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ECONOMIC CHANGES OF FAMILIES IN RELATION TO REPORTED INCOME ADEQUACY, SYMPTOMS OF STRESS, AND ECONOMIZING BEHAVIOR

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Economic changes of families in relation to reported income adequacy, symptoms of stress, and economizing behavior

by

Belletech Deressa

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of the Requirements for the Degree of DOCTOR OF PHILOSOPHY Major: Family Environment

Approved:

In Charge of Major Work

For the Major Department

For the Graduate College

Iowa State University
Ames, Iowa

1986
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DEDICATION

To my beloved late mother Bussa Karayou for her love, encouragement, and dedication to her children until the last day of her life.
CHAPTER 1. INTRODUCTION

Purpose of the Study

The purposes of this study are:

1) to investigate the effect of change in economic conditions of families in the middle years (wife's age 35 to 54) in nine states of the North Central Region during the recession of 1979-1982;

2) to examine the coping behaviors of the families in relation to consumption and economizing activities;

3) to explore the relationship between families' economic changes, reported income adequacy and symptoms of stress;

4) to probe the relationship between demographic and socio-economic variables such as age, employment status of husband and wife, family size, family income and reported economic changes, reported income adequacy, symptoms of stress and economizing activities.

Change in family economic conditions is viewed in two ways: reported change in total family income and reported change in the total overall financial conditions of families over the last three years. The measure of economizing behavior consists of eighteen activities such as buying on sale, use of coupons, gardening, canning food, etc. The symptoms of stress variable includes sleeplessness, accidents, irritability, depression, headaches, muscle tension, and difficulty in relaxing and is the total score for the family. Since most of the
previous research refers to "reported income adequacy" as "perceived income adequacy," the latter was included in the review of literature. However, for the present study, the term "reported income adequacy" was adopted since it more accurately characterizes the measure.

**Background**

General economic changes— inflation, recession, cost of living, changes in family income, unemployment, fluctuations in economic situations, changing business conditions, and their impacts on economic well-being—have been a concern for many families, especially since the early 1980s. The recession which started in 1980 and lasted until 1983 in the United States produced the highest unemployment rates since the Great Depression. It also produced long periods of unemployment (Rones, 1984). During 1982, as in any recessionary year, fewer unemployed people could find jobs, and consequently, more remained unemployed from one month to the next. The total number of unemployed was 6.3 million in 1979, while in 1983, that number reached 11.6 million (Rones, 1984). This dramatic increase in the rate of unemployment affected not only the general economy of the country but also families and individual persons.

Since employment is the main source of income for most families, unemployment is a great disadvantage to many families. A few researchers in the past have studied the consequences of unemployment on family
life. Among others, Elder (1974) examined the consequences of both unemployment and economic depression for the socialization of children during the Great Depression. Others have investigated the sociological consequences of unemployment, loss of income in terms of the family context and stress on family. For example, Komarovsky's (1940) study of 59 families whose head had been unemployed at least a year during 1935 and 1936 and Angell's (1936) study of families during the Depression found that families experienced psychological difficulties which had an adverse effect on family relationships.

Moen (1979) examined the effect of 1975 recession and the duration of unemployment on the family. Brenner (1973) studied the effect of recession on mental-hospital admissions and observed a correlation between economic changes and such admissions. According to Brenner (1973), people whose lives are threatened by economic instability (especially married males) were the most likely to be admitted to mental hospitals when economic change is correlated with the admission rate. Unemployment not only affects family income but also health, social well-being, and family relationships. Even though this study focuses on the effect of economic changes on the family and their coping behavior, as well as families' experience of stress, one should not ignore the effect of unemployment on a family's economic conditions.

**Indicators of family economic well-being**

One of the widely-used indicators of economic well-being over time is the annual change in real purchasing power. This change is measured by comparing before-tax median household or family income figures after
adjusting for changes in prices using the consumer price index (Schwenk, 1985). Although median family income increased between 1981 and 1982, there was a decline in real income of 1.4 percent after accounting for a 6.1 percent rise in consumer prices, representing a decline in the real purchasing power of families.

The median family income differs among families depending on whether the wife is in the labor force, level of education, skills, ethnic origin and by marital status. In 1982, married couples had a median income of about $26,000. When the wife was in the labor force, the median income was approximately $30,300 compared to $21,300 when the wife was not employed. Those families whose heads had no more than a high school education earned $23,800 while families with college educated heads of family earned about $38,250. Also, in 1982, about 59.5 percent of the male households with a spouse present worked year round full time (U.S. Department of Commerce, Bureau of the Census, 1984b). Furthermore, the same year, nonfarm population median income was $23,590, while farm residents earned only $18,750 (U.S. Department of Commerce, Bureau of the Census, 1984b).

Poverty level and economic well-being vary among families. The number of persons below the poverty level in 1982 was 34.4 million (15 percent of the population) and 13.5 million of the poor families have children under 18 years of age. In married-couple families, the number of poor families was 3.8 million which is 17.6 percent, while female households (no husband present) numbered 3.4 million (that is 36.3 percent of female-headed families) were below poverty level. These statistics show that most of the people with less income are families
where only one family member has a job, those with children under 18 years, the less educated, farm families, and single parent families. Changes in total economy may have a greater effect on these families, although all families might be affected when recession and inflation occur. And when the nation's economy is in trouble, families with lesser skills, already low incomes and those with dependent children suffer the most. This change in the economy may also affect the relationship among family members. According to O'Neill (1985), between 1979 and 1982, the official poverty rate for all persons rose from 11.7 percent to 15.0 percent. The unemployment for all individuals in the labor force was more than 10 percent in both 1982 and 1983, 3.7 percentage points above the 1979 level, while duration of unemployment continued to rise in 1983. This increase of unemployment affected family income and earnings which also had impact upon the levels of living of families.

The impact of the recession and inflation also affected family life may be reflected in the approximately 1.2 million marriages ended in divorce in the United States during 1981 (National Center for Health Statistics, 1982). The economic well-being of many wives and children involved in divorces deteriorates; Espenshade (1979) has shown that divorced females have a significant reduction in living standard following divorce, while married couples and divorced men have an increase in their living standard. Espenshade (1979) also defined living standard as the ratio of income to family needs. Dissatisfaction with the living standard may increase tension among family members which could affect the health and family life.
Caplovitz (1979), in a study of the impact of inflation and recession on the family, found that 40 percent of the sample indicated that inflation had no impact on marriage; 28 percent said that financial problems had drawn spouses closer together, 18 percent mentioned negative as well as positive consequences, and 14 percent said their marriage became worse.

The patterns of coping with economic changes

According to O'Neill (1985), the employment of wives was one factor that prevented families' income from eroding more than it might have during the 1979-1983 period. Married-couple families in which the wife was in the labor force experienced smaller income loss than other families. Thus, the decline in income (after adjusting for inflation) was 10 percent among those families in which the wife was not in the labor force, compared to a 6 percent decline among two-earner families. The increase in the labor force participation of wives between 1979 and 1982 (from 49 percent to 51 percent) may have helped cushion the effects of the recession.

Caplovitz (1979) identified five strategies or patterns of coping with inflation: effort to increase income, reduction of expenditures and three forms of increasing efficiency (bargain hunting, greater self-reliance and sharing with others). Adapting behavior involves moving from an expensive to a less expensive residence, spending less on entertainment, dining less in restaurants and cutting back on expenditures for clothes. The shift from more expensive to less expensive items is seen by Caplovitz as a significant pattern of adaptation.
Increasing efficiency, that is, getting more out of the resources on hand, is a way of coping with inflation and recession. Caplovitz refers to self-reliant activities including the repair of items that used to be thrown away, and bargain hunting which includes purchases that are on sale, shopping from less expensive shops, etc. Caplovitz indicated that low income families showed the greatest self-reliance and did more bargain hunting than high income families. In this study, efficient use of resources, bargain hunting and the maximum use of limited resources at minimum cost, and self-reliance are referred to as economizing activities or behavior.

Need for the Study

Sociologists, economists, and family researchers have devoted much effort over the years to assessing the quality of family life and the effect of low income on families and on individuals. For example, Kyrk (1933, 1953) studied the economic problems of the family; Elder and Liker (1983) examined the economic hardships on families during the Great Depression; Campbell, Converse, and Rogers (1976) and Campbell (1981) investigated the quality of American life and the sense of well-being in America; and Caplovitz (1979) described the coping strategies of families to recession and inflation.

Some of the previous research has also considered the effect of income on marital relations. Marriage counselors and researchers have reported that economic stress has been the main cause of conflict in families (Williams, Nall, & Deck, 1976; Odita & Jansen, 1977). Most
of these previous studies have focused on the level of income, unemployment, or consumption behavior, and have left out the effect of overall change in the economic conditions as perceived by families, the effect of perceived or reported income adequacy and its relationship to families' experience of stress and economizing activities.

The review of the literature indicates that financial difficulties may accelerate tension in the family (Williams et al., 1976) and that economic instability, unemployment and a lack of efficient use of resources affects families' health and level of living. The recession of 1979-1982 affected the level of living of many families. It is, therefore, important to investigate the impact of economic changes over these years on families and to ascertain the strategies families used to cope with these problems.

The present study recognizes the family as an economic unit within a larger economic and social environment. The economic environment in which a family operates has a significant impact on a family's level of living. As an economic unit, the family is involved in the production as well as consumption of goods and services. The economic environment may influence the rate of production as well as consumption. The management activities and efficient use of resources can be seen as one way in which the family's needs are met. Planning for needs and allocation of resource efficiently to minimize cost and maximize utility or satisfaction will help in times of economic hardship or economic fluctuation. The way the family evaluates economic changes may influence the level of stress in the family which may influence the family's coping patterns.
CHAPTER 2. REVIEW OF LITERATURE AND CONCEPTUAL FRAMEWORK

Introduction

The purpose of this chapter is to review past research works which investigated factors related to family economic changes, families' experience of stress as a result of loss in income and unemployment and coping patterns to economic changes as well as to develop a conceptual model.

The economic recession of the early '80s has been seen as a threat to many American families. Changes in the price level and in total family income, fluctuations in economic situations, and variations in business conditions have an impact on the economic well-being of families. During 1980-1982, the unemployment rate rose from 8 to 11 percent and both nonfarm and farm families experienced a great deal of economic uncertainty (U.S. Department of Commerce, 1985).

In a study of the economic stresses on farm couples, Rosenblatt and Keller (1983) reported that couples who experienced economic distress acknowledged greater blaming in the marriage which affected perception of the quality of family life. Most research on economic stress and economic problem studied the families of the Great Depression and a few studied crises that result from unemployment (Moen, 1979, 1980; Elder & Liker, 1983; Moen et al., 1983). In spite of the economic crises, repeated recession in the last decade, very little research was done in this area. Given changing economic conditions, and economic uncertainty, this literature review is designed to investigate the relationship between reported economic changes, and
family's perception of these changes; the impact of these changes on
family's health or well-being and the coping behaviors.

Income and Family Income

Income

Income is the most commonly used measure of the economic status
of families. In the national economy, it is the flow of economic
goods derived from productive processes over a period of time. Income
in the form of wealth includes all forms of commodities, material,
transferable goods, created or produced in the period of time. Income
in the form of service includes all kinds of services including
services provided by teachers, doctors, etc. Gross, Crandall, and
Knoll (1980) define real income as a flow of commodities and services
available for the satisfaction of wants and needs over a given period
of time. Families obtain these goods and services directly through
the efforts of family members or from the community, or indirectly
when some medium of exchange, usually money, is involved in trans-
actions. Gross, Crandall, and Knoll (1980) suggest that the concept
of real income recognizes the contribution to the family made by its
members' time, energy, and abilities, and by community resources as
well as by its money. The use of labor and managerial abilities of
family members is considered as an important method of increasing real
income. The goods and services provided by family members may save
the money which is otherwise used to purchase these goods and services.

Fitzsimmons and Williams (1973) categorize income as real income,
psychic income and money income. According to Fitzsimmons et al. (1973), psychic income consists of the satisfactions and dissatisfaction realized from the use of real income over a period of time. It involves attitudes toward adequacy of money income received and goods obtained. Psychic income includes feelings associated with earning money income.

Miller and Rein (1966) pointed out four factors that may affect one's income. The first factor recognizes the changes which occur in real income as a result of changes in the prices of consumer goods and services. Rising inflation causes the prices of consumer goods and services to increase, consequently lowering the purchasing power of the dollar. The second factor that affects one's income is the level and structure of taxes. Changes in taxes will affect the amount of disposable money income that consumers have left for personal consumption. Social policy as well as taxation may affect many goods and services that are publicly provided, which will in turn affect the types and the amount of consumer purchases. And, finally, the last factor is the "nondirect payments received by the family." These include benefits in the form of money or services received by the family which contribute to family well-being.

Money income is the flow of purchasing power expressed in dollars or in terms of any other monetary standard, received over a period of time. The United States Department of Commerce defines total money income as the sum of the amounts received from wages and salaries, self-employment income, social security, supplemental security income, public assistance, interest, dividends, rent, estates or trusts, veterans payments, unemployment and workers' compensations, private
and government retirement and any disability pensions, alimony, child support, any other source of money income that is regularly received.

According to this definition, income sets the limit upon what individuals or families spend on consumer goods and determines the level of saving or dissaving. Kyrk (1953) described income as one of the important independent variables with which the well-being of the family fluctuates.

The function of money can be viewed in both objective and subjective frameworks. From an objective standpoint, money is a rational tool used by human beings. In a purely economic sense, money has but one fundamental purpose in an economic system and that is to facilitate the exchange of goods and services by lessening the time and effort required to carry on trade. For a person who lives in complete isolation, money has no use. This person cannot use money to promote any productive function since there is no occasion to exchange it for either goods or services.

The objective function of money cannot be overlooked. However, there is an increasing awareness of the importance of the more subjective function of money in our society today. In order to develop a better understanding of financial problems and resultant concerns, both the objective and subjective aspects of money must be considered. According to Feldman (1957), an increased emphasis is being focused on the more subjective aspects of money. To many individuals and families, money symbolizes social and emotional security as well as economic strength. Each individual has some understanding of the economic meaning of money but simultaneously attaches personal significance to it. In most societies, power and respect are often based
on the possession of money.

According to Knight (1968), people who seek to become wealthy are not just seeking riches but power and respect among fellow human beings or within themselves. Knight (1968) believes the symbolic meaning of money is determined by an individual's cultural background, religion, life experiences, the attitudes of parents and others, and by short and long range goals.

Money income is not the only resource available to the family for attaining the goals, pleasure activities, and various other wants and needs which they regard as worthwhile; however, it is an instrumental resource for attaining these needs and desires. The insufficiency of money limits family and individuals from achieving some of their goals and needs.

Economics is defined as the study of how scarce resources are used to satisfy ends. Resources that are available to individuals and families are of many kinds. Human resources include skills, knowledge, ability, physical health, education, etc.; while nonhuman resources include wealth such as money, house, and all material properties. A shortage of both human resources and nonhuman resources affect family well-being. The lack of a sufficient or desired amount of resources is a constraint. Income, money, time as well as human resources such as skills and education are all limited. However, human wants, needs, and desires are not limited. Therefore, the limited resources that are available to a family may not be enough to purchase or exchange for the goods and services wanted or needed by a family. Since money serves as a medium of exchange for present or future
consumption of goods and services, changes in financial conditions or the amount of money available to a family or an individual consumer limits the amount of goods that can be consumed. The extent to which money or income and other resources are available to a family at a given point in time may affect the level of satisfaction of family members.

**Family income**

Family income is the money or purchasing power received in a period of time and the wealth and services created during that time in the household by family members and used by the family. A family's income depends upon the amount of work that different family members perform, the earnings they receive, the monetary return from property owned, and on transfer received from the government (Chiswick & O'Neill, 1977). Family income is that stream of money, goods and services, and satisfactions that come under the control of the family to be used by the family to satisfy needs and desires and to discharge their obligations (Nickell, Dorsey, & Budolfson, 1959).

Morgan, David, Cohen, and Brazer (1962) identified components of family income as income from earnings and capital, transfer income of many varieties such as social security benefits, unemployment compensation, and from such sources as relatives and charitable organizations. Earned income includes earning of the head of the household and spouse which results from hours worked wage times rates.

Most family income is achieved through paid employment. Unemployment, therefore, has a negative impact on family income, while employ-
ment of several family members adds to family income. Although, social insurance, in the form of unemployment benefits, may enable the family to endure a period of economic hardship, the social and psychological brunt of unemployment may have negative effects on the family environment. Lack of self-confidence and self-esteem may develop; a family member who loses a job may feel less competent; the family may change its social activities; and furthermore, the family may move to a less expensive house or be forced to move to another area in search of employment. Not all families have the cushion of social insurance or other forms of public assistance. Moen (1979) found that unemployment compensation was received by less than half of the families of the unemployed and welfare benefits by only 5 percent. Where it was provided, Unemployment Compensation softened the economic blow of joblessness.

According to Moen (1979), unemployment of the family breadwinner can bring about sudden changes in the economic status of the family. It can also bring about role conflict if the wife assumes the provider role and precipitates marital disruption in the form of desertion, separation, or divorce. Families differ in how they cope with economic change, especially with negative income changes. Some families cope by decreasing expenses and finding alternative income sources, others tend to increase household production rather than purchasing goods from the market, and still others may use their savings to stabilize their level of consumption.
Family income and spending

Keynes (1936) showed consumption and saving to be functions of income. Keynes assumed that consumers will both spend and save out of current income, never spending all their earnings on consumer goods. The income which consumers receive at any one time is referred to as absolute income. The absolute income hypothesis states people tend to increase their consumption as their income increases but not as much as the increase in the income and some percentage of the income will be saved. Although this assumption may be true for some families, it may not be true for those families with very low income, a point on which Keynes has been criticized.

Duesenberry (1949) suggested that savings rate does not depend on absolute income but, rather, on relative income. He pictures the consumer as constantly subjected to contact with the new and higher-quality goods that are bought by the groups around him. Each such contact demonstrates the superiority of these goods to those he has been buying, and with a sufficient number of such contacts, the consumer will cut into his/her savings and will buy these new goods, even if income and prices do not change. In the long run, therefore, in periods of steadily rising income, the aggregate savings ratio tends to be independent of absolute income. In the short run, however, the savings ratio is tied not to absolute income, but to the relationship of current income to previous peak income. This suggests that if current income should go down, the consumer will, for awhile at least, still buy the goods bought at previous income and will dip into his savings to do so if necessary (Duesenberry, 1949). Earlier,
Brady and Friedman (1947) suggested that consumption expenditures and savings are dependent upon the relation of family income to the community in which the family is a member.

The expectations of income may also influence consumer spending, a change in total family income may influence the spending and saving patterns of families. Spending is determined by expected or planned income. Friedman (1957) developed the permanent income hypothesis to explain the saving and spending pattern. Permanent income is related to the rate of interest at which the consumer can borrow or lend, the ratio of nonhuman wealth to income, and a number of transitory factors such as family size and age. According to the permanent income hypothesis, consumers gear their expenditures to average level of anticipated income over a number of periods rather than only to income received in the current period. The hypothesis assumes that the proportions of permanent income saved by consumer unit in a given period is independent of its income or its resources during that period.

Similar to the permanent income hypothesis, Modigliani (1949) and his associates developed the life cycle hypothesis. This hypothesis indicates that current consumption is not only based on current income, but consumers spread their savings over a period of time so that they use when and if they need, especially at old age.

According to the permanent income hypothesis and the life cycle hypothesis, a family is said to determine its standard of living on the basis of expected returns from its resources over its lifetime. The permanent income hypothesis explains family income and spending patterns even when families experience economic changes.
Perception and Perceived Income Adequacy

Perception

Perception depends upon the sense organs receiving stimuli from the environment and upon an internal process structuring this sensational impact (Hansen, 1972). How an individual perceives a total situation is related to aspects in the environment to which the individual attends. Perceptions may be influenced by other people, by one's sense of feeling, and by individual differences in past experiences, attitudes, values, need, and other stimuli.

Stogdill (1959) stated that an individual's perception is affected by his/her past experience. An individual's perception of a situation is determined by both the information he/she derives from the situation and by the expectation with which he/she views the situation. The desirability of a situation is estimated in reference to internalized scales and norms and values which are influenced by past experiences.

No two people will have the identical perception of an experience. This means that within an economic and social environment, there could be differences among family members as to how they perceive their income adequacy. Also, what seems to be adequate for one family may be seen as inadequate by another family. Since money has a social value, perception of income adequacy may be influenced by the reference group or the environment in which the family functions.

Allport (1955) believed that perception is our awareness of the objects and conditions about us. It is dependent to a large extent
upon the impressions these objects make upon our senses. It is the way things look to us or the way they sound, feel, taste, or smell. Perception also involves to some degree our understanding, awareness, a "meaning," or recognition of these objects (Allport, 1955, p. 14).

The concept of perception as used in this study suggests that how we perceive something may be affected by how we interpret the stimulus. Perception may also affect the response to the situation. The process of interpretation is based, in part, on one's past experiences, knowledge, values, and attitudes. These same elements are also important in understanding individual needs. Therefore, the perception of income adequacy may be related to needs and wants of a family, since income is a means for securing goods and/or services for satisfying needs.

**Perceived income adequacy**

The concept of income adequacy may be interpreted both objectively and subjectively. The former is based on income that is adequate to support an individual or family relative to basic needs such as shelter, food, and clothing. The latter interpretation is formed on the personal standard that the family has set for itself in assessing its income adequacy. These personal standards may be derived from socio/cultural norms, personality traits acquired early in childhood, or other motives (Katona, 1964). It is not uncommon to discover that a certain level of income that is adequate as determined by objective standards may not be perceived as adequate by family members. What is perceived as adequate by one family may not be considered as adequate
by other family or even by members within a given family. Inconsistency in the meanings of perceived income adequacy has led some researchers to consider a wide range of variables in measurement.

A few researchers have investigated the subject by measuring income adequacy as perceived by the family. Metzen and Helmick (1975) considered the contribution to family income of secondary workers and devised a measurement to assess the impact of such earnings on the family's income adequacy. This appraisal was based on the needs of the family and family composition. Moen (1980) expressed concern about the measurement of income adequacy. He recommended that a variety of indicators of family well-being was needed to measure financial problems, although he supported the idea that inadequacy or adequacy of family income was based on the needs as related to income.

In a study of the financial problems of urban families, Williams, Nall, and Deck (1976) examined financial problems in relation to a family income index which is a measure of income adequacy based on the cost of food for a family considering its size, sex, and age composition. The results of this study revealed that financial problems were associated with well-being, both perceived and objectively measured. Perceived adequacy of income was related to an income index that was the objective measure of well-being. Families that perceived their incomes to be more adequate had fewer and less frequent financial problems. How adequate income is perceived seems critical, since such perception may affect the behavior of individuals within the family in its use and adaptations to financial changes.
Financial problems basically arise when the demands on income outstrip the money supply. Demands on family income are related to several family attributes, particularly the stage of the family life cycle. The highest demands on family income usually occur during the expanding stage of the cycle which normally encompasses a period of about 20 years (Gross, Crandall, & Knoll, 1980). Other family attributes related to income include size of the household and sex and ages of its members. At any rate, if income falls short in comparison to increasing demands, money problems will occur.

Another factor corresponding with the demand on money income as noted by Duesenberry (1949) are the attempts people make to emulate their neighbors even when their income is restricted. This circumstance results from constant bombardment and pressures by society on the family with regard to what society think is an acceptable standard of living. These societal pressures may cause people to be dissatisfied with what they have. If people perceive that they are falling behind a lifestyle to which they feel entitled, they may tend to perceive their income as inadequate and infer that they have financial problems.

Rozier (1973) conducted a study on the relationship between fluctuations and financial problems of selected families in disadvantaged north central urban areas. The data for analysis were from the North Central Region Project (NC-90) entitled "Factors Affecting Patterns of Living of Disadvantaged Families" and came from 554 randomly selected homemakers in designated urban areas. In that study, low, steady-income families more frequently experienced
financial problems with food, rent, utilities, equipment repair, and clothing than did families in the low fluctuating-income group. Rozier (1973) reported that these families had significantly fewer problems in saving and had higher marital satisfaction scores when they perceived their income to be more adequate. High fluctuating-income families had financial problems more frequently than did high steady-income families, except as they perceived their incomes to be more adequate. However, high steady-income families were twice as likely to have their perceived adequacy of income positively correlated to their income index as were those with fluctuating incomes.

Perception of income adequacy may vary among families depending upon their income, education, and occupation classified as socio-economic variables as well as family composition. Age, family size, sex, and stage of family life cycle may affect the perceptions of income adequacy.

Adequacy of income and how it may be perceived tends to be affected as well by the demand on income from family members. For example, income that is considered as adequate for two may not be sufficient for three or more people. The demands of family members vary as age varies. Teenage demands for recreational activities and basic needs such as clothing and food increases demand for more money income.

Besides family composition, occupation of the head of the household or major breadwinner determines the size of income and also tends to affect its variability and dependability. Some jobs do not insure dependable income because such income varies from time to time
and may not be received by the earner on a regular basis. If persons have a job that cannot yield predictable income, their perceptions of their income adequacy will likely differ from others who receive regular income and who know how much they will be receiving.

The amount of income alone does not explain all of the variance in perceived income adequacy. Gross, Crandall, and Knoll (1980) mention additional factors. These include the change that occurs in real income as a result of a change in the prices of consumer goods and services. Inflation causes the price of consumer goods and services to increase and consequently lowers the purchasing power of the dollar. Changes in taxes will also affect the amount of disposable money income. Alterations in social policy, in turn, will influence the types and amount of consumer purchases. Additionally, payments received by the family, including benefits, purchasing practices, and proper management of money income may likewise explain the variance in perceived and absolute income adequacy. It is also postulated that as a person's education level rises, expectations in life also increase and if income does not rise as expected, it may not be regarded as adequate.

Perceptions of income adequacy may vary among families depending upon their standard of living, place of residence and time. Price of goods and services may differ from place to place, including variations between urban and rural areas. Since the cost of goods and services varies over a period of time, income that was once considered as adequate may not be so regarded at a later date. A
family's values and practices also determine the perception of income adequacy.

Katona (1960) argued that people will never consider their income adequate if they continue to raise their aspirations for assets or goods. The components that constitute the "good life" in the United States include more and more. Those who want to live in this affluent society have to earn more to keep pace (Katona, 1960). Each family has a standard of living which it regards as essential. This standard is determined to a great extent by the family's social status and its environment.

Standard of Living

Rice (1981, p. 242) defined standard of living as an ideal or desired norms of consumption usually defined in terms of quantity and quality of goods and services. Some investigators have utilized three slightly different definitions. The first is a typological standard of living which refers to the type of behavior which most adequately expressed the dominant values found in the associated manner of living. It is the type of behavior common to those who successfully represent the habits and the values of the given group.

According to Rice (1981, p. 242), the scientific standard of living is the ideal level of expenditures set up by social scientists as a means to a sanctioned social end, that is, as a means to removal of poverty. This form of the concept differentiates between plane of living (what people actually consume) and standard of living (what
those who attempt to reform society consider the theoretical level of living. An example of the latter would be the examinations of what will happen in terms of living efficiency if the family regulates its expenditures according to a scientifically determined budget that is planned with reference to efficiency.

The third approach is the attitudinal standard, that is, a standard of living that is wanted: the attitudes which govern spending rather than the actual consumption of goods and services (Zimmerman, 1936). Kyrk (1953) defines standard of living as the things which one insists upon having. Davis (1945) made a distinction between standard and level of living. Davis (1945) defines standard of living as the plane or content of living which an individual or group earnestly seeks and strives to attain, to maintain attained, to preserve if threatened, and to regain if lost (Davis, 1945, p. 10).

Reid (1938) defined a standard of living as the sum total of things that families consider essential as revealed through expenditures, status of housing, and numerous possessions. The standard of living in this sense is the result of economic behavior of the group and is more closely related to plane of living. A plane of living represents the purely economic aspects of standard of living. It is the materially measurable form of the standard of living, the goods and services actually consumed (Hoyt, 1938).

This standard of living is the quantity and quality of goods and services that an individual or group desires, while the level of living refers to the goods and services currently achieved (Davis, 1945). Desired and actual living level may have different relations
to motivations and perceptions of economic well-being. For many families, especially those in low income categories, a gap between what they have and what they consider adequate can be different, while those who have higher income levels have greater resources available to maintain their desired standard of living even when current income changes in a negative direction. Families then engage in different activities to attain or maintain their present level of living or for that matter, their standard of consumption.

Consumption

Economics has made several significant contributions to understanding consumer behavior. First, it explains product choices under ideal conditions. Second, economics has been instrumental in emphasizing the importance of income on the ability of consumers to buy. The consumption function assumes all consumption to be a result of income. Economics, by means of demand analysis, stresses the importance of price on the quantity of any product purchased. Although economics provides a take-off point for the analysis of consumer behavior by shedding light on how consumers act in the market place, this analysis of how consumers act leaves essentially unanswered the question of why they act that way. One may not get complete answers to these questions, but in order to satisfy consumers, a deeper understanding of their needs, motives, personality, and awareness is needed (Walters, 1978). In this study, consumption means the commodities, their uses, and services consumed as defined by Davis (1945). The
quantity and quality of the consumption among many other factors may be influenced by the financial condition and/or economic conditions of the family. Real consumption may also include the use of household-produced goods and services.

Davis (1945) stated that consumption includes having available, as well as using, free goods of nature and public goods that are utilized without charge, and self-service and mutual service, in addition to purchased commodities and services and the use of semi-durable and durable goods owned or rented. Consumption can be affected by production since goods and service to be used is based on availability of these goods. The level of production depends on resources that are available.

Kyrk (1953) defined the level of consumption as an aggregate of the food, fuel, and other nondurables, clothing, and other durable and semidurable goods utilized, and the human services used by an individual or group over a given period of time. According to this definition, commodities and services in use actually comprise a level of consumption (Davis, 1945). The level of consumption is then influenced by changing consumption standards. According to Davis, the consumption standard is the consumption level that is earnestly desired and eagerly striven for, in respect to quantities and qualities of goods consumed or wanted for consumption. In order to fulfill the desired wants, income and resources must be available.

Consumption is also explained by Samuelson (1971) as the use of a good and service purchased or exchanged to satisfy the needs and wants of the public. According to this definition, use of family resources
is determined by wants, needs, attitudes, customs, and habits which lead to consumption of goods and services. Consumption is determined by standards which include values and income. Consumption behavior is influenced by the level of income and the general environment in which the consumer operates.

Inadequacy of income prevents the quantity wanted, desired, or needed by consumers which may affect their satisfaction and happiness, since the available income is not enough to purchase what families would like to have. Some of the factors that enable human beings to consume are identified as purchasing power, time, energy, and the capacity to make selection or choice making. The consumer has to have sufficient money to buy goods and services desired and wanted (Eastwood, 1984). Since economists make distinctions between wants and needs, these concepts are discussed next.

Needs

A need is defined as any physical or emotional requirement. In a sense, it is a lack of something useful, required, or desired for any reason. Many theorists have studied human needs, but one expert who has been referred too often is Maslow (1954). He identified individual needs in ascending order of importance. The first level of basic needs is those that are biological in nature, which he termed "physiological needs." The second is "safety needs," i.e., security and release from anxiety aroused by threats of various kinds. The third is "social needs," which includes the needs to love and be loved, to belong and to be accepted by others. The fourth is the
"esteem needs" which includes "both self-esteem from mastery and confidence in one's worth, adequacy and capacities, and esteem from social approval." And the highest in the hierarchy of needs is the "need for self-actualization through creative self-expression in personal and social achievements, and to understand one's world (Maslow, 1954, pp. 18-19).

Economists often refer to need as any human requirement or ability upon which human performance and efficiency depends (Walters, 1978). A need is described as a basic (absolutely necessary) body requirement without which life cannot be sustained. Thus, need would mean basic food, shelter, affection, and esteem. Economists make a distinction between needs and wants. A want refers to any unnecessary requirement; it is a requirement only because of anticipated pleasure and not because it is necessary for sustenance. Walters (1978) pointed out that consumers have unlimited needs and wants and that consumers attempt to satisfy needs. However, because of limited resources such as income, money, etc., consumers are not always able to satisfy their needs and wants.

How an individual translates his/her needs and then evaluates the extent to which his/her income is sufficient to purchase the "needed" goods and services may determine how he/she perceives its adequacy. A person who perceives the income as inadequate may evaluate the priority of needs and may purchase goods and services that are absolutely necessary for the family and reduce purchase of other items. Therefore, the concept "needs" seems to be important in this study to understand the coping behavior of the family to economic changes.
When problems arise as a result of an inadequate income, families have to solve their problems by reevaluating their hierarchy of values and needs and consider possible alternatives. This reevaluation process could lead to economizing behaviors such as cutting back consumption or seeking other means of increasing finances or increasing their efficiency of consumption.

Economic Changes and Employment

Often, economic change is associated with unemployment and recessions. Larson (1984) collected data from 41 unemployed and 40 employed couples on the effect of unemployment upon marital stability. His findings indicated that the unemployed did not have significantly lower feelings of self-esteem but did report significantly lower marital adjustment, poor marital communication, and lower satisfaction and harmony in family relationship. Traditional marital role expectations such as the husband as a breadwinner had an additional negative effect on marital and family life.

In a similar study, Little (1976) discovered that middle class families adapt to unemployment better than lower class families because of their financial reserves and a good credit rating. The fact that many middle class males frequently have a spouse who can find a job to supplement the family income during a crisis contributes to an easier adaptation to the personal dilemma of unemployment.

The duration of joblessness and who in the family is unemployed may affect the family life. Hayghe (1979) found that, while nearly
one in four husband-wife families were touched by unemployment in 1977, only one family member was jobless at any given time in most cases. When the wife or adolescent child is unemployed, the husband is usually working full time, so the financial costs of unemployment are not devastating. When the husband is laid off, on the other hand, the wife's employment and that of older children can become essential to make ends meet. The employment of wives contributed, on the average, 26 percent of the family income (U.S. Department of Commerce, 1985). Less than 2 percent of two-earner families report incomes falling below the poverty level (Hayghe, 1979). Those two-income families who are in poverty tend to have earners working fewer hours than those in nonpoor families. Families with a second earner clearly are better able to adapt to economic loss than single-earner families (Moen et al., 1983).

Employment of wives

Research has been conducted comparing employed wives and housewives concerning who are the happiest with their lives, in general, and with their marriages, in particular. In a review of studies conducted during the 1950s and 1960s, Burke and Weir (1976) concluded that housewives were slightly happier, satisfied, and adjusted in their marriages than were working wives. However, Blood (1964) pointed out that the unhappiness of working wives and families was not only because of employment, but the conflict was over difficulties encountered in the management of household duties and child care.

Several recent studies refute the "happy housewife" findings as
they have found that working wives are happier in their overall rating of life satisfaction and marital satisfaction. Birnbaum (1971) and Yogevs (1982) revealed more marital happiness, more sharing and enjoyment, and more satisfaction among dual income families. When the marital happiness of professional women was compared with that of educated housewives, Birnbaum (1971) found that a higher proportion of professional women said that they were happily married compared to educated housewives. Similar results were reported by Polma and Garland (1971) when all the female subjects in dual career couples expressed greater satisfaction in being able to combine marriage and career. Gross and Arvey (1977) also indicated the importance of wives' employment of the family. Employment often is now seen as advantageous because higher wages mean better income to the family as well as provide more financial security in time of economic uncertainty.

Economic Changes and Marital Relationship

Burgess and Locke (1953) have discussed the relationship between marital stability and perceived income adequacy. They contend that in spite of the increase in the per capita income in the United States in comparison to that of other countries, the major cause of marital conflict in this country is still over money (p. 293). Family stability tends to be associated among other things with the economic position of the family, and more importantly, with how this economic position is perceived by the family. This is revealed by the higher divorce
rate among lower class families than among the upper class (Goode, 1956, 1962).

Some researchers, however, tend to believe that there are underlying reasons aside from money matters that cause family conflicts and that money problems have been used as a "safety valve" in marital arguments (Feldman, 1957). Goode (1951) adds that there may exist some "personality problems." He found that an inverse relationship existed between economic status and marital stability. Economic factors do have an impact on divorce and possibly on marital conflict but Goode claimed that their effect was interactional in character and not one of simple direct causation. Low income families do have higher divorce rates. Failure to fulfill economic roles may also affect the personality of individuals which could strain a marital relationship.

Feldman (1957) noted that while money may precipitate quarrels between married couples, the real problems could be emotional in nature. Those with a more "stable personality" and a stable relationship will not let financial difficulties outweigh other areas in marriage. Couples who have difficulties in other areas tend to be more vulnerable in their marital relationship when faced with a financial strain. Similarly, Rosenblatt and Keller (1983), in the study of farm couples, revealed that couples with greater economic vulnerability reported greater economic distress, and couples who reported greater economic distress also reported greater blaming in the marriage. This study also suggested the importance of counseling services for families during economic distress. Feldman (1957) also indicated
that money not only possesses an instrumental value as a means for securing goods and services, but it also possesses a symbolic meaning such as love, security, achievement, power, and prestige. Without money, one tends to feel deprived and useless.

Hafstrom and Dunsing (1973) found in their study of disadvantaged and nondisadvantaged families that marital satisfaction was highly correlated with the satisfaction level of the respondents' level of income. The higher the income, the greater the marital satisfaction reported. Williams (1974) also discovered high correlations between marital satisfaction and perceived income adequacy in a study conducted with southeast Iowa homemakers. It is the security and the stability of income rather than the amount of income which is often related to marital satisfaction.

When income is reasonably stable, couples can readily adjust their expenditures and expectations accordingly. But a sudden and unexpected reduction in income may undermine this balance. Heavy income loss disrupts household budgeting by creating a gap between customary expectations about control over preferred outcomes and adaptive resources.

Elder and Liker (1983), in a study of economic hardship and marital relations in the 1930s, indicated that not all families were equally prepared to manage and cope, and expectations of simple linear relations between income loss and marital tension may not be realistic. But, the strength of the marital relationship before income loss is worth a consideration. Results of the longitudinal study conducted by Elder and Liker (1983), concluded that: 1) heavy income loss
during the early 1930s increased financial disputes which substantially raised the tension levels in marriages; 2) heavy income loss weakened marital relations by increasing the personal instability of men; 3) and both effects were most pronounced among families with minimal coping resources before the Depression. Marital relationships were damaged because husbands became worrisome, unstable, and explosive. This effect was not observed among wives. The Elder and Liker study also revealed that marital relations grew more tense as couples were forced to adapt to a much lower income. Marital quality was more likely to be diminished by economic pressures when marital relations were weak before hard times. Personal resources and economic stress interacted in ways that directly influenced the marriage bond. Negative changes in family income altered marital relations through negative interaction patterns on financial matters.

Crisis

A family crisis is any situation in which the family is not familiar with applicable mores and folkways (Cavan, 1953). Habitual roles are inadequate; interaction becomes confused; goals seem unattainable; and the family is unable to carry out its normal functions. To the individual family, almost any event may be a crisis, if the family does not anticipate the event, has no patterns for adjustment, and lacks the resourcefulness and adaptability to invent new patterns of behavior and modification of roles to enable the family to function.

In contrast, when members of a family understand in advance how
a given crisis will affect them and know how families in the past have adjusted, they are able to plan how to meet a crisis. When family members realize that certain actions are necessary, they will make certain readjustments in terms of the resources that are available to them. Hansen and Hill (1964) state that a given event may or may not produce a family crisis. Whether it does will depend on at least three variables: the hardships involved in the situation, or event itself; the resources of the family, that is, its role structure, flexibility, and previous experience with crisis; the definition the family attaches to the event, that is, whether the family regards the events as if it is or is not a threat to status, goals, and objectives.

Hill (1949) suggests that the family may define a crisis on the basis of various influences including: 1) the nature of the event or intrusive force, 2) the degree of hardship or kinds of problems the stress creates, 3) the resources or weaknesses available to the source of the crisis, and 4) the family's past experience with other crises, particularly with those of a similar nature. This could mean that the perception of crisis may vary from one family to the other and also among members of the same family.

**Stress**

Stress may be defined in its medical sense as "essentially the rate of the wear and tear caused by life" (Selye, 1956, p. 8). It is a vaguely understood phenomenon encompassing subjective sensation of "just being tired," feeling jittery or generally ill. It has both physical and emotional causes. Stress comes in part from environmental
factors that are sensed but that cannot be stated in medical terms (Darling, 1966, p. 656). Emotional changes in life circumstances, no matter whether good or bad, have an impact on the biological organism and make it more susceptible to disease.

Hansen and Hill (1964) list the sources of stress. Some stresses originate from within and others from outside the family. Some arise from nature, from the social community or from family members themselves. Crises that result from stress such as economic depression or unemployment are beyond an individual family's control.

Hansen and Hill (1964) emphasize that to fully understand families under stress, researchers should look beyond individual families or individual persons toward an understanding of personality and community. Adjustment to stressful situations including economic crisis may depend on the personality and the perception of the situation.

Gross, Crandall, and Knoll (1980) define adjusting as changing a planned standard or procedure to increase the chance of a desired result. These authors list four categories of adjustment: 1) making little or no change; 2) rearranging procedures related to a pre-determined goal, plan, or standard; 3) changing the standard, that is, accepting a lower standard or establishing a higher standard; or 4) shifting the underlying goal. Families who experience income as well as other financial changes may engage in one or more of these adjustments.

Families make decisions under stress, strain, or in normal circumstances through the process of communication, by sharing ideas and making
decisions on family issues such as financial matters (Deacon & Firebaugh, 1981). The decision-making may be effectively carried out if, through the process of interaction, information is sought, ideas shared and discussed, and some form of control over finances and division of labor is implemented by members of a family. To satisfy wants and desires, and to reduce stress, certain decisions are inevitable. Decisions involve making choices by weighing alternatives, setting priorities and consequently, choosing an action that will satisfy the most urgent need at that point in time. It is through the process of interaction that families understand the needs of its members and attempt to reduce stress and tension under given situations.

Financial hardship and stress outcome

Financial hardship frequently results from the unemployment of family earners, bankruptcy, closing down of businesses, loss of income from farming, and related factors. The extent of hardship has been defined as an income level insufficient to meet family needs, and economic depreciation that is the loss of at least 30 percent of the income earned before unemployment (Elder, 1974; Moen, 1980). These hardships may occur independently of each other; both are related to patterns of family functioning (Elder, 1974).

Sudden unpredictable unemployment and economic loss have devastating effects on individuals and families. Such occurrences introduce a set of stressors into an individual's life situation and family system with little opportunity for either psychological or financial preparation.
Research on unemployment since the 1930s reveals effects on the mental and physical health of individuals and on family relationships and stability (Angell, 1936; Moen, 1979, 1980). Many studies show a strong relationship over several decades between unemployment rates and indicators of mental and physical health, including state mental hospitals admission, suicide, homicide, total mortality (Brenner, 1973). More qualitative research indicates less severe psychological effects such as lowered self-esteem, anxiety, and psycho-physiological distress (Cohn, 1978; Voydanoff, 1983).

When a company lays off workers or closes a facility, the problems encountered by families may be severe. Besides the income loss, when a family member becomes unemployed and spends substantially more time at home, family routines are disrupted and tensions may increase. The psychological effects on the unemployed lead to strain and concern among other family members including children (Voydanoff, 1983).

Coping mechanisms such as shifting the family work effort from the unemployed member to other family members is effective in coping with reduced financial resources. However, stress in family relationships can result if either the unemployed or other family members feel resentment or if it appears that the unemployed has failed as a provider. Besides financial resources and managerial activities, other resources such as family integration and family adaptability are considered in family stress literature as resources that need consideration during financial hardship (Angell, 1936; Cavan, 1953).

Family integration refers to the bonds of coherence and unity running through family life, of which common interests, affection,
and a sense of economic interdependence are perhaps the most prominent (Angell, 1936, p. 16). This concept is similar to Parad and Caplan's (1960), "need-response pattern," which describes the way in which the family as a group proceeds, respects, and satisfies the basic needs of its individual members.

According to Angell (1936), family integration or unity was of great importance in carrying the family through depression. When common interests, affection, and sense of economic interdependence were present, the family showed a strong defense against disorganization. The omission of any of these elements from family life tended to weaken the stability of the family. Complementary roles of husband and wife also provided unity. The unified or integrated family withstood the effect of the depression better than the family that was disorganized and lacking in unity at the beginning of the period of unemployment. Angell's concept of family adaptability refers to the family's capacity to meet obstacles and shift course.

Koos (1946) and Cavan and Ranck (1938) specify some of the elements of "integration" as they focused on family organization. These two studies argued that a well-organized family would successfully resist formulation of crises. Well-organized families include agreement on role structure; subordination of personal ambitions to family goals, satisfaction with the family because it successfully meets the physical and emotional needs of its members; and perceive and share goals toward which the family is moving collectively. The family is inadequately organized and likely to experience stress if any of these factors are missing (Hansen & Hill, 1964). Stress occurs because economic
changes seriously disrupt customary ways of living and behaving, producing a new and painful disjuncture between family claims and the resources with which to achieve these claims. Stress is conceptualized as a reaction to a situation or situations in which demands made upon the family exceeds its resources.

Effective financial management may help families in reducing some of the tensions. However, handling financial resources is often stressful for families and is a major source of family disagreements (Feldman, 1957; Voydanoff, 1983). Working together as a family to manage limited resources effectively is an important coping mechanism both for practical purposes and as a means of maintaining family cohesion. A consistent strategy for budgeting and bill paying is crucial for the efficient management of limited resources. Since the present study focuses on the effect of economic changes on families and how families cope with these changes, the following section will include a brief discussion on economizing behavior which is the major dependent variable.

Economizing Behavior

Economizing behavior in this study refers to the decision made by families in terms of consumption, purchase, and process of adaptations and adjustment made when faced with change in family income. Economizing behavior may be an adaptation to economic change.

Economizing is making the most frugal use of resources to get the outcomes desired over a period of time. It involves using all
resources in appropriate combinations of selected items. Because scarcity of resources exists, economizing is an alternative process of gaining a desired goal or end. It also involves decision-making, choice, and selection of means appropriate for desired goal (Fitzsimmons and Williams, 1973). Economizing may be considered as cost minimization in achieving a given level of satisfaction.

Economizing includes choosing goods which are more durable and deliver satisfaction over a period of time if in all other respects, the want-satisfying power of these goods are equal to those of any other alternative. When resources are few, the family will choose goods and services that are lower priced and search for items that could substitute. According to Fitzsimmons and Williams (1973), the ultimate purpose of economizing is to maximize utility (satisfaction) and to obtain desired goals considering resources that are available. When a negative financial change occurs, a family may also engage in more home production activities to compensate for the shortage of goods. Within economic theory, the purpose of economizing is to make efficient use of resources in order to achieve goals which lead to satisfaction and happiness.

Efficiency is used to describe activities in the use of resources to obtain ends in the family economy. It involves using resources in such a way as to obtain the maximum of return or output for input or resources applied. Efficiency is a microeconomic concept that indicates a relationship of input to output. Inputs are purchasing power time, energy, effort, materials, and outputs are satisfaction and happiness (Fitzsimmons and Williams, 1973). Efficient use of limited resources leads to
satisfaction. Increasing the supply of resources or reducing the demand on resources increases efficiency. Efficiency is a criterion to judge the outcome, that is, if maximum utility is obtained or not, while economizing is the process.

When families perceive their income to be inadequate, they find ways to avoid further money problems. Kyrk (1953) maintained that families will stretch the dollar through managerial skills, lower their standard of living, and supplement the income of the principal earner by seeking additional employment. The wife and children may have to work outside the home for pay. Families may also engage in such economizing behaviors as cutting down or reducing their expenditures in a number of consumption areas. Fergusson, Horwood, and Beauhair (1981), in a study of the measurement of family material well-being, illustrated that economizing behavior was correlated with assessments of financial difficulty as well as an analysis of income adequacy.

Adequate clothing, housing, and food are basic necessities. Since certain consumption levels are required to maintain feelings of dignity and self-worth, one might expect families to be affected by their ability or inability to consume goods and services. Cutright (1971) stated that family size and family disposable income affect the level of per member consumption within families. When disposable income is low due to changes in a family's economic environment, members may buy smaller quantities of food within limits or turn from customary purchases to lower priced substitutes. They may eat a greater proportion of their meals at home rather than dining out. They may defer purchases of durable goods such as equip-
ment and recreational items. These kinds of activities contribute to less money circulation according to Fitzsimmons and Williams (1973).

One may assume that when economic conditions are unfavorable, families are forced to consume less and to modify their shopping behavior by taking advantage of substitutions and by purchasing cheaper items. Katona (1960, 1974) argued that consumers are intelligent, well-informed, and possess many useful intuitive rules of thumb that determine their behavior. He maintained that the objective environment (income, assets, and opportunities) affects consumer attitudes and expectations and determines their behavior relating to demand and savings.

In order to understand the impact of economic change upon the shopping behavior of the family, Oumlil (1983) suggested that the best approach was to focus on consumer perceptions of the environment and how these perceptions are processed. Consumers interact constantly with the environment, striving to increase their chances of satisfaction. In order to confront daily situations, certain adaptive behavioral characteristics are required by each consumer or family.

Families can react to adverse economic situations by becoming a two income family, by working overtime or by changing how they spend their income. Some families are able to cope adequately with economic change while others have proven inadequate. Family structure, composition, and career stage are some of the reasons for differences in coping with economic changes. A family's past experiences and prospective financial circumstances as well as their perceptions and attitudes contribute to adaptation to change. Moen, Kain, and Elder
(1983) believed that what individuals brought to the experience of economic hardship in terms of personal values, assets, and liabilities affected their options in the face of misfortune and their appraisal of their situation.

The response of families to economic changes are influenced by the source and severity of economic deprivation as well as by the direct and indirect consequences of these changes. Economic deprivation is most commonly associated with job loss, cutbacks in hours worked, and in wage earning. Economic loss is also a consequence of an inflationary economy where earnings do not keep pace with the cost of living. Even when a family's financial resources do not suffer the anticipation of job or income loss may be as influential as actual deprivation in fostering internal family strains (Moen, Kain, & Elder, 1983).

Families respond to economic pressure by restructuring roles and resources and by reappraising both their present situation and prospects for the future (Moen et al., 1983). Families may adjust to economic changes by altering the family economy, by modifying family relationships, or by increasing the strains and tension felt by individual family members. Some of these alterations are adaptive coping strategies, while others such as drinking and violence may release pressure without improving the situation. According to Moen, Kain, and Elder (1983), coping behaviors take three forms: 1) eliminating or modifying problematic conditions; 2) reducing or controlling the meaning of these conditions; 3) or managing suffering and other emotional consequences. Changing the family economy can
be viewed as an effort to eliminate or modify the problem of economic hardship. Altering family relationships can become a way of controlling the effects of economic loss or managing their emotional consequences.

Changes in the family economy such as a wife's entry into the labor force may have direct implications for relationships within the family. The increased economic role of the wife changes the balance of power in marital roles. These shifts, in turn, may result in strains and conflict within the family unit and increased amounts of tension experienced by individual family members.

Family adaptations to economic change reflect a series of strategies, a process rather than a single act. The combination of adaptive strategies employed by families may represent the process by which the family unit attempts to regain control over desired outcomes. The family response to financial or economic change is itself a process with different adaptations being played out over time as family circumstances themselves change (Duncan, 1984).

Summary of the Literature Review

The literature review reveals that money and/or income perform a number of functions. These include providing a basis for value comparison, serving as a mechanism for exchanges with the general economy, acting as a claim against resource needs in the future, and functioning as a medium for making interchanges and transfers with government, institutions, private groups, and families. Money and/or income provides status and satisfaction.
Changes in financial condition affect how a family rates its economic condition and feelings of well-being in general (Winter, Bivens, & Morris, 1984). If change in financial condition is in a positive direction, it is assumed that the family will exhibit a sense of accomplishment. Such positive feelings may influence how families rate their level of life satisfaction. Families that express a negative change in their financial condition are expected to rate low satisfaction levels, although the perceptions among families and individuals may differ.

Since money income as observed by Kyrk (1953) was the gravest economic problem any family could confront, insufficiency limits activities and enjoyments and conditions the health, education, and association of all family members. Therefore, families strive to increase their money income by assuming additional jobs, allocating resources efficiently and by making wise decisions about how to spend and save. The decisions that family members make are seen as important in determining their satisfaction and happiness. The literature review also indicates the effect of the relationship between perceived income adequacy and the response patterns that families make to maintain certain standards of consumption and living. This review indicates the value attached to family income and efficient maintenance and allocation of income in families.

According to the review of the literature, changes in income, finances, and employment affect the family’s level of living and lifestyle. These are achieved through the use of resources as an input to attain goals. The literature on management in family living states
that goals, when identified, implemented, and achieved through managerial activities, contribute to the desired output, or level and style of living. A person's evaluation of the output affects the person's perceived overall life quality. The ability to achieve goals is determined, in part, by resource input which includes family income (Ackerman & Paolucci, 1983; Rettig and Bubolz, 1983).

The adequacy of income and perception of adequacy may vary from one family to the other. Similarly, the way in which families react or respond to economic changes, especially economic crises and unemployment differ. According to the literature, some families experience health problems, sleeplessness, nervousness, while others are able to cope with the changes without experiencing these symptoms.

The review reveals some of the factors that are related to economic change and its impact on consumption and level of living, as well as the impact of unemployment on the family. However, the literature on the influence of stress and on the relationship between symptoms of stress and economizing activities is very sparse. The present study may provide some explanation as to whether economic changes, reported income adequacy, and stress influences the economizing behavior or coping patterns of families. Based on the review of the literature, the microeconomic theory seems to be the appropriate approach to study the family behavior and coping pattern during families' economic changes. Therefore, in the following section, the conceptual framework for the present study will be examined. The model will be presented.
Conceptual Framework and Model

Theoretical background

The family as a unit collectively generates income and allocates consumption among its members (Eastwood, 1984). Each member has wants and needs and unless these needs are met, dissatisfaction will result. The family as a unit wants to maximize utility given resource as a constraint. The economic theory of utility (satisfaction) maximization attempts to provide an explanation and an understanding of consumer behavior. This theory suggests that consumers allocate their purchasing power so that the goods most important to them or judged to have the greatest utility are obtained first. It also assumes that consumers are able to arrange their wants in the order of importance from the most to least (Fitzsimmons and Williams, 1973).

The theory of consumer preferences which simply says that people rank their preferences grows out of the concept of utility maximization. Families make choices between goods based on available resources. According to consumer theory, a person is capable of rational behavior. He/She can make a choice by reasoning, such as asking questions, assembling information, weighing alternatives and taking action.

Economic theory states that needs and wants are unlimited but resources are limited. The family, therefore, makes decisions on the allocation of resources to meet individual family members' needs. The family evaluates the needs according to its priorities. Because of the limited resources, not all needs can be fully met. Economic decision-making in the family is often done by the adults especially
husband and wife. Within the decision-making process, interaction between family members takes place. Often, what seems to be the priority for one member of the family may not be the same for the other. Although all members of the family want to minimize cost and obtain a desired goal, conflict may emerge when what is considered a priority need by the other person is not seen as a priority of need by the other person. However, in the process of decision-making, a series of compromise is usually made considering the factors important to the decision such as availability of resources. Economic decisions attempt to maximize the achievement of given ends (goals, desires, interests, needs) through the careful use of available means, in a situation where not all ends can be fully achieved.

Conceptual Model

Based on the theoretical background and previous studies, the conceptual model (Figure 1) is presented to be tested. This study investigates the impact of economic change on reported income adequacy, symptoms of stress, and coping or economizing behavior of the family. In this study, reported change in total family income and reported change in overall financial condition are often referred to as changes in economic conditions which are the main independent variables.

The basic assumptions in the present study are that changes in economic conditions affect reported adequacy of family income, and that families experience symptoms of stress such as lack of sleep, and minor health problems. Finally, changes in economic conditions, reported income adequacy, and symptoms of stress may influence families’ economizing behavior as a means of coping.
Figure 1. Factors related to family economic changes, reported income adequacy, symptoms of stress and economizing behavior.
Hypotheses

1) Reported change in family income is explained by age, employment status, family size, and income.
2) Reported change in overall family financial condition is explained by age, employment status, family size, and income.
3) There is a positive relationship between the total family income and reported change in overall financial condition.
4) Reported family income adequacy is explained by age, employment status, family size, and income.
5) Family symptoms of stress is explained by age, employment status, family size, and income.
6) There is a positive relationship between total family income and reported family income adequacy.
7) There is a positive relationship between reported change in overall financial condition and reported family income adequacy.
8) There is a negative relationship between family symptoms of stress and reported change in overall financial condition and reported income adequacy.
9) Economizing behavior is negatively related to reported change in overall financial condition and reported income adequacy but positively related with family's symptoms of stress.
CHAPTER 3. METHOD AND PROCEDURE

The main purposes of this study are to investigate the effect of change in economic condition on families in the middle years in nine states of the North Central Region during the recession of 1979-1982; to examine the relationship between economic change, reported income adequacy, occurrence of stress symptoms and economizing behavior. Change in family economic condition refers to reported change in total family income and reported change in overall financial condition over three years. Five demographic and socioeconomic variables are used as control variables: age of wife, employment status of husband and wife, family size, and family income before taxes for 1982.

Source of Data

The data set used in the present research is the result of a nine-state regional project on stress, coping and adaptation during the middle years. States involved in the project include Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Missouri, and Nebraska. The data reported here are from the first of two waves planned in the panel design of the project and were gathered in the spring of 1982.

The sampling unit parameters were (1) intact families, (2) wife aged 35-54 and (3) a child present in the home. Although the desired age of wife was 35-54, the range of actual ages was 24-72. This study included only those aged 35-54. The sample was randomly selected from a list provided for each state by a commercial marketing firm.
The response rate, which varied somewhat from state-to-state, was 30-35 percent. The state data files were merged into a master system file using the Statistical Package for the Social Sciences (SPSS, Inc., 1983). The total regional data set includes information from 1896 families.

For this study, only families who are married and who had at least one child living at home, wife's age between 35 to 54 and those who had a total family income of less than $150,000 were included. Cases were dropped if the total family income had extremely out of range values. The resulting sample consisted of 1236 families. However, only 880 valid cases were included in the regression analysis. The families' total income before taxes was the average of the response given by husband and wife. Family symptomology was the total score obtained for both husband and wife as well as for the children who live at home or those who do not live at home but receive 50 percent support from their parents.

The average age of the wife is 44 and the average education of both husband and wife is 13 years. Reported changes in income, overall financial condition and adequacy of income are derived from the responses of both husband and wife. Since there is general assumption that the wife does shopping for the family more than the husband, responses of wives were used for the economizing variables.
Operational Measures of the Variables

Economizing behavior

This variable consisted of 18 items related to coping activities in terms of consumption of family and the efficient use of resources available to families. The question was stated as follows: "People have different ways of coping with economic changes, and we would like to know how you have coped with your financial condition. For each item listed, indicate how you have changed over the past years."

Economizing behavior is composed of the following coping activities.

- use of store/product coupons
- send for refunds
- grow fruits/vegetables
- freeze/can food
- shop at food co-op
- wear "hand-down" clothing
- sew for self/family
- shop garage/rummage sales
- mend clothing
- use self-serve gas in car
- service/repair own car
- repair shoes instead of buying new ones
- pay certain bills first
- take advantage of sales/specials
- call long-distance at cheaper rates
- write letters instead of phoning
The responses ranged from 1 to 7. (See Appendix A for original questionnaire.) For this study, however, the responses were recoded on a five-point scale as follows:

have not done = system missing
-2 = a lot less
-1 = less
0 = no change or "can't do any more than have been doing"
1 = more
2 = a lot more.

Family stress outcome (symptoms)

One measure of stress level outcome is used in the present study. The outcome of family symptomology is measured by the Family Health Status Inventory, developed by Norem and Brown (1983), and includes both physical and emotional symptoms of all family members. Husbands and wives were asked to respond to each of 12 symptom items for themselves and their family members, indicating to what extent each symptom is experienced by each individual. The self-reports of husbands' and wives' for themselves are included, as well as the wives' assessment of child symptoms. A family score was constructed by adding the husband's and wife's score plus the scores for each child as reported by the wife. In order to get a better estimate of the reported symptoms of a child in relation to economic change and economizing behavior, a decision was made to include only those children who live at home.
and/or those who do not live at home but receive 50 percent or more support from their parents. These are the children still dependent largely on parental family resources. The size of the family thus includes only children with this status. The score for each symptom is divided by family size before adding all symptoms to create a total family score. In the present study, seven of the 12 symptom items are used. The symptoms include sleeplessness, accident, irritability, depression, headaches, muscle tension, and difficulty in relaxing. Since symptoms such as smoking, use of alcohol and use of drugs may not be applicable to young children, these were not included in family symptomology or stress outcome (Radloff, 1977; Molgaard, 1985). The mean size of the family for this study is 3.7.

Reported income adequacy

The main intervening variable in this study is the respondents' assessment of adequacy of income. This question was stated as follows: "To what extent do you think your income today is enough for you to live on?" It was coded:

1 = can't buy some necessities
2 = can meet necessities
3 = can afford some of the things we want but not all we want
4 = can afford about everything we want
5 = can afford about everything we want and have some left over.
Independent variables

The two main independent variables in the present study are reported change in family income and reported change in overall financial condition. These two variables are sometimes referred to in this study as change in economic conditions. Respondents were given six choices and were asked to indicate the best response that described any changes in total family income over the past years (for details, see Appendix A for questionnaire). For the purpose of this study, it was recoded as follows:

1 = decreased more than 25%
2 = decreased 5 to 25%
3 = changed less than 5% (plus or minus), or fluctuated up and down over the 3 years
4 = increased 5 to 25%
5 = increased more than 25%.

Reported change in overall financial condition: respondents were asked to describe any change in overall financial condition over the past three years. This included what they owned, owed, earned, were able to buy, etc. The responses were coded as follows:

1 = much worse
2 = worse
3 = same
4 = better
5 = much better.

The change in income and change in overall financial condition are the results of responses obtained from both husband and wife.
Demographic and socioeconomic variables

Five demographic and socioeconomic variables were identified and used as control variables based on the review of the literature. These are age of the wife, employment status of the wife and husband, family size, and total family income before taxes.

Husbands and wives reported their dates of birth. In order to get their actual ages, the date of birth was subtracted from 1982, the year the data were collected. The size of the family was computed by adding the number of children and parents (both husband and wife). Employment of wife was coded as follows:

0 = unemployed
1 = employed part time
2 = employed full time.

Homemakers, retired, in school, disabled, and other unpaid workers were coded as 0.

Family income was the total family income for all members of the family before taxes for 1982. This included all sources of income such as earned income, investments, social security, self-employment, own business, job-related benefits, welfare benefits, etc. If the family had a farm or had its own business, the net farm or net business income before taxes was included. In order to obtain better estimate of family income, husband and wife's responses were used. When both husband and wife responded to family income, the sum of the two responses were divided by two; when only one of them responded, the income was divided by one; and when both did not respond, it was coded as missing; and where they indicated income as
0 or none, this was coded as 0. Since some out of the range values were observed in the frequencies, in order to reduce the outliers, only cases where family income was less than $150,000 were included. The mean for the total family income was $36,500, with standard deviation of $20,700 and median family income of $33,000. The distribution of income is shown in Appendix B. The median family income for this sample is high compared to the nation's median family income for married couples of $30,000 in 1983 (U.S. Department of Commerce, 1984a). Questionnaires were coded in the state which provided the data, but the final cleaning of the data was done in the Department of Family Environment at Iowa State University.

The Statistical Analysis

The data were analyzed by using the SPSSX statistical package. Frequencies, percentages, mean scores, modes and standard deviation were computed for all the variables in this study. Out of range values were recoded to missing. Since the economizing activities are composed of several items, reliability scores were computed. Items which comprised the economizing variables were selected based on the literature review.

In order to detect any curvilinear relationships, cross-tabulations were done. Pearson product moment correlations were computed on all the variables. Since the main problem of multiple regression is the high correlation that might occur among the exogenous variables, it was necessary to examine intercorrelations between these variables to determine possible multicollinearity. In the family
studies literature, the correlation greater than \((r > .50)\) is considered moderate (Felson & Knoke, 1974; Call & Otto, 1977; Lincoln, 1978) and severe multicollinearity \((r > .75)\). The presence of interaction effect between change in total family income and change in total financial condition was examined.

The present study uses a causal model in which economic changes such as change in total family income and change in overall family financial condition are seen as causes of reported income adequacy. Changes in economic conditions and reported income adequacy influence stress outcome and that changes in economic conditions, reported income adequacy and stress outcomes influence families' economizing activities or coping behavior.

Path analysis is often used to study patterns of causation among a set of variables. Path analysis is a technique that helps to detect the direct, indirect and total effect of variables hypothesized as causes of variables treated as effects. The path coefficient indicates the amount of expected change in the dependent variable as a result of a unit change in the independent variables (Pedhazur, 1982). The path coefficient is standardized regression coefficient "Betas" obtained in the regression analysis.

A total effect tells how much change in a consequent variable is induced by a given shift in an antecedent variable, irrespective of the mechanisms by which the change may occur (Alwin & Hauser, 1975).

Indirect effects are those parts of a variable's total effect which are transmitted or mediated by variables specified as intervening between the cause and effect of interest in the model. Indirect effects
tell how much of a given effect occurs because the manipulation of antecedent variables leads to changes in other variables which in turn change the consequent variables (Alwin & Hauser, 1975), and the direct effect of one variable on another is that part of its total effect which is not transmitted via intervening variables. It is the effect which remains when intervening variables have been held constant. In this study, the direct and indirect effects were examined to ascertain whether the model's predictive variables exert influence through the intervening variables.

Limitation of the Study

Since the original purpose of the North Central Regional project on stress in families in their middle years (NC-164) was designed primarily for purposes other than that of the present study, some relevant data were not available.

The result of the study may be generalized only to families with wives between the ages of 35 to 54 and those who have at least one child living at home. Although each state was expected to use a similar code book and code variables accordingly, one may not rule out some coding errors that could have occurred, especially with open-ended questions such as total family income.

It was noted that the questions related to symptoms of stress for children were not clear. The questions do not state whether the reported symptoms were for all children or for those who lived at home. However, an attempt was made in this study to relate reported
symptoms of a child only for those children who lived at home or for those children who did not live at home but who received 50 percent support from their parents.
CHAPTER 4. FINDINGS

The results of the analyses are presented in this chapter. These results reflect data that include only married couples, families who have at least one child living at home, wives between the age of 35 to 54, and those families whose total family income before taxes was less than $150,000. The families that met the above criteria totaled 1,236. Of these, 880 cases responded to all the variables, as a result, the listwise regression analyses include 880 cases. This chapter includes very brief background information on the variables.

The main findings are based on the results of the regression analysis. The discussion of predictors will be limited to those that are significant at the 0.05 level.

Background Information on the Variables

In order to detect the presence of multicollinearity, Pearson product moment correlations were computed on all the variables (Table 1). The intercorrelations between the background variables were examined. None of the correlations between the exogenous variables in this analysis were greater than .43. Therefore, multicollinearity was not considered to be a potential problem since Pedhauzer (1982) suggests that multicollinearity is often a problem when the correlation between exogenous variables are greater than .70.

The results of the frequencies indicate that the mean age of the wife was 44, and the standardized deviation was 7.49. The employment for both husband and wife was coded from 0 to 2, where zero
<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age of wife</td>
<td>1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Employment of wife</td>
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<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Employment of husband</td>
<td></td>
<td></td>
<td></td>
<td>-.305**</td>
<td>.015</td>
<td>1</td>
<td></td>
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<tr>
<td>4. Size of family</td>
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<td></td>
<td></td>
<td>-.430**</td>
<td>-.087*</td>
<td>.193**</td>
<td>1</td>
<td></td>
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<tr>
<td>5. Family income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.172**</td>
<td>.124**</td>
<td>.119**</td>
<td>-.083*</td>
<td>1</td>
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<td>6. Reported changes in income</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>-.078*</td>
<td>.096**</td>
<td>.270**</td>
<td>-.035</td>
<td>.326**</td>
</tr>
<tr>
<td>7. Reported changes in overall financial condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.023</td>
<td>.068*</td>
<td>.182**</td>
<td>-.079*</td>
</tr>
<tr>
<td>8. Reported income adequacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.144**</td>
<td>.096**</td>
<td>.118*</td>
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<td>9. Symptoms of stress</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.101**</td>
<td>-.016</td>
</tr>
<tr>
<td>10. Economizing behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.071*</td>
</tr>
</tbody>
</table>

*Significant at 0.01 level.

**Significant at 0.001 level.
stands for unemployed, 1 as part-time employed and 2 for full-time employment. One-third of the wives were unemployed outside the home, 27 percent had part-time employment, while 40 percent were employed full-time. The mean for employment for the wife was 1.07 with a standard deviation of .85. Almost 82 percent of husbands were employed full-time, 11 percent worked part-time, and only 7 percent were unemployed. The mean for husband employment status was 1.74 and the standard deviation was .58.

The mean size of the family was 3.7 and the standard deviation was 1.2. The mean for the total family income before taxes for the year 1982 was $36,500 with the standard deviation of $20,700. The reported change in income, change in overall financial condition and reported income adequacy were the responses from both husbands and wives. The scores range from 2 to 10. The mean score for the reported change in income was 6.76 and the standard deviation was 1.98. The mean for reported change for overall financial condition was 6.22 and the standard deviation was 1.78, while the mean for the reported income adequacy was 6.7 and the standard deviation was 1.57.

Family stress outcome or symptoms was the total score for the family. Since the score for each symptom was divided by the size of the family, the scores range from 0 to 18.50. The mean score for the family symptoms of stress was 3.56 and the standard deviation was 2.37. The frequency distribution of symptomology scores is shown in Appendix C.

The economizing behavior was a scale comprised of 18 items. The items were selected and a reliability test was done. The coefficient of reliability alpha was .84. The scores for the economizing
activities range from -1.27 to 2. The coding technique was discussed in Chapter 3. The mean score for the economizing activities was .477 and the standard deviation was .419.

Results of the Analyses

Reported change in income

The standardized regression coefficients of independent variables that were significant at the 0.05 level were: age of wife, employment of husband, size of family, and family income. These results are shown in Table 2.

The standardized regression coefficient for family income was .31, which was the strongest predictor of reported change in income. This indicates that families who are in a high income category reported a positive change in income, while those in low income categories reported a decrease in income.

Employment of husband was significantly related to reported change in income with a standardized regression coefficient of .22, indicating that families with husbands who were employed were more likely to report an increase in income while those with unemployed husbands reported a decrease in income. Although the direction of the relationship between reported change in income and employment of the wife was positive, the relationship was not statistically significant.

The size of the family was negatively related to reported change in income with a standardized regression coefficient of -.09. This finding was not surprising, since when there are more people in the family, a family needs more money to meet the needs of its members.
When the size of the family increases and income remains the same or decreases, a family feels the effect of these changes in their income. When the size of the family is reduced because children become independent and leave, the family may have more money because the expenses will be less.

The age of the wife was negatively related to reported change in income with a standardized regression coefficient of -.10. Perhaps the older wives experienced a decrease in income relative to younger families.

The $R^2$ for the regression of reported change in income on the exogenous variables was .17. This was significant ($p < .05$) and indicates that 17 percent of the variance in reported change in income was explained by the exogenous variables.

Table 2. Standardized regression coefficients when dependent variable is reported change in income

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Equation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of wife</td>
<td>-.103*</td>
</tr>
<tr>
<td>Employment of wife</td>
<td>.045</td>
</tr>
<tr>
<td>Employment of husband</td>
<td>.219*</td>
</tr>
<tr>
<td>Household size</td>
<td>-.093*</td>
</tr>
<tr>
<td>Family income</td>
<td>.305*</td>
</tr>
</tbody>
</table>

$R^2$ = .174*, $F$-ratio = 36.89*, $df$ = 5 & 874, Path residual = 0.908

*Significant at 0.05 level.
Reported change in overall financial condition

When reported change in overall financial condition was regressed on socioeconomic and demographic variables, employment of husband, size of family and total family income were significant (Table 3). The standardized regression coefficient was .15 for husbands' employment status, -.12 for size of family and .26 for family income. The $R^2$ for the regression of reported overall financial condition on exogenous variables was .11.

When change in overall financial condition was regressed on exogenous variables and reported change in income, family income, size of the family and reported change in income were significantly related to change in overall financial condition.

The families that had a higher income reported positive changes in overall financial condition over a three-year period, while those in lower income categories reported changes in overall financial condition to be worse. The standardized regression coefficient was .08.

The size of the family was negatively related to a reported change in overall financial condition. The standardized regression coefficient was -.06. Larger families need more finances and when family finances decrease while the size of family remains constant or increase, a reduction in finances may be reported since the money that is available may not meet the demands of family members.

Reported change in income was the strongest predictor of change in the overall financial condition of families. The standardized regression coefficient was .61. This finding is not surprising,
since there was a significant high correlation between change in income and change in the overall financial condition and changes in income have logical consequences for overall financial condition.

It was surprising that the employment status of husband and wife were not significant with the reported change in the overall financial condition of families when reported change in income was included in the regression. However, the effects of employment on income and financial condition may be more direct and measurable.

The $R^2$ for the regression of reported change on the overall change in financial condition on reported change in income and the exogenous variables was .42 ($p < .05$). Thus, 42 percent of variance in the reported change in the overall financial condition was explained by the other variables in the equation.

Table 3. Standardized regression coefficients when reported changes in overall financial condition is dependent variable

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Equation 1</th>
<th>Equation 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of wife</td>
<td>-.071</td>
<td>-.008</td>
</tr>
<tr>
<td>Employment of wife</td>
<td>.022</td>
<td>-.005</td>
</tr>
<tr>
<td>Employment of husband</td>
<td>.151*</td>
<td>.018</td>
</tr>
<tr>
<td>Family size</td>
<td>-.115*</td>
<td>-.058*</td>
</tr>
<tr>
<td>Family income</td>
<td>.261*</td>
<td>.076*</td>
</tr>
<tr>
<td>Reported change in income</td>
<td>—</td>
<td>.607*</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.115*</td>
<td>.417*</td>
</tr>
<tr>
<td>F-ratio</td>
<td>22.16*</td>
<td>104.12*</td>
</tr>
<tr>
<td>df</td>
<td>5 &amp; 874</td>
<td>6 &amp; 873</td>
</tr>
<tr>
<td>Path residual</td>
<td>0.941</td>
<td>0.763</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level.
Reported income adequacy

Significant predictors of reported income adequacy were: age of wife, size of family, total family income, reported change in income, and reported change in the overall financial condition (Table 4).

There was a strong relationship between reported income adequacy and reported change in the overall financial condition, with a positive standardized regression coefficient of .44. Families that had reported the change in their overall financial condition to be better tended also to report that their income was adequate for the family. Families who reported the change in overall financial condition as worse also reported worsening of their income adequacy.

Family income was the next strongest predictor of reported income adequacy. The standardized regression coefficient was .23. This positive relationship means that families in a high income category tended to report their income to be adequate, while those families in a low income category reported their income to be less adequate.

Reported change in income was significantly related to reported income adequacy, with a standardized regression coefficient of .07. This finding supports the hypothesis that families who reported a positive change in income also tend to report their income to be adequate. Those who reported a negative change in income tended to perceive their income to be less adequate.

The size of family was negatively related to reported income adequacy with a standardized regression coefficient of -.09. Larger families tended to report income to be inadequate.
Age of the wife was positively related to reported income adequacy with the standardized regression coefficient of .09. It seems that families with older wives reported their income to be adequate, while families with younger wives reported their income to be less adequate. The age of wife in this study ranged from 35 to 54, and it is possible that the younger wives may have less income; therefore, these families might find the income to be less adequate for family needs.

The lack of significant relationship between employment status for both husband and wife was interesting. Although a significant relationship was observed when reported income adequacy was regressed on only exogenous variables with a standardized coefficient of .12, this relationship disappeared when reported change in income and reported change in the overall financial condition were included in the regression equation. When reported adequacy of income was regressed on demographic and socioeconomic variables, the $R^2$ was .20. But, the addition of change in income to the equation increased the $R^2$ to .30. And in the final equation, when reported change in overall financial condition was included in the regression equation, the $R^2$ was .41 ($p < .05$), indicating 41 percent of the variance in reported income adequacy was explained by these variables in the model.
### Table 4. Standardized regression coefficients when reported income adequacy is dependent variable

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Equation 1</th>
<th>Equation 2</th>
<th>Equation 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of wife</td>
<td>.055</td>
<td>.091*</td>
<td>.094*</td>
</tr>
<tr>
<td>Employment of wife</td>
<td>.035</td>
<td>.020</td>
<td>.022</td>
</tr>
<tr>
<td>Employment of husband</td>
<td>.119*</td>
<td>.044</td>
<td>.036</td>
</tr>
<tr>
<td>Size of family</td>
<td>-.145*</td>
<td>-.113*</td>
<td>-.088*</td>
</tr>
<tr>
<td>Family income</td>
<td>.365*</td>
<td>.265*</td>
<td>.230*</td>
</tr>
<tr>
<td>Reported change in income</td>
<td>-</td>
<td>.341*</td>
<td>.074*</td>
</tr>
<tr>
<td>Reported change in financial condition</td>
<td>-</td>
<td>-</td>
<td>.438*</td>
</tr>
</tbody>
</table>

R²: .200* .297* .409*
F-ratio: 43.97* 61.39* 86.08*
df: 5 & 874 6 & 873 7 & 872
Path residual: 0.894 0.838 0.768

*Significant at 0.05 level.

**Family symptoms (stress outcome)**

The family health status inventory (Norem & Brown, 1983) was used to measure the family symptomology. The self-reports of individual symptoms of both husbands and wives are included as well as the wives' assessment of symptoms of dependent children.

When families' symptoms were regressed on demographic and socioeconomic variables, the R² was .08, and the size of the family was the only significant variable predicting families' symptoms of stress (Table 5). When reported change in income entered the regression equation, the R² was only .088 (p < .05) but individual standardized regression coefficient indicated that size of family with -.30 and reported change in income with -.10 were significant. When change in overall financial condition was added to the equation, the R² did not increase much.
R² was .09 (p < .05) and size of family was the only associated variable significant with family symptoms of stress.

In the final regression, reported income adequacy was included. Significant predictors of family stress outcome were: size of family and reported income adequacy. There was a strong relationship between size of family and family stress outcome with a standardized regression coefficient of -.31. This finding is interesting because it seems that the larger the size of the family, the less the family stress outcome was reported. It may be that the presence of children in the home serves some kind of stress-moderating function. These results from the present study run contrary to findings from a body of research which suggests that larger families experience more stress. However, the study conducted by Molgaard (1985) supports findings similar to those in this study.

Reported income adequacy was negatively related to symptoms of stress with standardized regression of -.11. This finding suggests that families who reported their income to be adequate experienced less stress while those who reported their income to be less adequate had more stress. This finding is in the expected direction. These findings also suggest that total family income, reported change in income, employment status, age of wife and reported change in overall financial condition may not directly contribute to feelings of stress. Rather, subjective estimates of income adequacy appear to be more salient in predicting families' symptoms of stress.
The $R^2$ for the regression of symptoms of stress on the exogenous variables were: reported change in income, overall financial condition and reported income adequacy was .10 ($p < .05$), indicating that 10 percent of the variance in the family symptoms was explained by these variables.

Table 5. Standardized regression coefficients when symptoms of stress is a dependent variable

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Equation 1</th>
<th>Equation 2</th>
<th>Equation 3</th>
<th>Equation 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of wife</td>
<td>-.012</td>
<td>-.023</td>
<td>-.023</td>
<td>-.014</td>
</tr>
<tr>
<td>Employment of wife</td>
<td>-.034</td>
<td>-.032</td>
<td>-.030</td>
<td>-.028</td>
</tr>
<tr>
<td>Employment of husband</td>
<td>.001</td>
<td>.024</td>
<td>.025</td>
<td>.029</td>
</tr>
<tr>
<td>Size of family</td>
<td>-.285*</td>
<td>-.295*</td>
<td>-.298*</td>
<td>-.308*</td>
</tr>
<tr>
<td>Family income</td>
<td>-.057</td>
<td>-.025</td>
<td>-.021</td>
<td>.004</td>
</tr>
<tr>
<td>Reported change in income</td>
<td>-</td>
<td>-.104*</td>
<td>-.067</td>
<td>-.059</td>
</tr>
<tr>
<td>Reported change in overall financial condition</td>
<td>-</td>
<td>-</td>
<td>-.061</td>
<td>-.015</td>
</tr>
<tr>
<td>Reported income adequacy</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.105*</td>
</tr>
</tbody>
</table>

$R^2$ .079* .088* .090* .098*  
F-ratio 15.01* 14.04* 12.34* 11.66*  
df 5 & 874 6 & 873 7 & 872 8 & 871  
Path residual 0.959 0.954 0.953 0.949

*Significant at 0.05 level.

Economizing behavior

Economizing behavior was significantly related to family income and employment of husband when regressed on demographic and socio-economic variables, with standardized regression coefficients of -.14 and -.08, respectively (Table 6). When reported change in income was entered in the regression model, economizing behavior was significantly associated with change in income, and total family income with standardized
regression coefficients of -.09 and -.17, respectively. But when change in overall financial condition was entered in the regression equation, its standardized equation ($\beta = -.23$) was significant and total family income continued to be a significant predictor ($\beta = -.07$). However, change in income no longer appeared as a significant explainer of economizing behavior. Regressing economizing behavior on demographic and socioeconomic variables reported change in income, overall financial condition and reported income adequacy resulted in $R^2$ of .11 ($p < .05$). Coefficients of -.16 for reported changes in overall financial condition and -.15 for reported income adequacy were significant.

The findings on the overall model indicate these significant predictors of economizing behavior, a form of coping behavior: reported change in overall financial condition (−) reported income adequacy (−) and symptoms of stress (+).

The strongest predictor of economizing behavior was reported change in overall financial condition with a standardized regression coefficient of -.16. This means families that experienced a reduction in overall financial condition (income as well as wealth) engaged in more economizing activities in order to cope with their financial difficulties than those families whose overall financial situation improved.

Reported income adequacy was also negatively related to economizing behavior, with a standardized regression coefficient of -.15. This finding is not unexpected since families who report their income to be inadequate have to find alternative ways to meet their needs. One way families cope when income seems to be inadequate appears to be by engaging in economizing activities.
Table 6. Standardized regression coefficients when economizing behavior is the dependent variable

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Equation 1</th>
<th>Equation 2</th>
<th>Equation 3</th>
<th>Equation 4</th>
<th>Equation 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of wife</td>
<td>-.051</td>
<td>-.068</td>
<td>-.070</td>
<td>-.056</td>
<td>-.055</td>
</tr>
<tr>
<td>Employment of wife</td>
<td>-.042</td>
<td>-.034</td>
<td>-.036</td>
<td>-.032</td>
<td>-.030</td>
</tr>
<tr>
<td>Employment of husband</td>
<td>-.080*</td>
<td>-.042</td>
<td>-.038</td>
<td>-.032</td>
<td>-.035</td>
</tr>
<tr>
<td>Size of family</td>
<td>.048</td>
<td>.031</td>
<td>.018</td>
<td>.005</td>
<td>.030</td>
</tr>
<tr>
<td>Family income</td>
<td>-.144*</td>
<td>-.091*</td>
<td>-.073*</td>
<td>-.038</td>
<td>-.038</td>
</tr>
<tr>
<td>Reported change in income</td>
<td>-</td>
<td>-.173*</td>
<td>-.033</td>
<td>-.023</td>
<td>-.017</td>
</tr>
<tr>
<td>Reported change in overall</td>
<td>-</td>
<td>-</td>
<td>-229*</td>
<td>-.162*</td>
<td>-.161*</td>
</tr>
<tr>
<td>financial condition</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.154*</td>
<td>-.146*</td>
</tr>
<tr>
<td>Reported income adequacy</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-1.050*</td>
<td>-0.800*</td>
</tr>
<tr>
<td>Symptoms of stress</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

R²: 0.040* 0.065* 0.095* 0.109* 0.115*
F-ratio: 7.28* 10.05* 13.12* 13.38* 12.58*
df: 5 & 874 6 & 873 7 & 872 8 & 871 9 & 870
Path residual: 0.979 0.966 0.951 0.943 0.940

*Significant at 0.05 level.
Figure 2. Path diagram of full model including wife's employment status

*Significant at the 0.05 level.
Symptoms of stress was significantly related to economizing behavior, with a standardized regression coefficient of .08. This suggests that families who experience stress also engage in more economizing activities while those with fewer symptoms of stress may do less economizing, possibly because the need to do so is less.

The $R^2$ for the overall regression equation with economizing behavior as the dependent variable was .12 ($p < .05$) indicating that 12 percent of the variance in economizing behavior was explained by variables in the equations. Figure 2 shows the path diagrams for the overall model.

Full Recursive Model, Wife's Employment Status Deleted

The variables included in this model were those that had significant path coefficients at least with one of the variables in the overall model. To determine if deleting the insignificant variable from the model was appropriate, the difference between the full recursive model including the wife's employment status and model without wife's employment status was analyzed. Although employment status of the husband was significant only with reported change in income, this was preserved in the model because it had a significant correlation with reported change in income.

The difference between the $R^2$ of the model with and without employment status was calculated for each equation. The standardized regression coefficients and $R^2$'s when employment status of wife was excluded are shown in Table 7. The calculated F-values were not
Table 7. Standardized regression coefficients when employment status of wife is excluded from the model (direct effect)

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Reported change in income</th>
<th>Reported change in overall financial condition</th>
<th>Reported income adequacy</th>
<th>Symptoms of stress</th>
<th>Economizing behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of wife</td>
<td>-.107*</td>
<td>-.007</td>
<td>.092*</td>
<td>-.011</td>
<td>-.052</td>
</tr>
<tr>
<td>Employment of husband</td>
<td>.219*</td>
<td>.018</td>
<td>.036</td>
<td>.029</td>
<td>-.034</td>
</tr>
<tr>
<td>Size of family</td>
<td>-.098*</td>
<td>-.058</td>
<td>-.090*</td>
<td>-.305*</td>
<td>.032</td>
</tr>
<tr>
<td>Family income</td>
<td>.310*</td>
<td>.076*</td>
<td>.233*</td>
<td>-.006</td>
<td>-.041</td>
</tr>
<tr>
<td>Reported change in income</td>
<td>-</td>
<td>.607*</td>
<td>.076*</td>
<td>-.067</td>
<td>-.019</td>
</tr>
<tr>
<td>Reported change in overall financial condition</td>
<td>-</td>
<td>-</td>
<td>.438</td>
<td>-.014</td>
<td>-.160*</td>
</tr>
<tr>
<td>Reported income adequacy</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.106*</td>
<td>-.147*</td>
</tr>
<tr>
<td>Symptoms of stress</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.081*</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.172*</td>
<td>.417*</td>
<td>.408*</td>
<td>.096*</td>
<td>.114*</td>
</tr>
<tr>
<td>F-ratio</td>
<td>45.54*</td>
<td>125.07*</td>
<td>100.34*</td>
<td>13.23*</td>
<td>14.05*</td>
</tr>
<tr>
<td>df</td>
<td>4 &amp; 875</td>
<td>5 &amp; 874</td>
<td>6 &amp; 873</td>
<td>7 &amp; 872</td>
<td>8 &amp; 871</td>
</tr>
<tr>
<td>Path residual</td>
<td>0.909</td>
<td>0.764</td>
<td>0.769</td>
<td>0.930</td>
<td>0.941</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level.
significant in any of the equations. Therefore, deleting the employment status of wife from the model seems to be appropriate since its presence has no effect on the endogenous variables. The path diagrams for the full recursive model without employment status of wife are shown in Figure 3.

**Indirect effect**

Total, direct, and indirect effects of the explanatory and intervening variable for the model with employment status of wife are shown in Table 8. The coefficients for indirect paths passing through change in income and reported change in the overall financial condition were significant for employment of husband, size of family, and total family income with standardized coefficients of .13, -.06 and .19, as shown in Table 8. These results are also the same when employment status of wife was deleted as shown in Table 9.

Reported change in income seems to be a strong intervening variable in explaining the relationship between reported income adequacy and employment of husband and total family income. The standardized path coefficients were .08 and .10, respectively. Reported change in overall financial condition was also a strong intervening variable with standardized regression coefficient of .27. Reported change in overall financial condition seems to be the strongest intervening variable in explaining the economizing behavior.

**Reduced model**

The variables included in the reduced model were only those that had significant path coefficients (Figure 3). The deletion of
Figure 3. Path diagram of full model without employment status of wife.
Table 8. Direct, indirect, and total effect of full model with wife's employment status

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Independent variables</th>
<th>Total effect</th>
<th>Indirect effect via</th>
<th>Direct effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Reported change in income</td>
<td>Reported change in financial condition</td>
<td>Reported change in income adequacy</td>
</tr>
<tr>
<td>Change in income</td>
<td>Age of wife</td>
<td>-.103</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Employment of wife</td>
<td>.045</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Employment of husband</td>
<td>.219</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Size of family</td>
<td>-.093</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Family income</td>
<td>.305</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Change in overall financial condition</td>
<td>Age of wife</td>
<td>-.071</td>
<td>-.063</td>
<td>-</td>
</tr>
<tr>
<td>Change in income adequacy</td>
<td>Age of wife</td>
<td>.055</td>
<td>-.036</td>
<td>-.003</td>
</tr>
<tr>
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<td>Employment of wife</td>
<td>.035</td>
<td>-.015</td>
<td>-.002</td>
</tr>
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<td>Employment of husband</td>
<td>.119</td>
<td>.075</td>
<td>.008</td>
</tr>
<tr>
<td></td>
<td>Size of family</td>
<td>-.145</td>
<td>-.032</td>
<td>-.025</td>
</tr>
<tr>
<td></td>
<td>Family income</td>
<td>.365</td>
<td>.102</td>
<td>.035</td>
</tr>
<tr>
<td></td>
<td>Reported change in income</td>
<td>.341</td>
<td>-</td>
<td>.267</td>
</tr>
<tr>
<td></td>
<td>Reported change in overall financial condition</td>
<td>.438</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Symptoms of stress</td>
<td>Age of wife</td>
<td>Employment of wife</td>
<td>Employment of husband</td>
<td>Size of family</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------</td>
<td>--------------------</td>
<td>-----------------------</td>
<td>---------------</td>
</tr>
<tr>
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<td>.011</td>
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<td>-.002</td>
<td>-.002</td>
<td>-.002</td>
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<td>-.001</td>
<td>-.004</td>
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<td>-.285</td>
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<td>.003</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>-.057</td>
<td>-.032</td>
<td>-.004</td>
<td>-.025</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Economizing behavior</th>
<th>Age of wife</th>
<th>Employment of wife</th>
<th>Employment of husband</th>
<th>Size of family</th>
<th>Family income</th>
<th>Reported change in income</th>
<th>Reported change in overall financial condition</th>
<th>Reported income adequacy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-.051</td>
<td>.017</td>
<td>.002</td>
<td>-.014</td>
<td>-.001</td>
<td>-.055</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-.042</td>
<td>-.008</td>
<td>.002</td>
<td>-.004</td>
<td>-.002</td>
<td>-.030</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>-.080</td>
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<td>-.004</td>
<td>-.006</td>
<td>.003</td>
<td>-.035</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>.048</td>
<td>.017</td>
<td>.013</td>
<td>.013</td>
<td>-.025</td>
<td>.030</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-.144</td>
<td>-.053</td>
<td>-.018</td>
<td>-.035</td>
<td>0</td>
<td>-.038</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level.
Table 9. Direct, indirect and total effects for model without employment status of wife

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Independent variables</th>
<th>Total effect</th>
<th>Indirect effect via</th>
<th>Direct effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reported change in income</td>
<td>Reported change in income</td>
<td>Reported income adequacy</td>
<td>Symptoms of stress</td>
</tr>
<tr>
<td>Age of wife</td>
<td>.107</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Employment of husband</td>
<td>.219</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Size of family</td>
<td>-.098</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Family income</td>
<td>.310</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age of wife</td>
<td>-.073</td>
<td>-.066</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Employment of husband</td>
<td>.151</td>
<td>.133</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Size of family</td>
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<td>-.059</td>
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<td>-</td>
</tr>
<tr>
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<tr>
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<tr>
<td>Age of wife</td>
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<tr>
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<td>Size of family</td>
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<tr>
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<td>Reported change in overall financial condition</td>
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<td>Age of wife</td>
<td>.009</td>
<td>.011</td>
<td>.001</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td>Employment of husband</td>
<td>.001</td>
<td>-.023</td>
<td>-.002</td>
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<tr>
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<td>Size of family</td>
<td>-.281</td>
<td>.011</td>
<td>.003</td>
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<td></td>
<td>Family income</td>
<td>-.061</td>
<td>-.032</td>
<td>-.005</td>
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<tr>
<td></td>
<td>Reported change in income</td>
<td>-.106</td>
<td>-</td>
<td>-.037</td>
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<td></td>
<td>Reported change in overall financial condition</td>
<td>-.061</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>Reported income adequacy</td>
<td>-.106</td>
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<td>Economizing behavior</td>
<td>Age of wife</td>
<td>-.047</td>
<td>-.019</td>
<td>-.001</td>
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<tr>
<td></td>
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<td>-.038</td>
<td>-.004</td>
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<tr>
<td></td>
<td>Size of family</td>
<td>.052</td>
<td>.017</td>
<td>.013</td>
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<tr>
<td></td>
<td>Family income</td>
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<td>.054</td>
<td>-.017</td>
</tr>
<tr>
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<td>-</td>
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<tr>
<td></td>
<td>Reported change in overall financial condition</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Reported income adequacy</td>
<td>-.156</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Symptoms of stress</td>
<td>.081</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

*Significant at 0.05 level.
paths reflects the hypotheses about certain variables not having direct effects on other variables. Such hypotheses are referred to as overidentifying restrictions (Pedhauzer, 1982). In the reduced model, all the paths that were not significant were set to zero; therefore, the regression equations include only significant paths as shown in Figure 4.

In order to assess if deleting the paths that are not significant from the model is appropriate, a goodness of fit test was performed by calculating the Chi-Square with degrees of freedom equal to the number of overidentifying restrictions. The calculation of the Chi-square is based on the residual path. The smaller the Chi-square, the better the model fits the data. The calculated Chi-square was 15.05 with 15 degrees of freedom. The null hypothesis is not rejected since Chi-square 17.32 has a probability of .30.

Interaction effects

A test for interaction effect was conducted by using the regression. Interaction between reported change in income and reported change in the overall financial condition was computed. Symptoms of stress and economizing behavior were regressed on the computed interacting variable and the rest of the variables in the model. The results indicate that there is no interaction effect between reported change in income and reported overall financial condition with symptoms of stress and economizing behavior.
Figure 4. Reduced path model with only paths significant in the full model, all other paths set equal to zero.
CHAPTER 5. DISCUSSION AND CONCLUSION

Purpose

The purpose of this study was to investigate the effect of change in economic conditions of families in their middle years in nine states of the North Central Region during the recession of 1979-1982; to examine the relationship between economic change, reported income adequacy, feeling of stress and economizing behavior; to examine if change in income, reported income adequacy influence a family's symptoms of stress. The demographic and socioeconomic variables were age of wife (35 to 54), employment status of wife and husband, total family income before taxes for 1982, and size of family.

The endogenous variables were reported change in income, reported change in overall financial condition of families over three years; reported income adequacy; a family's symptoms of stress, and coping or economizing behavior. Economizing behavior was a scale comprised of 18 items related to economizing activities; a family's symptoms of stress were the sum of the husbands' and wives' reported symptoms and the wives' report about their dependent children's symptoms. Reported change in income, overall financial condition, and income, overall financial condition, and income adequacy are the sum of the husbands' and wives' responses.
Data

Data for the analyses were obtained from the North Central Region project on stress, coping and adaptation during the middle years. The regional data set contains responses from both husband and wife from 1896 families. The data reported here are from the first of two waves planned in the panel design of the project and were gathered in the spring of 1982.

The sampling unit parameters were (1) intact families, (2) wife age 35-54, and (3) a child present in the home. For this study, only families that met the above three criteria as well as families with a total family income of less than $150,000 were included. These reduced the sample to 1236 families. However, 880 families were used in the listwise regression because cases where responses were missing for any of the variables were dropped.

Socioeconomic and demographic variables were used as control variables. Reported change in income and overall financial condition were used as independent variables. Reported income adequacy and symptoms of stress were influencing variables, while economizing behavior was the major dependent variable.

Major Findings

The hypothesis that reported change in a family's income is explained by age of wife, employment status of husband and wife, family size, and total family income was not rejected. The $R^2$ of .17 was significant and indicated that 17 percent of the variance in reported
change in income was explained by the exogenous variables. Employment of wife was the only control variable that was not significant at the 0.05 level.

The second hypothesis that a reported change in the overall financial condition of a family is explained by age of wife, employment status of husband and wife, family size and family income was supported. Except for age of wife and employment status of wife, significant relationships were observed for the rest of the variables. The $R^2$ was .11 ($p < .05$), indicating that 11 percent of the variance in reported change in overall financial condition was explained by the demographic and socioeconomic variables.

The third hypothesis that there is a positive relationship between total family income and reported change in overall financial condition was supported. The standardized regression coefficient was .08 which was significant. The $R^2$ was .42, an indication that 42 percent of the variation in change in overall financial condition was explained by the variables in the equation.

The fourth hypothesis that reported family income adequacy is explained by age of wife, employment status of husband and wife, family size and total family income was supported. The $R^2$ of .20 indicates 20 percent of the variation in reported income adequacy was explained by the exogenous variables. However, observation of individual standardized regression coefficients revealed that employment status of wife was not significant at the 0.05 level. Family income, with a standardized regression coefficient of .37, was strongly related to reported income adequacy.
The fifth hypothesis that family symptoms of stress is explained by age, employment status, family size, and income was supported. The $R^2$ was .08 ($p < .05$) meaning that 8 percent of the variance of symptoms of stress was explained by these variables. Examination of the standardized regression coefficients indicates that family size was the main significant variable that explained family symptoms with $\beta = -.29$.

The sixth hypothesis that there is a positive relationship between total family income and reported family income was not rejected. The standardized regression coefficient of .23 indicates a strong relationship.

The seventh hypothesis that there is a positive relationship between reported change in overall financial condition and reported family-income adequacy was supported. The standardized regression coefficient was .44. When reported change in overall financial condition entered the regression equation, the $R^2$ was .41, meaning that 41 percent of the variance in reported income adequacy was explained by the variables in the model.

The eighth hypothesis was that there is a negative relationship between family's symptoms of stress and overall financial condition and reported adequacy of income. The $R^2$ was .10 ($p < .05$) meaning that 10 percent of the variance in feeling of stress was explained by these variables. The hypothesis is not rejected. But, examination of the standardized regression coefficients indicates that symptoms of stress were significantly related to reported adequacy of income ($\beta = -.11$) but was not significant with a reported change in overall financial
condition ($\beta = -.02$). It seems that the subjective evaluation of adequacy of income contributes to stress more so than an actual reduction in overall financial condition.

The last hypothesis was that economizing behavior is negatively related to change in the overall financial condition of the family, reported income adequacy but positively related to family's symptoms of stress. The $R^2$ was .12 ($p < .05$); 12 percent of economizing behavior was explained by the variables in the equation. This hypothesis, therefore, was supported. The standardized regression coefficients of -.16 with reported change in the overall financial condition, -.15 with reported income adequacy and .08 with symptoms of stress were significant and indicate predictive relationships with economizing behavior. The family that experienced more stress engaged in economizing activities as a means of coping with economic change. Families which reported their income to be less adequate also engaged in economizing activities as did families who reported their financial condition had worsened.

Conclusions

One important conclusion in this study is that except for employment status, the demographic and socioeconomic variables were predictors of reported change in income, reported change in overall financial condition, and reported income adequacy.

Size of family was the only demographic variable that showed a strong relationship with symptoms of stress. Small families experienced more stress symptoms. None of the demographic and socio-
economic variables were directly significant with economizing behavior.

A strong relationship was observed between reported change in income and reported change in overall financial condition. Those who reported a decrease in income also reported that the family's financial condition deteriorated.

Reported income adequacy was strongly related to reported change in overall financial condition. Families who experienced a decrease in their finances also reported that their income was not adequate and those who experienced an increase in their finances also indicated that their income was adequate for the family. Reported income adequacy was also related to reported change in income; however, this relation was not very strong. It seems that it is not the change in income alone that influences a family's report of income adequacy. It is the financial change that affects the family's subjective reports of income adequacy.

Although one would expect that economic conditions such as a change in income and a change in overall financial condition would explain a family's experience of stress, this does not seem to be significant in this study. But, the income adequacy does explain the family symptomology. Since the present study includes only intact families who were in their middle years, perhaps it is not surprising that the economic changes were not significantly related to symptoms of stress since these families may have better income. Also, most of these families had wives who were employed outside of the home. Therefore, it is possible that these families had less stress related to
economic changes because 82 percent of the husbands were employed full-time and the mean family income was $36,500. Families who reported their income to be inadequate also had more symptoms of stress, while those who reported their income to be adequate signified fewer symptoms.

Economizing behavior was not significantly related to any of the demographic and socioeconomic variables. However, it was related to symptoms of stress, reported income adequacy and reported change in the overall financial condition.

Suggestions for Future Study

The present study examined intact families in their middle years with the ages of wives ranging from 35 to 54. Younger families and older families were not included. Since families in the sample parameters are often at their highest level of achievement, these families are probably better off than younger and older families during a recession or when changes in economic conditions occur. Younger and older families as well as single parent families should be studied in order to assess the impact of recession on these families.

The analyses in this study revealed that families with fewer members experienced more symptoms of stress. It would be of interest to examine why these families experienced such stress and, conversely, what it is about larger families that tends to ameliorate symptoms of stress.

The present study included family income before taxes for the
year 1982 only. The actual total family income over the three-year period (1979-1981) was not available, although the families' estimates of change in income were obtained. For the future, one should probably consider the total family income over a period of time in evaluating the impact of economic changes on families.

Implications

The present study indicated that families engage in economizing activities in order to cope with economic changes. Change in financial condition, reported adequacy of income and symptoms of stress explain family's engagement in economizing activities. Since economizing activities seem to be one way families cope with changes in economic conditions, it may be important to encourage families who are in deep financial problems to consider economizing activities in order to minimize family's expenses.

Symptoms of stress are related to economizing behavior. This finding suggests that as symptoms of stress increase, economizing activities also increase. It seems that for these families, economizing activities seem to be one way the family attempts to cope with stressful situations. Therefore, there is a need for financial counselors and family therapists to work together in helping families, especially during a recession or when families experience reduction in family economic situations.
REFERENCES


ACKNOWLEDGMENTS

I wish to express my sincere appreciation and thanks to my major professor, Dr. Gordon E. Bivens, for his guidance, interest, patience and encouragement which have helped me in many ways throughout my graduate program, particularly in the development of this dissertation. Without his support, I would not have been able to complete my graduate studies.

I wish to thank Dr. Fredrick Lorenz for helping me with the analysis of the data and his many valuable suggestions.

I wish to thank Dr. Irene Beavers who has been very helpful to me since I came to Iowa State University. She has helped me not only as a student but has also enabled me to cope with several crises.

I wish to express my appreciation to Dr. Tahira Hira for her valuable advice, support, and for playing a very special role in my life.

A special thanks is in order to Dr. Mary Winter for her support and pertinent advice, especially in the organization of the literature review.

I am also indebted to Dr. Craig Allen who assisted me with the data set and Ms. Letha DeMoss who diligently and competently typed this dissertation.

Last, but not least, to my sisters, Workinesh Deressa, Zeuditu Deressa, and Addis Alem Deressa, and to my wonderful husband, Arnie Cooper, I express my gratitude for their love and continuous encouragement.
We would like to have some background information about your family to help us in our study. Please fill in the following information about each member of your household, identifying each person by their relationship to you.

First, think about yourself.

Q1 Sex: M  F  Mo. & Yr. of Birth_________ Yrs. of School Completed_________
   (circle one) Marital Status_________ If Married, Mo. & Yr. of Marriage_________

Next, think about each of your children, starting with the oldest child. We will be asking questions about each of your children later in this questionnaire. Please make sure your answers are from oldest to youngest in each instance.

Q2 Birth Date  Yrs. of School Completed  Sex  Yr.  Living at Home (If NO) Date  % of Reason for Leaving Support

a. Child 1  M  F   

b. Child-2  M  F   

c. Child-3  M  F   

d. Child-4  M  F   

e. Child-5  M  F   

f. Child 6  M  F   

(Add on if necessary)
We're interested in the health of each member of your family. Please use the codes given below to indicate how often the following items apply to members of your family.

1 Never
2 Seldom
3 Sometimes
4 Frequently
5 Almost Always

For example, if child 1 smokes "frequently" and child 4 smokes "sometimes" and no one else in the family smokes, then you would answer:

```
smoked cigarettes, cigars, or pipe...... 1 4 1 1 3 1
```

Q18 How often have members of your family:

a. had trouble sleeping.
b. had accidents.
c. been irritable.
d. been depressed.
e. smoked cigarettes, cigars, or a pipe.
f. used prescription drugs.
g. had a weight problem.
h. used alcohol.
i. found it difficult to relax.
j. had headaches.
k. had muscle tension, nervous indigestion or anxiety.
l. had colds or flu.
To get an accurate financial picture of the families in our study, we need to know something about your family's work and income.

First, we would like some more information about your work:

Q21 Are you working for pay, either full-time or part-time?
   ___ Yes, employed full-time (35+ hours/week) or with a job but not at work at present because of temporary illness, vacation, or strike.
   ___ Yes, employed part-time (less than 35 hours/week)
   ___ Unemployed, laid off, looking for work
   ___ Full-time homemaker
   ___ Retired
   ___ In school
   ___ Disabled
   ___ Other (Please specify____________________)

Q24 Now, think about your total family income for 1982. This is total income before taxes for all members of your family, including yourself and your children. Be sure to include all sources of income; such as earned income, investments, social security, your own business, job-related benefits, welfare benefits, and so on. If your family farms or has its own business, indicate net farm or net business income before taxes.
   $________________________ (nearest $1,000)

Q25 In general, which of the following best describes any changes in your total family income over the past 3 years?
   a. increased more than 25%
   b. increased 5 to 25%
   c. changed less than 5% (plus or minus)
   d. decreased 5 to 25%
   e. decreased more than 25%
   f. fluctuated up and down over the 3 years.

Q26 To what extent do you think your income today is enough for you to live on?
   a. can't buy some necessities
   b. can meet necessities only
   c. can afford some of the things we want but not all we want
   d. can afford about everything we want
   e. can afford about everything we want and have some left over

Q27 Thinking about your family's overall financial condition -- what you own, owe, earn, are able to buy, and so on -- which of the following best describes any change in your overall financial condition over the past 3 years?
   a. much worse
   b. worse
   c. same (skip to Q29)
   d. better
   e. much better
People have different ways of coping with economic changes. In this section, we'd like to know how you have coped with your financial condition. For each item listed below, indicate how you have changed over the past 3 years.

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<thead>
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<th>Q31</th>
<th>Have Not Done</th>
<th>A Lot Less</th>
<th>Less Change</th>
<th>More</th>
<th>A Lot More</th>
<th>Can't do any more than have been doing</th>
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</thead>
<tbody>
<tr>
<td>a. Use store/product coupons</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>b. Send for refunds</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>c. Grow fruits/vegetables</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>d. Freeze/can food</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>e. Shop at food co-op</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>f. Wear &quot;hand-me-down&quot; clothing</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>g. Sew for self/family</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>h. Shop garage/rummage sales</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>i. Mend clothing</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>j. Repair shoes instead of buying new ones</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>k. Use self-serve gas in car</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>l. Service/repair own car</td>
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<td>m. Carpool</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>n. Exchange help with others (babysitting, repairs, clothing)</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<td>o. Buy on credit</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
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<td>p. Spend savings</td>
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<td>2</td>
<td>3</td>
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<td>6</td>
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<td>q. Pay certain bills first</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>r. Take advantage of sales/specials</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
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<tr>
<td>s. Call long-distance at cheaper rates</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
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<tr>
<td>t. Write letters instead of phoning</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>u. Make, not buy, gifts for others</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>v. Sell personal items (clothing, jewelry, furniture)</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>w. Do own yardwork</td>
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<td>2</td>
<td>3</td>
<td>4</td>
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APPENDIX B.

DISTRIBUTION OF TOTAL FAMILY INCOME BEFORE TAXES, N = 1236
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<th>Percent</th>
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<tr>
<td>18,751–37,500</td>
<td>46.8</td>
</tr>
<tr>
<td>37,501–56,250</td>
<td>27.7</td>
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<tr>
<td>56,251–75,000</td>
<td>7.3</td>
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<tr>
<td>75,001–93,750</td>
<td>1.9</td>
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<tr>
<td>93,751–112,500</td>
<td>1.1</td>
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<tr>
<td>112,501–131,250</td>
<td>0.3</td>
</tr>
<tr>
<td>131,251–150,000</td>
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APPENDIX C.

DISTRIBUTION OF SCORES OF FAMILY SYMPTOMS OF STRESS, N = 1236
<table>
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