

# Financial Stress and Absenteeism: An Empirically Derived Model

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*This paper examines the relationship between financial stress and absenteeism. A conceptual model was derived from a Health Promotion Model and empirically tested to investigate relationships among determinants (individual characteristics), stress (financial stress), physical and psychological responses (organizational commitment and health), and absenteeism. Using data from white-collar workers at an insurance company in three mid-western states, this research determined that financial stress was negatively related to organizational commitment and was positively associated with absenteeism. Employers might reduce employee absenteeism and improve organizational commitment by helping employees reduce financial stress through effective workplace financial education programs.*

**Key words:** *Financial stress, Absenteeism, Workplace, Financial Education*

## Introduction

Do financially troubled employees bring those concerns to work? Are financially troubled employees as productive as others? Twenty-seven percent of those responding to a recent survey conducted by the Los Angeles Times characterized their personal finances as shaky. Forty percent reported difficulty paying installment loans, car payments or insurance premiums (Atkinson, 2001). It is widely believed that many personal life stresses, such as marital, family, illness, and financial, influence an individual's psychological state and behavior at work (Families and Work Institute, 1997). Stress at work not only affects the individual but has also been estimated to cost American industry more than 100 billion dollars annually in absenteeism, productivity loss, and health-related expenses (Jacobson, Aldana, Goetzel, Vardell, Adams & Pietras, 1996; Rosch, 1984).

Employees who are suffering from stress at work are less likely to be productive. The three most common reasons for unscheduled absences are personal illness (33%), family issues (24%), and personal needs (21%). Stress as a reason for absenteeism has increased over 300 percent since 1995 (CCH Inc., 2002).

Financial stress is an important source of distress in people's lives because many fundamental activities of daily living and opportunities for success are closely tied to current levels of personal financial resources (Peirce, Frone, Russell & Cooper, 1996). Financial stress also affects family issues (Mills, Grasmick, Morgan & Wenk, 1992), personal health (Drentea & Lavrakas, 2000), and increases illness-related absenteeism (Hendrix, Steel & Schultz, 1987; Hendrix,

Spencer & Gibson, 1994; Ivancevich, Matteson & Preston, 1982; Jacobson, et al., 1996).

Brown (1993, 1999) reported that at least 10% of employees experience financial problems and bring those issues to work where it affects their productivity. In a study of both civilian and military research, Garman, Leech, and Grable (1996) calculated that 15% of employees in the United States are experiencing personal financial stress to the point that it negatively impacts their job productivity. Other more recent studies showed similar figures (Garman, Kim, Kratzer, Brunson & Joo, 1998; Joo, 1998).

Research also suggests a financial stress-absenteeism link. Joo and Garman (1998) found that a higher level of financial well-being was associated with less absenteeism. Bagwell (2000) and Garman, Camp, Kim, Bagwell, Baffi & Redican (1999) found that greater absenteeism was associated with poor financial management. Hendrix et al. (1987) and Jacobson et al. (1996) found that financial stress was one of the stressors that affects absenteeism. However, no research studies were identified that investigated the effects of financial stress on absenteeism within a comprehensive stress-based research framework. Sullivan and Bhagat (1992) suggested that the complexity of stress-related phenomenon could best be understood by casting variables in an interdisciplinary framework. The purpose of this research was to examine the effects of financial stress on psychological and physical responses, and absenteeism. A conceptual model was tested to investigate relationships among determinants (individual variables), stress (financial stress), physical and psychological responses

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(organizational commitment and health), and absenteeism.

### Literature Review

#### *Psychological and Physical Responses to Financial Stress*

Financial stress has been referred to by researchers as economic stress, economic hardship, economic strain, and economic pressure. Economic strain is an evaluation of current financial status such as perceived financial adequacy, financial concerns and worries, adjustments to changes in one's financial situation, and one's projected financial situation (Voydanoff, 1984).

Financial stress can induce physical and psychological responses. Financial stress affects individuals' health through physical impairments (Drentea & Lavrakas, 2000), drinking problems (Moos, Fenn, Billings & Moos, 1989; Peirce et al., 1996), depression, and reduced psychological well-being (Jackson, Iezzi & Lafreniere, 1997; Myvesta, 2001; Mills et al., 1992; Pearlin, Menaghan, Lieberman & Mullan, 1981; Ullah, 1990).

Drentea and Lavrakas (2000) found that individuals who reported higher levels of financial stress showed higher levels of physical impairment and illness than those with lower levels of financial stress. Credit counseling clients reported that their health was negatively affected by financial stress (Bagwell, 2000).

Responses to financial stress also include psychological factors. Jackson et al. (1997) examined the extent of emotional distress of individuals in chronic pain compared to healthy subjects. Perceived financial security was a significant predictor of emotional distress in both chronic pain and healthy samples. Mills et al. (1992) studied the effects of gender, family satisfaction, and economic strain on psychological well-being among married people. They found that the effect of economic strain on psychological well-being was the same for males and females regardless of employment status. Ullah (1990) studied the association between income, financial strain and psychological well-being among unemployed youths. He found that financial stress influences psychological well-being and also mediates the effect of income on mental health.

Workers' financial stress also leads to psychological responses such as organizational commitment and job satisfaction in the workplace. Organizational commitment is defined as the relative strength of an individual's identification with and involvement in a particular employing organization that is characterized by three factors: (1) a strong belief in and acceptance of the organization's goals and values, (2) a willingness

to exert considerable effort on behalf of the organization, and (3) a strong desire to maintain membership in the organization (Mowday, Steers & Porter, 1979). Job or life stress affects organizational commitment (Hendrix et al., 1987; Ivancevich & Matteson, 1980). Kim (1999) found a negative relationship between financial stress and organizational commitment.

#### *Absenteeism*

Absenteeism has long been a major human relations problem for managers and supervisors. It is defined as non-attendance of an employee from scheduled work. Absenteeism is expensive for employers because in many instances replacement workers must be hired and, of course, some work simply does not get accomplished as scheduled.

In a survey conducted by Aon Consulting (1998), employees missed workdays because of stress, personal matters, caring for a sick child, no available day care, caring for elderly dependents, time spent at work on personal matters, and employee sickness. The survey concluded that the total amount of missed time due to personal reasons and sickness averages 6% of pay, almost as much as the time taken for vacations/holidays.

It has been estimated that genuine sickness accounts for between half and two-thirds of absences from work (Huczynski & Fitzpatrick, 1989). Recent data show that calling in "sick" has more to do with reasons other than a worker's own physical health. According to the 2002 CCH Unscheduled Absence Survey, the average percentage of unscheduled absences at U.S. organizations was 2.1% in 2002, while the average per employee cost for unscheduled absences rose from \$610 in 2000 to \$789 in 2002 (CCH Inc., 2002). Although personal illness was the single most common reason cited for unscheduled absences, at 33%, reasons other than illness accounted for 67%. Among the other reasons, family issues account for 24%, personal needs for 21%, stress for 12%, and an entitlement mentality accounted for 10%.

Absenteeism has received a lot of attention in scholarly research (Harrison, 1998). A number of theories and models have attempted to explain absenteeism. The Steers and Rhodes model (1978, 1984) is the most cited example. The Steers and Rhodes model (1978) introduced a conceptual model for employee attendance. Various studies found that attendance was directly influenced by both employee motivation to attend and the ability to come to work. Attendance motivation was indirectly affected by pressure to attend and the job situation, including such factors as

economic conditions, incentives, work group norms, personal work ethic, and organizational commitment. Personal characteristics, such as education, tenure, age, gender, and family size, indirectly affect one's ability to attend work. Ability to attend work variables included illness and accidents, family responsibilities, and transportation problems.

A study conducted by Brooke and Price (1989) tested a causal model of absenteeism. They included direct inputs of health-related and organizational constructs associated with absenteeism. The empirical model offered the following as determinants of absenteeism: routinization, centralization, pay, distributive justice, work involvement, role ambiguity, conflict and overload, kinship responsibility, organizational permissiveness, job satisfaction, job involvement, organizational commitment, health status, and alcohol involvement. Results indicated that of these variables, kinship responsibility, organizational permissiveness, role ambiguity, alcohol involvement, negative direct effects of centralization, pay, and job satisfaction had direct effects on absenteeism. Job satisfaction mediated the effects of routinization, work involvement, centralization, and role ambiguity.

The Health Promotion Models (Hendrix et al., 1987; Ivancevich & Matteson, 1980) included organizational commitment as one of the psychological responses that affect absenteeism. Psychological factors have an effect on individuals' behaviors such as absenteeism, performance, and turnover. The model included stress and individuals' health on organizational outcomes to evaluate various health promotion interventions on organizational outcomes such as absenteeism and productivity.

#### *Financial Stress and Absenteeism*

Stress influences absenteeism (Hendrix et al., 1987; Ivancevich & Matteson, 1980). The literature has suggested that over 70% of all job absenteeism is tied to stress-related illness (Adams, 1987). Researchers have focused on two major areas, occupational stress and life stress related to absenteeism (Tang & Hammontree, 1992). Jacobson et al. (1996) found significant relationships between high stress and absenteeism, and female workers reported higher stress levels and absenteeism than men.

A few studies have linked personal finances to absenteeism (Bagwell, 2000; Hendrix et al., 1987; Joo, 1998). Bagwell (2000) and Joo (1998) found that financial well-being was negatively related to absenteeism. Jacobson et al. (1996) ascertained that personal finances were one of the highest stress sources for employees and the strongest stress-related

predictors of absenteeism were health, legal, social, and financial problems. These studies suggest some relationship between financial stress and employee absenteeism, but they did not explore any research models dealing with other stress-related variables and absenteeism.

Some studies have provided a framework for stress-absenteeism research (Hendrix et al., 1987; Hendrix et al., 1994; Ivancevich & Matteson, 1980). Hendrix et al. (1987) found that workers' financial problems had a direct effect on sick leave as well as an indirect effect through life stress. Hendrix et al. (1994) found that, for female workers, financial problems affect absenteeism directly and indirectly through emotional exhaustion. These studies included financial problems as one source of life stress, health problems, and absenteeism, but the studies did not explore other potential effects of financial stress on psychological responses at the workplace such as organizational commitment or job satisfaction.

Absenteeism models (Brooke & Price, 1989; Guerts, Schufeli & Rutte, 1999; Hendrix et al., 1987; Steers & Rhodes, 1978; 1984) have often included organizational commitment as a mediating variable to predict absenteeism. Sagie (1998) measured voluntary and involuntary absences using data from self-reports and personal records. He found that organizational commitment and job satisfaction were strongly related to voluntary absence, but not to involuntary absence. One study found that financial stress was negatively related to organizational commitment (Kim, 1999).

There is a need to include important variables such as physical and psychological responses to financial stress in order to understand the dynamics of the financial stress-absenteeism relationship. This research develops a conceptual model of the relationship of financial stress and absenteeism which is empirically tested.

#### **Research Model**

A conceptual model (Figure 1) was developed to predict the relationship between financial stress and absenteeism. The Health Promotion Model provides the basic framework of determinants, stress, stress responses, and consequences to explain absenteeism. The Health Promotion Model (Hendrix et al., 1987; Ivancevich & Matteson, 1980; Iverson, Olekalns & Erwin, 1998) includes stress and health related determinants, job and life stress, stress responses and organizational consequences. Stress responses are psychological factors (e.g., job satisfaction, organizational commitment, anxiety, and depression) and physiological factors (e.g., somatic symptoms).

These psychological and physiological factors have effects on an individual's behaviors such as turnover, job performance and absenteeism.

Financial stress was included as stress and determinants related to financial stress and responses were identified. Stress was hypothesized to influence psychological and physical stress responses, health and organizational commitment. The determinants in the model are individual variables, such as gender, education, age, and household income. These individual variables are often included in stress, absenteeism, and financial stress models (Brooke, 1986; Hayhoe & Wilhelm, 1998; Porter 1990; Steers & Rhodes, 1978, 1984).

Stress related to personal finances is perceived to be one of the most influential sources of psychological stress because many basic life activities are associated with personal financial resources and their management (Peirce et al., 1996). Subjective perception of personal finances has been a measure of financial stress (Fox & Chancey, 1998; Mills et al., 1992; Ullah, 1990).

Organizational commitment and health are stress responses. Organizational commitment is defined as an employee's psychological response to stress at work (Hendrix et al., 1987). Financial stress plays a role in explaining both organizational commitment and health, and leads to subsequent absenteeism. Organizational commitment has been suggested as a key factor influencing absenteeism (Brooke, 1986; Geurts et al., 1999; Steers & Rhodes, 1978, Hendrix et al., 1987). Organizational commitment was also related to employee financial satisfaction (Kim, 1999). Health, as a physical response to financial stress, influences absenteeism (Hendrix et al., 1987; Joo, 1998). Health has been negatively affected by financial stress

(Drentea & Lavrakas, 2000, Hendrix et al., 1994; Peirce, Frone, Russell & Cooper, 1994) and been cited as a predictor of absenteeism in absenteeism models (Hendrix et al., 1987; Steers & Rhodes, 1978, 1984).

Absenteeism as a consequence is influenced by determinants, stress, and stress responses. Stress has been implicated as a factor of absenteeism and attitude toward work (Kirchemeyer & Cohen, 1999; Ivancevich et al., 1982). In this model, financial stress has direct and indirect effects on absenteeism.

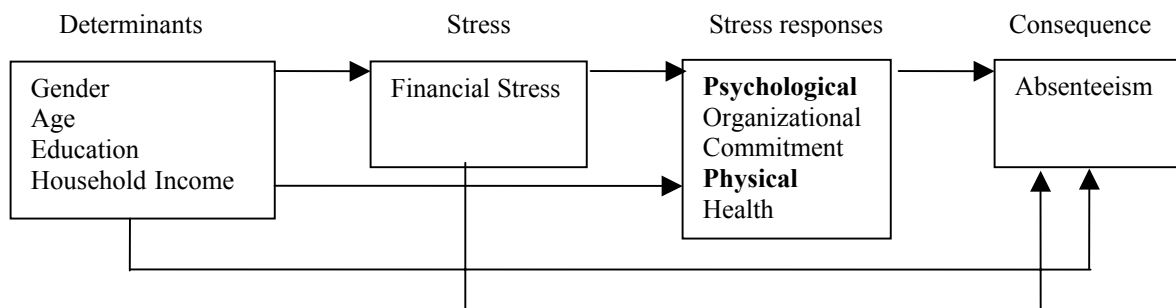
The path relationships among variables are shown in Figure 1. The model includes gender, education, age, and income as exogenous variables whose determinants are assumed to be outside the explanatory scope. Four endogenous variables--financial stress, organizational commitment, health, and absenteeism--are hypothesized to be influenced by other variables in the model. These intervening variables mediate the effects of the determinants on subsequent endogenous variables. The ordering of exogenous and endogenous variables, direct and indirect effects depicted by the paths in Figure 1, represent a series of hypotheses that specify the process by which the determinants influence absenteeism. Hypothesized paths are indicated by arrows. The three general hypotheses are:

Hypothesis 1. Individual variables (gender, age, education, and household income) will affect financial stress, organizational commitment, health and absenteeism;

Hypothesis 2. Financial stress will affect organizational commitment, health, and absenteeism; and

Hypothesis 3. Organizational commitment and health will affect absenteeism.

**Figure 1.**  
Research Model: Financial Stress and Absenteeism



## Methods

### *Data collection*

The data for this study were collected in February and March 1999 from white-collar workers of an insurance company with work sites located in three mid-western states. These data are part of pre-and post-assessment surveys. Only pre-assessment data were included in the data analysis. The mail survey procedures outlined by Dillman (1978) were used. A self-report questionnaire was mailed to all 476 employees. A cover letter, one stamped return envelope, and an index card for entering the lottery drawing as an incentive for participation were placed in a business-size manila envelope and mailed. Those who wanted to enter the free \$200 prize drawing submitted their names and addresses with the answered questionnaire. A week after the first survey instrument was mailed, a thank-you-and-reminder postcard was mailed to all employees. Three weeks later, a replacement questionnaire and a second follow-up cover letter were sent to non-respondents. To avoid duplicate mailings to the respondents, names were deleted from the initial mailing list based on the returned index cards. A total of 262 usable questionnaires were returned for a response rate of 55%.

### *Measures*

*Financial stress* is conceptualized as the subjective perception of one's personal finances. Perceived economic well-being has often been used as a measure of economic stress (Fox & Chancey, 1998). The financial stress scales for this study were developed based on different studies (Fox & Chancey, 1998; Scannell, 1990; Schmittgrund & Baker, 1983; Sumarwan & Hira, 1993) and used in different studies (Joo, 1998; Bagwell, 2000). The scales included satisfaction with present financial situation, income adequacy, debt, and saving and investment. The four items were: "I am satisfied with my present financial situation (reverse coding)," "My income is enough for me to meet my monthly living expenses (reverse coding)," "I worry about how much money I owe," and "I am satisfied with the amount of money that I am saving and investing for retirement (reverse coding)." The responses were coded on a 4-point Likert-type scale, 4 = agree to 1 = disagree, and summed. A higher total score indicated a higher level of financial stress and a negative perception of one's personal finances. The composite measure had an acceptable level of reliability as measured by a Cronbach's alpha of .79.

*Organizational commitment* The six-item scale measuring organizational commitment used in this study was from Mayer and Schoorman's (1992). The respondents were asked six questions to indicate the extent of their feelings about the organization using a

4-point Likert-type scale (from agree = 1 to disagree = 4). Statements such as "I am proud to be a member of this organization," "I would recommend this organization as one of the best places to work for," "I find that my values and the organization's values are very similar," "This organization inspires me to do my best in the way of job performance," "I am willing to work harder than I have to in order to help this organization succeed," and "For me, this is one of the best organizations for which to work" were included in the data analysis. The Cronbach's alpha for this measure was .92.

*Health* was measured with three items. To measure self-report of personal health, the respondents were asked, "Compared to people your age, how would you say your health is?" This question came from Drentea and Lavrakas (2000). Responses ranged from "better than others" to "worse than others" on a 5-point scale. Researchers find self-reported health is correlated with physicians' assessment (Drentea & Lvrakas, 2000). Two other health questions were, "How often are you bothered by health problems such as headaches and back pain?" and "How often has your physical health interfered with your work?" The scale had a modest level of alpha coefficient, .65.

*Absenteeism* was measured by self-report of the frequency of absences (Price & Muller, 1986). The question was phrased, "Over the past year, how many days were you absent (excluding vacation and holidays) from work for personal reasons?" Responses were none (0), 1-2 days (1), 3-4 days (2), 4-5 days (3), and 7 or more days (4).

Individual characteristics included gender, age, education, and household annual income as shown in Table 1. Age was represented as a continuous variable. Gender was dummy coded as male=0. Education and household income were represented as categorical variables.

About 60% of the respondents in this study were female. Almost all of the respondents were self-identified as white. About 60% of the respondents were married; 16.5% were never married. In regard to education, the largest group (36.3%) had a bachelor's degree. The average age was 39 years. Household income ranged from less than \$20,000 to more than \$100,000. The median category for annual household income was the range \$60,001 to \$70,000.

**Table 1.**  
Frequency and percentage distribution of cases.

Variable	Frequency	(Percent)
Gender		
Male	105	(40.5)
Female	154	(59.5)
Education		
Some high school	1	(.4)
High school graduate	58	(22.1)
Trade/vocational training	20	(7.6)
Associate degree	37	(14.1)
Some college	35	(13.4)
Bachelor's degree	95	(36.3)
Graduate of professional degree	16	(6.1)
Household annual income		
Less than \$20,000	10	(3.9)
\$20,001- \$30,000	31	(12.3)
\$30,001- \$40,000	25	(9.8)
\$40,001- \$50,000	25	(9.8)
\$50,001- \$60,000	21	(8.3)
\$60,001- \$70,000	40	(15.8)
\$70,001- \$80,000	33	(12.6)
\$80,001- \$90,000	26	(10.3)
\$90,001- \$100,000	24	(9.5)
More than \$100,000	18	(7.1)
Absenteeism		
0	89	(34.0)
1-2 days	107	(40.8)
3-4 days	12	(4.6)
5-6 days	3	(1.1)
7 or more days	4	(1.5)

### Data analysis

Analyses for the study began with frequencies, t-tests, correlations, reliability, and factor analysis. Before estimating the model using CALIS, a series of multiple regression analyses were performed. The major analysis employed structural equation modeling with latent variables using SAS CALIS. Structural equation modeling is a comprehensive statistical approach to testing hypotheses about relations among observed and latent variables (Hoyle, 1995). When used with latent variables as unmeasured constructs, or factors, that are hypothesized to underlie the manifest (observed or measured) variables, the structural equation model estimates the measurement and structural components of a causal model (Bentler, 1980).

The pattern of parameters (indicators of the relationship between two variables) defines two components of the general structural equation model--the measurement model and the structural model. In the measurement model, latent variables (unobserved variables implied by the co-variances among two or more measured variables) are prescribed. The structural model consists of the hypothesized relations among

latent variables and observed variables that are not indicators of latent variables (Hoyle, 1995). When the measurement and structural components are combined, the result is a comprehensive statistical model that can be used to evaluate relationships among variables that are free of measurement error (Hoyle, 1995). Hypothesized relationships among variables in this study are shown in Figure 1.

Since the chi-square goodness-of-fit statistic is sensitive to sample size and to violations of the assumption of multivariate normality (Jöreskog & Sörbom, 1992), trivial differences in the residuals between the sample and reproduced correlation matrices would be likely to produce a statistically significant chi-square in a model with many variables and a large sample size (Bentler, 1980, Bentler & Bonnett, 1980). As a result, many other fit indices were developed to assess the degree of congruence between the model and data.

In the present study, other fit indices, such as the Goodness of Fit Index (GFI), the Comparative Fit Index (CFI), the McDonald's Centrality Index, and Normed Fit Index (NFI), were used. These indices compare the fit of a substantive model to the fit of some predetermined baseline model, usually a null model, in which co-variation among variables is constrained to equal zero. The value of each index varies between zero and one. Also, standardized root mean squared error of approximation (RMSEA) was used to evaluate the goodness of fit model.

To conclude that there is a relatively good fit between the hypothesized model and the observed data, using maximum-likelihood estimates, Hu and Bentler (1999) recommend a cutoff value close to .95 for the Bollen's Fit Index and the Comparative Fit Index (CFI), a cutoff value of close to .90 for McDonald's Centrality Index, and a cutoff value close to .06 for the root mean squared error of approximation (RMSEA).

As shown in Figure 2, the variables shown in ellipses -- financial stress, health, and organizational commitment -- are latent variables. Manifest variables predicting latent variables are listed in Table 2. The variables shown in squares -- individual variables and absenteeism -- were manifest (observed) variables.

**Results**

*Measurement Model*

The co-variance structure models with multiple indicators for all latent variables were identified and measurement parameters were calculated. T-test results indicated that all manifest variables for latent variables--financial stress, organizational commitment, and health--were significant ( $p < .001$ ). Standardized loadings are reported in Table 2.

*Overall goodness-of-fit* Although the significant Chi-square value ( $\chi^2 = 142.10, p < .05$ ) reveals that there is significant co-variation among the model variables, other goodness of fit indices were above the .90 cutoff typically used to indicate a good fit between model and data. The GFI (Goodness of Fit Index) was .94, CFI (Comparative Fit Index).98, NFI (Normed Fit Index).92, and McDonald's CFI .94. Also, the RMSEA was .035, smaller than the .06 cutoff.

*Structural models* Figure 2 presents the standardized parameter estimates (structural coefficients) of structural relations specified by the model. Lines represent significant paths. Seven hypothesized

relationships were supported. Structural coefficients are shown in Table 3.

Financial stress influenced organizational commitment and absenteeism. However, financial stress did not have any significant effects on health, and organizational commitment was not significantly related to absenteeism.

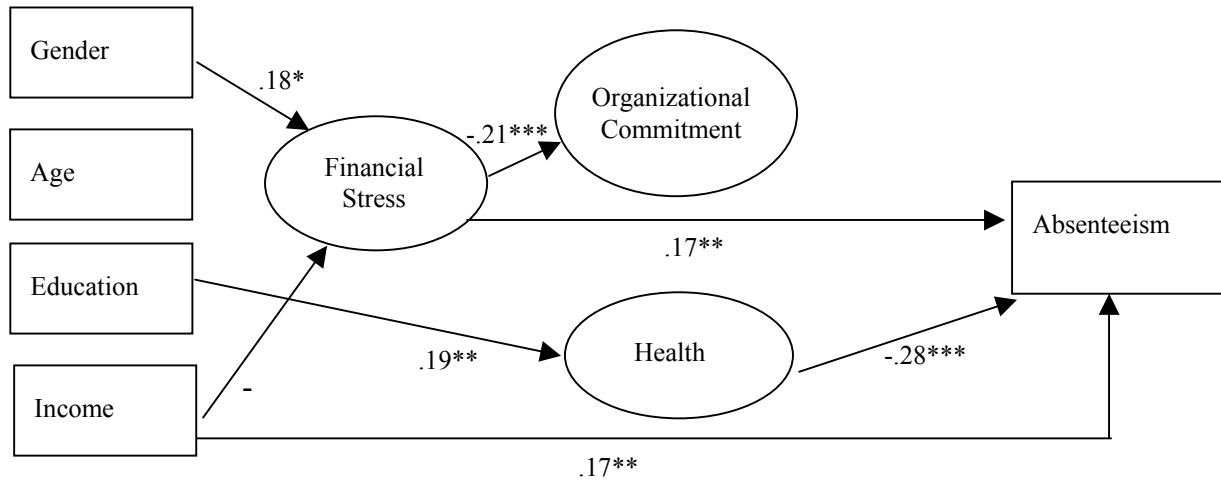
Hypothesis 1 was partially supported. Among the four hypothesized determinants of financial stress, only gender ( $B = .18, p < .05$ ) and income ( $B = -.35, p < .001$ ) were significant. Females had higher levels of financial stress.

Organizational commitment was not explained by any of the four individual variables such as gender, education, income, or age. Income was a significant determinant of absenteeism. Workers who had higher incomes were more frequently absent than those with lower incomes.

**Table 2**  
Measurement Parameter Estimates (N=171)

Manifest Variables	Indicator Reliability	Standardized Loading	Mean	Standard Deviation
<b>Financial stress</b>				
FS1	.33	.83	2.50	.82
FS2	.13	.58	3.11	.84
FS3	.08	.57	2.70	1.07
FS4	.69	.75	2.32	.91
<b>Organizational Commitment</b>				
OC1	.68	.82	3.38	.68
OC2	.80	.89	3.09	.84
OC3	.60	.77	3.15	.74
OC4	.34	.59	3.26	.66
OC5	.61	.78	2.98	.77
OC6	.75	.87	3.05	.79
<b>Health</b>				
H1	.24	.49	3.69	.85
H2	.44	.67	3.42	.89
H3	.54	.73	4.18	.79

**Figure 2.**  
Structural Equation Model of Financial Stress, Organizational Commitment, Health and Absenteeism



\* p < .05, \*\* p < .01, \*\*\* p < .001

**Table 3**  
Standardized Structural Coefficients

	Gender (male=0)	Education	Income	Age	Fin. Stress	Org. Commit.	Health	R <sup>2</sup>
Financial Stress	.18*	.15	-.35***	-.06				.15
Org. Commitment	.10	-.06	-.06	.04	-.21***			.05
Health	-.00	.15	.11	.19**	-.13			.13
Absenteeism	.14	-.11	.17**	-.09	.17**	-.10	-.28***	.21

Model Fit Statistics  $\chi^2 = 142.10$ , GFI = .94, CFI .98, NFI = .92, RMSEA = .036

\* p < .05, \*\* p < .01 \*\*\* p < .001

Hypothesis 2 was partially supported. The hypothesized relationship between financial stress and organizational commitment was significant (B = -.21, p < .05) controlling for other variables, such as gender, education, age, and income. Individual variables did not have any significant effects on organizational commitment. Workers who had higher financial stress were less committed to their organization. The hypothesized relationship between financial stress and health (B = -.13) was not supported. The hypothesized relationship between financial stress and absenteeism was supported (B = .17, p < .01). Those who were more financially stressed were more absent from work. Hypothesis 3 was partially supported. The relationship between organizational commitment and absenteeism was not significant (B = .10). The hypothesized indirect effect of financial stress on absenteeism through organizational commitment was not supported.

Health was negatively associated with absenteeism. The hypothesized indirect effect of financial stress on absenteeism through health was not supported because the relationship between financial stress and health was not significant.

**Discussion**

This study examined relationships among financial stress, health, organizational commitment, and absenteeism. The results provide an empirically derived model to serve as a guide for future research on financial stress and absenteeism. The cost of stress and stress-related problems to industry has been estimated to be in excess of hundreds of billions of dollars annually (Jacobson et al., 1996).

Gender had a significant effect on financial stress. This finding differs from some previous studies (Blumstein & Schwartz, 1983; Mills et al., 1992) but was consistent with Hedrix et al.'s (1994). Blumstein



and Schwartz (1983) suggested that many people still seem to place more pressure on husbands than on wives to meet the financial needs of the family. Mills et al. (1992) found that impacts of economic strain were equivalent on husbands and wives. Hendrix et al. (1994) found that females experienced higher levels of stress than male workers.

Organizational commitment was not explained by any of the four individual variables such as gender, education, income, or age. Personal characteristics have often been included as antecedents of organizational commitment, but results have been mixed (Glisson & Durick, 1988; Mowday et al., 1979; Zangaro, 2001). This study did not include job characteristics or work experience in the model, which generally explain more than personal characteristics. The focus of the study was on variables that may affect financial stress and absenteeism.

Age, gender, and education did not affect absenteeism while previous research had mixed results (Jacobson et al., 1996; Price & Muller, 1986; Brooke & Price, 1989). Unexpectedly, income was positively associated with absenteeism. One explanation might be that household income was used instead of respondent's wages or income from the workplace in the study. Married women with young children could have higher household income than single women but take more time off due to family obligations. This result might also be due to the occupation of the sample in the study. The participants were mostly white-collar workers from insurance companies and had higher levels of household income (median household income was between \$60,000 and \$70,000). Some insurance agents who have a compensation based on commission might opt for more flexible work schedules than salaried workers.

Although a number of studies have found that financial stress and stress-related illness or health was related, the hypothesized relationship between financial stress and health was not supported in this study. Unlike in other studies (Hendrix et al., 1987; Drentea & Lavrakas, 2000; Jacobson et al., 1996), there was no significant association between health and financial stress. This might be due to the measures of general health status instead of specific health problems such as cold, flu symptoms (Hendrix et al., 1987) or illness (Jacobson et al., 1996). The effect of financial stress on overall health could be a long-term consequence. However, the effect of financial stress on organizational commitment was

significant. Financially stressed employees were less committed to their organization.

The result that health was a significant predictor of absenteeism was consistent with previous studies (Hendrix et al., 1987; Hendrix et al., 1994; Steers & Rhodes, 1978). The effect of organizational commitment on absenteeism was negative but was not significant ( $p = .12$ ) contrary to previous studies (Mayer & Schoorman, 1992; Zangaro, 2001). The small sample size of the study might contribute to the result.

Those who were more financially stressed were more frequently absent from work. In addition, income was inversely related to financial stress. The significant financial stress/absenteeism association remains when controlling for age, gender, household income, education, organizational commitment and health. These results suggest that financial stress is one of the key contributors to absenteeism. Therefore, financial stress is a more valid measure than income in predicting absenteeism. Individuals experience financial stress at any income level when they cannot meet financial obligations or support desired lifestyle patterns.

This study found some evidence that financial stress spills into work life. Employees with higher levels of financial stress are less committed to their organization and are more frequently absent from their work.

### Limitations

This study was conducted with white-collar workers in three states in the United States. The subjects were primarily white, thus there are limits to generalization to broader populations. Absenteeism measures have limitations associated with self-reporting; however, self-reporting has been used for absenteeism data other studies (Brooke and Price, 1986 and 1989; Sagie, 1998). Absenteeism data used in these studies exhibit problems similar to the data in the study reported here; that is, many zero values and skewed distribution. Previous research found that absence measures, even if self-reported, demonstrated adequate reliability and validity (Carmines & Zeller, 1979; Brook & Price, 1986). Another limitation is that the present study did not include all predictors of absenteeism.

### Recommendations

Based on the results, the authors provide the following recommendations for researchers, employers and policymakers. Since the data in this study suggest that the model has some value, it is recommended that the model be tested with larger

samples of employees that can be generalized to a broader population. Studies with different population such as blue-collar and diverse ethnicities are recommended. Additional research should include variables such as physical and mental health status that may be related to absenteeism.

Many employers understand the value of sponsoring work/life programs for employees specifically designed to reduce family- and work-life stresses. There is some evidence that workplace financial education can reduce financial stress and improve financial well-being. While employees may gain personally from financial education provided at the workplace, employers may require reliable statistics, such as historical employment data on absenteeism, before they commit to providing financial education programs that would improve employees' personal financial well-being. Researchers have suggested that workplace financial education programs could improve workers' productivity by reducing financial stress (Garman, 1997; Garman et al., 1998). Workplace financial education programs have been found to increase the participants' confidence in their investment decisions, change their attitudes in positive directions (Fletcher, Beebout & Mendenhall, 1997), and improve their financial management, such as saving more money (Bernheim & Garrett, 1997). Workers who attended financial education seminars and workshops reported less financial stress, and greater financial well-being than those who did not (Garman et al., 1998).

Additional studies are needed to more clearly establish the predictive relationships between financial stress and both absenteeism and job productivity. If employers would support efforts to help employees reduce financial stress—and monitor any changes—a more reliable understanding of the value of employer-based programs would emerge. The results of this study should motivate employers to provide workplace assistance for employees with financial stress

### References

- Adams, G.T. (1987). Preventive law trends and compensation payments for stress-disabled workers. In R.S. Bhagat, J.E. Dalton & J.D. Quick (Eds.), *Work stress: Health care systems in the workplace* (pp.235-245). New York: Praeger Publishers.
- Aon Consulting (1998). *America @ Work: A focus on benefits and compensation*. Chicago, IL: Author.
- Atkinson, W. (2001, August). Drowning in debt. *HR Magazine*, 46(8), 68-74.
- Bagwell, D.C. (2000). *Work and personal financial outcomes of credit counseling clients*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.
- Bentler, P.M. (1980). Multivariate analysis with latent variables: Causal modeling. *Annual Review of Psychology*, 31, 419-456.
- Bentler, P.M. & Bonnet, D.G. (1980). Significance tests and goodness-of-fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588-606.
- Bernheim, D.B. & Garrett, D.M. (1996). *The determinants and consequences of financial education in the workplace: Evidence from a survey of households*. Stanford University Working Paper #96-007, 1-52.
- Blumstein, P.W. & Schwartz, P. (1983). *American couples: Money, work, and sex*. New York: William Morrow.
- Brooke, P.P., Jr. (1986). Beyond the Steers and Rhodes model of employee attendance. *Academy of Management Review*, 11, 345-361.
- Brooke, P.P., Jr. & Price, J.L. (1989). The determinants of employee absenteeism: An empirical test of a causal model. *Journal of Occupational Psychology*, 62, 1-19.
- Brown, R.C. (1993). *Extent of financial worries in the workforce*. Unpublished manuscript, R.J. Reynolds Tobacco Company, Winston-Salem, NC.
- Brown, R.C. (1999). Financially-troubled employees and threats of violence. *Personal Finances and Worker Productivity*, 3(1), 38-47.
- Carmines, E.G. & Zeller, R.A. (1979). Reliability and validity assessment. Beverly Hills, CA: Sage.
- CCH Inc. (2002). *2002 CCH unscheduled absence survey: As employee absenteeism persists and costs climb, more employers look to work-life, absence control programs*. Retrieved on October 23, 2002 from <http://www.cch.com/absenteeism>
- Dillman, D.A. (1978). *Mail and telephone surveys: The total design method*. New York: John Wiley & Sons.
- Drentea, P. & Lavrakas, P.J. (2000). Over the limit: The association among health status, race and debt. *Social Science & Medicine*, 50, 517-529.
- Families and Work Institute (1997). *The 1997 national study of the changing workforce*. New York: Author.
- Fletcher, C.N., Beebout, G. & Mendenhall, S. (1997). Developing and evaluating personal finance education at the worksite: A case study. *Personal Finances and Worker Productivity* 1(1), 54-59.

- Fox, G. L. & Chancey, E. (1998). Sources of economic distress: Individual and family outcomes. *Journal of Family Issues*, 19(6), 725-749.
- Garman, E.T., Leech, I.E. & Grable, J.E. (1996). The negative impact of employee poor personal financial behaviors on employers. *Financial Counseling and Planning*, 7, 157-168.
- Garman, E.T. (1997). How to do the research to make a convincing case to persuade employers to offer financial education to employers. *Personal finance and worker productivity* 2, 128-135.
- Garman, E.T., Kim, J., Kratzer, C.Y., Brunson, B.H. & Joo, S. (1998). Workplace financial education improves personal financial wellness. *Financial Counseling and Planning*, 10(1), 79-88.
- Garman, E.T., Camp, P., Kim, J., Bagwell, D., Baffi, C. & Redican, K. (1999). Credit delinquencies: A portrait of pain for employers' bottom lines—Preliminary findings. *Personal finances and worker productivity* 3(2), 165-168.
- Geurts, S.A., Schufeli, W.B. & Rutte, C.G. (1999). Absenteeism, turnover intention and inequity in the employment relationship. *Work & Stress*, 13(3) 253-267.
- Glisson, C. & Durick, M. (1988). Predictors of job satisfaction and organizational commitment in human service organizations. *Administrative Science Quarterly*, 33, 61-81.
- Harrison, D.A. (1998, *May-June*). Time for absenteeism: A 20-year review of origins, offshoots, and outcomes. *Journal of Management*, Retrieved October 2, 2001, from www.Findarticles.com
- Hayhoe, C.R. & Wilhelm, M.S. (1998). Modeling perceived economic well-being in a family setting: A gender perspective. *Financial Counseling and Planning*, 9(1), 21-34.
- Hendrix, W.J., Steel, R.P. & Shultz, S.A. (1987). Job stress and life stress: Their causes and consequences. *Journal of Social Behavior and Personality*, 2(3), 291-302.
- Hendrix, W.H., Spencer, B.A. & Gibson, G.S. (1994). Organizational and extraorganizational factors affecting stress, employee well-being, and absenteeism for males and females. *Journal of Business and Psychology*. 9(2), 103-128.
- Hoyle, R. H. (1995). *Structural equation modeling: Concepts, issues, and applications*. Thousand Oaks, CA: Sage Publications.
- Hu, L. & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Huczynski, A.A. & Fitzpatrick, M.J. (1989). *Managing employee absence for a competitive edge*. London: Pittman.
- Ivancevich, J.M. & Matteson, M.T. (1980). *Stress and work: A managerial perspective*. Glenview, IL: Scott, Foresman, and Company.
- Ivancevich, J.M., Matteson, M.T. & Preston, C. (1982). Occupational stress, type A behavior, and physical well-being. *Academy of Management Journals*, 25, 383-391.
- Iverson, R.D., Olekalns, M. & Erwin, P.J. (1998). Affectivity, organizational stressors, and absenteeism: A causal model of burnout and its consequences. *Journal of Vocational Behavior*, 52, 1-23.
- Jacobson, B.H., Aldana, S.G., Goetzel, R.Z., Vardell, K.D., Adams, T.B. & Pietras, R.J. (1996). The relationship between perceived stress and self-reported illness-related absenteeism. *American Journal of Health Promotion*, 11(1), 54-61.
- Jackson, T., Iezzi, A. & Lafreniere, K. (1997). The impact of psychosocial features of employment status on emotional distress in chronic pain and healthy comparison samples. *Journal of Behavioral Medicine*, 20(3), 241-256.
- Joo, S. (1998). *Personal financial wellness and worker productivity*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.
- Joo, S. & Garman, E.T. (1998). Personal financial wellness may be the missing factor in understanding and reducing worker absenteeism. *Personal Finances and Worker Productivity*, 2(2), 172-182.
- Jöreskog, K. G. & Sörbom, D. (1996). *LISREL 8: User's reference guide*. Chicago: Scientific Software International.
- Kim, J. (1999). Financial satisfaction, personal finance-work conflict, and work outcomes: Pay satisfaction, organizational commitment, and productivity. *Proceedings of the Association for Financial Counseling and Planning Education Annual Conference, Scottsdale, AZ*, 38-45.
- Kirchemeyer, C. & Cohen, A. (1999). Different strategies for managing the work/non-work interface: A test for unique pathways to work outcomes. *Work and Stress*, 13, 59-73.
- Mayer, R.C. & Schoorman, F.D. (1992). Predicting participation and production outcomes through a two-dimensional model of organizational commitment, *Academy of Management Journal*, 35, 671-684.

- Mills, R.J., Grasmick, H.G., Morgan, C.S. & Wenk, D. (1992). The effects of gender, family satisfaction, and economic strain on psychological well-being. *Family Relations*, 42, 440-445.
- Mowday, R.T., Steers, R. M. & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224-247.
- Moos, R.H., Fenn, C.B., Billings, A.G. & Moos, B.S. (1989). Assessing life stressors and social resources: Applications to alcoholic patients. *Journal of Substance Abuse*, 1, 127-137.
- Myvesta.org (2001). Homepage. Retrieved from <http://www.Myvesta.org/Default.htm>
- Pearlin, L.I. Menaghan, E.G., Lieberman, M.A. & Mullan, J.T. (1981). The stress process. *Journal of Health and Social Behavior*, 22, 337-356.
- Peirce, R.S., Frone, M.R., Russell, M. & Cooper, M.L. (1994). Relationship of financial strain and psychosocial resources to alcohol use and abuse: The mediating role of negative affect and drinking motives. *Journal of Health and Social Behavior*, 35, 291-308.
- Peirce, R.S., Frone, M.R., Russell, M. & Cooper, M.L. (1996). Financial stress, social support, and alcohol involvement: A longitudinal test of the buffering hypothesis in a general population survey. *Health Psychology*, 15, 38-47.
- Porter, N.M. (1990). *Testing a model of financial well-being*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.
- Price, J.L. & Mueller, C.W. (1986). *Absenteeism and turnover among hospital employees*. Greenwich, CT: JAI Press.
- Rosch, P.J. (1984, February). Coping with stress on the job. *Nation's Business*, p. 65.
- Sagie, A. (1998). Employee absenteeism, organizational commitment and job satisfaction: Another look. *Journal of Vocational Behavior*, 52, 156-171.
- Scannell, E. (1990). Dairy farm families' financial management. *Financial Counseling and Planning*, 1, 133-146.
- Schnittgrund, K.P. & Baker, G. (1983). Financial management of low income urban families. *Journal of Consumer Studies and Home Economics*, 7, 261-270.
- Steers, R.M. & Rhodes, S.R. (1978). Major influences on employee attendance: A process model. *Journal of Applied Psychology*, 63, 391-407.
- Steers, R.M. & Rhodes, S.R. (1984). Knowledge and speculation about absenteeism. In P.S. Goodman & R.S. Atkin (Eds.), *Absenteeism* (pp.229-275). San Francisco: Jossey-Bass.
- Sullivan, S.E. & Bhagat, R. S. (1992). Organizational stress, job satisfaction and job performance: Where do we go from here? *Journal of Management*, 18(2), 353-374.
- Sumarwan, U. & Hira, T.K. (1993). The effects of perceived locus of control and perceived income adequacy on satisfaction with financial status of rural households. *Journal of Family and Economic Issues*, 14, 343-364.
- Tang, T.L. & Hammontree, M.L. (1992). The effects of hardiness, police stress, and life stress on police officers' illness and absenteeism. *Public Personnel Management*, 21(4), 493- 510.
- Ulla, P. (1990). The association between income, financial strain and psychological well-being among unemployed youths. *Journal of Occupational Psychology*, 63, 317-330.
- Voydanoff, P. (1984). Economic distress and families. *Journal of Family Issues*, 5(2). 273-288.
- Zangaro, G. A. (2001). Organizational commitment: A concept analysis. *Nursing Forum*, 36 (2), pp. 14-22.