibility for Financial Welfare in Retirement (RFW) and The Value of Society's Efforts to Assist the Elderly in Retirement (SEAR), which had poor internal consistency reliabilities on the pilot-test (WWAFR = .47; CWBR = .36; RFW = .56 and SEAR = .43). Following the pilot test these scales had been rewritten. Despite this, they continued to show low internal consistency reliability (WWAFR = .53; CWBR = .48; RFW = .57 and SEAR = .51). These scales were subsequently excluded from all further analyses, except for the factor analyses, since their low reliabilities made their use in path analysis questionable.

To check on scale dimensionality, scale items, including those previously dropped because of low reliability, were subjected to alpha factor analysis. The factor loadings, when all items were used, revealed fifteen factors which accounted for one hundred percent of the variance. Within these factors three accounted for fifty-three percent of the variance. These factors included scale items representing the a priori constructs of Environmental Stress, Psychological Strain and Coping Behaviors. Items from the previously deleted scales were complex and loaded on several factors equally. This

further justified deleting these items from further analyses. Following this factor analysis, a separate factor analysis was performed on the endogenous variables of environmental stress, psychological strain and coping behaviors. The factor loadings are shown in Appendix B. The factor intercorrelations are shown in Appendix C.

Three factors accounted for ninety-two percent of the variance in the four dimensions of environmental stress. The items for scales CFC and ECOPP loaded on the same factor. Based upon analysis of the items, this factor was named Current Financial Concerns (CFC). Thus, the three factors are considered to be Current Financial Concerns (CFC), Awareness of the Conditions of Retirees (AWARE) and Savings Behavior (SAVBEF.)

Four factors accounted for one hundred percent of the variance in the four dimensions of psychological strain: Internal Locus of Control (ILOC); Importance of Financial Planning (FPPY); Negative Beliefs About the Economic Future (NBEF); and Expectations Regarding Economic Retirement (EXPECT.)

Three factors accounted for sixty-nine percent of the variance for the three endogenous variables of retirement financial planning activity level. Based upon the high correlations among the factors and the loading of complex items, the three measures of Financial Planning Behavior, Active Financial Planning Activities (ACTIVE), Passive Financial Planning Behaviors (PASS) and Delay of Financial

Planning (DELAY), were combined into one single scale called Financial Planning Behavior (FPB). It is believed that respondents were unable to distinguish differences among these constructs.

As a result of the factor analysis, the scales were reidentified based on item factor loadings. Following this procedure, the scale reliabilities were recomputed for all reidentified scales. The new scale means, standard deviations and scale correlations are shown in Table 3, with the new scale internal consistency reliabilities in the diagonal.

As a result of the revisions which took place to the basic model following psychometric analysis, the hypothesized model was revised (See Figure 3).

Finally, prior to conducting path analysis, James, Mulaik and Brett (1982) provide 10 conditions for confirmatory analysis and causal inferences which will guide the analysis of the study data. The first 2 of these conditions: 1) a formal statement of theory in terms of a structural model, and 2) a theoretical rationale for causal hypotheses have been discussed in Chapter 1. The third condition, a specification of causal order is inherent in the model since temporal movement is presumed to occur from left to right. The fourth condition, a specification of causal direction is apparent in the hypothesized model. The next three conditions, the necessity for self-contained functional equations, the specification of boundaries and

Table 3

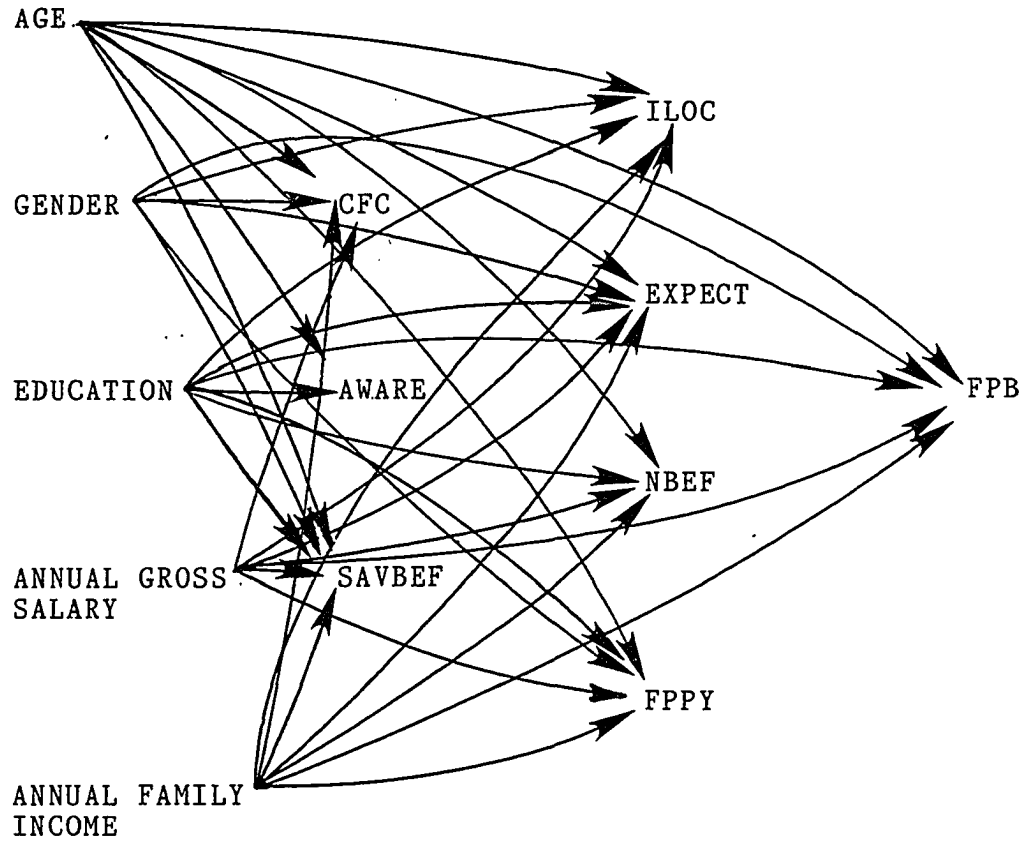
Means, Standard Deviations and Correlations of Scales  
Following Factor Analysis

	Mean	s.d.											
1. AGE	39.35	11.06	( * )										
2. AGS	2.50	.76	.86	( * )									
3. CFC	2.77	.71	.78	.76	(.81)								
4. AWARE	3.48	.66	.68	-.15	-.26	(.79)							
5. SAVBEF	3.29	.93	.71	.82	.27	-.15	(.65)						
6. ILOC	3.18	.72	-.57	.83	.52	-.32	.21	(.74)					
7. EXPECT	3.69	.60	-.12	.72	-.37	.49	-.17	-.42	(.69)				
8. NBEF	2.82	.60	-.62	-.57	.58	-.25	.24	.31	-.25	(.68)			
9. FPPY	3.91	.71	.71	.82	-.03	.28	.13	.02	.21	.04	(.73)		
10. FPB	3.42	.56	.85	.84	.32	-.01	.16	.32	-.14	.27	.45	(.80)	
				1	2	3	4	5	6	7	8	9	10

Abbreviations. AGE, Age;  
 AGS, Annual Gross Salary;  
 CFC, Current Financial Concerns;  
 AWARE, awareness of retirees;  
 SAVBEF, personal savings behaviors;  
 ILOC, Internal Locus of Control;  
 EXPECT, Expectations about financial retirement;  
 NBEF, Negative Beliefs About the Economic Future;  
 FPPY, Importance of Financial Planning;  
 FPB, Financial Planning Behaviors.

\* denotes single item scale; internal consistency cannot be calculated.

**Figure 3.** Revised Model Following Factor Analysis



**Abbreviations.** CFC, Current Financial Concerns;  
 AWARE, awareness of retirees;  
 SAVBEF, personal savings behaviors;  
 ILOC, Internal Locus of Control;  
 EXPECT, Expectations about financial retirement;  
 NBEF, Negative Beliefs About the Economic Future;  
 FPPY, Importance of Financial Planning;  
 FPB, Financial Planning Behaviors.

the stability of the structural model precede model trimming which will result in a final model to be submitted to path analysis. With regard to the self-containment requirement, there is always a concern when deleting scales from a model. Specifically, when deleting an exogenous variable from the structural equation during the reconstruction of the correlation matrix, if deleted exogenous variable represents a scale which was highly correlated with a remaining exogenous variable in the equation, the error term in the structural equation will then contain a portion of that correlation, thus causing the error term to be correlated with the exogenous variable in violation of the assumption of self-containment. In the present case, all deleted scales showed very low (less than .17) correlations with the exogenous variables in the structural equations prior to their deletion. The eighth condition, operationalization of the variables is addressed in Chapter 2. Finally, the last two conditions, determining empirical support for the functional equations and determining the goodness-of-fit between the structural model and the data will be addressed in Chapter 3.



## CHAPTER 3

## Results

Prior to conducting path analysis several considerations need to be addressed. First, since nonhierarchical models cannot be subjected to OLS analysis, it is necessary to prove the model is hierarchical. Secondly, since ordinary least squares (OLS) procedures assume no covariation between exogenous variables and the error term of each structural equation, tests for this covariation need to be conducted prior to submitting a final model to path analysis. If covariation does exist, the model must either be trimmed to exclude the feedback loops or the model must be analyzed using two-stage least squares analysis or full information maximum likelihood techniques to estimate the structural equations. In order to create a final model for path analysis, the revised model was analyzed to determine if feedback loops existed or if trimming was necessary.

The process begins with submitting a model to ordinary least-squares (OLS) analysis. James et al. (1982) suggest that under the assumption that functional equations are operationalized in a well-defined population of subjects, an OLS regression equation may be used to represent a functional equation, where the values of the unstandardized regression weights represent the values of the structural parameters, or path coefficients. Under these conditions,

the OLS error term, or residual, accurately represents the disturbance term in the functional equations. The significance test for the structural parameter involves evaluating the F-ratio. Additionally, the relationship between exogenous variables and the error terms in each of the OLS regression equations must be evaluated to assure no covariation exists.

The first analysis of the model in Figure 2 consisted of using OLS to derive predictive equations for each endogenous variable, using all preceding variables for which significant paths had been hypothesized as exogenous variables in the equation. The resulting F-ratios indicated several hypothesized paths were non-significant. Subsequently, the model was trimmed by deleting those hypothesized causal connections. As a result, the variables Savings Behavior (SAVBEB), Expectations About Financial Retirement (EXPECT) and Negative Beliefs About the Economic Future (NBEF) were deleted. Of the demographic variables, only AGE and Annual Gross Salary (AGS) showed significant causal linkages. The Psychological Model of Financial Planning Behavior which resulted from the model trimming process is shown in Figure 4.

Using Annual Gross Salary (AGS) and Age as predictors of Current Financial Concerns (CFC) yielded a Multiple R of (.35) with an Adjusted R Squared of (.11). The Adjusted R Squared formula used is: 
$$\text{Adjusted } R^2 = R^2 - \frac{(k-1)}{N-k} (1 - R^2)$$
 (Nie, Hull, Jenkins, Steinbrenner and Bent (1975, p.

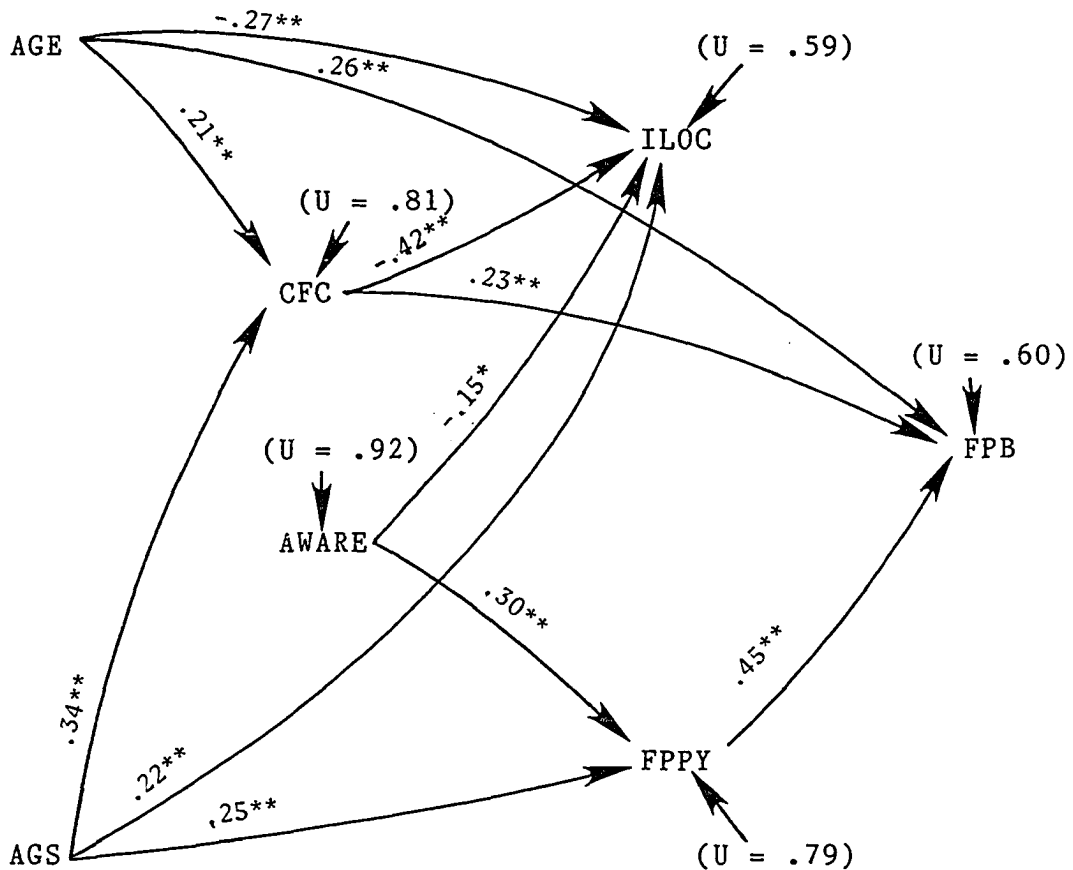
358) and is used to adjust for shrinkage. Using Annual Gross Salary (AGS) and Age as predictors of Awareness of the Financial Condition of Retirees (AWARE) yielded a Multiple R of (.16) with an Adjusted R Squared of (.01).

Using Current Financial Concerns (CFC), Awareness of the Financial Condition of Retirees (AWARE) and AGE as predictors of Internal Locus of Control (ILOCC) yielded a Multiple R of (.66) with an Adjusted R Squared of (.41). Using Awareness of the Financial Condition of Retirees (AWARE) and Annual Gross Salary (AGS) to predict Importance of Financial Planning (FPPY) yields a Multiple R of (.36) with an Adjusted R Squared of (.11). Using all variables as predictors for Financial Planning Behaviors (FPB) yielded a Multiple R of (.64) with an Adjusted R Squared of (.38).

The path coefficients shown in Figure 4 suggest support for the major hypotheses that external sources of stress impact psychological strain and modify coping behaviors, that is Financial Planning Behaviors. Additionally, the exogenous variables of AGE and AGS contribute both directly and indirectly in the model.

Finally, there are several methods for testing the goodness-of-fit between a model and the data (James et al., 1982, p. 58; Blalock, 1964, p. 79). The Psychological Model of Retirement Financial Planning Behavior (Figure 4) was evaluated using the formula for evaluating causal models (Blalock, 1964, p. 80), which reconstructs the

**Figure 4.** Psychological Model of Retirement Financial Planning Behavior



**Note.** \*  $p < .005$  \*\*  $p < .001$

**Abbreviations.** AGE, Chronological Age;  
 AGS, Annual Gross Salary.  
 CFC, Current Financial Concerns;  
 AWARE, Awareness of Retirees;  
 ILOC, Internal Locus of Control;  
 FPPY, Importance of Financial Planning;  
 FPB, Financial Planning Behaviors.

original correlation matrix. This process begins with writing the equations for the recursive system such that each of the slopes control for remaining variables that appear in the equation, or appear in any previous equation. Since the numerators of correlation coefficients and slopes have the same values, setting any of the slopes equal to zero is equivalent to setting the comparable partial coefficient equal to zero. Thus, predictive equations can be written in the form of a partial correlation set equal to zero and solved using OLS procedures. The results of the predictive equations can then be compared with the originally obtained inter-scale correlation coefficients. The results indicate this model accurately fits the data (Table 4). However, since model trimming has occurred, the model should fit the data. Further, the use of model trimming means that the resulting analyses are exploratory and not confirmatory.

Table 4 Goodness-of-Fit

## Original Correlation Matrix

---

1.	AGE	1.00						
2.	AGS	.86	1.00					
3.	CFC	.78	.76	1.00				
4.	AWARE	.68	-.15	-.26	1.00			
5.	ILOC	-.57	.83	.52	-.32	1.00		
6.	FPPY	.71	.82	-.03	.28	.02	1.00	
7.	FPB	.85	.84	.32	-.01	.32	.45	1.00
		1	2	3	4	5	6	7

---

## Reconstructed Correlation Matrix

---

1.	AGE	1.00						
2.	AGS	.85	1.00					
3.	CFC	.78	.75	1.00				
4.	AWARE	.67	-.16	-.27	1.00			
5.	ILOC	-.56	.82	.45	-.30	1.00		
6.	FPPY	.71	.82	-.02	.25	.04	1.00	
7.	FPB	.84	.85	.29	-.01	.34	.40	1.00
		1	2	3	4	5	6	7

---

Abbreviations. AGE, Age;  
 AGS, Annual Gross Salary;  
 CFC, Current Financial Concerns;  
 AWARE, Awareness of Retirees;  
 ILOC, Internal Locus of Control;  
 FPPY, Importance of Financial Planning;  
 FPB, Financial Planning Behaviors.

## CHAPTER 4

## Discussion

Interpreting the meaning of the paths, moving from left to right to conform to the temporal occurrence of the model, the influence of AGE on Current Financial Concerns (CFC) suggests that as people become older they are more concerned with their current financial condition. A similar finding comes from Glasmer (1976) and Ederdt et al. (1976), who suggested older workers are more reluctant to leave the work force due to being financially unprepared for retirement.

The influence of Annual Gross Salary (AGS) upon the Importance of Financial Planning (FPY) is understandable and predictable when one considers the findings of the House of Representatives, Select Committee on Aging (1981), which suggested that those who have higher incomes are more likely to participate in financial planning behaviors such as the purchase of an IRA. Logically, one has to have a certain level of income before financial planning is perceived as being important. Those without discretionary income simply do not have the resources with which to plan financially, therefore, those behaviors have no relevance for them.

The negative relationship between AGE and Internal Locus of Control (ILOC) supports the findings of Neugarten (1964), whose research suggested the period between age 40 and 70 is marked by a shift in a perception of the

environment from one that is positive and full of opportunity to one that is more hostile. Further, as Perlmutter and Monty (1977) have pointed out, a lack of ability to control the environment leads to decreased feelings of internal locus of control, and this view is certainly supported by the influence of Current Financial Concerns (CFC) on Internal Locus of Control (ILOC).

One's sense of Internal Locus of Control (ILOC), therefore, is influenced directly by Current Financial Concerns (CFC) and both directly and indirectly by AGE. The negative influence of Awareness of Financial Condition of Retirees (AWARE) on Internal Locus of Control (ILOC) also supports the findings of others. Perlmutter and Monty (1977) suggested that perceptions of not being able to control the environment lead to feelings of helplessness and impaired functioning. The negative influence of Awareness of the Financial Condition of Retirees (AWARE) on Internal Locus of Control (ILOC) suggests that individuals may lose their sense of internal locus of control as a result of their vicarious and personal awarenesses of the financial condition of retirees. This suggests that as respondents become aware of the hardships faced by those in retirement, their own confidence in being able to "do better" in their own retirement may be shaken. That is, their psychological strain is increased, since as Stagner (1981) has pointed out, a decrease in a sense of having an internal locus of control is an indicator of increasing



psychological strain.

It is not surprising that the Importance of Financial Planning (FPPY) is directly influenced by one's Awareness of the Financial Condition of Retirees (AWARE). Hopefully, one's perceptions of the importance of financial planning should be enhanced by vicarious and personal experiences which suggest current retirees experience financial difficulties.

Finally, perceptions of environmental pressures increase psychological strain and influence coping behavior both directly and indirectly, as hypothesized. The adjusted R squared indicates that 38 percent of the variance in Financial Planning Behaviors can be predicted by the joint influences of the exogenous variables, leaving a total unaccountable variance of 62 percent. In the absence of previous psychological models of retirement financial planning behavior, the ability of the model to account for at least one-third of the variance is notable. Certainly, in terms of assessing the concerns of individuals prior to implementing employee retirement assistance programs, the Psychological Model of Retirement Financial Planning can serve as a valuable point of departure or as an adjunct to other assessment methodologies. However, a caveat applies. Whenever curve-fitting procedures, such as those used in this study, have been applied the resulting model will always fit the data. That should not be the test of the model.

That is, confirmatory analysis must not be confused with exploratory analysis. The real test of the model lies in its applicability to the real world. For that reason, further testing with different populations, as discussed later, is necessary.

The purpose of this study was to develop a psychological model of retirement financial planning behavior. While numerous econometric models are reported in the literature, there is an absence of models which explore the psychological components of preparing financially for retirement. Such a model is needed to understand fully the complexities of retirement financial planning since planning is a goal-directed behavior which may be motivated by the psychological strain which results from perceptions of environmental stress.

A framework was developed, based upon the work of Stagner (1981), which suggests environmental stress causes psychological strain, thus, mediating coping behaviors. Specific measures of environmental stress, psychological strain and coping behaviors were developed based upon the existing literature. Some of the a priori measures proved to be imprecise. Psychometric analyses revealed several of the measures were not perceived by respondents as being independent, therefore, these measures were combined. Several other measures failed to demonstrate significant causal connections within the model; they too were deleted. Other exogenous variables were correlated with the error

terms in their functional equation, thus violating the self-containment requirement for path analysis, and were deleted from the model. The rationale for deleting these variables stems from the equilibrium argument suggested by Kenny (1979.) Since causation is ordinarily assumed to occur with a time lag, a model with feedback would create effects that would last forever. While it may be assumed the effects might decrease rather rapidly, theoretically, the effect never ceases. The alternative to this condition suggests that when feedback loops do exist it is possible that the model has been misspecified; the condition can be remedied by combining variables to eliminate the loops. The model trimming process suggested by James et al. (1982, p.57) resulted in a final model of retirement financial planning behavior consistent with the data. This recursive model, which also included the exogenous variables of AGE and Annual Gross Salary (AGS), was then submitted to path analysis.

The original model (Figure 2) included many hypothesized variables and relationships which were not entirely supported by the data. However, the Psychological Model of Retirement Financial Planning Behavior (Figure 4) is the most parsimonious model resulting from the data and confirms the hypothesized causal linkages between environmental stress, psychological strain and coping behavior. The secondary hypotheses regarding the causal effects of age and annual gross salary also received

support.

The study provides three general conclusions regarding a psychological model of retirement financial planning behavior. First, retirement financial planning behavior is a complex phenomenon composed of perceptions of environmental stress and evidence of psychological strain. This suggests typical econometric models of retirement financial behaviors might benefit from the inclusion of psychological variables. Second, there is support for applying Stagner's (1981) general model of human behavior, which suggests coping behaviors are caused by perceptions of environmental stress and feelings of psychological strain. The validity of a general theory is enhanced by evidence of its utility in specific applications.

The second general conclusion to be drawn is that both age and annual gross salary provide causal links to perceptions of environmental stress and psychological strain. Since these variables have been traditionally used in econometric models of retirement financial planning behaviors, these findings suggest econometric and psychometric models may be integrated and expanded through considerations of the influence of common variables. Integration increases the generalizability of basic models and expands our understanding of the supporting theories.

The third general conclusion to be drawn is that respondents did not distinguish between active, passive and delayed levels of retirement financial planning behaviors.

The result was their combination into one global variable of Financial Planning Behaviors which represents a scale in need of further validation in future research. The process of combining these outcome scales suggests respondents may not perceptually discriminate some measures with the same distinction the researcher brings to the hypothetical model. In cases where complex items have obscured the scales in the hypothetical model, the combination of variables leads to the development of reliable, parsimonious, global scales which provide adequate measures and have high utility in applied settings. Of particular interest to Norfolk General Hospital, the Financial Planning Behavior scale represents a short assessment questionnaire which can be used directly in their employee assistance program to assess an individual's level of retirement financial planning activity.

There are some specific conclusions which can be drawn from the causal connections suggested by the Psychological Model of Retirement Financial Planning Behavior. First, the direct causal connection between internal locus of control and the importance of financial planning and retirement financial planning behavior suggests that two simple components, locus of control and perceived values, can be instrumental in explaining certain coping behaviors. Future research should be directed toward determining how the value of these variables may change situationally. If one's sense of internal locus of control and one's

perceived values vary situationally, then measures of these variables without regard to their contextual implications might lead to erroneous conclusions. This study provides one example of a contextual measure. Obviously more examples are needed.

Secondly, the direct and indirect causal connections between the measures of environmental concerns, the mediating mechanisms and internal locus of control and coping behavior suggest coping and locus of control involve confidence in one's ability to manipulate internal and external resources. However, those resources, in the present case annual gross salary, must be available for the individual to manipulate. Additionally, personal and vicarious experiences influence the importance we place on financial planning for people like ourself. The results of our negative experiences suggest placing increased values on behaviors which we perceive will avoid negative consequences.

Finally, the two measures of willingness to work, that is, current willingness to work to acquire financial assets for retirement and willingness to work beyond retirement for the same reason, were disappointingly poor scales, which never improved from the pilot-test to the study, despite several word changes. It is believed these two measures were too abstract for the respondents. Current willingness to work may be related to the need for current financial rewards, or for reasons of self-esteem. Relating

current efforts to a pay-off in retirement may have been an unrealistic expectation. Similarly, asking workers today about reasons for working in retirement, which may be years in the future, may be unrealistic due to unknown intervening variables which are impossible for the individual to assess. Whether the difficulty was due to the abstractness of the scale, or poorly constructed items, is a matter for further research. Ultimately the need exists to construct adequate measures so that the relationships of these variables in the basic model can be determined.

#### Study Limitations and Future Research

The population used in this study may limit the generalizability of these findings. Health care systems are staffed predominantly by females, which accounts for the low number of males in the study. The utility of the Psychological Model of Retirement Financial Planning Behavior may be reduced in a male population. It is possible that some of the variables which failed to demonstrate significant causal connections may do so in a male population. For example, expectations about economic retirement may be significant for males who may consider the necessity of financially supporting both themselves and a spouse. It is possible that for the current sample, self-planning for financial retirement may be viewed as ancillary to that done by a spouse. Therefore, the significant causal connections to financial planning

behavior may differ across populations. The extent to which the model applies to a predominately male population awaits further investigation. Finally, in this study there was a high correlation (.91) between Annual Gross Salary and Annual Family Income due to the large number of unmarried individuals in the sample. This may not be the case in other populations where a person's Annual Gross Salary is one of many inputs into the total Annual Family Income. In such cases a spouse's Annual Gross Salary might be set aside exclusively for financial planning, in which case a better measure of the relationship between income and planning would use the Annual Family Income.

Ideally, the validation of newly constructed scales should occur through repeated applications. However, that was not possible in the present study. Therefore, scale validation was determined on the basis of the factor analysis. Thus, two recommendations for future investigations of a psychological model of retirement financial planning behavior seem evident.

First, there is a need to examine the extent to which the Psychological Model of Retirement Financial Planning can be replicated across studies using similar populations. Also the model needs to be tested among males as well as females.

Second, there may be organizational characteristics which could contribute to the model that were not included. For example, given the significant causal connection



between the perceived importance of financial planning and retirement financial planning behaviors, the presence or absence of employee assistance and/or educational programs which emphasize this component may have significance. Also the type of retirement financial savings opportunities available to the employee such as pension plans, company sponsored tax deferred annuities, or company credit union plans may be important since they represent not only available resources to the employee but evidence of employer commitment to the retirement financial planning process. The development of an exploratory causal model, the future implications of which can only be determined by further research, requires addressing not only the questions of validity and reliability but those of generalization and further model modifications.

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APPENDIX A

Survey Questionnaire



PRERETIREMENT

FINANCIAL

PLANNING

SURVEY

600 Gresham Drive Norfolk, Virginia 23507 804/628-3000  
AN ALLIANCE HOSPITAL

## PRERETIREMENT FINANCIAL PLANNING SURVEY

You have been selected at random from a list of employees at Norfolk General to complete this preretirement financial planning survey. The purpose of this survey is to find out what Norfolk General employees are currently thinking and doing about preretirement planning. Your answers will provide valuable information about your concerns and needs and will help us in planning. By completing this survey you will begin to think about your financial planning for retirement and let us know how Alliance Health Systems might be able to assist you in your planning.

Participation in this survey is voluntary. The questionnaire itself contains no request for identification which can be used to trace your answer sheet back to you. If you do not desire to participate, please write, "I do not desire to participate," on the front of the survey and return it in the enclosed envelope. However, we strongly urge you to complete this survey and return it to Old Dominion University in the enclosed postage paid envelope within a few days.

It may appear to you that we are asking similar questions in different parts of this survey. This is necessary in order to better understand different aspects of retirement planning. Please be sure to read each question carefully, since often there is only a word, or two, difference between questions and this wording can often change the meaning. We estimate that it should take about 30 minutes to complete the survey.

Thank you for your cooperation in completing this survey. The results will be available in the Norfolk General Hospital Department of Human Resources within a few months.

PLEASE TURN THE PAGE



SURVEY QUESTIONNAIRE

Please circle the number which corresponds to your answer on the scale following each question or statement. For example, if the question or statement is, "I think people should financially plan for their retirement.", and you strongly agree with that statement, you would mark your answer as shown below:

Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1	2	3	4	5

THE FOLLOWING QUESTIONS ASK ABOUT HOW MUCH CONTROL YOU THINK THAT YOU PERSONALLY, OR OTHERS, HAVE IN DETERMINING YOUR FINANCIAL WELLBEING IN RETIREMENT.

- |    |  |                   |                   |                      |                   |                        |
|----|--|-------------------|-------------------|----------------------|-------------------|------------------------|
| 1. | I can control my financial retirement by what I do today.  | Strongly Disagree | Disagree          | Not Sure             | Agree             | Strongly Agree         |
|    |  | 1                 | 2                 | 3                    | 4                 | 5                      |
| 2. | To what extent do you have financial control over what happens to you in life?                         | Not At All        | To a Small Extent | To a Moderate Extent | To a Great Extent | To a Very Great Extent |
|    |  | 1                 | 2                 | 3                    | 4                 | 5                      |
| 3. | To what extent do the decisions others make influence the amount of money you will have in retirement? | Not At All        | To a Small Extent | To a Moderate Extent | To a Great Extent | To a Very Great Extent |
|    |  | 1                 | 2                 | 3                    | 4                 | 5                      |
| 4. | Making financial plans for my retirement is difficult because I may not be able to make them work.     | Strongly Disagree | Disagree          | Not Sure             | Agree             | Strongly Agree         |
|    |  | 1                 | 2                 | 3                    | 4                 | 5                      |
| 5. | I can do something about most of the important financial decisions for retirement that I face today.   | Strongly Disagree | Disagree          | Not Sure             | Agree             | Strongly Agree         |
|    |  | 1                 | 2                 | 3                    | 4                 | 5                      |
| 6. | People who get ahead financially in life make things happen for themselves.                            | Strongly Disagree | Disagree          | Not Sure             | Agree             | Strongly Agree         |
|    |  | 1                 | 2                 | 3                    | 4                 | 5                      |

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7. To what extent do you feel things outside of your control will determine your financial condition in retirement?
- | Not At All | To a Small Extent | To a Moderate Extent | To a Great Extent | To a Very Great Extent |
|------------|-------------------|----------------------|-------------------|------------------------|
| 1          | 2                 | 3                    | 4                 | 5                      |
8. I have a hard time putting aside money for retirement.
- | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree |
|-------------------|----------|----------|-------|----------------|
| 1                 | 2        | 3        | 4     | 5              |
9. It is largely my own fault if I don't have enough savings set aside for my retirement.
- | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree |
|-------------------|----------|----------|-------|----------------|
| 1                 | 2        | 3        | 4     | 5              |

THE FOLLOWING QUESTIONS ASK ABOUT YOUR EXPERIENCES WITH RETIRED PEOPLE, YOUR EXPECTATIONS REGARDING YOUR OWN FUTURE RETIREMENT AND YOUR ABILITY TO PROVIDE FINANCIALLY FOR YOUR RETIREMENT.

10. If I did not need to save money for retirement, I would not work.
- | No Chance | Not Very Likely | Somewhat Likely | Very Likely | Almost Certain |
|-----------|-----------------|-----------------|-------------|----------------|
| 1         | 2               | 3               | 4           | 5              |
11. Most of the retirees I know have few financial problems.
- | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree |
|-------------------|----------|----------|-------|----------------|
| 1                 | 2        | 3        | 4     | 5              |
12. I am concerned about my financial retirement.
- | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree |
|-------------------|----------|----------|-------|----------------|
| 1                 | 2        | 3        | 4     | 5              |
13. Of the retirees you know, how many are not affected by changes in the cost-of-living?
- | Very Few If Any | Less than Half | About Half | More than Half | Most |
|-----------------|----------------|------------|----------------|------|
| 1               | 2              | 3          | 4              | 5    |
14. How likely is it that you will have to keep working, at least part time, just to keep ahead financially in your old age?
- | No Chance | Not Very Likely | Somewhat Likely | Very Likely | Almost Certain |
|-----------|-----------------|-----------------|-------------|----------------|
| 1         | 2               | 3               | 4           | 5              |
15. The retirees I know seem to have enough money to live on.
- | Strongly Disagree | Disagree | Not Sure | Agree | Strongly Agree |
|-------------------|----------|----------|-------|----------------|
| 1                 | 2        | 3        | 4     | 5              |
16. How many people do you know who have retired within the last ten years?
- | 0 | 1 - 2 | 3 - 4 | 5 - 6 | 7 or more |
|---|-------|-------|-------|-----------|
| 1 | 2     | 3     | 4     | 5         |

PLEASE TURN THE PAGE

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- |     |  |                      |                    |                    |                   |                   |
|-----|--|----------------------|--------------------|--------------------|-------------------|-------------------|
| 17. | In retirement I expect to have an adequate amount of money to live on.                             | No<br>Chance         | Not Very<br>Likely | Somewhat<br>Likely | Very<br>Likely    | Almost<br>Certain |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 18. | Most retired people in this country are well off financially.                                      | Strongly<br>Disagree | Disagree           | Not Sure           | Agree             | Strongly<br>Agree |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 19. | One of my most important reasons for working is to save money for retirement.                      | Strongly<br>Disagree | Disagree           | Not Sure           | Agree             | Strongly<br>Agree |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 20. | I work because I enjoy working, not because I need the money.                                      | Strongly<br>Disagree | Disagree           | Not Sure           | Agree             | Strongly<br>Agree |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 21. | In retirement I will live at least at the level of comfort, convenience and quality that I do now. | No<br>Chance         | Not Very<br>Likely | Somewhat<br>Likely | Very<br>Likely    | Almost<br>Certain |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 22. | Most of my retired friends or relatives are as well off financially as when they were working.     | Strongly<br>Disagree | Disagree           | Not Sure           | Agree             | Strongly<br>Agree |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 23. | I do not worry a lot about being able to make it financially during retirement.                    | Strongly<br>Disagree | Disagree           | Not Sure           | Agree             | Strongly<br>Agree |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 24. | Most retired people who live in poverty never planned well.  | Strongly<br>Disagree | Disagree           | Not Sure           | Agree             | Strongly<br>Agree |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 25. | I do not expect to work after I am eligible to retire unless I am really bored.                    | Strongly<br>Disagree | Disagree           | Not Sure           | Agree             | Strongly<br>Agree |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |
| 26. | Of the retirees you know, how many have enough money to meet their needs?                          | Very Few<br>If Any   | Less<br>than Half  | About<br>Half      | More<br>than Half | Most              |
|     |  | 1                    | 2                  | 3                  | 4                 | 5                 |

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- |       |  |                      |                         |                            |                         |                              |
|-------|--|----------------------|-------------------------|----------------------------|-------------------------|------------------------------|
| 27.   | I expect to work after I am eligible to retire because I enjoy working.                                | No<br>Chance         | Not Very<br>Likely      | Somewhat<br>Likely         | Very<br>Likely          | Almost<br>Certain            |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| <hr/> |  |                      |                         |                            |                         |                              |
| 28.   | Most retirees do <u>not</u> have financial problems.   | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| <hr/> |  |                      |                         |                            |                         |                              |
| 29.   | In retirement I will have to watch my budget more than I do now.                                       | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| <hr/> |  |                      |                         |                            |                         |                              |
| 30.   | Most retirees live in their own home which was paid for while they were working.                       | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| <hr/> |  |                      |                         |                            |                         |                              |
| 31.   | I would retire tomorrow if it were financially possible.   | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| <hr/> |  |                      |                         |                            |                         |                              |
| 32.   | One of the hardest adjustments in retiring will be learning to live on less money than I make now.     | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| <hr/> |  |                      |                         |                            |                         |                              |
| 33.   | From what you read in the newspapers or see on television, how many retirees are poor in this country? | Very Few<br>If Any   | Less<br>than Half       | About<br>Half              | More<br>than Half       | Most                         |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| <hr/> |  |                      |                         |                            |                         |                              |
| 34.   | To what extent do you think that retirees in general have financial problems?                          | Not At<br>All        | To a<br>Small<br>Extent | To a<br>Moderate<br>Extent | To a<br>Great<br>Extent | To a<br>Very Great<br>Extent |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| <hr/> |  |                      |                         |                            |                         |                              |
| 35.   | One important benefit at work is having a pension plan.  | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|       |  | 1                    | 2                       | 3                          | 4                       | 5                            |

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4

<p>THE FOLLOWING QUESTIONS ASK ABOUT YOUR THOUGHTS REGARDING THE PRESENT AND FUTURE ECONOMY.</p>
--

- |     |  |                      |                         |                            |                         |                              |
|-----|--|----------------------|-------------------------|----------------------------|-------------------------|------------------------------|
| 36. | The cost of living seems to go up faster than my salary.   | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 37. | Most of the retired poor in this country are women.  | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 38. | How much opportunity is available today to save money?   | None                 | A<br>Little             | Some                       | Quite<br>A Bit          | A Great<br>Deal              |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 39. | To what extent do we owe it to retired people to help them financially?                                      | Not At<br>All        | To a<br>Small<br>Extent | To a<br>Moderate<br>Extent | To a<br>Great<br>Extent | To a<br>Very Great<br>Extent |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 40. | I never seem to have enough money to buy the things I need.  | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 41. | Compared to the past, there are fewer opportunities to increase retirement savings through wise investments. | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 42. | I never seem to be able to save as much as I would like because of the cost of living.                       | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 43. | People age 65 or over should not get discounts at stores or businesses.                                      | Strongly<br>Disagree | Disagree                | Not Sure                   | Agree                   | Strongly<br>Agree            |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 44. | How much opportunity exists today to invest some of the salary you get?                                      | None                 | A<br>Little             | Some                       | Quite<br>A Bit          | A Great<br>Deal              |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |
| 45. | How likely is it that Social Security payments will be available to you when you retire?                     | No<br>Chance         | Not Very<br>Likely      | Somewhat<br>Likely         | Very<br>Likely          | Almost<br>Certain            |
|     |  | 1                    | 2                       | 3                          | 4                       | 5                            |

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46. I get along okay financially.	Never	Occasionally	Sometimes	Often	Always
	1	2	3	4	5
47. In ten years most people will be economically worse off than they are now.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
48. Retired people get too many financial breaks.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
49. How likely is it that people like yourself will be able to afford the cost of the things they need in the future?	No Chance	Not Very Likely	Somewhat Likely	Very Likely	Almost Certain
	1	2	3	4	5
50. The cost of living will get out of control before I retire.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
51. Most retirees I know are satisfied with their financial condition.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5

THE FOLLOWING QUESTIONS ASK HOW IMPORTANT YOU THINK FINANCIAL PLANNING FOR RETIREMENT IS FOR PEOPLE LIKE YOURSELF.

52. I expect to participate in the company-sponsored Tax Deferred Annuity in the near future.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
53. I make sure I have some money set aside for my retirement.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5

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54. I actively plan financially for my retirement.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
55. Members of my family do not have responsibility for ensuring that I have enough money to live on in retirement.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
56. How important is having a company pension plan in your retirement planning?	Not at All Important	Somewhat Important	Moderately Important	Very Important	Extremely Important
	1	2	3	4	5
57. I consider my company's pension plan to be an important benefit.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
58. I would never attend a financial planning workshop on my own time.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
59. My parents saved up money for larger purchases.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
60. I need to work today in order to have financial security in retirement.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
61. How important is your own financial planning to your retirement?	Not at All Important	Somewhat Important	Moderately Important	Very Important	Extremely Important
	1	2	3	4	5
62. I would attend a retirement financial planning workshop.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
63. It is not important for people like me to learn about investment opportunities for retirement financial planning.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
	1	2	3	4	5
64. How important are company-sponsored workshops and lectures on financial planning for retirement to people such as yourself?	Not at All Important	Somewhat Important	Moderately Important	Very Important	Extremely Important
	1	2	3	4	5

CONTINUE TO THE NEXT PAGE

7

65.	I can always plan financially for retirement in the future.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
		1	2	3	4	5
66.	I talk to my family about my financial plans for retirement.	Never	Occasionally	Sometimes	Often	Always
		1	2	3	4	5
67.	How much responsibility do employers have in making sure that you have enough money to live on in retirement?	None	A Little	Some	Quite a Bit	A Great Deal
		1	2	3	4	5
68.	How often do you save money in advance to buy something expensive?	Almost Never	Less than Half the Time	About Half the Time	More than Half the Time	Almost Always
		1	2	3	4	5
69.	I participate in as many retirement savings plans as I can.	Never	Occasionally	Sometimes	Often	Always
		1	2	3	4	5
70.	I plan to begin saving for retirement within the next 2 to 3 years.	No Chance	Not Very Likely	Somewhat Likely	Very Likely	Almost Certain
		1	2	3	4	5
71.	If someone shows me a better way to save money for retirement, I use it.	Never	Occasionally	Sometimes	Often	Always
		1	2	3	4	5
72.	I never watch television programs about how to plan financially for retirement.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
		1	2	3	4	5
73.	For people like yourself, how important is it to be able to participate in a voluntary savings plan at work?	Not at All Important	Somewhat Important	Moderately Important	Very Important	Extremely Important
		1	2	3	4	5
74.	I plan to learn more about financial planning for retirement by reading books and magazines.	No Chance	Not Very Likely	Somewhat Likely	Very Likely	Almost Certain
		1	2	3	4	5

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75.	I plan to spend more time talking to others about financial planning for retirement in the future.	No Chance	Not Very Likely	Somewhat Likely	Very Likely	Almost Certain
		1	2	3	4	5
76.	I think about how I might be able to better prepare financially for retirement.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
		1	2	3	4	5
77.	How much responsibility does the government have in making sure you have enough money to live on in retirement?	None	A Little	Some	Quite A Bit	A Great Deal
		1	2	3	4	5
78.	I never read newspaper articles about financial planning for retirement.	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
		1	2	3	4	5
79.	I plan ahead for the expensive purchases I want to make.	Never	Occasionally	Sometimes	Often	Always
		1	2	3	4	5
80.	How important for you are company-sponsored workshops and lectures on the non-financial aspects of retirement?	Not at All Important	Somewhat Important	Moderately Important	Very Important	Extremely Important
		1	2	3	4	5

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9

BACKGROUND INFORMATION

IN THIS SECTION WE ASK A NUMBER OF QUESTIONS ABOUT YOUR BACKGROUND, EMPLOYMENT HISTORY AND METHODS OF SAVING FOR RETIREMENT. THIS INFORMATION IS NEEDED SO WE CAN DETERMINE HOW DIFFERENT GROUPS OF EMPLOYEES PLAN FINANCIALLY FOR RETIREMENT. LIKE THE REST OF YOUR SURVEY RESPONSES, THE INFORMATION YOU PROVIDE WILL BE ENTIRELY CONFIDENTIAL.

81. What is the highest level of education you have completed?
- | Grade School Diploma | High School Diploma | Some College | Certified Professional, Vocational or Craft Certification | Bachelor's Degree | Advanced Degree |
|----------------------|---------------------|--------------|---|-------------------|-----------------|
| 1                    | 2                   | 3            | 4   | 5                 | 6               |
82. What is your employment status?
- | Full Time | Part Time | Fire/pool | Other |
|-----------|-----------|-----------|-------|
| 1         | 2         | 3         | 4     |
83. How old were you on your last birthday?
- \_\_\_\_\_ years old.
84. Gender: \_\_\_\_\_ Male \_\_\_\_\_ Female
85. Ethnic Group:
- | Caucasian American | Black American | Hispanic American | Asian American | Other |
|--------------------|----------------|-------------------|----------------|-------|
| 1                  | 2              | 3                 | 4              | 5     |
86. Current Marital Status:
- | Single Never Married | Single, Separated, or Divorced | Married | Widow or Widower |
|----------------------|--------------------------------|---------|------------------|
| 1                    | 2                              | 3       | 4                |
87. How many years has it been since you first started working at any job, regardless of any periods when you were not employed?
- | Less than Five Years | 5 - 10 Years | 10 - 20 Years | 20 - 30 Years | 30 Years or More |
|----------------------|--------------|---------------|---------------|------------------|
| 1                    | 2            | 3             | 4             | 5                |
88. How long have you been employed with Norfolk General Hospital?
- | Less than One Year | 1 - 5 Years | 5 - 10 Years | 10 - 20 Years | 20 - 30 Years | More than 30 Years |
|--------------------|-------------|--------------|---------------|---------------|--------------------|
| 1                  | 2           | 3            | 4             | 5             | 6                  |

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89. How many years remain until you reach a mandatory length of service or age required retirement from Norfolk General Hospital?
- | LESS THAN Five Years | 5 - 10 Years | 10 - 20 Years | 20 - 30 Years | 30 Years or More |
|----------------------|--------------|---------------|---------------|------------------|
| 1                    | 2            | 3             | 4             | 5                |
90. Have you ever had any periods when you were not employed for reasons of personal choice, or for raising children?
- | Yes | No |
|-----|----|
| 1   | 2  |
91. Do you anticipate that before you retire you will have any periods during which you will not be employed because of personal reasons or for raising children?
- | Yes | No |
|-----|----|
| 1   | 2  |
92. Presently, what is your annual gross salary, (from all sources, (before deductions and taxes)?
- | Below \$10,000 | \$10,000- \$19,999 | \$20,000- \$29,999 | \$30,000- \$39,999 | Above \$40,000 |
|----------------|--------------------|--------------------|--------------------|----------------|
| 1              | 2                  | 3                  | 4                  | 5              |
93. Considering the income earned by all adults in your household, what is the approximate total annual family income?
- | Below \$15,000 | \$15,000- \$29,999 | \$30,000- \$44,999 | \$45,000- \$59,999 | \$60,000 or more |
|----------------|--------------------|--------------------|--------------------|------------------|
| 1              | 2                  | 3                  | 4                  | 5                |
94. How many dependents do you have? (Others who depend on your income for their financial support.)
- \_\_\_\_\_
95. Including yourself, how many people currently live in your household and contribute financially to the family?
- \_\_\_\_\_
96. Assuming they are in good health, at what age do you feel individuals, such as yourself, should retire from full-time employment?
- | Before Age 45 | 45 - 55 | 55 - 65 | 65 - 70 | After Age 70 |
|---------------|---------|---------|---------|--------------|
| 1             | 2       | 3       | 4       | 5            |
97. Including yourself, how many people do you expect will be dependent upon you for financial support after you have retired?
- \_\_\_\_\_
98. Check which of the following methods of providing for retirement you currently use.
- Social Security \_\_\_\_\_
  - Savings Account \_\_\_\_\_
  - Individual Retirement Account (IRA) \_\_\_\_\_
  - Tax Deferred Annuity (TDA) \_\_\_\_\_
  - Company Pension Plan \_\_\_\_\_
  - Real Estate for Personal Use Only \_\_\_\_\_
  - Real Estate for Other Than Personal Use \_\_\_\_\_
  - Stocks, Bonds, or other Investments \_\_\_\_\_
99. How is your position with Norfolk General Hospital best described? (Check one only.)
- Administrative Staff \_\_\_\_\_
  - Department Head \_\_\_\_\_
  - Exempt Supervisory \_\_\_\_\_
  - Non-Exempt Supervisory \_\_\_\_\_
  - Exempt Non-Supervisory \_\_\_\_\_
  - Professional/Technical \_\_\_\_\_
  - Clerical \_\_\_\_\_
  - Service/Maintenance \_\_\_\_\_

APPENDIX B  
Factor Loadings

## Factor Analysis, Environmental Stress Variables

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<u>Item</u>	<u>Scale</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>
11	AWARE	-.382	.005	.100
15	AWARE	-.760	.049	.033
33	AWARE	-.437	-.050	-.059
34	AWARE	-.634	-.036	.060
18	AWARE	-.667	-.010	-.026
22	AWARE	-.568	.006	-.010
26	AWARE	-.731	-.043	-.120
28	AWARE	-.570	.001	-.066
36	CFC	.091	.460	-.027
40	CFC	.312	.562	-.021
42	CFC	.041	.680	.072
46	CFC	.330	.497	.201
38	ECOPP	-.106	.689	-.073
41	ECOPP	-.093	.662	-.014
44	ECOPP	-.101	.729	.074
68	SAVBEP	.071	.042	.888
79	SAVBEP	-.062	-.036	.718

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Abbreviations. AWARE, Awareness of retirees;  
 CFC, Current Financial Concerns;  
 ECOPP, Perceptions of Economic Opportunity;  
 SAVBEF, Personal savings habits.

## Factor Analysis, Psychological Strain Variables

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<u>Item</u>	<u>Scale</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>	<u>Factor 4</u>
1	ILOC	.546	.131	.066	-.104
2	ILOC	.844	-.057	-.088	.092
4	ILOC	.548	.101	.074	-.235
8	ILOC	.399	-.088	.190	-.166
9	ILOC	.563	-.081	.029	.014
17	EXPECT	-.166	-.287	-.212	.576
23	EXPECT	-.039	.096	.027	.631
29	EXPECT	.004	.067	.066	.537
56	FPPY	-.197	.479	.039	.020
61	FPPY	.232	.587	.058	.113
64	FPPY	-.028	.762	-.133	-.123
47	NBEF	.028	-.105	.776	.068
50	NBEF	-.061	.039	.844	-.000

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Abbreviations. ILOC, Internal Locus of Control;  
 EXPECT, Expectations about Economic Retirement;  
 FPPY, Importance of Financial Planning;  
 NBEF, Negative Beliefs About the Economic Future.

## Factor Analysis, Outcome Variables

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<u>Item</u>	<u>Scale</u>	<u>Factor 1</u>	<u>Factor 2</u>	<u>Factor 3</u>
53	ACTIVE	-.879	-.100	.028
54	ACTIVE	-.745	-.060	.143
72	PASSIVE	.034	.569	.014
78	PASSIVE	.069	.769	-.173
76	PASSIVE	-.218	.008	.503
52	DELAY	.451	.204	.152
62	DELAY	.079	-.093	.609
70	DELAY	-.443	-.202	-.045
74	DELAY	-.033	.166	.527
75	DELAY	.117	.067	.670

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Abbreviations. ACTIVE, Active Retirement Financial Planning Behaviors;  
 PASSIVE, Passive Retirement Financial Planning Behaviors;  
 DELAY, Deferral of Planning Behaviors.

APPENDIX C  
Factor Correlations



## Factor Correlations, Environmental Stress

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1.	Factor 1	1.00		
2.	Factor 2	.07	1.00	
3.	Factor 3	.11	.04	1.00
		1	2	3

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## Factor Correlations, Psychological Strain

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1.	Factor 1	1.00			
2.	Factor 2	.09	1.00		
3.	Factor 3	.13	.21	1.00	
4.	Factor 4	.11	.07	.10	1.00
		1	2	3	4

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## Factor Correlations, Outcome Variables

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1.	Factor 1	1.00		
2.	Factor 2	.73	1.00	
3.	Factor 3	.79	.83	1.00
		1	2	3

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## BIOGRAPHY

The author was born on December 30, 1942. He received a Bachelor of Arts degree in 1975 and a Master of Arts degree in 1976 from the University of North Florida. During his doctoral training he held a Teaching Assistantship in the Department of Psychology and conducted research and consulting activities with Organization Research Group of Tidewater, Inc. and is currently the President of Third Quarter: Institute for Retirement Research in Washington, D. C. He is a member of the American Psychological Association (Divisions 2 and 14), The Human Factors Society, the American Association for Counseling and Development, and the American Mental Health Counselors Association.