

THE INTENTION TO SAVE FOR RETIREMENT: THE INFLUENCE OF  
ATTITUDES AND SUBJECTIVE NORMS

by

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Dissertation submitted to the faculty of the  
Virginia Polytechnic Institute and State University  
in partial fulfillment of the requirements for the degree of  
DOCTOR OF PHILOSOPHY  
in  
Housing, Interior Design, and Resource Management

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September, 1988  
Blacksburg, Virginia

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(ABSTRACT)

America's population is aging. People are living longer and medical advances continue to make that true. Many citizens count on social security as a major source of retirement income. Future retirees will find that there will be fewer workers to support them and unless the nation stops borrowing from the social security fund to finance the deficit, there will be less money for retirees. All of this means that it is important for individuals to save for retirement. Martin Fishbein developed the Behavioral Intention Model to explain various behaviors. According to the model, attitude and subjective norm explain the variation in the intention to behave a certain way and there is a high correlation between intention and behavior when using this model. Indirect measures of attitude and subjective norm increase understanding of these variables. The Fishbein model and an extended version of it, to which demographic variables were added, were tested in this study. Five hundred Virginia Tech classified employees received the mail survey instrument, which was based upon Dillman's specifications, in June 1988. A 74.6% response was received. The data were analyzed using

descriptive statistics, correlations, t-tests, multiple regression, and path analysis. While the Fishbein model accounted for 22% of the variation in the intention to save for retirement, the extended model accounted for 40% of the variation. In addition to attitude, number of assets, having a dependent child between the ages of 5 and 13, number of years expected to live after retirement, and age made significant contributions to the variation in the intention. It was concluded that the extended model is a better theoretical framework for explaining the intention to save for retirement. There were statistically and practically significant differences in the indirect measurers of attitude and subjective norm for those who intended to save and those who did not. However it was apparent that neither group believed that saving now will assure them of financial security in retirement. Additional research is needed to further explore the variables which influence individual's intentions to save for retirement.

## ACKNOWLEDGEMENTS

Recognizing that this work would never have been accomplished without the contributions of many, the author expresses sincere appreciation and many thanks to:

—Dr. Nancy A. Barclay, Professor and Head of the Department of Housing, Interior Design, and Resource Management for guidance, encouragement, references, patience, confidence and concern throughout the entire graduate program; and for positions which broadened professional growth and provided financial support.

—Dr. Wayne M. Keffer, Associate Professor and Assistant Director, 4-H Youth, Extension Division for encouragement, patience, confidence and concern during the last four years; and for positions which provided valuable experience and the resources to get the job done.

—Dr. Rebecca P. Lovingood, Professor in Housing, Interior Design, and Resource Management for years of advice, patience, encouragement, and for editing of the dissertation; also for opportunities to participate in research.

—Dr. Elaine D. Scott, Assistant Professor in Housing, Interior Design, and Resource Management for extra encouragement and reminders, patience, confidence, and crazy work hours, especially during the dissertation stage.

—Dr. Michael J. Sporakowski, Professor of Family and Child Development for patience, advice, confidence, great humor, and editing of the dissertation.

--Dr. Lawrence H. Cross, Associate Professor of Education, for assistance with the study design and statistical analysis during the pilot test.

--The Divisions of Employee Benefits (especially and Institutional Research (especially and for advice and assistance with accessing the mailing list for the population.

--Other supportive professionals, including and the Copy Center II personnel who assisted with technical problems.

--The College of Human Resources and the Virginia Cooperative Extension Service for opportunities and understanding as I balanced various roles.

--Friends, colleagues, and family who provided encouragement and patience.

-- for inspiration to embark on the challenging process.

--My husband, for extra patience, assistance, encouragement, and faith that one day we would reach the goal.

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## Chapter I

### INTRODUCTION

America's population is aging. According to the Census Bureau (U.S. Department of Commerce, 1987), 4% of our population was over age 65 in 1900. In 1985 that age group comprised 11.9% of the population. It is projected that by 2000, 13% of the population will be over 65 and that by 2030 the percentage will be 21.2.

When the social security system was devised in 1935, it was intended to be a supplementary source of retirement income. However, for many Americans, it is the primary source of income. Ycas and Grad (1987) report that social security was the major source of income for 62% of retirees in 1984. It provided 90% or more of the income for about 1 in 4 retirees and was the only source of income for 1 in 7 beneficiaries. Given the projected demographic trends and the structure of the social security system, many are concerned that it will not meet the demands of the future.

Social security payments to current recipients are funded by taxes paid by today's workers and their employers. When social security began, workers paid 1% on their income up to \$3,000 (Mudge, 1983). The average annual tax payment was \$16.80. Currently, each worker pays 7.51% on wages up to \$45,300, and the average annual payment is \$1,466.30 (Thomas, 1987). The maximum wage base is due to rise again in 1989 to \$48,000. Then both the rate and the wage base will rise in 1990 to 7.65% and \$50,700 respectively.

Actually, it is not surprising that workers often consider social security to be a primary source of retirement income. For many

families, it is very difficult to save more than 7.51% of income for retirement. However the income that will be received from social security will only be a supplemental sum, not enough to provide total retirement income.

In 1980 there were 31 recipients for every 100 workers. It is projected that by the year 2000 there will be 40 recipients per 100 workers and that by 2050 the ratio will be 50 recipients per 100 workers (A long life can strain your finances, 1980).

This ratio is changing because people are living longer and our population growth has slowed. In 1959, a 65 year old white man could expect to live 13.0 more years and a white woman could expect to live 15.9 years (U.S. Department of Commerce, 1987). By 1983, that man could expect to live 15.9 more years and the woman could expect 18.7 more years. Blacks could expect to live about one year less than whites. Medical advances provide cures and life lengthening treatments, nutrition has improved, and general health awareness has increased so that people are living longer. Meanwhile, our population is not growing as fast. When the Baby Boom generation reaches retirement, there will be proportionately fewer younger people to pay social security than there are today; thus there will be less money available to pay social security benefits. Currently it is projected that the social security system will experience a major financial crunch around 2040 (Hardy, 1987). If social security is still available after that year, it is unlikely that the payments will replace the proportion of income that they do now.

The most prevalent asset owned by retirees is equity in a home

(Friedman & Sjogren, 1981; Sherman, 1985). This asset is becoming harder for families to obtain.

Since 1970, the price of a new home of a given size, adjusted for inflation, has risen 28 percent nationally, and inflation adjusted rents have risen 20 percent. During that same period, real median household income has increased by only 7 percent.

(Bren, 1987, p. 2)

In addition, most homeowners may have to sell their homes in order for the equity to be used (Springer, 1985). If this is done, rent must be paid or another place to live must be found. Another potential threat to the equity in the home is the home equity loan. The real impact of this instrument has yet to be seen. However, if families use their home equity before retirement and are unable to repay the loan, this source of retirement income will not be available.

It is estimated that only 42.4% of workers are covered with pension plans (U.S. Department of Commerce, 1987). More males than females, and more higher than lower income workers are covered. Blacks are slightly less likely than whites to be covered. It is becoming more and more common for workers to switch jobs. They often lose retirement benefits as they move. A vested employee may take the portion of retirement benefits he/she contributed. However, it can take from 5 to 15 years for an employee to become vested, depending upon the procedure an employer selects.

Women are particularly vulnerable to retirement income problems (Keith, 1985; Warlick 1985). Currently, many women receive benefits

based on their husband's income. When the husband dies, they must adjust to receiving only about a third of the benefits the two of them had been receiving. Women live longer than men and often marry men older than they are. Thus they and can expect to spend a number of years living alone. Although more women are working outside of the home, they generally work at lower paying jobs than men do. When they retire, they receive less income. Married women fare better financially than unmarried women (Irick, 1985; Sherman, 1985; "Women and Social Security", 1985).

Congress attempted to encourage citizens to save for retirement by giving a tax incentive for workers to put money into IRA's. Those with lower incomes often could not afford to take advantage of this. Now many who invested in IRA's have lost the tax incentive to save and it is projected that fewer people will use this form of saving.

Studies show that 1982 retirees are better off than those who were retired in 1969 (Irick, 1985; Sherman, 1985). These people retired with higher salaries and thus higher retirement income than their predecessors. Unless this income increases as inflation increases, recent retirees may not find themselves as financially well off in a few years.

As people live longer they typically need additional health care. Medicine has made great advances, but the cost of treatment continues to rise. In 1970, the average per capita health expenditure was \$349 (U.S. Department of Commerce, 1987). It grew to \$1,721 in 1985. The per capita health care costs in Virginia were \$151 in 1966 and \$1,054 in 1982 (U.S. Department of Health and Human Services, 1985). Also, the

average national cost for a 1 day stay in the hospital has grown from \$300 in 1983 to \$760 today (Gilmour, 1988).

Many elderly people count on Medicare to provide their retirement health insurance coverage. The deductible for Part A, which covers the hospital costs, was \$260 five years ago, and is \$540 in 1988. This deductible must be paid for every hospital stay and the number of days covered is limited. Part B requires a continually increasing monthly payment (\$24.80 in 1988) in addition to a \$75.00 deductible and co-payment of 20% of approved costs. At the same time, the gap between Medicare approved costs and the fees physicians will accept continues to grow. A medigap policy may help, but the costs are still high. These payments are difficult to make unless income increases as costs do.

Congress addressed this situation by passing the Medicare Catastrophic Coverage Act of 1988 and President Reagan signed the law in early July. Changes will begin to take effect in January of 1989 and will be phased in over a five year period (Rostenkowski, Bentsen & Dingell, 1988). The hospital deductible will have to be paid only once each year and the day limit for hospital care will be removed. There will also be a limit on the amount that a beneficiary will have to pay for Part B coverage in a year. Extended hospice care and new prescription drug and respite care are other benefits. However, the monthly costs will increase and many retirees will have to pay a new supplemental tax for Medicare. It is unclear what the total costs to the retiree will be, but coverage will be improved. There is still no coverage for long-term care, however.

When a person runs out of assets to pay medical costs, he or she

may qualify for Medicaid. However, Medicaid requires that virtually all assets be gone. If one spouse needs care, the healthy spouse may lose almost everything to provide that care. The new Catastrophic Health Care Bill requires that beginning in September, 1989 the community based spouse must be allowed to keep \$786 of income each month and \$12,000 of assets. While this is a definite improvement over the current situation, a community based spouse may still lose much.

Some families have transferred assets to other family members at less than market value so that a member could qualify for aid. Currently Virginia law (20-88.01) prohibits such aid if a transfer occurred within 4 years of application for assistance. The Governor's Task Force on Indigent Health Care (1988) has recommended that the period of years be extended, to assure that families really do shoulder the burden of health care.

Another expense of older people is household and personal assistance. In the past, extended families usually lived in the same community, if not in the same house. Family members served as caretakers for those who needed it. As our society has become more mobile, the family continues to be the primary source of help, but members are less likely to live in the same house (Horowitz, 1985; Shanas, 1979). Children are able to help older parents less as the distance between their residences increases (Kivett & Atkinson, 1984). While the family is still involved in care for its older member, the it looks to outside resources to provide some care and these services must be paid for. Sometimes older people end up in expensive long-term care facilities because they cannot obtain transportation to the grocery

store and physician or because they need housekeeping assistance that is not available in the home.

In summary, there is a growing need for individuals to prepare financially for retirement. That is, they need to save money. It is not probable that social security and other retirement benefits (i.e., pensions) will cover all of the retiree's needs. Future retirees will probably live longer than previous generations and their cost of living is likely to continue to rise.

#### Theory of Reasoned Action

Martin Fishbein has developed a theory which he maintains "is designed to explain virtually any human behavior" (Ajzen & Fishbein, 1980, p.4). He assumed that people are usually rational, make use of available information, and make conscious decisions based on consideration of the implications of their actions (Ajzen & Fishbein, 1980, p.5) Thus the theory is called "the theory of reasoned action."

The "intention to perform (or to not perform) a behavior is the immediate determinant of the action" (1980, p.5) Intention is a function of attitude toward the behavior (the belief that the behavior leads to particular results and the evaluation of whether or not one should perform the behavior) and subjective norm (the perceived social pressures to perform the behavior and the motivation to comply with those pressures). In any given study, the relative importance of these factors is related to the particular intention under investigation.

Although all attitude researchers do not subscribe to this theory, it has proven useful for many studies. Topics studied have ranged from

predicting and understanding family planning behaviors, to voting in American elections, to consumer behavior. Findings indicate that people almost always behave as they intend. Ryan and Bonfield (1980) relate that studies frequently report correlations of .80 and higher for the relationship between intention and behavior.

At least one other home economist has used this model. In 1985, Janis Lovell, a student at Texas Tech, used the theory of reasoned action to develop and test a behavioral intention instrument for predicting dysfunctional family financial management and found that it was a useful theory for her work.

The theory of reasoned action provides a logical basis for a retirement study such as this. It has been tested in a variety of studies, including studies of various consumer behaviors and saving for retirement is a consumer behavior.

#### Purpose

The primary purpose of this study was to investigate the importance of attitudes and subjective norms on the intention to save for retirement.

#### Significance of the Study

Counselors and educators who work with families need to know more about the attitudes and subjective norms which have an impact upon the intention to save for retirement. With this information, they will be more likely to influence families to save for retirement, or understand why a family will not save. Public policy makers also need to

understand this behavior as they shape the budgets, laws, and regulations that govern our country. The business community (e.g., banks and insurance companies) could also use this information in attempting to help consumers prepare for their retirement years.

### Problem Statement

Social security was established as a program to assure that citizens received a minimal source of retirement income. However, researchers have found that in many cases it serves as a primary source of retirement income (Yankelovich, Skelly, & White, 1985; Radner, 1987). Although the government assures us that social security will be available in the future, the facts that more people are living longer and that there will be fewer workers to support the retirees, make it seem unlikely that payments will be a substantial portion of needed retirement income. Thus, families will benefit from taking action to plan financially for retirement.

Research has shown that the intention to perform a behavior usually leads to performance of that behavior. The theory of reasoned action states that intention is influenced by attitudes and subjective norms. The present study addressed the question: What is the relative importance of attitudes and subjective norms on the intention to save for retirement? It also addressed the following sub-questions:

1) What are the beliefs and evaluations of outcomes that shape the attitude?

2) What individuals or groups influence people to save or not to save for retirement?

3) Is there a difference in the intention to save for retirement for people with different demographic backgrounds?

4) What are the differences in attitude and subjective norm for those who intend to save for retirement and those who do not intend to save?

### Operational Definitions of Variables

Intention to save for retirement was specified as contributing money during the next year to a pension, tax shelter, Keogh plan, real estate (including the home) or other instruments which may be liquidated to provide retirement income.

Attitude included such beliefs as "It's important to save for retirement." and "Current retirement plans (e.g., social security, Virginia Supplemental Retirement System) are not adequate." and outcome evaluations such as "I will benefit from saving for retirement."

Subjective norm included the important individuals and groups and the motivation of the respondent to comply with what he/she perceives these individuals and groups think should be done.

External factors which were measured were: age, gender, marital status, years in the pension system, planned retirement age, expected years to be funded in retirement, income, number of assets owned, race, and education.

### Summary

It is important that families plan financially for retirement. This study was designed to investigate the attitudes and subjective

norms that influence the intention to save for retirement. This information will help counselors, educators, public policy makers, and businesses understand why families do or do not save for retirement and possibly help them encourage families to save for retirement.

## Chapter II

### REVIEW OF LITERATURE

Saving for retirement is a long term goal. Families usually plan to retire, but it often seems so far away that it is hard to actually prepare financially for that time in life. It is also hard to put money away for an uncertain future when there are pressing needs for things like food and clothing right now, and intermediate goals, like children's education, too.

#### The Fishbein Behavioral Intention Model

Martin Fishbein developed the theory of reasoned action to understand and predict human behavior. Figure 1 shows the Fishbein model.

The theory which this model is based upon is called the theory of reasoned action. Ajzen and Fishbein state "We make the assumption that most actions of social relevance are under volitional control and, consistent with this assumption, our theory views a person's intention to perform (or to not perform) a behavior as the immediate determinant of action" (1980, p.5).

Careful definition of the behavior is necessary. The researcher must assure the identification of a behavior rather than an outcome of a behavior. The intention must also be specifically identified so that it corresponds to the behavior of interest. The correlation will be higher when the behavior and intention are correctly identified. They must be measured on a personal level, e.g., how the respondent feels about saving 5% of his or her income for retirement this year rather than how

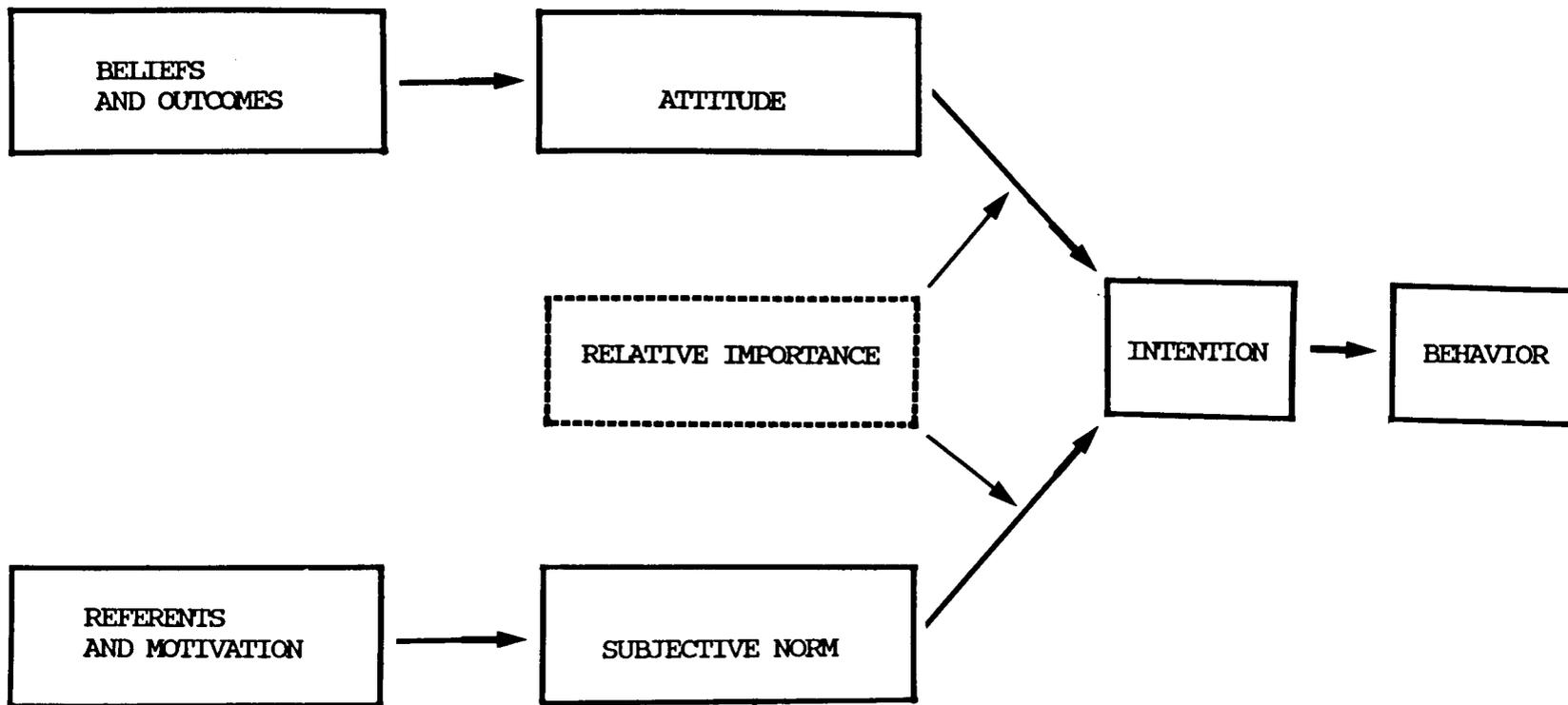


Figure 1. Fishbein Behavioral Intentions Model.

Note. From Understanding Attitudes and Predicting Social Behavior by I. Ajzen and M. Fishbein, 1982, Englewood Cliffs, NJ: Prentice-Hall, Inc.

the respondent generally feels about saving. Both the behavior and the intention are composed of four elements: the action, the target toward which the behavior or intention is directed, the context in which the behavior occurs, and the time at which it happens.

Intention is a function of the attitudes a person has and his or her subjective norms. These must be understood before behavior may be understood.

A person's attitude toward a behavior is his or her positive or negative evaluation of his or her performing the behavior. It is "an index of the degree to which a person likes or dislikes an object, where 'object' is used in the generic sense to refer to any aspect of the individual's world." (Ajzen & Fishbein, 1980, p. 64).

Subjective norm may be defined as social influence. It is a more restricted definition of norms than sociologists typically use in that the subjective norm is the respondent's "perception that important others desire the performance or nonperformance of a specific behavior" (Ajzen & Fishbein, 1980, p.57). Sociologists usually use the term to mean the range of permissible but not necessarily required, rather than the expected behavior.

Beliefs underlie both attitudes and subjective norms. For example, behavioral beliefs, or the belief that positive or negative outcome will result from saving part of this year's income for retirement, underlie attitudes. Generally, if a person believes that the outcome of saving will be mostly positive, he or she will save. Subjective norms are influenced by normative beliefs, or what the person believes important others think. Usually, a person will be motivated to save if he or she

perceives this social pressure to save.

The relative influence of attitudes and subjective norms varies with specific behaviors. In one case, attitudes may be more important, in another, subjective norms may carry more weight. Relative influence is not a measured variable, but is determined from the beta weights in the regression model. While the theory considers all other factors to be external to the model, Ajzen and Fishbein do note that factors such as demographic variables, personality traits, and other individual differences may influence the relative importance of attitudes and subjective norms.

The variables which Ajzen and Fishbein call external variables may indirectly influence intentions and behavior through the attitudinal and normative factors. They demonstrate this influence in their 1980 book with a study of voting in American elections. They found a .80 correlation between intention and voting behavior. The  $R^2$  for the impact of attitude and subjective norm on intention was .83. These are strong results. They state: "Although consideration of external variables may help explain the origin of certain beliefs, we saw that the two components of our theory are sufficient to predict voting intentions." (Ajzen & Fishbein, 1980, p. 193). Other studies which confirm the finding that other variables are external include: Davidson and Jaccard (1975 & 1976) in fertility studies; Pomazal and Brown (1977) in a drug use study; Pomazal and Jaccard (1976) in a study of altruistic behavior; and Vinokur-Kaplan (1978) in a family planning study.

The model shown in Figure 1 operationalizes the theory of reasoned

action. The first hypothesis of the model deals with the relationship between intention and behavior. The second is the relationship between attitudes and the subjective norm and intention. Then the influence of beliefs on attitudes and beliefs on subjective norm are studied. The model does not allow jumping from beliefs to intention. The intervening variables are vital. Each relationship must be empirically tested.

The model has been used in a wide variety of studies. In addition to the work already cited, Fishbein has published extensively using the model. Some examples of his work include studies of: family planning (Fishbein, 1972 and Fishbein & Jaccard, 1973); public reaction to energy proposals (Bowman & Fishbein, 1978); childbearing intentions (Loken & Fishbein, 1980); and voting (Fishbein & Ajzen, 1981). Ryan and Bonfield (1975) published a summary of marketing studies by ten research teams which used the model. They recommended that more work be done to further test the model.

In 1980 Ryan and Bonfield published "Fishbein's Intentions Model: A Test of External and Pragmatic Validity," based on a credit union loan study. They concluded that "This study adds correlational evidence in support of external validity to the body of research investigating Fishbein's Intentions Model"(p. 92). While they support its use in the real world of marketing, they note that more work needs to be done in the methodology of determining salient attitudes and referents.

Lovell (1985) used the Fishbein model to develop an instrument for predicting dysfunctional family financial management which family therapists may use. She stated that this model is suitable for testing family financial management hypotheses for three reasons:

- a) because of its success in predicting other behaviors,
  - b) because of its distinctive focus on attitudes toward acts (i.e., personal use of drugs), which have been found to be a better predictor of intentions and subsequent behavior than attitudes toward objects (i.e., drugs in general) (Ajzen & Fishbein, 1980), and
  - c) because the causal direction of the model is a logical approach for testing the behavior of interest.
- (Lovell, 1980, p.8)

Lovell's reasons for using the Fishbein Model also apply to this study. The remainder of the review of literature is organized around the variables in the theoretical model.

#### The Behavior of Saving for Retirement

Americans save for retirement in a number of ways - some they are not aware of as savings. Those who earn wages pay a social security tax. While under current social security regulations this money is not saved for the employee, if he or she works long enough to be fully insured by social security, an income can be expected from social security during retirement. Those who are working will finance the income of those already retired. While this is not direct savings, it is a source of retirement income.

Although the Social Security Administration maintains that social security retirement income will be available for today's workers (Ballantyne, 1986; Gavzer, 1987; Hambor, 1987), its Commissioner emphasizes the growing need for families to save for retirement. Hardy

(1987) notes that we may be reaching the point where people are no longer able to put more of their income into social security. She says:

I believe Social Security should get back to basics and provide a 'floor of protection' to be supplemented, not replaced, with pensions, savings, and other investments. In sum, each individual must take the responsibility for ensuring his or her own financially secure retirement (Hardy, 1987, p.7).

Because of concern about family saving for retirement and dependence on social security for that income, the Social Security Administration has sponsored studies about retirement. Researchers have found that recent retirees currently have more income than older retirees (Harris, 1986; Maxfield & Reno, 1985; Sherman, 1985; Ycas & Grad, 1987) . Married people are the better off than single people (Irick, 1985). Still, the home is the primary asset of retirees (Sherman, 1985).

A major debate concerning the impact of social security on the saving behavior of families continues. Currently, it seems that it can be shown that social security both does (Feldstein, 1974; Kotlikoff, 1979; Lesnoy & Hambor, 1975) and does not (Esposito, 1987) inhibit savings. Researchers have strong opinions both ways, but finally admit that we really do not know which is true.

In 1985 Yankelovitch, Skelly and White, Inc. conducted a study for the American Association of Retired Persons on the attitudes of Americans toward social security. They found that people consider it to

be important and successful. Those who are retired rely on social security as their main source of retirement income, more than any other source. However, those who are not yet retired expect that they will rely most heavily on their employer's pension.

Pension World ("Survey suggests," 1982) reported that New Yorkers are pessimistic about the ability of social security to meet their retirement income needs. "Only 20 percent feel they are meeting their retirement planning goals, and only 25 percent cited their pensions as a major reason for not building up a retirement nest egg on their own" (p.49). While 18% believe that social security will keep up with the cost of living, only 12% believed that their union-sponsored plans will keep up.

Some employers provide pensions for their employees. To receive these benefits the employee must become vested. Depending on the employer's plan, this can take from 5 to 15 years. Employers may provide pensions in 1 of 2 ways. There may be a defined benefit, in which case the employee is guaranteed a certain income, or a defined contribution, where the contribution to the fund is guaranteed instead of the benefit. In recent years, there have been more and more defined contribution programs.

According to the U.S. Bureau of Census (U.S. Department of Commerce, 1984) only about a third of the workers in the private sector were covered by a private pension plan. Fifty percent of males were covered but only 37% of all females were covered. Of those earning \$20,000 and more, 77.4% were covered by a pension, but only 30.2% of those earning \$5,000-\$9,000 were covered. Quadagno (1987) points out

that in the past reliance on private pension coverage widened the gap between the haves and the have nots. Women receive considerably less income under private plans because of their lower earnings.

Retirement benefits may or may not increase as inflation does. Strate (1984) found that all but 1 of 76 large state pension plans increased benefits after an employee retired. However, these increases were not sufficient to keep up with inflation. Strate noted that these plans have been designed with the assumption that employees will supplement their retirement income, especially with personal savings.

Hefferan (1982) has also studied family saving. She has found that income is a primary indicator of saving behavior. The more income a family has, the higher the level of saving.

Families with more sources of income in retirement tend to survive better financially during these years (Hefferan, 1981). Kitt, Hampton, and Sain (1983) found that of the 12 investment types included in their study, only four, savings accounts, home equity, cash value life insurance, and certificates of deposit, were owned by more than half of the respondents. Almost half owned real estate other than their house.

#### Intention to Save

In management terms, what Fishbein calls intention translates best into what Gross, Crandall, and Knoll (1980) call motivation or "a need or desire within a person or group that stimulates action" (p.75). Lovell (1985) used this definition of motivation in her financial management study. It is seen as an input to the managerial system.

Gross, et al. (1980) point out that the major motivational forces are values, goals, and standards. Goals make values concrete while standards are specifications of values. Families are more aware of their goals than of their values or standards.

Goals are ranked so that smaller ones lead to larger ones. A family may begin with a goal to save \$10 each pay period. Later this may change to putting a larger percentage of income into a fund specifically for retirement. Deacon and Firebaugh (1981) specify that long term goals are those which require an accumulation of resources or which take a long time to accomplish.

"Associated with the setting of goals is an intention to do something toward the achievement of them" (Gross et al., 1980, p. 186-187). When there is no intention to take action to achieve a goal, it is nothing but a daydream.

Fitzsimmons and Holmes (1958) found that families can state short-term goals easier than long-term goals. Through further work, Fitzsimmons, Larery, and Metzen (1971) found retirement to be one of nine general types of goals for families. This category made up 3% of all the goals families reported. Seventy-four percent of the retirement goals were related to being financially secure in retirement. Others had to do with when people would retire and where they would retire.

Goal setting requires the ability to look ahead to the future (Gross et al., 1980). It is closely related to the process of planning. Families must determine where they are headed before they can take action. There may be a period of time between when a family sets a goal and when it acts to achieve it. Retirement tends to be the kind of goal

which families generally set, but for which saving is often put off until later.

McKenna (1985) reported that for her sample of well-educated women between the ages of 40 and 55, retirement goal-setting behavior did not match planning behavior. Most thought retirement goals and investment goals were important but less than half thought retirement planning was important.

### Attitudes

Few studies have emphasized attitudes and saving. Rudd and Dunsing (1972) have found that there is a relationship between knowledge and attitude however this might not mean that the behavior would occur. Some families did not realize that they had savings goals already.

Hampton, Kitt, and Sain (1984) found that expectations concerning the level of government support influenced people to plan financially for retirement. Uncertainty in the economy and problems with inflation reduced the likelihood that families would plan.

In a New York state study, Hogarth (1986) found that few state workers bothered to attend well publicized retirement planning programs or even request a benefit-level estimate. She concluded that people appear to have inadequate knowledge or unrealistic expectations of retirement income. Tengel (1986) interpreted the situation as people believing that "big brother" will take care of them so they do not need to plan.

### Subjective Norms

Subjective norms are social influence. They are the perception that important others think a particular behavior or action should or should not be performed. There are a variety of subjective norms in the literature.

Hampton, Kitt, and Sain (1984a) studied the sources of information families use to plan for retirement. They found that the daily newspaper is the most common source (66 %) followed by television (55%) and family and friends (50%). Professional advisors were used by 38% of the respondents. Other sources were magazines and radio. The most prominent of these sources are not people, but mass media sources. Family and professional advisors were important sources, however. Evans, Ekerdt, and Bosse (1985) found that retirees serve as role models for workers.

Feeling less well off than peers was demoralizing for respondents to Keith and Schafer's study (1983). Wright (1978) found that families in debt were getting into financial trouble due to peer pressure to obtain goods and services.

Gross, et al. (1980) noted that people are influenced by peers as they set their standards. They also report surveys which show the values of youth changing from saving and thrift. Deacon and Firebaugh (1981 & 1988) say that values fit on an absolute-relative continuum. Where a particular value fits depends upon how independent or dependent it is with respect to a situation. They define normative values as "those which are reinforced through people's own experience or by the expectations of those around them - neighbors, colleagues, community,

the country" (1981, p. 39). Values influence the goals that families set, so it may be inferred that people have goals which are influenced by others.

#### Attitudinal Beliefs

According to Deacon and Firebaugh:

Values are the essential meanings relating to what is desirable or has worth, providing fundamental criteria for goals, thereby giving continuity to all decisions and actions. At the same time, management contributes to the clarification of values as goals. Values provide both the purpose toward which managerial activity is directed and criteria to identify the means through which demands are effectively met. (1988, p.40)

They describe values as being absolute and relative, intrinsic and extrinsic, and general and specific. Absolute values do not change easily as the situation changes, while relative values are interpreted in the context of the situation. For example, if saving for retirement was an absolute value, there would be no question about whether or not to take the money for retirement and spend it on a vacation. A sense of security is an intrinsic value. It comes from within the person. The corresponding extrinsic value is having assets to meet needs. The related goal may be to own some mutual fund shares or have a savings account. General values, like those expressed through a goal such as

having financial security in retirement, are fulfilled over time, while specific values are satisfied by single actions.

The attitudinal beliefs the Fishbein model is concerned with are influenced by values. Values are made explicit by the goals and standards families express. These will be set according to the positive or negative outcomes a family expects.

Guthrie (1962) studied family perception of security. She found that families fit into six groups which ranged from insecure-poorly-protected to secure-well-protected. Families at different stages of the life cycle had different problems.

Yankelovich, Skelly, and White, Inc. (1975) conducted a study of American families for General Mills in which they explored family expectations about budgeting. They found that half of the families felt budgeting was helpful and those who used a budget, felt it helped them save. Those who reported feeling that budgeting was helpful had different values than those who did not feel that it was helpful.

Hefferan (1981, 1982) studied family saving behavior that related to family values. She found that in some families, having a second earner reduced the perceived need to save. The family felt more economic security.

#### Normative Beliefs

No specific studies were found which relate to the normative beliefs which may influence family saving for retirement. However, Wright (1978) found that people get into financial trouble because of

peer pressure. Clearly peers and what these people think peers expect are important if families get into financial difficulty because of them. Thus, normative beliefs related to saving for retirement need further investigation.

### External Factors

Although the Fishbein Model is definite about the lack of importance of external factors, retirement studies indicate that for this topic, some external factors may be important. Clearly, sex is important. Women are more at risk for retirement income problems (Harris, 1986; Keith, 1985; "Women and Social Security", 1985; Quandagno, 1987; Warlick, 1985).

Marital status is another important variable. Studies show that married people have more assets and higher income (Friedman & Sjogren, 1981; Irick, 1985; Sherman, 1985).

Income also influences families' saving. Hefferan (1982) found that those with more income were more likely to save. Total family income, not just the respondent's will influence this factor. Also, there is less elasticity in the demand for essentials such as food, housing and clothing; the basics which all families must buy first. Families may also save for periodic or emergency expenses before true long term goals, such as retirement.

Because the more sources of retirement income a family has, the better off it is (Hefferan, 1981), this information should be collected. Hampton, Kitt, and Sain (1984b) collected information on 12 sources.

Duncan, Mitchell, and Morgan (1984) included social security, private pensions, house equity at retirement, and other assets.

Years to retirement influences some people's interest in saving for retirement. Evans, Ekerdt, and Bosse, (1985) found that this is a more important factor than age.

However, age may also influence saving. Although there is no agreement on when most people actively begin to plan, sources indicate that this begins around age 35 to 44 (American Council on Life Insurance, undated) or in the empty nest stage (Stampfl, 1978).

Years in the pension plan will influence the level of income an employee may receive. This information may also influence the decision to save or not to save for retirement. These external variables, along with others (e.g., ages and number of children) were used to describe the sample.

The literature shows a variety of uses of the Fishbein Model and justification for using it in a retirement study. When the literature is applied to the model, it reveals that the goal, motivation or intention to save is important. More research is needed about attitudes and saving for retirement, but expectations about government support influence attitudes. Previous work has identified some subjective norms and determined that people are influenced by subjective norms. Likewise, some attitudinal beliefs have been identified but more work is needed. No previous research concerning normative beliefs was found. However, gender, marital status, income, sources of retirement income, years to retirement, age and years in a pension plan are external

variables which have been shown, or are widely believed, to influence saving for retirement.

#### Proposed Model

Thus, the theoretical basis for this study was the Fishbein Model, with the addition of the external variables discussed above. Figure 1 shows the Fishbein Model and Figure 2 shows the Extended Fishbein model. Both were tested in this study.

#### Hypotheses

The following null hypotheses were tested in this study:

- 1) There are no statistically significant relationships between attitudes or subjective norms and the intention to save for retirement.
- 2) There is no statistically significant relationship between attitude toward saving for retirement and the indirect measure of attitude.
- 3) There is no statistically significant relationship between subjective norm and the indirect measure of subjective norm.
- 4) There are no statistically significant relationships between the intention to save for retirement and the demographic variables of:
  - a) gender
  - b) age
  - c) marital status
  - d) years in the pension system
  - e) years to retirement

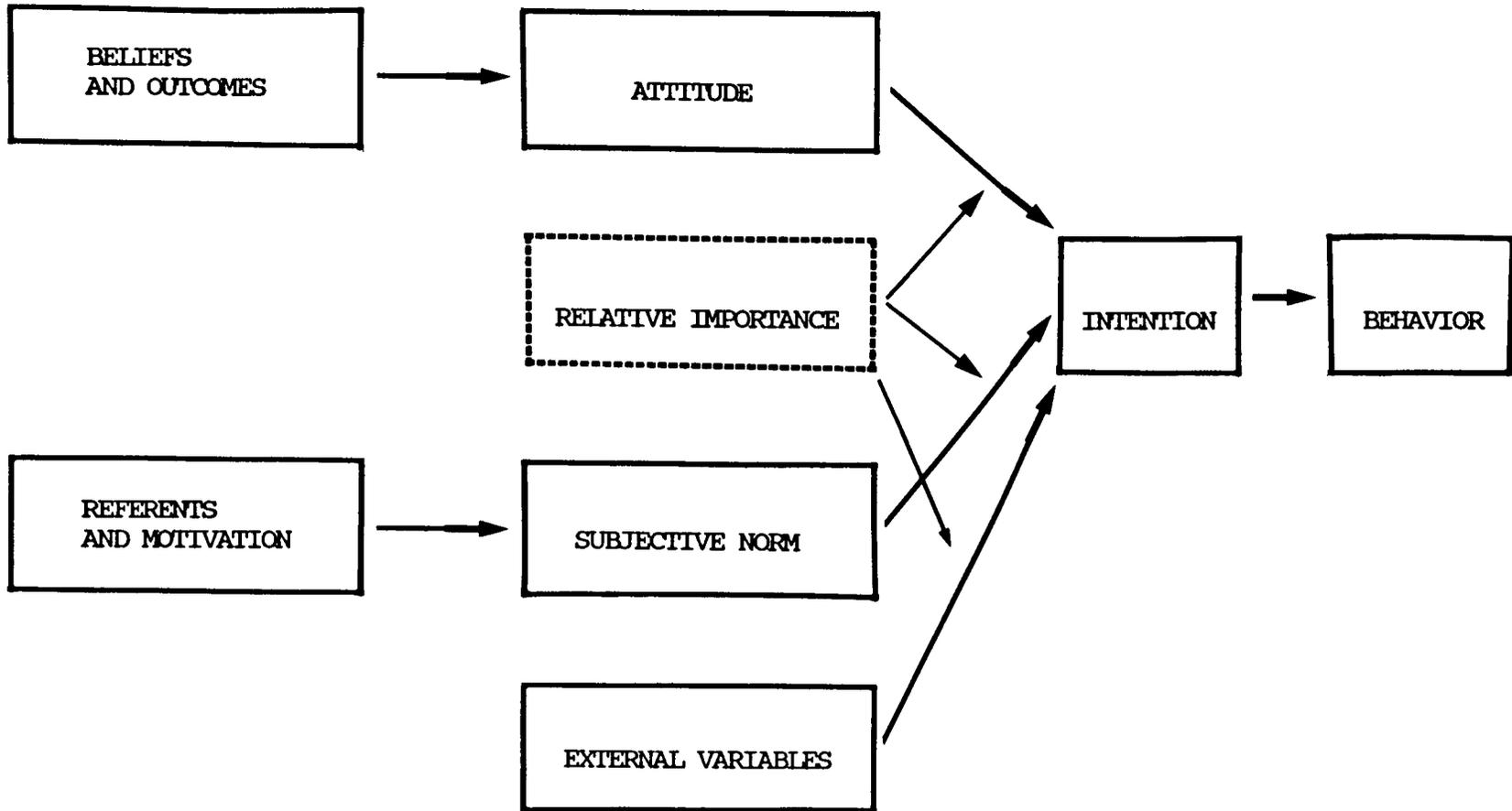


Figure 2. Expanded Fishbein Behavioral Intentions Model.

Note. Adapted from Understanding Attitudes and Predicting Social Behavior by I. Ajzen and M. Fishbein, 1982, Englewood Cliffs, NJ: Prentice-Hall, Inc.

- f) income
  - g) number of assets owned
  - h) race
  - i) education
- 5) There are no statistically significant relationships between attitude and subjective norm for those who intend to save and those who do not intend to save for retirement.

#### Summary

The Fishbein Behavioral Intentions Model provides a good theoretical basis for this study. This work will build upon previous research and contribute to our knowledge of how attitudes and subjective norms influence the intention to save for retirement.

## CHAPTER III

### METHODOLOGY

The purpose of this study was to investigate the relative influence of attitudes and subjective norms on the intention to save for retirement. The Fishbein model served as the theoretical base for this work. Intention to save for retirement was the dependent variable. The primary independent variables were attitude toward the behavior and subjective norm. To understand attitude, behavioral beliefs and outcome evaluations were traced. Likewise, normative beliefs and motivations to comply were traced for the subjective norm. Demographic information, including gender, age, marital status, income, family income, job, years in the job, planned retirement age, number of years expected to live after retirement, assets owned, and ages and number of children, was also collected to describe the sample and test their importance in an adaptation of the model.

#### Instrument

The content of the research instrument was developed according to the procedure recommended by Ajzen and Fishbein (1980) with a few adaptations. The behavioral intention measured was the intention to save for retirement in the next year. Ajzen and Fishbein (1980) explain that because salient outcomes and referents differ for particular populations, they must be elicited from the population being studied.

Ryan and Bonfield (1975) surveyed marketing studies which utilized the Fishbein model. They reported that all studies did not elicit outcomes and referents from the population studied. Those who did found higher correlations between attitude and the product of behavioral beliefs and outcome evaluations. Lovell (1985) used a combination of elicited responses and factors which other researchers found to be important, as identified in her review of literature.

#### Eliciting Outcomes and Referents

To elicit salient outcomes and referents for the study population, a convenience sample of 62 respondents was asked by the researcher and a trained assistant to write answers to the following questions during January and February, 1988:

##### Salient Outcomes

- 1) What do you see as the advantages of your saving for retirement in the next year?
- 2) What do you see as the disadvantages of your saving for retirement in the next year?
- 3) Is there anything else you associate with your saving for retirement in the next year?

##### Salient Referents

- 1) Are there any groups or people who would approve of your saving for retirement in the next year?
- 2) Are there any groups or people who would disapprove of your saving for retirement in the next year?
- 3) Are there any other groups or people who come to mind when you think about saving for retirement in the next year?

Most respondents were in groups so they were asked each question verbally. Others were given the questionnaire shown in Appendix A. The responses are shown in Appendix B. The most frequent responses were used to create the test instrument which measured behavioral beliefs, outcome evaluations, normative beliefs, and motivations to comply. Table 1 shows which part of the model each question in the instrument measured.

#### Instrument Format

The format of the test instrument was developed using Dillman's (1978) guidelines. The full size pages were reduced so that two pages of questions fit side by side on an 8 1/2 inch by 11 inch piece of paper. The cover was yellow, featured a sunset design, and identified the study, the department and the university. The questionnaire was stapled twice in the center and folded in half to create a booklet which measured 5 1/2 inches by 8 1/2 inches.

Instructions and example questions were provided on the first page (Appendix C). Questions were typed in upper and lower case letters and answers were all upper case. Demographic information was requested after the questions for the model. The next six questions were asked for use by the university benefits officer. Finally, respondents were given an opportunity to make additional comments and thanked for their participation in the study. A numbering machine was used to stamp an identifying number on the front of each questionnaire and on the master list of names and addresses.

Table 1

Questions and Part of Model Measured

Part of Model	Measured by question(s)
Intention	Question 1
Attitude	Question 2 a-c
Indirect Measure of Attitude	
Belief Strength	Questions 3-10
Outcome Evaluation	Questions 11-18
Subjective Norm	Question 19
Indirect Measure of Subjective Norm	
Normative Belief	Questions 20-24
Motivation to Comply	Questions 25-29
External Variables	Questions 30-42
(Also used to describe sample)	
Employee Benefits Information	Questions 43-48

### The Sample

The population was classified employees associated with Virginia Polytechnic Institute and State University. There was a wide range in the salaries paid to these employees in jobs that ranged from grounds keeper to musician. Custodial workers, Hospital Attendants A, and Extension Technicians began at \$4.51 per hour, while a Student Health Staff Physician earned \$20.53 per hour and a VPI Music Tutor earned \$22.00 per hour (VPI & SU Temporary Hourly Wage Employment, 1987). Because they were employed by the same institution they had the same package of benefits. All were state employees. Some (e.g. extension agents) may also have been federal employees. This was a large group which state government, educators, and businesses are interested in serving.

This group was part of Virginia's employed population of 2,348,401.

The number of workers in each job category in 1980 was:

582,904 in Managerial and Professional Specialty  
 704,922 in Technical, Sales, and Administrative Support  
 287,471 in Service  
 56,212 in Farming, Forestry, and Fishing  
 300,867 in Precision Production, Craft, and Repair  
 416,025 as Operators Fabricators and Laborers  
 243,178 as Federal Government Workers  
 126,079 as State Government Workers.

The total state population was 5,346,818 in 1980 (U.S. Department of Commerce, Bureau of Census, 1982). Forty-nine per cent were male and 51.0% were female. The racial division was 79.1% white and 18.9% black.

Nearly two-thirds (62.4%) of the population completed at least four years of high school and 19.2% completed at least four years of college. Per capita income in 1985 was \$14,542 (U.S. Department of Commerce, Bureau of Economic Analysis, 1986). The median family income was \$20,018 in 1979 (U.S. Department of Commerce, Bureau of Census, 1986).

The largest group of the population (57.5%) was married. There were 26.8% single, 3.2% separated, 5.4% divorced, and 7.1% widowed (U.S. Department of Commerce, Bureau of Census, 1982). Just over half of the families ( 51.9%) had children under 18 years old while 12.1% had children under age 6 only.

The study population, part of the state government workers, contained approximately 2,500 people. A random sample of 500 Virginia Tech classified employees was used in the study. These people were selected on the basis of the last two digits of their social security numbers. Numbers were drawn from a random numbers table (Kerlinger, 1973). As each number was selected by the researcher, the employees with those numbers were selected from the population by a researcher in the university's institutional research division. The process was repeated until the correct size sample was drawn. A computer file containing names and addresses in alphabetical order was transferred from an institutional research account to the researcher's account.

#### Data Collection

Data were collected using the basic procedure outlined by Dillman (1978). Individualized cover letters with the participant's name and address were created using the file of names and addresses and a script

program on the university mainframe computer (Appendix D). Each letter was signed in blue ink by the researcher. These letters were folded in half and placed in a 6 1/2 inch by 9 1/2 inch envelope along with the appropriate questionnaire and a self addressed 4 1/8 inch by 9 1/2 inch return envelope. Stamps were placed on return envelopes for off-campus individuals. A return address label and an addressee label were placed on each mailing envelope and it was sealed.

Envelopes which could be delivered on campus were divided by department and placed in the university mail system. Those addressed to extension staff were placed in the extension mail system. Finally, stamps were placed on those to staff at experiment stations and they were placed in the U.S. Mail.

#### Follow-up

One week after the instrument was mailed, a thank-you/reminder postcard was mailed to each person (Appendix E). The message was printed on yellow card stock. The researcher signed each one with blue ink. Each card had the person's name and address and the researcher's name and address on its front.

As an incentive to participate, one \$50 U. S. Savings Bond was awarded through a drawing. Respondents who returned their instruments within three weeks of the initial mailing were part of the drawing procedure.

Before testing began, it was determined that a second follow-up, in which a second questionnaire would be sent to non-respondents, would be sent if the return was below 40%. This was not necessary. After 4 weeks 74% of the questionnaires had been returned. It was determined

that some non-respondents were no longer employed by the university. Others were not working during this time due to illness or other causes.

### Scoring

Several methods of scoring items have been utilized by researchers who have used the Fishbein Model. Most researchers score all but the motivation to comply scale from -3 to +3. The motivation to comply scale is scored from 1 to 7. Ryan and Bonfield (1975) show that the -3 to +3 scale yields the most consistent results so this method was used.

For this study, three independent experts were asked to determine which end of the continuum someone who generally intends to save for retirement would select. Positive numbers were assigned to that end. The negative numbers were assigned to reflect the general intention to not save for retirement in the next year.

The intention to save for retirement, measured in question 1, was coded as the respondent answered. If the respondent marked the far left spot, next to likely, it was coded +3. Attitude toward saving was determined through summing the scores for the three semantic differentials in question 2. Those responses closest to good, wise, and beneficial were scored as +3. The subjective norm was measured with question 23. The response closest to likely was rated +3.

The indirect measure of attitude was determined using the responses to questions 3-22. The indirect measure of subjective norm was determined using the responses to questions 24-35. Coding for these scores is shown in Appendix F.

The demographic variables were coded as shown in Appendix F to represent the particular response. Jobs were classified using the job classification system shown in Appendix G, a system which has been used in time use research.

#### Data Entry

Data were entered into a WordPerfect file on a personal computer. The margins were set for 0 and 80. The first three items were the questionnaire number. It was followed by the card number since two cards were required for the pilot test. Then the answers were entered. For entry, the semantic differentials were coded so that the first space on the left was 1 and the last 7, regardless of the question.

After all data were entered, an assistant helped the researcher check every fifth questionnaire for accuracy. Five errors were discovered and corrected. The file was then converted to a DOS text file and up-loaded to the campus mainframe computer.

#### Recoding and Computing Variables

An SPSSX file was created for the data. Necessary identifying information was added and the items were named. Next, the semantic differential items were recoded so that answers were -3, -2, -1, 0, 1, 2, or 3, as previously determined (See Appendix F). Attitude was computed to be the mean of Question 2, parts a-c. Then the indirect measures of attitude (TOTX) and subjective norm (TOTY) were calculated. Table 2 shows which questions were used to create these variables. Essentially, a belief question response was multiplied by an outcome

Table 2

Calculation of Indirect Measures of Attitude and Subjective Norm

---

Indirect Measure of Attitude (TOTX)

---

Question 3 x Question 13	=	X1
Question 4 x Question 14	=	X2
Question 5 x Question 15	=	X3
Question 6 x Question 16	=	X4
Question 7 x Question 17	=	X5
Question 8 x Question 18	=	X6
Question 9 x Question 19	=	X7
Question 10 x Question 20	=	X8
Question 11 x Question 21	=	X9
Question 12 x Question 22	= +	<u>X10</u>
		TOTX

---

Indirect Measure of Subjective Norm (TOTY)

---

Question 24 x Question 30	=	Y1
Question 25 x Question 31	=	Y2
Question 26 x Question 32	=	Y3
Question 27 x Question 33	=	Y4
Question 28 x Question 34	=	Y5
Question 29 x Question 35	= +	<u>Y6</u>
		TOTY

---

question for each attitude measure, and the results for all belief items were added to create the indirect measure. For the indirect measure of subjective norm, a belief question was multiplied by a motivation to comply question and the results were added.

### Data Analysis

The SPSSX computer package was used. First, frequencies, means, and ranges were calculated for each variable. Then correlation coefficients were determined. Next multiple regression equations were designed and run for each hypothesis. Other researchers have used a combination of correlation and regression analysis to study this model. Path analysis was used in this study when the model was tested because it is a stronger statistical procedure. The specific analysis for each equation was:

Hypothesis 1: There are no statistically significant relationships between attitudes or subjective norms and the intention to save for retirement. Path analysis was utilized to test this hypothesis. The primary equation was:

$$Y = a + b_1x_1 + b_2x_2$$

where Y = intention to save for retirement

a = constant

b = regression coefficient

$x_1$  = attitude

$x_2$  = subjective norm

The path for attitude was determined with the equation:

$$Y = a + b_1x_1$$

and the path for subjective norm was determined with the equation:

$$Y = a + b_2x_2.$$

Hypothesis 2: There is no statistically significant relationship between attitude toward saving for retirement and the indirect measure of attitude. Regression analysis was used to test this hypothesis. TOTX was regressed on attitude. The equation was:

$$Y = a + b_1x^1$$

where Y = attitude

a = constant

b = regression coefficient

x = TOTX

The attitude items and the items that created TOTX (the indirect measure of attitude) were also tested for reliability.

Hypothesis 3: There is no statistically significant relationship between subjective norm and the indirect measure of subjective norm. Regression analysis was also used to test this hypothesis. TOTY was regressed on subjective norm. The equation was:

$$Y = a + b_1x_1$$

where Y = subjective norm

a = constant

b = regression coefficient

x = TOTY

The items that created TOTY (the indirect measure of subjective norm) were tested for reliability.

Hypothesis 4: There are no statistically significant relationships between the intention to save for retirement and the demographic variables of:

- a) gender
- b) age
- c) marital status
- d) years in the pension system
- e) years to retirement
- f) income
- g) number of assets owned
- h) race
- i) education

Path analysis was used to test this hypothesis. The procedure outlined for hypothesis 1 was used and the external variables were added to the main equation. That equation became:

$$Y = a + b_1X_1 + b_2X_2 + \dots b_{13}X_{13}.$$

where Y = intention to save for retirement

a = constant

b = regression coefficient

X = attitude, subjective norm and each of the demographic variables.

Hypothesis 5: There are no significant relationships between attitude and subjective norm for those who intend to save and those who do not intend to save for retirement.

The sample was split into two groups, those who intended to save and those who did not intend to save. The means for the two groups were compared for each attitude item, TOTX, each subjective norm item, and TOTY using t-tests.

#### Pilot Testing

The instrument (Appendix H) and the procedure, including most of the data analysis, were tested using a separate sample of 220 employees. As a result of the pilot test, several items which were part of the indirect measures of attitude and subjective norm were deleted. The n for the study was selected based on the 70% return obtained in the pilot and the number of variables.

#### Summary

This chapter outlined the development of the instrument and procedures to test the hypotheses. After pilot testing, minor changes were made in the instrument but none were necessary for the procedure.

## Chapter IV

### FINDINGS

This study was designed to investigate the relative influence of attitudes and subjective norms on the intention to save for retirement. The Fishbein model (Ajzen & Fishbein, 1982) and an adaptation of it were tested using a sample of 500 classified Virginia Polytechnic Institute and State University employees. The data were collected in June and July, 1988. Within five weeks after the mailing went out 373 of the questionnaires (74.6%) were returned, and 362 (72.4%) of these were complete enough for analysis.

#### Sample Description

The sample consisted of 145 males (40.1%) and 217 females (59.9%) (Table 3). There were almost nine percent less males in the sample than there are in Virginia's population (U. S. Department of Census, 1982). While only 57.5% of Virginia's population was married in 1980 (U. S. Department of Commerce, Bureau of Census, 1982), most respondents (78.7%) were married (Table 3). There were more whites in the sample (92%) (Table 3) than there are in Virginia's population (79.1%) (U. S. Department of Commerce, Bureau of Census, 1982). The mean age was 40.8 years (range = 19 - 68; standard deviation = 10.75). Frequencies and percentages of respondents by age are shown in Table 4. Nearly half of the sample had no dependent children (Table 5). Comparatively, 51.9% of Virginia families had children under 18 in 1980 (U. S. Department of Commerce, Bureau of Census, 1982). Respondents had a mean of .93 children each (range = 0 - 5; standard deviation = 1.00). Table 6 shows

Table 3

Respondents by Gender, Marital Status, and Race (N=362)

	<u>n</u>	<u>%</u>
Gender		
Male	145	40.1
Female	217	59.9
Marital Status		
Single	47	13.0
Married	285	78.7
Divorced	24	6.6
Widowed	6	1.7
Race		
Black	28	7.7
White	333	92.0
No answer	1	0.3

Table 4

Respondents by Age (N=362)

Age <sup>a</sup>	<u>n</u>	% <sup>b</sup>
19	1	.3
20 - 24	13	3.7
25 - 29	45	12.3
30 - 34	63	17.4
35 - 39	55	15.1
40 - 44	53	14.6
45 - 49	37	10.3
50 - 54	46	12.6
55 - 59	26	7.2
60 - 64	14	3.9
65 - 68	5	1.5
Missing	4	1.1

<sup>a</sup>M = 40.8; SD = 10.8; Range 19 - 68.

<sup>b</sup>May not add to 100 due to rounding.

Table 5

Dependent Children of Respondents (N = 362)

Number of Children <sup>a</sup>	<u>n</u>	%
None	169	46.7
1	84	23.2
2	70	19.3
3	29	8.0
4	1	0.3
5	1	0.3
Missing	8	2.2

M = .93; SD = 1.0; Range = 0 - 5.

Table 6

Respondents With Dependent Children By Age of Child (N=185)

Child's Age	Number of Children	n	% <sup>a</sup>
Under 5	1	41	11.3
	2	5	1.4
5-13	1	54	14.9
	2	15	4.1
	3	5	1.4
14-18	1	52	14.4
	2	16	4.4
	3	2	.6
19-24	1	32	8.8
	2	10	2.8
	3	2	.6
25 and older	1	10	2.8
	2	5	1.4
	3	2	.6

<sup>a</sup>This is the percentage of the total sample having children in each age category. Respondents may have children in more than one category.

children by age groups. Nearly 13% of the sample had children under age 5; 20.4% had children between the ages of 5 and 13; 19.4% had children between the ages of 14 and 18; 12.2% had dependent children between the ages of 19 and 24; and 4.8% had dependent children over age 25.

Respondents had worked for the university a mean of 10.8 years (range = 1 to 45 years; Standard Deviation = 8.5). Frequencies and percentages of respondents by years worked for Virginia Tech are shown in Table 7. Clerical workers composed 40.9% of the sample and 30.4% were technical and professional workers (Table 8). There were respondents in 11 of the 14 categories of the occupation coding scale.

The group's education ranged from some grade school to a doctoral degree. A vocational degree or less education was held by 56.7% of the respondents. (Table 9). Since nearly two-thirds of the state's population completed at least four years of high school (U. S. Department of Commerce, Bureau of Census, 1982), this sample is probably more educated than the general population.

Respondent's income ranged from less than \$9,999 annually to over \$50,000, and 56.6% of respondents had income below \$20,000 (Table 10). In 1985, Virginians had a per capita income of \$14,542 (U.S. Department of Commerce, Bureau of Economic Analysis, 1986). Fifty-one percent had family income below \$35,000, with a range from under \$9,999 to over \$70,000 (Table 10). Comparatively, the median family income in Virginia in 1979 was \$20,018 (U. S. department of Commerce, Bureau of Census, 1986).

Few respondents (2.8%) plan to retire before age 55 (Table 11). However 24.9% plan to retire at age 55, while 11% plan for 60, 21.3%

Table 7

Years Worked for Virginia Tech (N=362)

Years <sup>a</sup>	<u>n</u>	%
1	31	8.6
2 - 5	101	27.9
6 - 10	84	23.2
11 - 15	52	14.3
16 - 20	49	13.5
21 - 25	20	5.5
26 - 30	10	2.8
31 - 35	11	3.0
36 - 40	2	.6
45	1	.3
Missing	1	.3

$\bar{M}$  = 10.8;  $SD$  = 8.5; Range = 1 - 45.

Table 8

Respondents by Occupation Category (N = 362)

Occupation Category	n	%
Cleaning Service Worker	17	4.7
Food Service Worker	3	.8
Personal Service Worker	3	.8
Protective Service Worker	1	.3
Laborer	4	1.1
Operative	6	1.7
Craftsman, Foreman and Kindred Worker	25	6.9
Clerical and Kindred Worker	148	40.9
Sales Worker	1	.3
Managerial and Administrative	38	10.5
Professional, Technical & Kindred Worker	110	30.4
Missing	6	1.7

Table 9

Educational Attainment (N = 362)

Education	n	%
Some Grade School (Grades 1-8)	14	3.9
Some High School (Grades 9-12)	10	2.8
High School Graduate or Equivalent	70	19.3
Some College or Vocational School	88	24.3
Completed Vocational Program	23	6.4
Completed 2-year Degree	42	11.6
Completed 4-year Degree	47	13.0
Some Graduate Work	29	8.0
Masters Degree	36	9.9
Doctoral Degree	1	.3
Missing	2	.6

Table 10

Individual and Family Income (N = 362)

Income	Individual		Family	
	n	%	n	%
Under \$9,999	4	1.1	2	.6
\$10,000 - \$14,999	75	20.7	27	7.5
\$15,000 - \$19,999	125	34.8	38	10.5
\$20,000 - \$24,999	74	20.4	34	9.4
\$25,000 - \$29,999	37	10.2	39	10.8
\$30,000 - \$34,999	27	7.5	45	12.4
\$35,000 - \$39,999	9	2.5	55	15.2
\$40,000 - \$44,999	3	0.8	37	10.2
\$45,000 - \$49,999	4	1.1	25	6.9
Over \$50,000	1	0.3		
\$50,000 - \$54,999			17	4.8
\$55,000 - \$59,999			16	4.5
\$60,000 - \$64,999			10	2.8
\$65,000 - \$69,999			4	1.1
Over \$70,000			8	2.2
Missing	3	0.8	5	1.4

Table 11

Planned Retirement Age and Number of Years Expected to Live After Retirement (N = 362)

	<u>n</u>	<u>%</u>
<b>Planned Retirement Age</b>		
45 or younger	5	1.4
50 - 54	5	1.4
55	90	24.9
56 - 59	19	5.3
60	40	11.0
61 - 62	77	21.3
63 - 64	6	1.7
65	97	26.8
67 - 75	9	2.5
Missing	14	3.9
<b>Years Expected to Live</b>		
0	4	1.1
1 - 5	13	3.6
6 - 10	45	12.4
11 - 15	69	19.1
16 - 20	70	19.3
21 - 25	50	13.8
More than 25	93	25.7
Missing	18	5.0

plan for 61 or 62 and 26.8% plan for 65. Almost everyone (93.6%) plans to retire by age 65. These people think they will live a number of years after they retire (Table 11). The mean response was that they think they will live 16 to 20 years after retirement and the largest group, 25.7%, believe they will live more than 25 years after retiring.

The respondents own a mean of 3.2 different types of assets. Information was collected about ownership of six different assets. Three-quarters of the sample own their homes and 26% own other real estate (Table 12). Savings accounts are owned by 76.5% of respondents and 21.8% have IRA's. Cash value life insurance is owned by 49.4% of the respondents and 11.9% own annuities.

### Analysis and Discussion

Hypothesis 1: There are no statistically significant relationships between attitudes or subjective norms and the intention to save for retirement. The basic premise of the Fishbein Behavioral Intention Model is tested with this hypothesis. The model is shown in Figure 1. The regression equation was:

$$Y = a + b_1x_1 + b_2x_2$$

where Y = Intention to save

a = Constant

b = Regression coefficient

$x_1$  = attitude

$x_2$  = subjective norm.

Table 12

Asset Ownership by Respondents (N = 362)

Asset <sup>a</sup>	n	%
Home	272	75.1
Other Real Estate	94	26.0
Savings	277	76.5
IRA	79	21.8
Cash Value Life Insurance	179	49.4
Annuity	43	11.9

<sup>a</sup>Respondents owned a mean of 3.2 different types of assets.

The results are shown on Figure 3. The  $R^2$  was .2236 and it is statistically significant at the .01 level (Table 13). Thus, the null hypothesis was rejected. Attitude and subjective norm explain 22% of the variation in the intention to save for retirement. The standard error was 2.12. According to the beta weights, attitude ( $B = .46$ ) was the most important component of the equation. It was statistically significant at the .001 level. Subjective norm (.09) contributed less to the intention to save and was not statistically significant.

As predicted by the Fishbein Model, the  $R^2$  for attitude and subjective norm was statistically significant. However, it explains less than a quarter of the variation in the intention to save for retirement. Clearly, there are other factors which also contribute. Comments from respondents indicated that there may be a period of readiness to plan for retirement. Some said that it was just too far away to consider yet.

Hypothesis 2: There is no statistically significant relationship between attitude toward saving for retirement and the indirect measure of attitude. This hypothesis was tested by regressing TOTX, the calculated indirect measure of attitude (see Table 2), on attitude. The following regression equation was used:

$$Y = a + b_1x_1$$

where  $Y$  = attitude

$a$  = constant

$b$  = regression coefficient

$x$  = totx

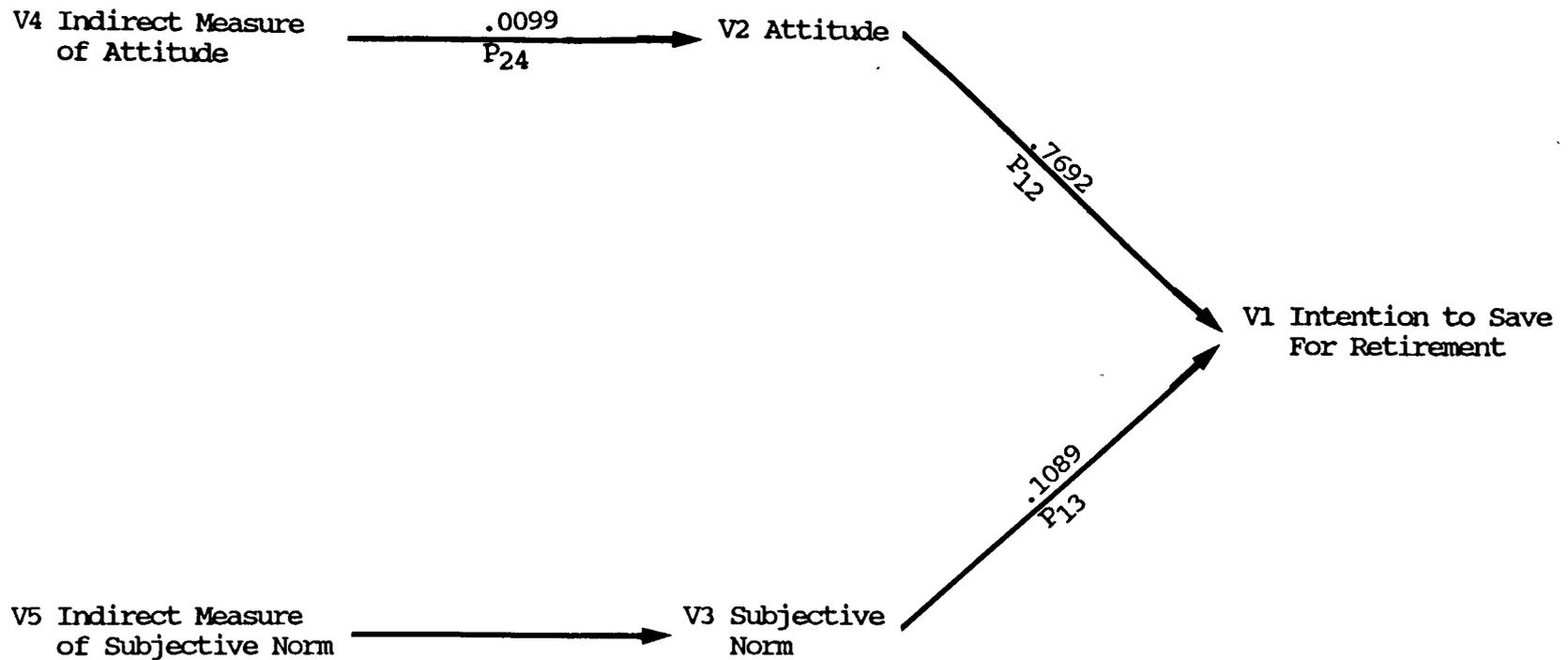


Figure 3. Significant path coefficients for the Fishbein Behavioral Intentions Model.

Table 13

Results of Attitude and Subjective Norm Regressed on Intention to Save for Retirement

Variables	<u>b</u>	<u>B</u>	<u>t</u>	<u>R<sup>2</sup></u>	<u>F</u>
Attitude	.7692	.4602	9.247***	.2236***	45.2036
Subjective Norm	.1089	.0923	1.855		

\*  $p < .05$

\*\*  $p < .01$

\*\*\*  $p < .001$

This  $R^2$  (.02) was statistically significant (Table 14). The null hypothesis was rejected. While statistically significant, it is not practically significant when only 2% of the variation is accounted for.

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Table 14

Results of the Indirect Measure of Attitude (TOTX) Regressed on Attitude

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Variable	$b$	$B$	$t$	$R^2$	$F$
TOTX <sup>a</sup>	.0099	.1480	2.657**	.0219	7.0575

---

<sup>a</sup> Indirect measure of attitude

\*\*  $p < .01$

---

The procedure Fishbein recommended for obtaining the beliefs from the study population was followed. The reliability coefficient for the indirect measure of attitude was .5755. According to the analysis, if the beliefs, "Having to do without things I need now to save for retirement " and "Not being able to spend money now on things I want now so I can save for retirement" were omitted, the reliability would increase somewhat.

Further work is needed to determine what beliefs really do substantially influence the intention to save for retirement. Given the dearth of literature in this area, it is clear that researchers have not identified what beliefs are important. Those who advise families are left to guess what is important to the families they work with in relation to saving for retirement.

Hypothesis 3: There is no statistically significant relationship between subjective norm and the indirect measure of subjective norm. This hypothesis was also tested with regression. TOTY, the indirect measure of subjective norm which was calculated from referents and motivation to comply (see Table 2) was regressed on subjective norm using the equation:

$$Y = a + b_1X_1$$

where Y = subjective norm

a = constant

b = regression coefficient

x = indirect measure of subjective norm.

This  $R^2$  was not significant. Shown in Table 15, it did not explain much variation in subjective norm. The null hypothesis was accepted.

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Table 15

Results of the Indirect Measure of Subjective Norm (TOTY) Regressed on Subjective Norm

---

Variable	b	B	t	$R^2$	F
TOTY <sup>a</sup>	-.0055	-.0439	-.780	.0019	.6086

---

<sup>a</sup>Indirect measure of subjective norm

\* p < .05

---

It appears that the indirect measure of subjective norm is not a good measure of subjective norm. However, the reliability coefficient

for the indirect measure of subjective norm was .736 and the analysis did not reveal any items which could be omitted to increase the reliability. Apparently the items are reliable, but they do not measure the subjective norm.

During the first phase of instrument development, when part of the population was asked "Are there any groups or people who would approve of your saving for retirement in the next year?" and "Are there any groups or people who would not approve of your saving for retirement in the next year?", there was comparatively little response. While participants could think of advantages and disadvantages of saving for retirement, they had few responses for the later questions. Various family members were mentioned most frequently. Possibly, family is truly the most important part of the subjective norm for this population. Another possibility is that the subjective norm does not affect the intention to save for retirement. While the indirect measure did not explain the variation in subjective norm, neither did the direct measure contribute substantially to the explanation of variance in the intention. Further research could explore these possibilities.

Hypothesis 4: There are no statistically significant relationships between the intention to save for retirement and the demographic variables of: gender, age, marital status, years in the pension system, number and ages of dependent children, years to retirement, income, number of assets owned, race, and education. This hypothesis was tested by a regression equation in which these variables were added to those in the first hypothesis and regressed on the intention to save for

retirement. The model is shown in Figure 2. The regression equation was:

$$Y = a + b_1x_1 \dots b_{18}x_{18}$$

where Y = intention to save

a = constant

b = regression coefficient

x = attitude, subjective norm, and each of the demographic variables.

Because the initial first order correlations showed a high (.84) correlation between age and years to retirement, years to retirement was replaced with planned retirement age, which was not highly correlated with age. Years to retirement was a variable which was calculated by subtracting present age from planned retirement age. (Correlations shown in Appendix I.)

This model resulted in a significant ( $p < .01$ )  $R^2$  of .41 (Table 16). It explains 41% of the variation in the intention to save for retirement. Specific variables which made a significant ( $p < .05$ ) contribution to the equation were: attitude ( $B = .35$ ), number of assets, having a dependent child between the ages of 5 and 13 ( $B = -.095$ ), number of years expected to live after retirement ( $B = .115$ ) and age of respondent ( $B = .318$ ).

The path analysis coefficients for significant variables are shown in Figure 4. They also signify that age and attitude contribute the most, but that having a dependent child between 5 and 13, the number of assets owned, and the number of years expected to live after retirement are important.

Table 16

Regression of All Variables on the Intention to Save for Retirement

Variable	b	B	t	R <sup>2</sup>	F
Attitude	.5829	.3476	7.171***	.4093***	8.7979
Subjective Norm	.0949	.0809	1.666		
Gender	-.3621	-.0739	-1.436		
Marital Status	.2062	.0424	.830		
Age	.0732	.3184	2.836**		
Planned Retirement Age	.0150	.0659	.577		
Children Under 5	.0547	.0091	.184		
Children Age 5-13	-.3653	-.0954	-2.000*		
Children 14-18	-.1356	-.0328	-.672		
Children 19-24	.1299	-.0267	.550		
Children Over 25	-.2203	-.0283	-.588		
Years Worked at Tech	-.0271	-.0946	-1.551		
Income	-.0024	-.0015	-.022		
Family Income	.0786	.0970	1.509		
Years Expect to Live	.1834	.1147	2.249*		
Assets Owned	.6082	.3745	4.728***		
Race	-.1847	-.0212	-.436		
Education	-.0835	-.0756	-1.235		

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

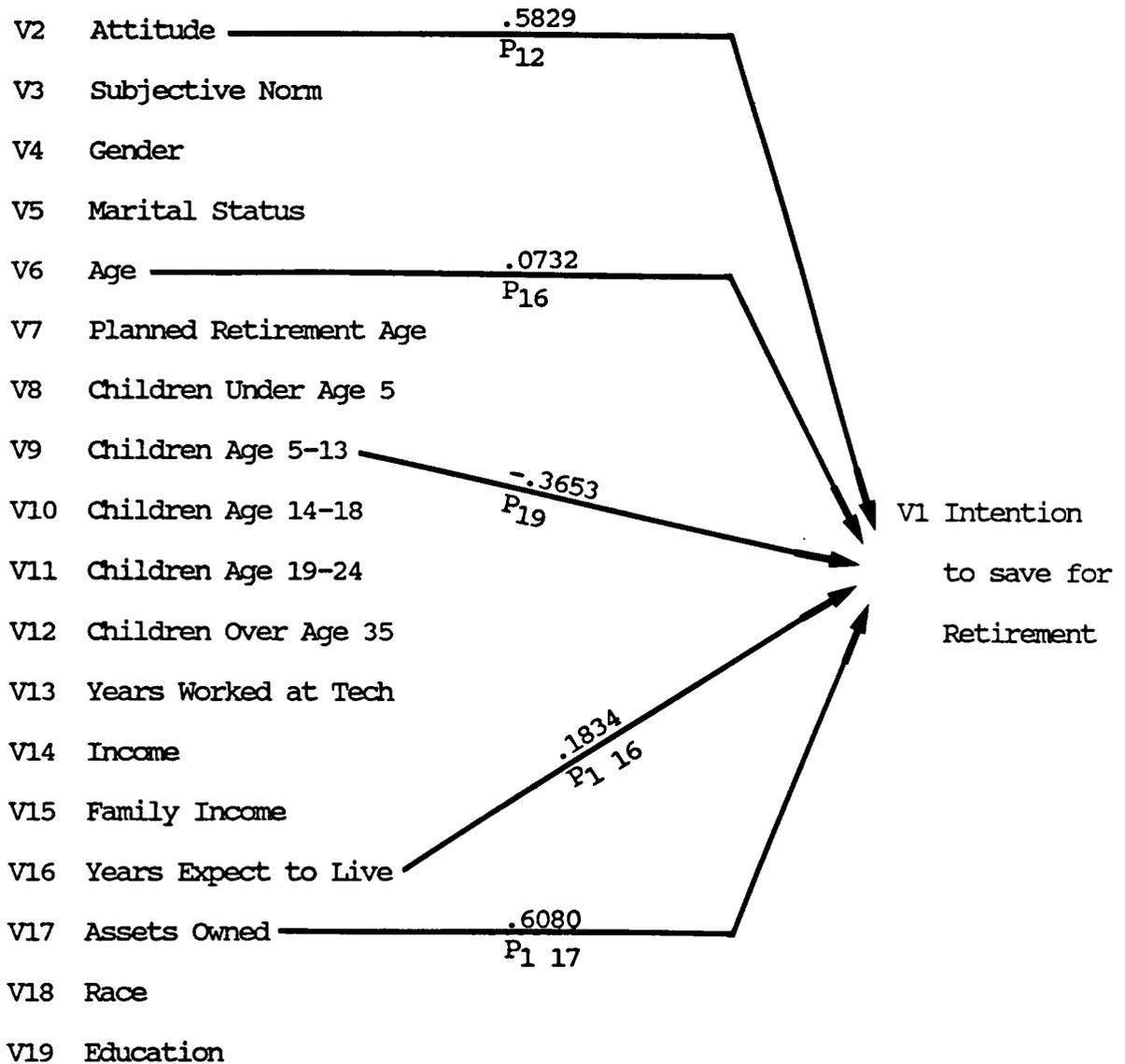


Figure 4. Significant path coefficients for the Extended Fishbein Behavioral Intentions Model.

The null hypothesis was rejected. Adding the variables which Fishbein calls external nearly doubles the variation explained by the model. Attitude is still important, but so are some demographic variables.

These findings are consistent with the literature. Hefferan (1981) noted that the more kinds of assets families have, the better off they are and other researchers (Duncan et al., 1984; Hampton et al., 1984a) have studied the assets that families had. Now we know that families with more kinds of assets are more likely to intend to save. Since income was not significant, it can be assumed that it is number of assets, not income that matters. When the types of assets were individually listed in the equation, two were significant: IRA's ( $B = .122$ ) and annuities ( $B = .131$ ).

Having a dependent child between the ages of 5 and 13 ( $B = - .095$ ) was significant. This means that having young children reduces the likelihood that families will save for retirement. This is the expanding stage in the life cycle. Costs for necessities like housing are high since it is often this stage where families buy homes. Also, family income has not reached its peak. Thus, it is very difficult to save.

The review of literature did not reveal the importance of the number of years expected to live after retirement. However, it was significant. Logic indicates that someone who expects to live longer would have more concern about saving.

Age was significant. The older respondents were more likely to intend to save for retirement. Again, the literature did not reveal any

studies which found this to be important. Age could influence the readiness to plan for retirement, which comments from respondents indicated did influence behavior.

Hypothesis 5: There are no statistically significant relationships between attitude and subjective norm for those who intend to save and those who do not intend to save for retirement. This hypothesis was tested by sorting the respondents by those who intend to save and those who do not intend to save for retirement in the next year. Responses to each item were compared using t-tests. The level of significance was  $p < .05$ .

Respondents whose responses were -3, -2, -1 or 0 (unlikely to neutral) were considered to not intend to save for retirement in the next year. Those whose responses were 1, 2, or 3 (likely) were considered to intend to save for retirement in the next year. Thus 175 (48%) did not intend to save for retirement while 187 (52%) intended to save for retirement in the next year. Table 17 shows the results for the attitude items. Overall, there are significant differences between those who intend to save for retirement and those who do not intend to save. It is interesting that the means for so many outcome evaluations are negative. This indicates that respondents do not believe that their actions will really help them in the end. Possibly this is why the indirect measure of attitude seems to account for so little of the variation in intention. If people believe that it is important to have enough money to live the way they want to, for example, but do not

Table 17

Indirect Measure of Attitude: Mean Beliefs and Outcome Evaluations of People Who Intend and Do Not Intend to Save for Retirement

Statement	Beliefs		Outcome Evaluations	
	Intend to Save	Intend not to Save	Intend to Save	Intend not to Save
Having financial security	2.973	2.851*	.380	-1.280*
Having enough money to live the way I want to do	2.834	2.655*	- .406	-1.703*
Having to do without things I need now to save	- .124	.626*	- .027	1.131*
Not needing to save as much later	1.668	1.674	- .065	- .223
Being able to get the medical and dental care I need	2.807	2.617	- .171	- .794*
Not being able to spend money now on things I want now	.128	.707*	.226	1.223*
Being dependent on the social security system for my income	1.551	1.920*	.519	.263
Being dependent on someone else	2.471	2.640	1.594	- .224*

\* Significant difference between intend-not intend ( $p < .05$ )

anticipate that saving will help them meet this goal, they are less likely to save.

The same situation may be true for the subjective norm. Those who intend to save seem to believe that their referents think they should save (Table 18). However, they do not have strong motivation to comply with these referents. The strongest motivation to comply was .963 (family). Those who do not intend to save have weaker normative beliefs and even less motivation to comply.

#### Summary

Attitude has more influence on the intention to save for retirement than subjective norm has. While the indirect measure of attitude was not a strong indicator of attitude, the study exposed some beliefs. Although the indirect measure of subjective norm was not significant, family seems to have the most influence.

While the Fishbein model does explain some of the variation in the intention to save for retirement, the model which includes demographic variables explains more variation. Age, number of assets owned, having a dependent child between the ages of 5 and 13 and expecting to live a long time after retirement were the significant demographic variables.

There are differences in the responses of those who intend to save and those who do not. It seems that even those who intend to save do not believe that their doing so will truly help them meet their goals.

Table 18

Indirect Measure of Subjective Norm: Mean Normative Beliefs and  
Motivation to Comply for People Who Intend and Do Not Intend to Save  
for Retirement

Referents	Normative Belief		Motivation to Comply	
	Intend to Save	Intend Not to Save	Intend to Save	Intend Not to Save
Members of my family	1.543	- .276*	.963	.331*
The government	1.444	.960*	.037	- .737*
Most financial institutions	1.947	1.253*	.310	- .571*
My employer	1.586	.730*	.489	- .274*
My co-workers	.909	- .310*	- .054	-1.109*

\*Significant difference between intend-not intend ( $p < .05$ ).

## Chapter V

### SUMMARY AND RECOMMENDATIONS

Designed to primarily explore the influence of attitude and subjective norm on the intention to save for retirement, the Fishbein Behavioral Intentions Model (Ajzen & Fishbein, 1982) provided the theoretical basis for this study. According to Fishbein, attitude and subjective norm predict intentions. For each study, the relative importance of attitude and subjective norm varies. Attitude and subjective norm are further studied through indirect measures of each. That model and an adaptation of it, in which certain demographic variables were added, were tested.

The specific null hypotheses tested were:

- 1) There is no statistically significant relationship between attitudes or subjective norms and the intention to save for retirement.
- 2) There is no statistically significant relationship between attitude toward saving for retirement and the indirect measure of attitude.
- 3) There is no statistically significant relationship between subjective norm and the indirect measure of subjective norm.
- 4) There are no statistically significant relationships between the intention to save for retirement and the demographic variables of:
  - a) gender
  - b) age
  - c) marital status
  - d) years in the pension system
  - e) planned retirement age

- f) income
- g) number of different assets owned
- h) race
- i) education

5) There are no statistically significant relationships between attitude and subjective norm for those who intend to save and those who do not intend to save for retirement.

The content of the mail survey instrument was designed according to the guidelines set by Fishbein. The major components of the model were measured by semantic differentials. Demographic information was collected through multiple-choice and open-end items. The instrument itself and the data collection procedure were developed based on the Dillman method. A pilot test was conducted in March and April 1988 to test the instrument and the procedure. Several items were dropped as a result of this work.

The data were collected during June and July 1988 from 373 (74.6%) of an original random sample of 500 Virginia Polytechnic Institute and State University classified employees in jobs ranging from health service physician to grounds keeper. The data were coded and uploaded to the mainframe computer. Statistical procedures utilized in the analysis of the data included frequencies, means, standard deviations, ranges, correlations, t-tests, and multiple regression.

### Major Findings

1. When attitude and subjective norm were regressed on the intention to save for retirement, the  $R^2$  of .2236 was statistically

significant. According to the beta weights, attitude (.46) was relatively more important than subjective norm (.09). When the paths for attitude and subjective norm were analyzed, the same was true. The  $R^2$  for attitude was statistically significant while that for subjective norm was not. In this case, attitude is a better indicator of the intention to save than subjective norm.

2. The indirect measure of attitude did not explain much of the variation in attitude. However, it was statistically significant.

3. Likewise, the indirect measure of subjective norm did not explain much of the variation in subjective norm.

4. When the demographic variables were added to the original regression equation, nearly twice as much variation in the intention to save was explained ( $R^2 = .41$ ). In addition to attitude, number of assets, having a dependent child between the ages of 5 and 13, number of years expected to live after retirement, and age made significant contributions to the variation in the intention.

5. There were significant differences between those who intended to save and those who did not intend to save. However, study of the responses indicated that neither group believed that their saving would really put them in a better retirement financial position.

### Conclusions

Although the Fishbein Model explained 22% of the variation in the intention to save for retirement, and the results were statistically significant, more variation needs to be explained. The extended model,

in which demographic variables were added, explained more than 40% of the variation and was also statistically significant. Thus the extended model is the better of the two. The problem of good indirect measures of attitude and subjective norm remains, however. These must be understood to explain the factors that affect attitude and subjective norm.

There are clear statistical differences between those who intend to save and those who do not. Those who intend to save are more likely to believe that they need to save and that they will benefit from doing so. However, the strength of the beliefs that saving will help is not great for either group. It appears that most people believe that their actions will not make enough difference in their retirement financial security, so they are not encouraged to save for retirement.

### Implications

Researchers should include attitude, number of assets, having a dependent child between the ages of 5 and 13, number of years expected to live after retirement, and age as variables in future studies. They also need to explore other models which explain the saving behavior of Americans. There is a need to better understand the things that encourage and discourage saving for retirement. New models need to be created and tested. Semantic differentials and other methods should also continue to be used and refined.

Educators need to help families understand the importance of saving for retirement. As future research uncovers more of the important

attitudes that influence families to save for retirement, educators can help families develop these attitudes.

Counselors and advisors who work with families should recognize that attitude, age, number of assets, having a dependent child between the ages of 5 and 13, number of years expected to live after retirement, and age influence families' intentions to save for retirement. Families will benefit from obtaining different kinds of assets which could be used in retirement. Because IRA's are not advertised as much now that the immediate tax incentive is gone, families may not realize that they are still good instruments since their earnings are not currently taxable.

Public policy makers should find ways to assure Americans that their retirement will be financially secure if families take the proper steps in preretirement years. They should recognize that families do not feel that their efforts will yield sufficient results to make them worthwhile. Some actions might include allowing the social security fund surplus to grow rather than utilizing it to meet today's needs. Although the lower income families did not tend to use IRA's much, families in this study who intended to save often had an IRA. The fact that the immediate tax incentive has been lost probably means that fewer families will utilize this method of saving for retirement in the future. Policy makers should consider reinstating this tax incentive.

#### Limitations of the Study

Self report data were used. Since there was no check to confirm the information, there is a possibility of error.

The semantic differential statements used in the study may have been difficult for some respondents to understand. The pilot procedure identified several particularly troublesome items and they were removed. However, the possibility that some people did not understand the statements remains to some extent.

### Recommendations

The following recommendations for researchers, educators, counselors, and policy makers are based on the findings of this study:

#### Researchers

1. Attitudes are difficult to define and measure. One method, semantic differentials, was utilized in this study. Other ways of defining and measuring the attitudes related to saving for retirement should be developed and tested.
- 2) The Fishbein Behavioral Intentions Model and one adaptation of it were tested. Other models and adaptations of models should be developed and tested so that we better understand what influences the intention to save for retirement. One possible approach would be to study saving for retirement from a life cycle perspective. To date, no useful model of saving for retirement across the life cycle has been developed. Stampfl (1978) has created a consumer life cycle and the American Council of Life Insurance (undated) has a financial management matrix, but these have not been fully tested by research. Since age and having young dependent children were important variables in this study, additional exploration of these variables is indicated. There could be a period of readiness in which people are more inclined to prepare for retirement.

Comments from respondents indicated that this is possible, future research should explore this possibility.

3) This population is an important one, but it accounts for a small percentage of the population of the Commonwealth and the nation, and is not completely representative of citizens of the state. Other populations should be studied concerning their intentions to save for retirement and their actual saving behavior.

4) Payroll taxes, employer pensions, and tax incentives are the primary ways that our country has attempted to assure that citizens have income in retirement. Other means of financing retirement, or assurances that existing means will be sufficient, need to be found. Possibly some strategies (similar to IRA's) could be implemented on a limited basis and researchers could study the results before they are implemented nationally.

5. Since IRA's are no longer as profitable to Americans as tax incentives and are not as highly advertised as they were several years ago, research should determine the extent to which people continue to use them.

6. Many people do not want to tell others, even researchers, how much money they save or what they save it for. It is difficult to study how families save for retirement under these conditions. Alternative ways of studying saving for retirement, such as retrospective studies of retirees, need to be developed and tested.

7. Limited research has been done in this area. Meanwhile our population is growing older. More researchers need to study Americans' preparations for retirement. Several types of studies should be done.

A longitudinal study of families' financial transactions is needed so that we can study the influences on decisions and changes through the life cycle. Because there are so many kinds of families and there is little agreement upon a basic lifecycle, several studies will be required to meet this goal. A cross-sectional study would give us information more quickly than the longitudinal work and should also be done.

### Educators

1. Families need to understand what actions they may take to prepare for retirement early in life. Efforts to increase individual and family awareness of the desirability of preretirement preparation need to be strengthened.
2. Long term goals are often difficult for families to consciously set and work toward because they are long term. Educators need to help families with this difficulty by teaching them about decision making and setting short, intermediate, and long term goals. Families should be taught to develop short and intermediate goals which make long term goals possible and thus also make them seem more attainable.

### Counselors

1. As counselors help families with their finances, they need to help them prepare for retirement so that the financial burden is spread throughout the working life.
2. Counselors should consider the attitudes, age, ages of children, assets, and the number of years expected to live after retirement as they help families set and work toward financial goals.

3. Since the intention to save is greater and retirement well-being is greater when families have more kinds of assets, counselors should help families understand the importance of obtaining several kinds of assets and offer alternative saving and investment instruments.

#### Public Policy Makers

1. Actions need to be taken to help families feel that their saving now will benefit them in the future. As economic and monetary policies are set, they need to be such that citizens' confidence in their financial future is increased.

2. As our population ages and there are fewer young workers to pay retirement benefits, careful maintenance of social security funds by government will be vital.

#### REFERENCES CITED

- Ajzen, I. & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- American Council on Life Insurance. (Undated). Adult financial management matrix. Washington, DC: American Council on Life Insurance.
- Ballantyne, H. C. (1986). Actuarial status of the OASI and DI trust funds. Social Security Bulletin, 49(7), 5-9.
- Bowman, C., & Fishbein, M. (1978). Understanding public reaction to energy proposals: An application of the Fishbein Model. Journal of Applied Social Psychology, 8, 319-340.
- Bren, K. E. (1987). Finding shelter: The growing housing crisis in Virginia. Commonwealth of Virginia: Department of Housing and Community Development.
- Davidson, A. R., & Jaccard, J. J. (1976). Social-psychological determinants of fertility intentions. In S. H. Newman & V.D. Thompson (Eds.), Population psychology: Research and education issues. (pp 131-138). Washington, DC: Government Printing Office. DHEW Publ. No. (NIH) 76-574.
- Davidson, A. R., & Jaccard, J.J. (1975). Population psychology: A new look at an old problem. Journal of personality and social psychology, 31, 1073-1082.
- Deacon, R. E., & Firebaugh, F. M. (1988). Family resource management: Principles and applications. (2nd Ed.). Boston: Allyn and Bacon, Inc.
- Deacon, R. E., & Firebaugh, F. M. (1981). Family resource management: Principles and applications. Boston: Allyn and Bacon, Inc.
- Dillman, D. A. (1978). Mail and telephone surveys. New York: John Wiley & Sons.
- Duncan, G. J., Mitchell, O. S., & Morgan, J. N. (1984). A framework for setting retirement savings goals. The Journal of consumer affairs, 18(1), 22-46.
- Esposito, L. (1978). Effect of social security on saving: Review of studies using U.S. Time-Series Data. Social security bulletin. 41(6), 9-17.

- Evans, L., Ekerdt, D. J., & Bosse, R. (1985). Proximity to retirement and anticipatory involvement: Findings from the normative aging study. Journal of gerontology, 40(3), 368-374.
- Feldstein, M. (1974). Social security, induced retirement, and aggregate capital accumulation. Journal of political economy. 82(5), 905-927.
- Fishbein, M. & Ajzen, I. (1981). Attitudes and voting behavior: An application of the theory of reasoned action. In G. M. Stephenson, & J. M. Davis (eds.), Progress in applied social psychology (Vol. 1, pp 101-108). New York: John Wiley & Sons.
- Fishbein, M. & Jaccard, J.J. (1973). Theoretical and methodological considerations in the prediction of family planning intentions and behavior. Representative research in social psychology, 4, 37-51.
- Fishbein, M. (1972). Toward an understanding of family planning behaviors. Journal of applied social psychology, 2, 214-227.
- Fitzsimmons, C., Larery, D. A., & Metzen E. J. (1971). Major financial decisions and crises in the family life span. North Central Regional Research Publication No. 208, Purdue University Agricultural Experimental Station, Lafayette, IN.
- Fitzsimmons, C. & Holmes, E. G. (1958). Factors affecting farm family goals. Research Bulletin No. 663, Purdue University Agricultural Experiment Station, Lafayette, IN.
- Friedman, J. & Sjogren, J. (1981). Assets of the elderly as they retire. Social security bulletin, 44(1), 16-31.
- Gavzer, B. (1987). How secure is your social security? Parade magazine. October 18, 1987. 4-6.
- Gilmour, R. A. (1988). How to cover the gaps in medicare: Health insurance options for the retired. Great Barrington, MA: American Institute for Economic Research.
- Governor's Task Force on Indigent Health Care. (1988). Report of the Governor's task force on indigent health care. (Senate Document No. 11). Richmond, VA: Commonwealth of Virginia.
- Gross, I. H., Crandall, E. W., & Knoll, M. M. (1980). Management for modern families (4th ed.). Englewood Cliffs, N.J.: Prentice-Hall, Inc.
- Guthrie, L. J. (1962). Factors affecting the perceived financial security of twenty urban families. Unpublished master's thesis, Purdue University, Lafayette, IN.

- Hambor, J. C. (1987). Economic policy, intergenerational equity, and the social security trust fund buildup. Social security bulletin, 50(10), 13-18.
- Hardy, D. R. (1987). The future of social security. Social Security bulletin, 50(8), 5-7.
- Harris, R. J. (1986). Recent trends in the relative economic status of older adults. Journal of gerontology, 41(3), 401-407.
- Hampton, V. L., Kitt, K. A., & Sain, C. A. (1984a). A Study of information sources used for financial retirement planning. Austin, TX: Texas Tech University.
- Hampton, V. L., Kitt, K. A., & Sain, C. A. (1984b). Financial retirement planning: A study of planners and nonplanners. In K. D. Rettig and M. Abdel-Ghany (Eds.), Economic decisions of families: Security for the elderly and labor force participation of women. (pp. 95-107). Washington, D.C.: American Home Economics Association.
- Hefferan, C. (1982). Determinants and patterns of family saving. Home economics research journal, 11(1), 47-55.
- Hefferan, C. (1981). Family financial planning - Research. Family economics review, Spring, 14-19.
- Horowitz, A. (1985). Sons and daughters as caregivers to older parents: Differences in role performance and consequences. The gerontologist. 25(6), 612-617.
- Hogarth, J. M. (1986). Retirement incentives and retirement planning. Human ecology forum. 15-16.
- Irick, C. (1985). Income of new retired workers by social security benefit levels findings from the new beneficiary survey. Social security bulletin, 48(5), 7-23.
- Keith, P. M. (1985). Work, retirement, and well-being among unmarried men and women. The gerontologist, 25(4), 410-416.
- Keith, P. M., & Schafer, R. B. (1983). Employment characteristics of both spouses and depression in two-job families. Journal of marriage and the family, 45, 877-884.
- Kerlinger, F. N. (1973). Foundations of behavioral research. (2nd Ed.). New York: Holt, Rinehart and Winston, Inc.

- Kitt, K. A., Hampton, V. L., & Sain, C. A. (1983). Investment ownership among persons approaching retirement age. In M. Burton (Ed.) Changes in economic policy: Implications for family well-being. (pp. 12-17). Salt Lake City: Western Regional Home Management - Family Economic Association.
- Kivett, V. R., & Atkinson, M. P. (1984). Filial expectations, association, and helping as a function of number of children among older rural-transitional parents. Journal of gerontology. 24 (4), 499-503.
- Kotlikoff, L. J. (1979). Testing the theory of social security and life cycle accumulation. The American Economic Review. 69(3), 396-410.
- Lesnoy, S. D. & Hambor, J. C. (1975). Social security, saving and capital formation. Social security bulletin. 38(7), 3-15.
- Loken, B., & Fishbein, M. (1980). An analysis of the effects of occupational variables on childbearing intentions. Journal of applied social psychology, 10, 202-223.
- A long life can strain your finances. (1980, August). Changing Times. 34(8), 61-62.
- Lovell, J. (1985). Development of a behavioral intention instrument for predicting dysfunctional family financial management. Unpublished doctoral dissertation, Texas Tech University, Lubbock.
- Lovingood, R. P. (1981, December). Family time use: an eleven state urban/rural comparison. (VPI-2). Blacksburg, VA: Agricultural Experiment Station.
- Maxfield, L. D. & Reno, V. P. (1975). Distribution of income sources of recent retirees: Findings from the new beneficiary survey. Social security bulletin. 48(1), 7-13.
- McKenna, J. (1985). Retirement planning of midlife women: Catalysts and constraints. Unpublished paper presented at the Third Annual Conference of the Association of Financial Counseling and Planning Educators. Provo, Utah: Brigham Young University.
- Mudge, R. S. (1983). Social security and retirement: Private goals, public policy. Washington, D.C.: Congressional Quarterly, Inc.
- Pomazal, R. J. & Brown, J. D. (1977). Understanding drug use motivation : A new look at a current problem. Journal of health and social behavior, 18, 212-222.
- Pomazal, R. J., & Jaccard, J. J. (1976). An informational approach to altruistic behavior. Journal of personality and social psychology, 33, 317-326.

- Quadagno, J. (1987). The social security program and the private sector alternative: Lessons from history. International journal of aging and human development, 25:(3), 239-246.
- Radner, D. B. (1987). Money incomes of aged and nonaged family units, 1967-84. Social security bulletin, 50(8), 9-28.
- Rostenkowski, D., Bentson, L., & Dingell, J. (1988, May 31). A summary of the conference agreement on H.R. 2470. Washington, DC: United States Congress.
- Rudd, N.M., & Dunsing, M.M. (1972). A three-pronged look at family saving. The journal of consumer affairs. 35-43.
- Ryan, M. J. & Bonfield, E. H. (1980). Fishbein's intentions model: A test of external and pragmatic validity. Journal of marketing, 44(Spring 1980), 82-95.
- Ryan, M. J. & Bonfield, E. H. (1975). The Fishbein extended model and consumer behavior. Journal of consumer research, 2(2), 118-136.
- Shanas, E. (1979). The family as a social support system in old age. The gerontologist. 19(2), 169-174.
- Sherman, S. R. (1985). Assets of new retired-worker beneficiaries: Findings from the new beneficiary survey. Social security bulletin, 48(7), 27-43.
- Springer, P. B. (1985). Home equity conversion plans as a source of retirement income. Social security bulletin. 48(9), 10-19.
- Stampfl, R. W. (1978). The consumer life cycle. The journal of consumer affairs, 12(2), 209-219.
- Strate, J. M. (1984). Post-retirement benefit increases and the adequacy of benefits in state pension plans. The gerontologist, 24(5), 522-529.
- Survey suggests poor retirement planning. (1982, March). Pension world. 18(3), 49.
- Tengel, P. M. (1986). Education for retirement planning. In G. L. Pyles (Ed.) Consumer services for the family: who, what when, where, why Akron, Ohio: Southeastern Regional Association Family Economics-Home Management.
- Thomas, III, W. W. (1987). Social security manual. Cincinnati, OH: The National Underwriter Company.
- U. S. Department of Commerce, Bureau of the Census. (1987). Statistical abstract of the United States. Washington, DC: U.S. Printing Office.

- U. S. Department of Commerce, Bureau of the Census. (1986). State and metropolitan area data book 1986. Washington, DC: U.S. Printing Office.
- U. S. Department of Commerce, Bureau of the Census. (1984). Statistical abstract of the United States. Washington, DC: U.S. Printing Office.
- U. S. Department of Commerce, Bureau of the Census. (1983). 1980 Census of population: General social and economic characteristics. Washington, DC: U.S. Printing Office.
- U. S. Department of Commerce, Bureau of the Census. (1982). General population characteristics. Washington, DC: U.S. Printing Office.
- U. S. Department of Commerce, Bureau of Economic Analysis. (1986). 1985 state percapita personal income. BEA 86-41. Washington, DC: U.S. Printing Office.
- U. S. Department of Health and Human Services, Public Health Service. (1985). Health United States 1985. Washington, DC: U. S. Printing Office.
- Vinoker-Kaplan, D. (1978). To have - or not have - another child: Family planning attitudes, intentions, and behavior. Journal of applied social psychology, 8, 29-46.
- VPI & SU Temporary Hourly Wage Employment Authorization. (1987). Blacksburg, VA: Virginia Polytechnic Institute and State University.
- Warlick, J. L. (1985). Why is poverty after 65 a woman's problem? Journal of gerontology, 40(6): 751-757.
- Women and social security. (1985). Social security bulletin, 48(2), 17-42.
- Wright, L. A. (1978). Families in debt. Journal of home economics, 70(4), 38-39.
- Yankelovich, Skelly, & White, Inc. (1985). A fifty year report card on the social security system - The attitudes of the American public. Washington, DC: American Association of Retired People.
- Yankelovich, Skelly, & White, Inc. (1975). The General Mills American family report 1974-75. Minneapolis, MN: General Mills, Inc.
- Ycas, M. A., & Grad, S. (1987). Income of retirement-aged persons in the United States. Social security bulletin, 50(7), 5-14.

## APPENDICES

APPENDIX A  
PRESURVEY INSTRUMENT

1. What do you see as the advantages of your saving for retirement in the next year?
  
  
  
  
  
  
  
  
  
  
2. What do you see as the disadvantages of your saving for retirement in the next year?
  
  
  
  
  
  
  
  
  
  
3. Is there anything else you associate with your saving for retirement in the next year?
  
  
  
  
  
  
  
  
  
  
4. Are there any groups or people who would approve of your saving for retirement in the next year?
  
  
  
  
  
  
  
  
  
  
5. Are there any groups or people who would disapprove of your saving for retirement in the next year?
  
  
  
  
  
  
  
  
  
  
6. Are there any other groups or people who come to mind when you think about saving for retirement in the next year?

APPENDIX B

RESPONSES TO PRESURVEY QUESTIONNAIRE

Advantages of saving for retirement

- 21 I will be able to maintain my standard of living (Way of being sure you are able to live in retirement the way you are accustomed to living)
- 20 Have financial security
- 13 Less worry in retirement years
- 11 Freedom to travel, etc. (Allows you to plan for your future so you will be able to do the things you want to do)
- 13 Getting an early start allows interest to compound
- 8 Way to reduce taxes on current income
- 14 Will have extra income besides retirement benefits (Assure adequate retirement income)
- 7 Will be able to obtain needed medical and dental care
- 7 Unsure that social security benefits will be available (Don't feel that I'm at the mercy of the social security system)
- 6 Tax sheltered vehicles are available
- 8 I won't be dependent on someone else
- 4 Tax deferral
- 4 Able to achieve lifetime goals
- 3 Discipline of saving
- 2 Help provide for dependents' care (education)
- 2 Lifestyle adjustments can be planned
- 2 May have higher income now
- 1 Career change may include different retirement plan
- 1 Make retirement living easier
- 1 Easier to save in small amounts

- 2 Ability to retire at an earlier age
- 1 Can invest money the way I want for retirement
- 1 More control over type of care I will receive if I need custodial or nursing home care
- 1 Leave financial assets intact to pass on to child
- 1 Offset inflation
- 1 Relieve other persons of stress caused by caring for persons in aging process
- 1 My age requires additional contributions towards funds
- 1 Reduced living costs (no mortgage, car payment)
- 1 Starting too late to plan creates a pressure in late working years

Disadvantages of saving for retirement

- 32 Less income now
- 4 Live on less during younger years when have greater expenses
- 4 Need money now for current expenses (Need money for pressing needs this year)
- 4 Too much money tied up, not enough to live on
- 4 Not allowed to use that money now (no liquidity)
- 4 Can't save for other things (college education)
- 13 I may not live to retirement (If I don't make it to retirement I have not benefited from the use of this money at any time.)
- 3 May lose money if not invested well
- 3 Reduction in tax saving
- 2 Inability to save enough now to compensate for future cost of living
- 2 Inflation
- 3 More money to pay taxes on
- 2 Difficult to know how much money I'll need
- 2 Could be supporting a system such as ss form which you will receive no benefits
- 2 Retirement age seems to keep increasing
- 1 Give up enjoyment now for uncertain future
- 1 I will not have time to plan as I should
- 1 May lower present satisfaction by concentrating on future
- 1 I'll be taxed on passive income to help pay for people who didn't save - not fair
- 1 May be able to look forward to future inheritance and not need to save
- 1 I already have a good retirement plan
- 1 Uncertainty of the stock market and economy

Other associations with saving for retirement

- 3 Need a good financial plan
- 1 Uncertain economy
- 1 Lack of confidence in my ability to plan, implement and manage
- 1 I want more real estate
- 1 It's too late for me to try
- 1 Feeling of accomplishment - doing something important
- 1 Don't know about stock market
- 1 Possibility of disability and need for income for the duration
- 1 I'm getting older, my earning power is not increasing rapidly
- 1 Sooner plan, better off
- 1 I need to investigate ways to get more return on long term investments
- 1 It takes continuous discipline
- 1 Adequate pay
- 1 College education for children

People who would approve of your saving for retirement

24	Spouse
22	Family
16	Government
15	Children
14	Financial institutions
14	Broker
10	Employer
9	Parents
4	Beneficiaries
4	Friends
5	Fellow workers
4	Financial planner
3	Insurance agent
2	Social services
2	Ken Martin
2	Public in general
2	Sister/brother
1	AARP
1	Church
1	Persons whose services you might need
1	Anyone who believes in planning ahead

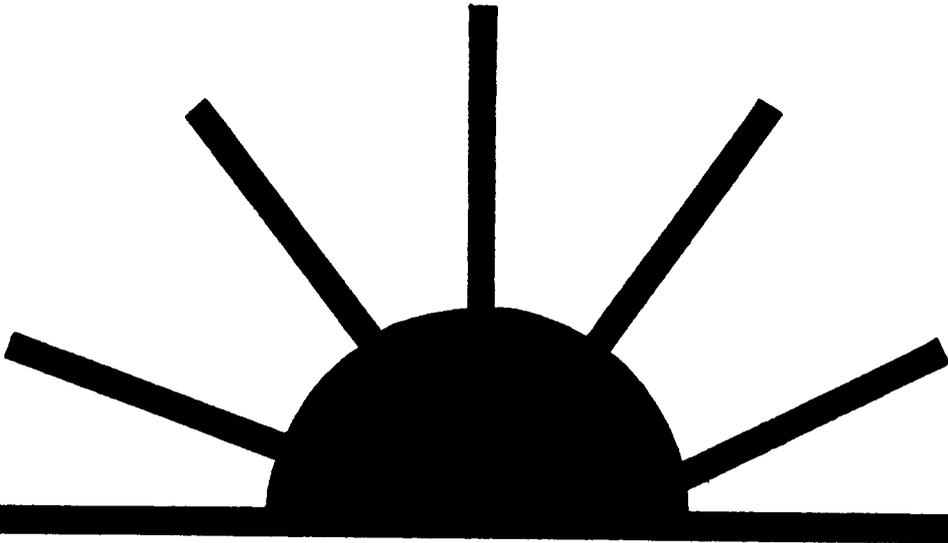
People who would disapprove of your saving for retirement

- 3 Family members
- 3 Children
- 2 Investment people
- 2 Those selling current recreation
- 1 Employer
- 1 Friends
- 1 Grandchildren
- 1 Anyone who would have use of that money now that you would use later
- 1 Creditors, if I didn't pay bills
- 1 Retail stores
- 1 Human services organizations
- 1 Other professionals
- 1 People who spend it as they get it

Other groups who come to mind

- 2 AARP
- 1 Church retirement homes
- 1 Church
- 1 Knowledgeable people who can help, financial counselors
- 1 Parents
- 1 Social security administration
- 1 Some people are happy in retirement, others are not; prepare so be happy
- 1 Those who didn't save
- 1 Future caretakers

APPENDIX C  
TEST INSTRUMENT



# RETIREMENT STUDY

Department of Housing, Interior Design  
and Resource Management

Virginia Tech

In the questionnaire you are about to fill out we ask questions which make use of rating scales with seven places; you are to make an X in the place that best describes your opinion. For example, if you were asked to rate "The Weather in Blacksburg" and you think it is extremely good, then you would place your mark as follows:

The Weather in Blacksburg is

GOOD \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BAD

HARMFUL \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BENEFICIAL

You will also be using a rating scale with likely-unlikely as endpoints. this scale is to be interpreted in the same way. For example, if you were asked to rate "The Weather in Blacksburg is cold in January" on such a scale, and you think that it is extremely likely that the weather in Blacksburg is cold in January, you would make your mark as follows:

The weather in Blacksburg is cold in January

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

In making your ratings please remember the following points:

1) Place your marks in the middle of spaces, not on the boundaries:

\_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_

2) Be sure you answer all items - please do not omit any.

3) Never put more than one "X" mark on a single scale.

4) As you answer each question, think about what it means in relation to your particular situation. The only right answer is the one that is right for you.

Please begin answering questions on page 2.

1. I intend to save in the next year for retirement.

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

2. My saving in the next year for retirement would be

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

WISE \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ FOOLISH

HARMFUL \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BENEFICIAL

3. Having financial security in retirement is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

4. Having enough money to live the way I want to do in retirement is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

5. Having to do without things I need now to save for retirement is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

6. Not needing to save as much later for retirement is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

7. Being able to get the medical and dental care I need in retirement is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_BAD

8. Not being able to spend money now on things I want now so I can save for retirement is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_BAD

9. Being dependent on the social security system for my retirement income is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_BAD

10. Being dependent on someone else in my retirement years is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_BAD

11. My saving in the next year for retirement will mean that I will have financial security in retirement

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_UNLIKELY

12. My saving in the next year for retirement will mean that I will have enough money to live the way I want to in retirement

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_UNLIKELY

13. My saving in the next year for retirement will mean that I will have to do without things I need now

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

14. My saving in the next year for retirement will mean that I won't need to save as much later for retirement

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

15. My saving in the next year for retirement will mean that I will be able to get the medical and dental care I need in retirement

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

16. My saving in the next year for retirement will mean that I will not be able to spend money now on things I want now

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

17. My saving in the next year for retirement will mean that I will be dependent on the social security system for my retirement income

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

18. My saving in the next year for retirement will mean that I won't be dependent on someone else in my retirement years

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

19. Most people who are important to me think I should save in the next year for retirement.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

20. Most members of my family think I should save in the next year for retirement.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

21. The government (Social Security Administration, IRS, etc.) thinks I should save in the next year for retirement.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

22. Most financial institutions (for example: banks, credit unions, and insurance companies) think I should save in the next year for retirement.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

23. My employer thinks I should save in the next year for retirement.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

24. My coworkers think I should save in the next year for retirement.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

25. Generally speaking, I want to do what most members of my family think I should do.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

26. Generally speaking, I want to do what the government (Social Security Administration, IRS, etc.) thinks I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

27. Generally speaking, I want to do what financial institutions (ex. banks, credit unions, insurance companies) think I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

28. Generally speaking, I want to do what my employer thinks I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

29. Generally speaking, I want to do what my coworkers think I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

The next set of questions pertain to personal information. Again, we remind you that this questionnaire is confidential. Neither your name nor any other identifying information will be revealed in reporting the findings.

30. What is your gender?

\_\_\_\_\_ MALE

\_\_\_\_\_ FEMALE

31. What is your present marital status?

\_\_\_\_\_ SINGLE

\_\_\_\_\_ MARRIED

\_\_\_\_\_ DIVORCED

\_\_\_\_\_ WIDOW OR WIDOWER

32. What is the year of your birth? \_\_\_\_\_  
YEAR

33. How many children who you financially support do you have in each age group? (If none, write "0")

Number of Children

\_\_\_\_\_ UNDER 5 YEARS OF AGE

\_\_\_\_\_ 5 TO 13

\_\_\_\_\_ 14 TO 18

\_\_\_\_\_ 19 TO 24

\_\_\_\_\_ 25 AND OVER

34. What is your job title? \_\_\_\_\_

35. How many years you have had a job with Virginia Tech? \_\_\_\_\_  
YEARS

36. Which of the following categories best describes YOUR yearly income before taxes?

- UNDER \$9,999
- BETWEEN \$10,000 AND \$14,999
- BETWEEN \$15,000 AND \$19,999
- BETWEEN \$20,000 AND \$24,999
- BETWEEN \$25,000 AND \$29,999
- BETWEEN \$30,000 AND \$34,999
- BETWEEN \$35,000 AND \$39,999
- BETWEEN \$40,000 AND \$44,999
- BETWEEN \$45,000 AND \$49,999
- OVER \$50,000

37. Which of the following categories best describes your yearly TOTAL FAMILY income before taxes?

- UNDER \$9,999
- BETWEEN \$10,000 AND \$14,999
- BETWEEN \$15,000 AND \$19,999
- BETWEEN \$20,000 AND \$24,999
- BETWEEN \$25,000 AND \$29,999
- BETWEEN \$30,000 AND \$34,999
- BETWEEN \$35,000 AND \$39,999
- BETWEEN \$40,000 AND \$44,999
- BETWEEN \$45,000 AND \$49,999
- BETWEEN \$50,000 AND \$54,999
- BETWEEN \$55,000 AND \$59,999
- BETWEEN \$60,000 AND \$64,999
- BETWEEN \$65,000 AND \$69,999
- OVER \$70,000

38. At what age do you intend to retire?

\_\_\_\_\_ YEARS

39. How many years after retirement do you expect to live?

\_\_\_\_\_ 0 YEARS

\_\_\_\_\_ 1 TO 5 YEARS

\_\_\_\_\_ 6 TO 10 YEARS

\_\_\_\_\_ 11 TO 15 YEARS

\_\_\_\_\_ 16 TO 20 YEARS

\_\_\_\_\_ 21 TO 25 YEARS

\_\_\_\_\_ MORE THAN 25 YEARS

40. Which of the following do you own?

\_\_\_\_\_ MY HOME

\_\_\_\_\_ OTHER REAL ESTATE

\_\_\_\_\_ SAVINGS ACCOUNT

\_\_\_\_\_ IRA

\_\_\_\_\_ CASH VALUE LIFE INSURANCE

\_\_\_\_\_ ANNUITY

41. What is your race?

\_\_\_\_\_ BLACK

\_\_\_\_\_ WHITE

\_\_\_\_\_ OTHER

42. Which is the highest level of education that you have completed?

- NEVER WENT TO SCHOOL
- SOME GRADE SCHOOL (GRADES 1-8)
- SOME HIGH SCHOOL (GRADES 9-12)
- HIGH SCHOOL GRADUATE OR EQUIVALENT
- SOME COLLEGE OR VOCATIONAL SCHOOL BEYOND HIGH SCHOOL
- COMPLETED A VOCATIONAL TRAINING PROGRAM BEYOND HIGH SCHOOL
- COMPLETED A 2-YEAR COLLEGE DEGREE
- COMPLETED A 4-YEAR COLLEGE DEGREE
- SOME GRADUATE WORK
- MASTERS' DEGREE
- DOCTORAL DEGREE

43. Have you attended a formal pre-retirement program?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

44. Would you like to have formal training session on retirement planning?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

45. Would you be interested in working part-time for the University after you retire?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

46. Have you been discriminated against because of your age?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

47. Have you made any specific retirement plans?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

48. What are your biggest retirement worries?

Please write any additional comments you have about saving in the next year for retirement.

Thank you for your help!

APPENDIX D

COVER LETTER

Date

Name  
Address  
Address

Dear \_\_\_\_\_,

Most Americans plan to retire at some point in life. There are many ways that we can prepare for retirement. However, we know very little about what influences an individual's preparations for retirement.

You are one of a small number of Virginia Tech classified employees who are being asked their opinions on these matters. Your name was drawn in a random sample of employees. In order that the results will truly represent the thinking of the Virginia Tech classified employees, it is important that each questionnaire be completed and returned.

You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only. This is so that we may check your name off of the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire.

Three weeks from today, we will randomly draw a returned questionnaire. The number on it will be used to identify the winner of a \$50 U. S. Savings Bond.

The results of this research will be made available to university officials and all interested employees. You may receive a summary of results by writing "copy of results requested" on the back of the return envelope, and printing your name and address below it. Please do not put this information on the questionnaire itself.

I would be most happy to answer any questions you might have. Please write or call. The telephone number is (703) 961-4191.

Thank you for your assistance.

Sincerely,

Irene E. Leech  
Project Director

APPENDIX E

POSTCARD FOLLOW-UP

Date

Last week a questionnaire seeking your opinion about preparing for retirement was mailed to you. Your name was drawn in a random sample of classified employees of Virginia Tech.

If you have already completed and returned it to us please accept our sincere thanks. If not, please do so today. Because it has been sent to only a small, but representative, sample of Virginia Tech employees it is extremely important that yours be included in the study if the results are to accurately represent the opinions of Virginia Tech employees.

If by some chance you did not receive the questionnaire, or it got misplaced, please call me right now, (703) 961-4191, and I will get another one in the mail to you today.

Sincerely,

Irene Leech  
Project Director

APPENDIX F  
SCORING FOR TEST INSTRUMENT

1. I intend to save in the next year for retirement.

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

2. My saving in the next year for retirement would be

GOOD +3 : +2 : +1 : 0 : -1 : -2 : -3 BAD

WISE +3 : +2 : +1 : 0 : -1 : -2 : -3 FOOLISH

HARMFUL -3 : -2 : -1 : 0 : +1 : +2 : +3 BENEFICIAL

3. Having financial security in retirement is

GOOD +3 : +2 : +1 : 0 : -1 : -2 : -3 BAD

4. Having enough money to live the way I want to do in retirement is

GOOD +3 : +2 : +1 : 0 : -1 : -2 : -3 BAD

5. Having to do without things I need now to save for retirement is

GOOD +3 : +2 : +1 : 0 : -1 : -2 : -3 BAD

6. Not needing to save as much in later years for retirement is

GOOD +3 : +2 : +1 : 0 : -1 : -2 : -3 BAD

7. Being able to get the medical and dental care I need in retirement is

GOOD +3 : +2 : +1 : 0 : -1 : -2 : -3 BAD

8. Not being able to spend money now on things I want now so I can save for retirement is

GOOD -3 : -2 : -1 : 0 : +1 : +2 : +3 BAD

9. Being dependent on the social security system for my retirement income is

GOOD -3 : -2 : -1 : 0 : +1 : +2 : +3 BAD

10. Being dependent on someone else in my retirement years is

GOOD -3 : -2 : -1 : 0 : +1 : +2 : +3 BAD

11. My saving in the next year for retirement will mean that I will have financial security in retirement

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

12. My saving in the next year for retirement will mean that I will have enough money to live the way I want to in retirement

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

13. My saving in the next year for retirement will mean that I will have to do without things I need now

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -1 UNLIKELY

14. My saving in the next year for retirement will mean that I won't need to save as much later for retirement

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

15. My saving in the next year for retirement will mean that I will be able to get the medical and dental care I need in retirement

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

16. My saving in the next year for retirement will mean that I will not be able to spend money now on things I want now

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

17. My saving in the next year for retirement will mean that I will be dependent on the social security system for my retirement income

LIKELY -3 : -2 : -1 : 0 : +1 : +2 : +3 UNLIKELY

18. My saving in the next year for retirement will mean that I won't be dependent on someone else in my retirement years

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

19. Most people who are important to me think I should save in the next year for retirement.

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

20. Most members of my family think I should save in the next year for retirement.

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

21. The government (Social Security Administration, IRS, etc.) thinks I should save in the next year for retirement.

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

22. Most financial institutions (for example: banks, credit unions, and insurance companies) think I should save in the next year for retirement.

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

23. My employer thinks I should save in the next year for retirement.

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

24. My coworkers think I should save in the next year for retirement.

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

25. Generally speaking, I want to do what most members of my family think I should do.

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

26. Generally speaking, I want to do what the government (Social Security Administration, IRS, etc.) thinks I should do

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

27. Generally speaking, I want to do what financial institutions (ex. banks, credit unions, insurance companies) think I should do

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

28. Generally speaking, I want to do what my employer thinks I should do

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY

29. Generally speaking, I want to do what my coworkers think I should do

LIKELY +3 : +2 : +1 : 0 : -1 : -2 : -3 UNLIKELY



36. Which of the following categories best describes YOUR yearly income before taxes?

- 1 UNDER \$9,999
- 2 BETWEEN \$10,000 AND \$14,999
- 3 BETWEEN \$15,000 AND \$19,999
- 4 BETWEEN \$20,000 AND \$24,999
- 5 BETWEEN \$25,000 AND \$29,999
- 6 BETWEEN \$30,000 AND \$34,999
- 7 BETWEEN \$35,000 AND \$39,999
- 8 BETWEEN \$40,000 AND \$44,999
- 9 BETWEEN \$45,000 AND \$49,999
- 10 OVER \$50,000

37. Which of the following categories best describes your yearly TOTAL FAMILY income before taxes?

- 1 UNDER \$9,999
- 2 BETWEEN \$10,000 AND \$14,999
- 3 BETWEEN \$15,000 AND \$19,999
- 4 BETWEEN \$20,000 AND \$24,999
- 5 BETWEEN \$25,000 AND \$29,999
- 6 BETWEEN \$30,000 AND \$34,999
- 7 BETWEEN \$35,000 AND \$39,999
- 8 BETWEEN \$40,000 AND \$44,999
- 9 BETWEEN \$45,000 AND \$49,999
- 10 BETWEEN \$50,000 AND \$54,999
- 11 BETWEEN \$55,000 AND \$59,999
- 12 BETWEEN \$60,000 AND \$64,999
- 13 BETWEEN \$65,000 AND \$69,999
- 14 OVER \$70,000

38. At what age do you intend to retire?

\_\_\_\_\_ YEARS (Code number in blank)

39. How many years after retirement do you expect to live?

1 0 YEARS

2 1 TO 5 YEARS

3 6 TO 10 YEARS

4 11 TO 15 YEARS

5 16 TO 20 YEARS

6 21 TO 25 YEARS

7 MORE THAN 25 YEARS

40. Which of the following do you own?

\_\_\_\_\_ MY HOME

\_\_\_\_\_ OTHER REAL ESTATE (Code 1 if own,

\_\_\_\_\_ SAVINGS ACCOUNT Code 0 if not own)

\_\_\_\_\_ IRA

\_\_\_\_\_ CASH VALUE LIFE INSURANCE

\_\_\_\_\_ ANNUITY

41. What is your race?

1 BLACK

2 WHITE

3 OTHER

42. Which is the highest level of education that you have completed?

- 1   NEVER WENT TO SCHOOL
- 2   SOME GRADE SCHOOL (GRADES 1-8)
- 3   SOME HIGH SCHOOL (GRADES 9-12)
- 4   HIGH SCHOOL GRADUATE OR EQUIVALENT
- 5   SOME COLLEGE OR VOCATIONAL SCHOOL BEYOND HIGH SCHOOL
- 6   COMPLETED A VOCATIONAL TRAINING PROGRAM BEYOND HIGH SCHOOL
- 7   COMPLETED A 2-YEAR COLLEGE DEGREE
- 8   COMPLETED A 4-YEAR COLLEGE DEGREE
- 9   SOME GRADUATE WORK
- 10   MASTERS' DEGREE
- 11   DOCTORAL DEGREE

43. Have you attended a formal pre-retirement program?

- 1   YES
- 2   NO

44. Would you like to have formal training session on retirement planning?

- 1   YES
- 2   NO

45. Would you be interested in working part-time for the University after you retire?

- 1   YES
- 2   NO

46. Have you been discriminated against because of your age?

- 1   YES
- 2   NO

47. Have you made any specific retirement plans?

  1   YES

  2   NO

48. What are your biggest retirement worries?

APPENDIX G  
CATEGORIES OF OCCUPATION CODING SCALE

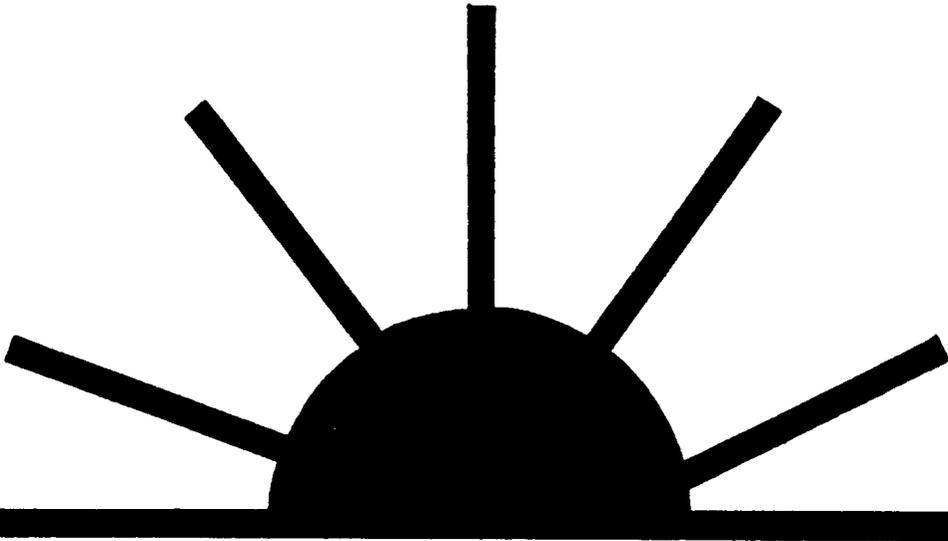
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Category	Job
1	Cleaning Service Workers
2	Food Service Workers
3	Health Service Workers
4	Personal Service Workers
5	Protective Service Workers
6	Private Household Workers
7	Laborers
8	Operatives, including Transport
9	Craftsmen, Foremen and Kindred Workers
10	Clerical and Kindred Workers
11	Sales Workers
12	Managerial and Administrative, including farm
13	Professional, Technical and Kindred
14	Homemakers

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Source: Lovingood, R. P. (December, 1981). Family time use: an eleven state comparison. (VPI-2) Appendix D. Blacksburg, VA: Virginia Agricultural Experiment Station.

APPENDIX H  
PILOT TEST INSTRUMENT



# RETIREMENT STUDY

Department of Housing, Interior Design  
and Resource Management

Virginia Tech

In the questionnaire you are about to fill out we ask questions which make use of rating scales with seven places; you are to make an X in the place that best describes your opinion. For example, if you were asked to rate "The Weather in Blacksburg" and you think it is extremely good, then you would place your mark as follows:

The Weather in Blacksburg is

GOOD \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BAD

You will also be using a rating scale with likely-unlikely as endpoints. this scale is to be interpreted in the same way. For example, if you were asked to rate "The Weather in Blacksburg is cold in January" on such a scale, and you think that it is extremely likely that the weather in Blacksburg is cold in January, you would make your mark as follows:

The weather in Blacksburg is cold in January

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

In making your ratings please remember the following points:

1) Place your marks in the middle of spaces, not on the boundaries:

\_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_

2) Be sure you answer all items - please do not omit any.

3) Never put more than one "X" mark on a single scale.

4) As you answer each question, think about what it means in relation to your particular situation. The only right answer is the one that is right for you.

Please begin answering questions on page 2.

1. I intend to save in the next year for retirement.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

2. My saving in the next year for retirement would be

GOOD \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BAD

WISE \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ FOOLISH

HARMFUL \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BENEFICIAL

3. Having financial security in retirement is

GOOD \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BAD

4. Having enough money to live the way I want to do in retirement is

GOOD \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BAD

5. Having to do without things I need now to save for retirement is

GOOD \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BAD

6. Not needing to save as much later for retirement is

GOOD \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BAD

7. Being able to get the medical and dental care I need in retirement is

GOOD \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ BAD

8. Not being able to spend money now on things I want now so I can save for retirement is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

9. Never benefitting from the use of money saved for retirement if I don't live that long is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

10. Being dependent on the social security system for my retirement income is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

11. Reducing my current taxes is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

12. Being dependent on someone else in my retirement years is

GOOD \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ BAD

13. My saving in the next year for retirement will mean that I will have financial security in retirement

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

14. My saving in the next year for retirement will mean that I will have enough money to live the way I want to in retirement

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

15. My saving in the next year for retirement will mean that I will have to do without things I need now

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

16. My saving in the next year for retirement will mean that I won't need to save as much later for retirement

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

17. My saving in the next year for retirement will mean that I will be able to get the medical and dental care I need in retirement

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

18. My saving in the next year for retirement will mean that I will not be able to spend money now on things I want now

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

19. My saving in the next year for retirement will mean that I will never benefit from the use of that money, if I don't live that long

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

20. My saving in the next year for retirement will mean that I will be dependent on the social security system for my retirement income

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

21. My saving in the next year for retirement will mean that I will reduce my current taxes

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

22. My saving in the next year for retirement will mean that I won't be dependent on someone else in my retirement years

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

23. Most people who are important to me think I should save in the next year for retirement.

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

24. Most members of my family think I should save in the next year for retirement.

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

25. The government (Social Security Administration, IRS, etc.) thinks I should save in the next year for retirement.

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

26. Most financial institutions (for example: banks, credit unions, and insurance companies) think I should save in the next year for retirement.

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

27. My employer thinks I should save in the next year for retirement.

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

28. My coworkers think I should save in the next year for retirement.

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

29. Most people who want my money now (ex. family members, stores, travel agents) think I should save in the next year for retirement.

LIKELY \_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_:\_\_\_\_\_ UNLIKELY

30. Generally speaking, I want to do what most members of my family think I should do.

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

31. Generally speaking, I want to do what the government (Social Security Administration, IRS, etc.) thinks I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

32. Generally speaking, I want to do what financial institutions (ex. banks, credit unions, insurance companies) think I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

33. Generally speaking, I want to do what my employer thinks I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

34. Generally speaking, I want to do what my coworkers think I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

35. Generally speaking, I want to do what those who want my money now ( ex. family members, stores, travel agents) think I should do

LIKELY \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ UNLIKELY

The next set of questions pertain to personal information. Again, we remind you that this questionnaire is confidential. Neither your name nor any other identifying information will be revealed in reporting the findings.

36. What is your gender?

\_\_\_\_\_ MALE

\_\_\_\_\_ FEMALE

37. What is your present marital status?

\_\_\_\_\_ SINGLE

\_\_\_\_\_ MARRIED

\_\_\_\_\_ DIVORCED

\_\_\_\_\_ WIDOW OR WIDOWER

38. What is the year of your birth? \_\_\_\_\_  
YEARS

39. How many children who you financially support do you have in each age group? (If none, write "0")

Number of Children

\_\_\_\_\_ UNDER 5 YEARS OF AGE

\_\_\_\_\_ 5 TO 13

\_\_\_\_\_ 14 TO 18

\_\_\_\_\_ 19 TO 24

\_\_\_\_\_ 25 AND OVER

40. What is your job title? \_\_\_\_\_

41. How many years you have had a job with Virginia Tech? \_\_\_\_\_  
YEARS

42. Which of the following categories best describes YOUR yearly income before taxes?

- UNDER \$9,999
- BETWEEN \$10,000 AND \$14,999
- BETWEEN \$15,000 AND \$19,999
- BETWEEN \$20,000 AND \$24,999
- BETWEEN \$25,000 AND \$29,999
- BETWEEN \$30,000 AND \$34,999
- BETWEEN \$35,000 AND \$39,999
- BETWEEN \$40,000 AND \$44,999
- BETWEEN \$45,000 AND \$49,999
- OVER \$50,000

43. Which of the following categories best describes your yearly TOTAL FAMILY income before taxes?

- UNDER \$9,999
- BETWEEN \$10,000 AND \$14,999
- BETWEEN \$15,000 AND \$19,999
- BETWEEN \$20,000 AND \$24,999
- BETWEEN \$25,000 AND \$29,999
- BETWEEN \$30,000 AND \$34,999
- BETWEEN \$35,000 AND \$39,999
- BETWEEN \$40,000 AND \$44,999
- BETWEEN \$45,000 AND \$49,999
- BETWEEN \$50,000 AND \$54,999
- BETWEEN \$55,000 AND \$59,999
- BETWEEN \$60,000 AND \$64,999
- BETWEEN \$65,000 AND \$69,999
- OVER \$70,000

44. At what age do you intend to retire?

\_\_\_\_\_ YEARS

45. How many years after retirement do you expect to live?

\_\_\_\_\_ 0 YEARS

\_\_\_\_\_ 1 TO 5 YEARS

\_\_\_\_\_ 6 TO 10 YEARS

\_\_\_\_\_ 11 TO 15 YEARS

\_\_\_\_\_ 16 TO 20 YEARS

\_\_\_\_\_ 21 TO 25 YEARS

\_\_\_\_\_ MORE THAN 25 YEARS

46. Which of the following do you own?

\_\_\_\_\_ MY HOME

\_\_\_\_\_ OTHER REAL ESTATE

\_\_\_\_\_ SAVINGS ACCOUNT

\_\_\_\_\_ IRA

\_\_\_\_\_ CASH VALUE LIFE INSURANCE

\_\_\_\_\_ ANNUITY

47. What is your race?

\_\_\_\_\_ BLACK

\_\_\_\_\_ WHITE

\_\_\_\_\_ OTHER

48. Which is the highest level of education that you have completed?

- NEVER WENT TO SCHOOL
- SOME GRADE SCHOOL (GRADES 1-8)
- SOME HIGH SCHOOL (GRADES 9-12)
- HIGH SCHOOL GRADUATE OR EQUIVALENT
- SOME COLLEGE OR VOCATIONAL SCHOOL BEYOND HIGH SCHOOL
- COMPLETED A VOCATIONAL TRAINING PROGRAM BEYOND HIGH SCHOOL
- COMPLETED A 2-YEAR COLLEGE DEGREE
- COMPLETED A 4-YEAR COLLEGE DEGREE
- SOME GRADUATE WORK
- MASTERS' DEGREE
- DOCTORAL DEGREE

49. Have you attended a formal pre-retirement program?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

50. Would you like to have formal training session on retirement planning?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

51. Would you be interested in working part-time for the University after you retire?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

52. Have you been discriminated against because of your age?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

53. Have you made any specific retirement plans?

\_\_\_\_\_ YES

\_\_\_\_\_ NO

54. What are your biggest retirement worries?

Please write any additional comments you have about saving in the next year for retirement.

Thank you for your help!

APPENDIX I  
CORRELATIONS

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	Attitude	Sub.Norm	Inclr.At.	Inclr.S.N	Gender	M.Status	Age	Age Ret	Under5	Age5-13	Age14-18	Age19-24	Age25	TechYr	Income	Fam.Inc.	Race	Educ.	Assets	
Subj. Norm	.039																			
Inclr. Att.	.148	.360																		
Inclr. S.N.	.139	-.044	.162																	
Gender	.054	.060	.010	.013																
Mar. Status	.181	-.014	-.040	.034	.111															
Age	.261	-.079	.050	.129	-.033	.295														
Age Ret.	-.077	-.062	-.005	.065	.005	.056	.233													
Child <5	-.035	.010	.004	-.041	-.051	.022	-.311	-.176												
Child 5-13	-.046	.050	-.097	-.088	.009	.080	-.158	-.119	.082											
Child 14-18	-.028	.070	-.040	-.131	.027	.128	.088	-.016	-.161	.071										
Child 19-24	.132	.041	.116	.069	.026	.047	.217	.000	-.131	-.134	.023									
Child >25	.107	.000	.079	.085	.080	.137	.234	.050	-.065	-.082	-.046	.105								
Tech Year	.141	.023	.015	-.015	-.029	.122	.530	-.122	-.168	-.033	.094	.096	.086							
Income	.051	.204	.048	-.174	-.338	.090	.142	-.127	.003	.018	.080	-.008	.002	.275						
Fam. Income	.123	.240	.101	-.072	.063	.106	.118	-.201	.028	.038	.120	.169	.055	.105	.493					
Race	.071	-.021	.049	.033	-.048	.031	-.073	.093	.050	-.014	-.125	.008	.013	-.109	.017	.049				
Education	-.006	.253	.062	-.201	-.106	-.007	-.196	-.121	.022	-.001	.142	-.048	-.018	-.170	.504	.301	-.107			
Assets	.160	.151	.047	-.003	-.031	.099	.275	-.134	-.044	.059	.045	.072	.093	.234	.311	.488	-.043	.178		
Intention	.464	.110	.317	.162	-.049	.147	.382	-.004	-.067	-.154	-.039	.169	.109	.177	.146	.250	.000	-.008	.365	

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