Lifestyle Risk Factors, Health Status, and Financial Distress: Framing Interventions Using the Transtheoretical Model of Change, 2007, Proceedings of the Association for Financial Counseling and Planning Eduction, Prawitz, Shatwell, Haynes, Hanson, Hanson, O'Neill, & Garman

Abstract

The purpose was to examine financial topics that employees found most stressful, number of lifestyle risk factors they reported, and their health status to determine whether these variables were related to financial distress. The Transtheoretical Model of Change (Prochaska, Norcross & DiClemente, 1994) provided a theoretical framework to determine the most beneficial strategies for delivery of workplace financial education based on employees' stage in the change process. Findings revealed that more lifestyle risk factors and poorer health were linked to more financial distress. Stressful topics included retirement planning, managing debts, and budgeting; most employees were in the Precontemplation stage of readiness to learn more about stressful topics.

KEY WORDS: financial distress, lifestyle risk factors, health status, stages of change

Introduction

Over the past several years, researchers consistently have found links between financial stress and health. Queries of Americans about their level of financial distress and perceived health status have produced consistent results-- those experiencing more financial distress report worse health (Bagwell & Kim, 2003; Drentea & Lavrakas, 2000; Genco, Ho, Grossi, Dunford, & Tedesco, 1999; Garman et al., 2007). New studies have shown that those who make positive changes in their financial behaviors also reduce their financial distress (Kim, Sorhaindo, & Garman, 2003; Prawitz, O'Neill, Sorhaindo, Kim, & Garman, 2007), and improve their health as well (Kim, Garman, & Sorhaindo, 2003; O'Neill, Prawitz, Sorhaindo, Kim, & Garman, 2006).

Movement of clients toward better financial management practices is the goal of financial education programs, but increased financial knowledge alone does not always lead to behavior changes (Lyons, Chang, & Scherpf, 2006). Recently, researchers and consumer educators have sought new approaches to the challenge of moving consumers from knowing how to manage finances better to actually implementing good financial management practices. Some, for example, are examining the usefulness of the Transtheoretical Model of Change (TTM) (Prochaska, Norcross, 1994) in helping distressed consumers make behavior changes to reduce debt (Shocky & Seiling, 2004; Xiao, Newman et al., 2004; Xiao, O'Neill et al., 2004). The current study examined the financial topics that employees found most stressful, the number of lifestyle risk factors they reported, and their health status to determine whether these variables were related to financial distress. The TTM (Prochaska, Norcross et al.,1994) was used as a theoretical framework to determine the most beneficial strategies for delivery of holistic financial and health education to employees based on their differing stages in the change process.

Review of Literature

Researchers have examined relationships among financial behaviors, financial distress, and health outcomes (Bagwell & Kim, 2003; Drentea & Lavrakas, 2000; Genco, Ho, Grossi, Dunford, & Tedesco, 1999; Kim, Garman et al., 2003; Lyons & Yilmazer, 2005; O'Neill et al., 2006). This study added the variable, lifestyle risk factors, and examined its relationship to financial distress and health outcomes for employees in differing stages of readiness to learn more about the financial topic they found stressful. The following review will examine past research related to financial distress/financial well-being, age, and health, and use of the Transtheoretical Model of Change (Prochaska, Norcross et al., 1994) as a framework in which to promote changes in financial management.

Financial Distress/Financial Well-Being and Health Financial distress/financial well-being has been defined as one's feelings about and reactions to one's personal financial condition (Prawitz et al., 2006). Over the past several decades, researchers have examined the stress, strain, and anxiety associated with personal finances. For example, in 1984 Voydanoff examined the effects of economic strain on families and discussed ways to mitigate the effects, such as using effective financial management as a coping strategy. In a review of economic distress and family relations over the 1980s, Voydanoff (1990) noted that families in economic distress use different coping mechanisms, some of which include taking action to alleviate the problem. Voydanoff (1990) defined economic strain as the subjective evaluation of one's personal financial status including financial concerns and worries, and pointed out that economic strain increased during situations in which a family lacked the resources to satisfy its needs. Other researchers reached similar conclusions-- when people experience financial troubles such that their resources are inadequate to meet the family's financial demands, their financial distress increases and their well-being suffers (Danes & Rettig, 1993; Drentea, 2000; Mills, Grasmick, Morgan, & Wenk, 1992; O'Neill et al., 2006; Prawitz et al., 2006; Ross & Huber, 1985; Sorhaindo, Garman, & Kim, 2003).

Research examining financial distress has been consistent-- individuals' health and stress surrounding their personal finances are related. Lyons and Yilmazer (2005), for example, found that those in poorer health experienced more financial strain. Jacobson and colleagues (1996) found financial stress to be a predictor of illness-based absenteeism from the workplace. For consumers known to be financially distressed, such as credit counseling clients, the relationships were pronounced. Kim, Sorhaindo et al. (2003), for example, found that those reporting higher levels of financial well-being also reported better health.

Changes in financial behaviors influence both health and the level of financial distress for consumers. O'Neill, Sorhaindo, Xiao, and Garman (2005), in a study of financially distressed consumers, found that those reporting positive changes in financial practices also reported improved health. In 2006, O'Neill et al. determined that a decrease in negative financial events (e. g., paying bills late, receiving calls from creditors) resulted, not only in lower financial distress, but also improved health. It appears that helping clients change financial practices, then, provides a holistic approach to improving both financial well-being and overall health.

The relationship of age to anxiety and distress about finances has been documented in the literature. Mirowsky and Ross (1999), for example found that young adults experienced more anxiety related to economic hardship. Drentea (2000) pointed out that one explanation could be the level of debt incurred during this stage of the life cycle, a phase that often includes establishing households and supporting children before having reached the desired earning potential. Prawitz et al. (2007) also found that financial distress decreased with age.

The Transtheoretical Model of Change and Promotion of Changes in Financial Management Behaviors The Transtheoretical Model of Change (TTM) is a framework that has been used widely in the health field to help people learn to substitute healthy behaviors for unhealthy ones (Prochaska, Redding, Harlow, Rossi, & Velicer, 1994; Prochaska, Redding, & Evers, 1996). The two main thrusts of the model include the stages of change and the change processes. Stages of change represent levels of readiness to change an undesirable behavior, and include the following: Precontemplation (no intention to take action within the next six months), Contemplation (intention to take action within the next six months), Preparation (intention to take action within the next 30 days), Action (has begun to take action within the previous six months), and Maintenance (has implemented the change more than six months previous) (Prochaska, Norcross et al., 1994).

The change processes consist of strategies useful in assisting clients with change; change processes are specific to the stage of change. Those intended for the Action stage, for example, are not useful in the Precontemplation stage. The processes, their definitions, and appropriate stages of change follow (Prochaska, Norcross et al., 1994). Precontemplation *Consciousness raising (learning new facts to support the healthy behavior change; *Environmental reevaluation (understanding that the negative behavior has unhealthy impacts and the healthy behavior has positive impacts on the social and physical environment) *Dramatic relief (experiencing the negative feelings that accompany the unhealthy behavior risks) Contemplation *Self-reevaluation (realizing that changing one's behavior is important to one's identity) Preparation *Self-liberation (firmly committing to change) Action/Maintenance *Helping relationships (using social supports to assist in the change) *Reinforcement management (increasing rewards for the new behavior and decreasing rewards for the unhealthy behavior) *Counter conditioning (substitution of healthy behaviors and thoughts for unhealthy ones) *Stimulus control (removal of cues to perform the unhealthy behavior; addition of cues to perform the new behavior)

In recent years, researchers and consumer educators have begun to use the model to help consumers change negative financial behaviors. Xiao, Newman, et al. (2004), for example, developed a measure to assess stages of change for financially distressed consumers attempting to get out of credit card debt. These researchers determined that programs work best if the needs of clients are addressed based on the stage of change they are in, rather than assuming that all clients are in the action stage and ready for changes in financial behaviors. The goal is to move clients from one stage to the next, helping them to gain skills and confidence in their ability to manage their finances differently.

In 2004, Shockey and Seiling developed a program assessment based on clients' stages of change for a financial education program. They found that, for most of the financial behaviors, clients were in the preparation stage. For those advancing only one stage of change during the educational program, chances for implementing the newly learned behaviors doubled. The current study uses the TTM as a framework to assess the stages of change for clients responding to an online health risk assessment. The goal was to use the findings to direct the development of holistic health and financial workplace programs.

Research Questions

The following research questions were developed for the study. 1. Which financial issues do people find most stressful? 2. Is there a difference by age in the top three financial topics that cause stress? 3. Do lifestyle risk factors contribute to poorer health? 4. What is the relationship between lifestyle risk factors and financial distress/financial well-being? 5. What is the relationship between health status and financial distress/financial well-being? 6. Is there a difference in financial distress/financial well-being based on the financial topic identified as causing the most stress? 7. What is the stage of change for those in each of the top three financial topic groups identified as most stressful?

Data Collection

The data were collected in 2006 by the Director of Preventive Health Strategies and the Director of Marketing and Communication for TwoMedicine Health and Financial Fitness, a private firm that implements preventive health strategies in the workplace. For this study, the firm incorporated the Personal Financial Well-Being Scale (PFW) and several other items into the Mayo Clinic Health Risk Assessment to evaluate relationships among lifestyle risk factors, health status, and financial distress/financial well-being.

The Mayo Clinic Health Risk Assessment is a 197-item survey developed to obtain biomedical screening data as well as self-reported data about people's medical and lifestyle risk factors and their personal and family health history (O'Donnell, 2002). The assessment tool is unique in that it is completed online and uses branching logic to move respondents through the questionnaire based on their earlier responses. TwoMedicine Health and Financial Fitness was granted permission to add additional items to the Mayo Clinic Health Risk Assessment, including the eight items that comprise the personal financial well-being scale, a query about the financial topic that caused the respondent the most stress, and stage of readiness for change related to the financial topic causing the most stress.

For the study reported here, employees of public and private companies in Montana and Wyoming were invited to participate by completing an online survey; a total of 349 employees responded by completing the survey questionnaire. The sample included 253 males (72%) and 96 females (28%). Ages ranged from 22-74 years, with 66% of the respondents (n = 230) aged 40-60 years. The mean age was 47 years.

Self selection by respondents and the absence of incentives to participate resulted in a non-probability sample, and represented a limitation of the study. This limits the generalizability of the findings. Another limitation was that the researchers were limited in their ability to add variables of interest to the existing Mayo Clinic Health Risk Assessment tool. For example, income, a variable of interest in any study of financial distress, was not included in the assessment. Nevertheless, the researchers were able to explore relationships among lifestyle risk factors, health status, age, financial distress, and readiness of employees to learn more about financial topics currently causing stress. Measurement of each of these variables are detailed below.

Measures

Most stressful financial topic A list of financial topics were presented, and participants were asked to chose the one that caused them the most stress. The list of topics was based on subject matter typically covered in personal finance employee education programs, and was made up of the following items: understanding employee benefits; retirement planning; insurance planning; budgeting; managing debts; maintaining good credit status; buying a home; estate planning; investing; consumer rights; tax planning; creating or managing a will, deed, or trust; and college planning. Participants were asked to select the single financial topic that caused the most stress rather than rating the level of stress caused by each topic. This process was used so that level of readiness for change with respect to learning more about the most stressful topic subsequently could be assessed. The variable, most stressful financial topic, was measured at the nominal level.

Lifestyle risk factors For this study, a risk factor was a biological measure or lifestyle issue scientifically linked to greater risk for illness, death, or both. Of the 11 risk factors assessed, 5 were considered medical risk factors, and included medical measurements related to blood pressure, blood sugar, cholesterol, triglycerides and weight. Lifestyle risk factors included six self-reported behaviors related to alcohol use, emotional health, exercise, nutrition, safety, and tobacco use, and represented risk factors tied directly to behaviors. For this report, only the lifestyle risk factors were used. Each risk factor reported scored a 1; total scores were computed for the variable by summing the factors. So, for example, for the tobacco use risk factor, a smoker accrued a 1, and a non-smoker, a 0. The variable was measured at the ratio level, with scores that could range from 0 - 6.

Health status Health status was a self-reported, single item measure. Response choices ranged from 1 = poor to 5 = excellent. The variable, health status, was measured at the ordinal level.

Age Respondents were requested to state their current age in years. Age was measured at the interval level.

Financial distress/financial well-being Financial distress/financial well-being was measured using the Personal Financial Well-Being scale, an 8-item instrument developed to assess individual's feelings about and reactions to their personal financial situation (Prawitz et al., 2006). In the current study, one of the items inadvertently was omitted from the index, so the data reported here are based on scores computed using seven items. Factor analysis confirmed that the instrument measured only one construct, and explained 76% of the variance. (See Table 1.) A robust Cronbach's alpha of 0.939 demonstrated excellent internal consistency of items making up the instrument. Financial distress/financial well-being was measured at the continuous level.

Stage of change Stage of change represented participants' readiness to learn more about the financial topic they identified as causing them the most stress. Based on Prochaska's Transtheoretical Model of Change (Prochaska, Norcross et al., 1994), the variable was measured at the nominal level using the following items: 1, "I don't plan to learn more about [most stressful financial topic] within the next six months" = Precontemplation; 2, "I am thinking about learning more about [most stressful financial topic] within the next six months" = Contemplation; 3, "I am making plans to learn more about [most stressful financial topic] within the next 30 days" = Preparation; and 4, "I am actively trying to learn more or have increased my knowledge on [most stressful financial topic] within the past six months" = Action/Maintenance.

Table 1. Factor loadings for the eight items making up the PFW Scale™ (n = 349)

Item #	Item description	Factor loading
1.	What do you feel is the level of your financial stress today?	.896
2.	On the stair steps below, mark how satisfied you are with your present financial situation.	.869
3.	How do you feel about your current financial situation?	.937
4.	How confident are you that you could find the money to pay for a financial emergency that costs about $1,000?	.720
5.	How often does this happen to you? You want to go out to eat, go to a movie or do something else and don’t go because you can’t afford to.	.859
6.	How frequently do you find yourself just getting by financially and living paycheck to paycheck?	.868
7.	How stressed do you feel about your personal finances in general?	.932
	Eigenvalue Proportion of variance explained	5.314 .759

Results

Participants were asked to report which one of the financial topics listed on the assessment survey caused them the most stress. The three financial topics most frequently cited as most stressful were retirement planning (n = 76), managing debts (n = 73), and budgeting (n = 53), and represented the most stressful financial topics for 58% of the sample. See Table 2 for the complete list of financial topics ranked in descending order from highest to lowest frequency of identification as most stressful.

Table 2. Frequencies for Identification of Most Stressful Financial Topics

Variable	**Frequency**	**Percent (%)**
Retirement planning	76	21.8
Managing debts	73	20.9
Budgeting	53	15.2
4.Buying a home	25	7.2
Planning for college	23	6.6
Investing	21	6.0
Understanding employee benefits	20	5.7
Insurance planning	18	5.2
Creating or managing a will, deed, or trust	15	4.3
Tax planning	11	3.2
Consumer rights	5	1.4
Maintaining a good credit status	5	1.4
Estate planning	4	1.1
Total	349	100.0

A one-way analysis of variance was used to determine whether there were differences in age of participants based on financial topics identified as most stressful. Ages of participants who were in the groups representing the three financial topics most frequently cited as stressful were compared. Differences were detected in ages among those in the three groups, $F(2, 199) = 12.81$, $p < .001$. A Tukey HSD post hoc test was used to determine which groups differed from one another. Those who had identified retirement planning as the most stressful financial topic were older than those in both the managing debts topic group ($p = .001$) and the budgeting topic group ($p < .001$). There were no age differences between those in the managing debts topic group and the budgeting topic group.

To test for a relationship between lifestyle risk factors and health status, the Spearman's rho correlation statistic was used. As expected, there was a negative relationship; greater numbers of lifestyle risk factors led to poorer health (rho = -.283, $p < .001$).

Spearman's rho also was used to test for a relationship between health status and financial distress/financial well-being. The variables were positively related; those who reported poorer health had lower scores on the PFW Scale™, indicating more financial distress, less financial well-being (rho = .343, $p < .001$).

To test for a relationship between number of lifestyle risk factors and financial distress/financial well-being, the Pearson r correlation was used, since both variables were measured at the continuous level. A negative relationship was found; those who reported more lifestyle risk factors had lower PFW Scale™ scores, indicating more financial distress, less financial well-being ($r = -.260$, $p < .001$). To test for differences in financial distress/financial well-being based on financial topic identified as stressful, one-way analysis of variance was used. Again, those in the three groups representing the financial topics most frequently cited as stressful (retirement planning, managing debts, budgeting) were used in the analysis. Differences in financial distress/financial well-being were found among the groups, $F(2, 199) = 42.96$, $p < .001$. A Tukey HSD post hoc test performed multiple comparisons and detected differences among all of the groups. Those who felt stress about managing debts had more financial distress and less financial well-being than those in either the retirement planning topic group ($p < .001$) or the budgeting topic group ($p = .003$). Those in the budgeting topic group had significantly more financial distress than those in the retirement planning topic group ($p < .001$).

The stages of change for readiness to learn about the financial topic identified as causing the most stress were examined for those in each of the three most frequently cited stressful financial topic groups. Among those who identified retirement planning as their top stressor, nearly half (47%) were in the Precontemplation stage. Similar percentages were found for those in the other two stressful financial topic groups. For those who reported managing debts to be the most stressful financial topic, a little over half (53%) were in the Precontemplation stage. Among those who identified budgeting as the most stressful topic, 43% were in the Precontemplation stage. See Table 3 for frequencies and percentages for each stage of change based on designation within top three stressful financial topic groups.

Table 3. Frequencies for Stages of Change by Financial Stressor Topic Groups

Financial Stressor Topic Group	**Stage of Change**	**Frequency**	**Percent (%)**
Retirement Planninga			
	Precontemplation	36	47.4
	Contemplation	7	9.2
	Preparation	19	25.0
	Action/Maintenance	14	18.4
Managing Debtsb			
	Precontemplation	39	53.4
	Contemplation	9	12.3
	Preparation	17	23.3
	Action/Maintenance	8	11.0
Budgetingc			
	Precontemplation	23	43.4
	Contemplation	8	15.1
	Preparation	12	22.6
	Action/Maintenance	10	18.9

Note: Data reported here represent responses for the subsample who identified as most stressful to them one of the three financial topics in the table.
an = 76
bn = 73
cn = 63

Discussion and Implications

As expected, employees in this study who engaged in risky lifestyle behaviors experienced poorer health than those who reported fewer such behaviors. Those exhibiting more lifestyle risk factors and those with poorer health also had more financial distress and less financial well-being. Some individuals use inappropriate coping mechanisms to deal with stress, such as "comfort eating" (Stambor, 2006), so it may be that the risky lifestyle behaviors exhibited by the participants in this study, such as smoking and over-consumption of alcohol, represent attempts to mitigate financial distress. Reduction in financial distress, then, should be part of a holistic program to promote well-being and prevent health problems in the workforce.

Part of the goal of this study was to determine which financial topics triggered stress for employees, and participants' level of readiness to learn more about the stressful topic. Presumably, willingness to learn more about a stressful topic indicates that the individual recognizes that a problem exists and that solutions for improvement are possible.

The employees in this study reported retirement planning, managing debts, and budgeting as the financial topics that caused them the most stress. Those who reported that retirement planning was the most stressful topic were older than those in the other two topic groups, and had lower levels of financial distress. These findings were not surprising, as retirement planning becomes more important to older employees who are nearing retirement age, and financial distress has been shown to decrease with age (Drentea, 2000; Prawitz et al., 2007). Older employees may not feel distress about their current financial situation, but may experience stress and uncertainty about whether they have saved enough to live comfortably following their retirement. Some may worry that if they have not saved enough, there is not enough time left to remedy the situation.

It is interesting that, for those who cited retirement planning as the most stressful of the financial topics listed, nearly half were in the precontemplation stage of readiness to learn more about the topic. Location in the precontemplation stage is an indication that an individual has no intention to change, and may deny that a problem exists (Prochaska, Norcross et al., 1994). Moving such clients from the precontemplation stage to the next stage of change, contemplation, represents a challenge for financial educators. Identifying the barriers preventing readiness to change is an important and necessary step in the process. A challenge for financial educators is to motivate employees early on in their working years to begin planning and saving for retirement so that stress over this issue can be avoided later in life. Again, this involves moving a group of precontemplators to the next stage of change, and likely represents an even more daunting task than motivating those nearing retirement to make meaningful changes.

For those citing managing debts and those citing budgeting as the most stressful of the financial topics, there were no differences in age. Both groups were younger than those feeling stress about retirement planning. Those in the budgeting topic group experienced more financial distress than those worried about retirement planning, but less than those concerned with managing debts. Those who felt stress about managing debt experienced more financial distress than either of the other financial topic groups.

Employees concerned about management of their debts likely lacked the needed resources to meet family demands, resulting in negative feelings about the situation. More than half of those claiming managing debts as the most stressful of financial topics, however, were in the precontemplation stage of readiness to learn more about the topic. The findings were similar for those who felt stress about the topic of budgeting-- nearly half were in the precontemplation stage. Clearly, identifying which financial topic is causing one stress does not necessarily lead to seeking knowledge about how to change the situation. As in the case of those worried about retirement planning, identifying barriers that are keeping people from seeking information that could enable them to change the situation is a crucial first step.

Lyons et al. (2006) pointed out that financial knowledge does not necessarily translate into behavior change. In a study of low-income consumers, Lyons et al. determined that the goals of a financial education program need to focus on what is obtainable for the program audience. While participants may want to solve their financial problems, they may not be ready or able to take the necessary steps. Xiao, O'Neill et al. (2004), in applying the change model of Prochaska, Norcross et al. (1994) changes in financial behaviors, noted that consumers struggle with the process throughout the stages of change. It is not surprising, then, that those with high levels of financial distress anticipate the hard work associated with managing their debts.

Xiao, Newman et al. (2004) studied consumers working to get out of credit card debt. They found that those in the action stage struggled in some of the same ways those in the preparation stage did, indicating they may not have been quite ready yet for change. Moving to the action stage of change before one is ready sets the stage for relapse. Many of the participants in the current study indicated a lack of readiness to learn about the stressful financial topic, so even if financial education were offered, such employees likely would not participate. Helping people move from the precontemplation stage to the contemplation stage requires specific strategies that are different from those used in other stages of change. Specific processes need to be used even at the program advertisement stage, for drawing an audience of consumers who need help with managing debts but are unwilling to learn how. This requires strategies different from those used to attract individuals eager to learn. For example, using the change processes that involve dramatic relief (experiencing of negative feelings that accompany negative behaviors) and environmental reevaluation (seeing the negative impact the inappropriate behavior has on others) are more useful in moving an individual from the precontemplation stage to the contemplation stage than would be reinforcement management (decreasing rewards for the negative behavior) (Prochaska et al., 1996).

Financial program developers likely would increase desirable program outcomes by assessing the stages of change of potential participants, then targeting those in different stages using different change processes. For programs set up this way, movement to the next stage of change is a reasonable target outcome. Indeed, Shockey and Seiling (2004) found that those who advanced by only one stage of change through a financial education program based on the TTM had double the probability of putting new behaviors into action. Change in financial management takes time, but using appropriate change processes to help clients move through the stages of change can be rewarding for both clients and financial educators. For program developers expecting to move participants from the Precontemplation stage through the various other stages of change leading to Action, significant resources will probably be required over an extended period of time.

References

Bagwell, D. C. & Kim, J. (2003). Financial stress, health status, and absenteeism in credit counseling clients. Journal of Consumer Education, 21, 50-58.

Danes, S. M., & Rettig, K. D. (1993). The role of perception in the intention to change the family financial situation. Journal of Family and Economic Issues, 14(4), 365-389.

Drentea, P. (2000). Age, debt and anxiety. Journal of Health and Social Behavior, 41, 437-450.

Drentea, P. & Lavrakas, P. J. (2000). Over the limit: The association among health status, race, and debt. Social Science and Medicine, 50, 517-529.

Garman, E. T., MacDicken, B., Hunt, H., Shatwell, P., Haynes, G., Hanson, K. C., Hanson, E., Olson, P., & Woehler, M. B. (2007). Progress in measuring changes in financial distress and financial well-being as a result of financial literacy programs. Consumer Interests Annual, 53, 199-211.

Genco, R. J., Ho, A. W., Grossi, S. G., Dunford, R. G., & Tedesco, L. A. (1999). Relationship of stress, distress, and inadequate coping behaviors to periodontal disease. Journal of Periodontology, 70(7), 711-723.

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.

Kim, J., Garman, E. T., & Sorhaindo, B. (2003). Relationships among credit counseling clients' financial well-being, financial behaviors, financial stressor events, and health. Financial Counseling and Planning, 14(2), 75-87.

Kim, J., Sorhaindo, B., & Garman, E. T. (2003). Relationships among credit counseling, financial well-being, and health. Consumer Interests Annual, 49, 1-4.

Lyons, A. C., Chang, Y., & Scherpf, E. M. (2006). Translating financial education into behavior change for low-income populations. Financial Counseling and Planning, 17(2), 27-45.

Lyons, A. C., & Yilmazer, T. (2005). Health and financial strain: Evidence from the survey of consumer finances. Southern Economic Journal, 7(4), 873-890.

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, 41, 440-446.

Mirowsky, J., & Ross, C. (1999). Economic hardship across the life course. American Sociological Review, 64, 548-569.

O'Donnell, M. P. (2002). Health promotion in the workplace, (3rd Ed.) NY: Delmar Publishing.

O'Neill, B., Prawitz, A. D., Sorhaindo, B., Kim, J., & Garman, E. T. (2006). Changes in health, negative financial events, and financial distress/financial well-being for debt management program clients. Financial Counseling and Planning, 17(2), 46-63.

O'Neill, B., Sorhaindo, B., Xiao, J. J., & Garman, E. T. (2005). Health, financial well-being, and financial practices of financially distressed consumers. Consumer Interests Annual, 51, 80-82.

Prawitz, A. D., Garman, E. T., Sorhaindo, B., O'Neill, B., Kim, J., & Drentea, P. (2006). The InCharge Financial Distress/Financial Well-Being Scale: Development, administration, and score interpretation. Financial Counseling and Planning, 17(1), 34-50.

Prawitz, A. D., O'Neill, B., Sorhaindo, B., Kim, J., & Garman, E. T. (2007). Financial distress/financial well-being: Do length of time spent in a debt management program and changes in debt burden and financial stressor events make a difference? Consumer Interests Annual, 53, 107-109.

Prochaska, J. O., Norcross, J. C., & DiClemente, C. C. (1994). Changing for good. NY: Avon Books.

Prochaska, J. O., Redding, C. A., & Evers, K. E. (1996). The Transtheoretical model and stages of change. In K. Glanz, F. M. Lewis, & B. K. Rimer (Eds.). Health behavior and health education: Theory research, and practice (2nd ed.). San Francisco: Jossey-Bass.

Prochaska, J. O., Redding, C. A., Harlow, L. L., Rossi, J. S., & Velicer, W. F. (1994). The Transtheoretical Model of Change and HIV prevention: A review. Health Education Quarterly, 21, 4.

Ross, C., & Huber, J. (1985). Hardship and depression. Journal of Health and Social Behavior, 26, 312-27.

Shockey, S. S., & Seiling, S. B. (2004). Moving into action: Application of the Transtheoretical Model of Behavior Change to financial education. Financial Counseling and Planning, 15(1), 41-52.

Sorhaindo, B., Garman, E. T., & Kim, J. (2003). The effects of credit counseling on financial stressors, behaviors, and well-being. Proceedings of the Association for Financial Counseling and Planning Education Annual Conference, 20, 121-130.

Stambor, Z. (2006). Stressed out nation. Monitor on Psychology, 37(4). Retrieved on May 27, 2007 from http://www.apa.org/monitor/apr06/nation.html

Voydanoff, P. (1984). Economic distress and families. Journal of Family Issues, 5(2), 273-288.

Voydanoff, P. (1990). Economic distress and family relations: A review of the eighties. Journal of Marriage and the Family, 52(4), 1099-1115.

Xiao, J. J., Newman, B. M., Prochaska, J. M., Leon, B., Bassett, R. L., & Johnson, J. L. (2004). Applying the Transtheoretical Model of Change to consumer debt behavior. Financial Counseling and Planning, 15(2), 89-100.

Xiao, J. J., O'Neill, B., Prochaska, J. M., Kerbal, C. M., Brennan, P., & Bristow, B. J. (2004). A consumer education program based on the Transtheoretical Model of Change. International Journal of Consumer Studies, 28(1), 55-65.

Contact author:
School of Family, Consumer, and Nutrition Sciences
Northern Illinois University, DeKalb, IL 60115
815-753-6344 (TEL)
815-753-1321 (FAX)