

CHAPTER III. METHODOLOGY

This chapter discusses the methodology and procedures used to answer the research questions of this study. The purpose of this study was to ascertain the work and personal financial outcomes of credit counseling clients. A discussion of the population and the sample, development of the instrument, variables, the data collection procedures, and data analysis utilized in this study is provided.

Population and Sample

The source of the data for this research was Virginia Tech's National Institute for Personal Finance Employee Education (NIPFEE). In 1999, NIPFEE researchers conducted a study of clients of a non-profit consumer credit counseling agency. The population consisted of consumers who contacted a non-profit consumer credit counseling agency in the Mid-Atlantic for assistance with their personal finances.

The sample for the initial study conducted by NIPFEE consisted of 332 individuals who received credit counseling in spring 1999 and who volunteered to participate in the study. A follow-up study was conducted one year later.

Consumers are referred to this credit counseling agency by varied sources, including word of mouth, the agency's web site, and referrals from creditors and community agencies. The agency operates two companies that offer free counseling services in person, by mail, by telephone, and via the Internet. Clients may come from the local region for face-to-face counseling while others may call in from another state to receive counseling by telephone. Most of the clients outside the Mid-Atlantic region locate the service through the agency's web site.

Services offered by the agency include budget and credit counseling, debt management, and education. Individuals who seek credit counseling from this agency have their financial situation analyzed by a counselor who can (1) show them how to better manage their money and credit, (2) assist them in developing a realistic budget, and (3) help them set personal financial goals. In addition, the agency's education department offers seminars on personal money management, the wise use of credit, and home buying.

In cases where clients have more debts than their income can support, the agency may be able to arrange a repayment plan called a debt management plan. A debt management plan gives clients a plan for paying off their liabilities by combining their debts into one monthly payment. The agency attempts to establish more affordable monthly payments for their clients by negotiating alternative payment terms with most creditors, and, in particular, with unsecured creditors, (e.g., bankcards, retailers, doctors, and hospitals). Creditors may agree to accept a smaller payment per month, freeze or lower the interest, or waive late fees on the outstanding balance owed. Thus, greater portions of each payment may be applied toward the consumer's principal outstanding balance (rather than toward interest) on their debts. The agency charges \$5 per month to the client to administer a debt management plan. Non-profit consumer credit counseling agencies help both their consumer clients and creditors because the debt management plan serves the dual purpose of (a) helping consumers pay off their debts and (b) assisting creditors in receiving outstanding amounts owed on accounts.

Agency records of clients counseled in 1999 indicated that the major cause of client financial problems (or their presenting problems) were, in order, (1) poor money management due to excessive spending, (2) reduced income resulting from unemployment, and (3) medical expenses, accidents, or disability. In 1999, the agency counseled 6,660 individuals. Of those, 43.2% were male, 56.8% were female, and 36 years was the average age of the client. Regarding marital status, 41% were single, 44% were married, 11% were separated or divorced, and 4% were widowed. The average annual gross income of clients was \$32,400 per year.

Development of the Instrument

The original instrument was developed in 1999 to assess financial, health and wellness, family life and work outcomes. A review of the literature was conducted by NIPFEE researchers to determine if there were other valid measures of the constructs of interest. Several of the scales used were adapted from research previously conducted by Joo (1998), Kim (2000), and NIPFEE. Where no scales were found, new ones were developed to assess the constructs of interest. NIPFEE researchers held meetings with faculty members and graduate students from the Virginia Tech Department of Near

Environments and faculty from the Department of Teaching and Learning to help reveal additional areas of the constructs not found in the literature review and to establish content-related validity evidence.

A questionnaire review panel was formed and consisted of eight Virginia Tech faculty, graduate students, and staff members of Virginia Tech's Personal Finance Employee Education Outreach initiative. They were asked to review and make suggestions for the original instrument. Approximately 60 questions were evaluated for breadth and depth of content coverage. The design of the instrument and individual questions were evaluated numerous times resulting in the final 41-item instrument.

A pilot study was conducted with five graduate students to ensure the clarity of directions and instrument items. Minor changes were suggested as a result of the pilot study. These were included in the final instrument, which was called the Work and Family Life Survey (see Appendix A). The panel did not review the instrument again because the changes were only minor. Respondents who participated in the pilot study were not included in the final sample.

The Work and Family Life Survey is a paper and pencil questionnaire containing nine sections with a total of 41 questions, which can be completed in approximately 10 to 15 minutes. The following areas are the basis of questionnaire items: cause for contacting credit counseling agency, financial concerns and financial stress, cause of financial problems, work time used for personal financial matters, work life events, work outcomes, family life events, financial wellness and health status, and descriptive information. Table 4 lists the order of questions and their corresponding item numbers.

Instrument for the Follow-up Study

The instrument for the follow-up study was titled Work and Family Life Survey II (see Appendix B). The survey contains 54 items and can be completed in approximately 15 minutes. A majority of the questions asked in the initial study were used; there were three deletions and 14 new questions. Modifications to instrument used in the follow-up study are discussed below.

Table 4

Order of Questions in Initial and Follow-up Instruments

Variable	Initial Instrument	Follow-up Instrument
Perceived Cause to Contact Agency	1	--
Financial Stressor Items	2	3
Cause of Financial Problems	3	--
Work Time Used for Financial Matters	4	4
Work Life Events	5	5
Tardiness	6	6
Absenteeism	7	7
Presenteeism (Total Days Lost)	8	8
Presenteeism (Days Cut Down)	9	9
Personal Finances and Work Interference	10	10
Self Report of Quantity of Work	11	11
Self Report of Quality of Performance	12	12
Performance Rating From Boss	13	13
Retirement Plan Available	14	14
Retirement Plan Participation	15	15
Retirement Plan Borrowing	16	16
Retirement Plan Loan Amount	17	17
Family Life Changes	18	18
Overall Financial Satisfaction	19	19
Financial Wellness	20	20
Feeling About Financial Situation	21	21
Financial Stress	22	22
Retirement Security	23	23
Self Report of Overall Health Status	24	26
Frequency of Health Status Problems	25	25
Health Affected By Financial Problems	26	27
Physical Health and Work Interference	27	28
Emotional Health and Work Interference	28	29
Stress and Work Interference	29	30
Personal Finances and Work Interference	30	31
Demographics		
Gender	31	41
Age	32	42
Marital Status	33	43
Number of Financial Dependents	34	44
Level of Education	35	45
Household Income	36	46
Housing Situation	37	47
Number of Jobs (Spouse/Partner)	38	49
Hours Worked (Spouse/Partner)	39	50
Intention to Leave Employer	40	51
Cultural Heritage	41	52

Question one on the initial instrument was deleted on the follow-up instrument because it asked respondents what caused them to contact the credit counseling agency. Question three asked respondents what happened in their household to cause their financial problems. Because the answers to both questions were determined in the initial study, these two questions were deleted from the follow-up study. Question four asked respondents to indicate the number of hours spent at work doing things unrelated to their jobs during the last month and during an average month. Due to redundancy, missing data, and non-response on the initial study, the instrument development team decided to delete “average month” in future studies.

Of the job quality and productivity items in question 5, four were deleted on the follow-up instrument: (1) missed work because you could not pay for child care, (2) missed work to deal with financial matters, (3) had injuries or illness severe enough to cause you to miss work, (4) made a worker’s compensation claim in the last three years. To avoid confusion these items were deleted in the follow-up instrument because respondents were asked if they had experienced any of the four situations while “at work.” These four situations implied actions that take place away from the worksite rather than at work.

For the follow-up study, 15 additional questions were included to collect further information about the sample that helped answer the research questions of this study. Table 5 lists the additional questions with their corresponding item numbers. To assess the change in level of financial stress both before and after receiving credit counseling, respondents were asked to rate their level of stress. To determine if positive personal financial behaviors occurred following credit counseling, nine questions were added. Also in some instances clients may have received additional services from the credit counseling agency; therefore, a question was added for respondents to indicate what additional services, if any, they received from the credit counseling agency. A question also was added for occupation description using major occupational categories of the Bureau of Labor Statistics. The item numbers in each table correspond to the item number of the question in the follow-up instrument.

Table 5

Additional Questions Included in the Follow-up Study

Variable	Item Number
Level of Financial Stress -- Before	1
Level of Financial Stress -- Current	2
Self-Report of Overall Health Status	24
Financial Behaviors	31 - 39
Occupation Description	50
Geographic Area	53
Additional Services Received from Agency	54

Research Questions and Variables

Four research questions were addressed in this study: (1) to what extent do work outcomes, financial wellness, financial concerns, financial stress, and health status change one year after commencing credit counseling administered by a non-profit consumer credit counseling agency? (2) to what extent have respondents instituted positive financial behaviors one year after commencing credit counseling administered by a non-profit consumer credit counseling agency? (3) are there any differences in individual and family characteristics among (a) clients on a debt management plan, (b) those who received counseling only, and (c) individuals who dropped out of debt management plans? and (4) to what extent do the individual and family characteristics and personal financial variables in the empirical model explain the variance in work outcomes (i.e., productivity, presenteeism, work time used for personal financial matters)?

Not all of the questions on the instrument pertained to this research project. Only the variables that were relevant to this study are discussed in this chapter. The following sections discuss the variables and how they were measured.

Personal Financial Outcomes

Financial Stress

Financial stress was measured using three items from the instrument: (1) level of financial stress before contacting the non-profit consumer credit counseling agency, (2) the level of financial stress today, and (3) the level of stress about personal finances in general (see Table 6). The first two items are on a five-point Likert-type scale from 1 (overwhelming) to 3 (moderate) to 5 (none). These items were not asked in the initial study. The third item is on a five-point Likert-type scale from 1 (no stress at all) to 5 (extremely stressed). All of the Likert-type questions used in this instrument were anchored at both ends and in the middle. All financial stress items were developed for this study. Because it was assessed in both the initial and follow-up studies, responses to the third item were used as the financial stress score for most of the analyses.

Table 6

Financial Stress Questions

Item

1. Before you contacted [Agency Name] (about one year ago), how would you have rated your level of financial stress?
 2. Since contacting [Agency Name], how would you rate your level of financial stress today?
 22. How stressed do you feel about your personal finances?
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Financial Stressor Events

Financial stressor events were measured by asking respondents to indicate how frequently they had experienced 23 non normative financial events believed to be indicative of financial stress during the past year (see Table 7). All events were negative, and respondents were asked to report the frequency of occurrence for each item from 0 (never) to 1 (once) to 2 (more than once) during the past 12 months (in the initial study). This scale was adapted from Camp (1999), Joo (1998), and Fitzsimmons et al. (1993).

Table 7

Financial Stressor Events Question

Item

3. Now, we'd like to ask you to think about your financial life during the past month.

Tell us how often, during that time, you have experienced any of the following?

- a. Received an overdue notice from a creditor
- b. Paid utility bill late
- c. Paid credit card bill late
- d. Paid a service charge for paying a bill late
- e. Got phone call from creditor about past due bill
- f. Got collection agency call about overdue bill
- g. Made vehicle loan/lease payment late
- h. Paid rent/mortgage late
- i. Credit card balance reached maximum limit
- j. Took a cash advance on a credit card
- k. Used cash advance on a credit card to pay another
- l. Did not have enough money to pay for emergency
- m. Could not afford to go out when desired
- n. Could not afford to make needed vehicle repairs
- o. Could not afford to pay auto insurance premium
- p. Could not afford transportation to work
- q. Could not afford medical care
- r. Could not afford to pay for medical insurance
- s. Bounced a check
- t. Been sued for collection of a debt
- u. Had items repossessed
- v. Had wages garnished or attached
- w. Home went into foreclosure

Note. In the follow-up study the question was rephrased to ask respondents if they experienced the events in the past month rather than in the past 12 months.

The reported Cronbach's alpha for the 16-item scale used by Camp (1999) was .84. The alpha reliability was .81 for the initial study and .89 in the follow-up study.

In the follow-up study, respondents were asked to indicate how frequently they had experienced these events during the past month, rather than during the past year, as in the initial study. Although the questions were not worded the same, they were relatively equivalent. The wording was changed to assess the recency of the occurrence of these events, if any, so they could be compared to the same events as reported one year ago by respondents. Responses to the 23 financial stressor events were recoded into two categories rather than three. Prior to recoding, there were three categories. The two categories of "once" and "more than once" were summed and collapsed into "once or more."

Financial Concerns

Financial concerns were measured by asking respondents about the frequency of their financial concerns and stress interfering with their work (see Table 8). Two questions were very similar (see question 30 and 31 in Table 13), and both were on a 5-point Likert-type scale from 1 (very often) to 5 (never). The other question (frequency of stress about money problems) was also on a 5-point Likert-type scale but the anchors were from 1 (often) to 5 (never). The Cronbach's alpha reliability estimate for the scale was .81 in the initial study and .82 in the follow-up study. Responses to these items were summed to yield a total financial concerns score.

Financial Wellness

Financial wellness was measured using three subjective indicators: (1) satisfaction with personal financial situation, (2) perceived financial wellness, and (3) feeling about current financial situation (see Table 9).

The first item, satisfaction with personal financial situation, was measured with a 10-point stair-step scale. Those who were dissatisfied with their financial wellness were asked to mark the lower steps and those who were satisfied were asked to mark the higher steps. This satisfaction item was developed by Joo (1998) based on a scale used by

Table 8

Financial Concerns Questions

Item
10. How often do you feel that concerns about your personal finances interfere with your responsibilities at work, such as getting to work on time, accomplishing daily tasks or working overtime?
30. How often has the stress from your money problems interfered with your work?
31. How often have your financial concerns kept you from spending the amount of time you would like on your job activities?

Table 9

Financial Wellness Questions

Item
19. How satisfied are you with your present financial situation
20. How well off are you financially?
21. How do you feel about your current financial situation?

Porter (1990) from Cantril's (1965, as cited in Porter) Self-Anchoring Striving Scale (SASS). Cantril's scale is a self-measuring instrument, rating subjects' present, past, and anticipated future satisfaction with life on a scale anchored by their own identified values. Porter's variation used an 11-step ladder on which a respondent was asked to imagine (1) the best possible financial situation as forming the upper end of the ladder, and (2) the worst possible financial situation as forming the lower end. After the ladder became "self-anchored" in this manner, respondents were then asked to locate an estimate of their current financial situation between these two extremes. Cantril's scale has generally been used to measure life satisfaction (Porter, 1990). After reviewing Porter's scale, Joo converted the ladder to stair steps for visual presentation and ease of understanding overall wellness.

The second item, perceived financial wellness, was measured by a five-point Likert-type scale from 1 (always in trouble) to 3 (average) to 5 (doing pretty well). The third item is a 5-point Likert-type scale ranging from 1 (it's hard to pay bills) to 5 (I'm in good shape). Both items were adapted from items by Joo (1998) with slight modifications made in the wording of the anchors. Regarding reliability reported in previous use of the questions, Joo (1998) recoded the 10-point scale into a 5-point scale for computing with the other two financial wellness questions and reported the Cronbach's alpha as .89 for the overall financial wellness index. The Cronbach's alpha reliability estimate for the composite score was .73 in the initial study and .90 in the follow-up study.

Responses to the three financial wellness questions were summed to form a composite financial wellness score. Prior to summing, the 10-point scale (satisfaction with personal finances) was divided by two so that it would be on the same scale as the other two 5-point scales. The range of the composite score was from 5 to 15.

Financial Behaviors

The presence of positive financial behaviors that had been instituted since receiving credit counseling was assessed by "yes" or "no" responses to nine items. This scale was adapted from Kratzer et al. (1998) and Joo (1998) and is based on three domains of personal finances: retirement planning, employee benefits, and money and credit management (see Table 10). A third response category of not applicable was created for two of the behaviors (contributed to my employer's retirement plan and participated in and contributed money to a pre-tax dependent or health status care program). Responses to the items were evaluated individually and therefore were not summed for a composite score.

This scale was not a part of the initial study. The alpha was not reported for the Kratzer et al. scale. Joo reported an alpha of .80 for her 12-item scale based on a sample of 271 white-collar clerical workers of a large employer in a mid-Eastern state. The alpha reliability was .41 for the nine items in the financial behaviors scale used in this study.

Table 10

Financial Behaviors Questions

Item

31. Developed a plan for my financial future
 32. Started or increased my savings
 33. Reduced some of my personal debts
 34. Followed a budget or spending plan
 35. Cut down on living expenses
 36. Contacted a financial planner
 37. Tried to determine how much I will need to live comfortably in retirement
 38. Contributed to my employer's retirement plan
 39. Participated in and contributed money to a pre-tax dependent care or health status care program
-

Work Outcomes

Three measures of work outcomes were used in the study. These were productivity, presenteeism, and work time used for personal financial matters.

Productivity

This was assessed using three items from the instrument: (1) self-report of productivity, (2) self-report of quality of work performance, and (3) performance rating from boss (see Table 11). All three items were on a Likert-type scale from 1 (poor) to 5 (excellent). The first two items, quantity and quality of job performance, were from Kim (2000) who adapted these from Netemeyer, Boles, and McMurrian (1996). The third item, performance rating from boss, is from Joo (1998). Kim (2000) used all three items in her research and reported .71 as the combined alpha. The alpha reliability coefficients for the three items were .79 in the initial study and .81 in the follow-up study. The three productivity variables were summed into a composite score.

Table 11

Productivity Questions

Item

- 11. How do you rate yourself in terms of how much work you accomplish?
 - 12. How do you rate yourself in terms of the quality of your performance?
 - 13. Describe your “performance rating” from your boss?
-

Presenteeism

Presenteeism is a proxy of productivity and a measure of the number of work-loss days a person was on the job but not fully functioning. It was assessed by responses to two items. Respondents were asked to indicate (1) how many days during the previous month they were totally unable to carry out their normal work activities and (2) how many days they had to cut down on their activities or did not get as much as usual done (see Table 12). The possible responses ranged from none to 11 or more days. The alpha reliability coefficients for the two items in the initial study were .97 and .68 in the follow-up study.

Table 12

Presenteeism Questions

Item

- 8. On how many days during the previous month were you totally unable to carry out your normal work activities
 - 9. On how many days during the previous month were you able to work and carry out your normal activities but had to cut down on what you did or did not get done as much as usual?
-

The presenteeism (work-loss items) were developed by Forthofer et al. (1996). Responses in their study were summed based on their data based deduction and on the “assumption that each cut back day is equivalent to half of one work-loss day” (Forthofer et al., 1996, p. 599). Their decision was based on the results of a national telephone study

where the work cutback question was followed by a question asking respondents to estimate the percentage of a full day's work they completed on their cutback days; this average was close to 50%. In the current study, responses to the days cut down on work item were computed as half of one day (divided by .5) and added to the days totally unable to work item for a score of work-loss days.

Work Time Used for Personal Financial Matters.

To assess how much time was used at work handling personal financial matters, respondents were asked to indicate the number of hours they spent in the last month doing things unrelated to their jobs while at work. Table 13 shows the 19 items in the question. This scale was adapted from Kim (2000) and NIPFEE staff developed the remainder of the items. Responses to each item were summed for a composite score of work time used.

Individual and Family Characteristics

Individual and family characteristics included nine demographic variables: gender, marital status, age, level of education, heritage, number of financial dependents, household income, housing situation, and occupation. The occupation question was added to the follow-up study. Respondents were asked to indicate their year of birth. This information was converted to age for reporting results.

Health Status

Health status was measured using three items (only two items in initial study): (1) self report of overall health status, (2) frequency of being bothered by health problems, and (3) self report of physical health status compared to others (see Table 14). The first item was from Drentea and Lavrakas (2000) and was included only in the follow-up study. Responses are on a 5-point Likert-type scale from 1 (very good) to 3 (satisfactory) to 5 (poor). The second and third items were developed by NIPFEE in 1999. The second item is on a 5-point Likert-type scale from 1 (very often) to 3 (average) to 5 (never). The third item is on a 5-point Likert-type scale from 1 (worse than others) to 3 (average) to 5 (better than others). The two health status questions that were used in the initial study

were summed to create a composite score for further analyses. These were also summed using data from the follow-up study.

Table 13

Work Time Used for Personal Financial Matters Questions

Item

4. Often people must spend time at work doing things unrelated to their jobs. This is often necessary and good. How much time would you say you have spent on each of the following tasks during the last month?
- a. Talked with coworker about personal financial problems
 - b. Talked to creditor about past due payments
 - c. Talked to a collection agency about past due payments
 - d. Spent time worrying about personal finances
 - e. Taken time to handle personal financial issues while at work
 - f. Talked to a EAP professional about financial problems
 - g. Read or studied about money matters while at work
 - h. Attended workshop to learn more about money matters
 - i. Consulted a lender about consolidating debts
 - j. Talked to lender about taking out a 2nd mortgage to pay debts
 - k. Talked to lender about a home equity line of credit to pay debts
 - l. Talked to a lawyer about bankruptcy
 - m. Talked to a credit or budget counselor during work hours
 - n. Searched the Internet for information on personal finances
 - o. Used personal finance computer software
 - p. Consulted with a financial planner
 - q. Changed the asset allocation in my retirement portfolio
 - r. Talked to human resources about changing my fringe benefits
 - s. Asked about payroll advances
-

Table 14

Health Status Questions

Item
24. Overall, would you say your health status is
25. How often are you bothered by health status problems (e.g., headaches, upset stomach, back pain, etc.)?
26. Compared to other people your age, how would you rate your physical health status?

Explanation of the Empirical Model

The Double ABCX Model of crisis and stress by McCubbin and Patterson (1983) and the model adapted by Joo (1998) based on McCubbin and Patterson's model that included components of personal finances and work outcome provided the conceptual framework for the study. An empirical model (see Figure 3) was developed from the conceptual framework and used to test the fourth research question.

The five main concepts of the empirical model were the following: individual and family characteristics, health status, financial concerns and related stress, financial wellness, and work outcomes. A summary of the measures is given below. Two variables in the conceptual framework, financial stressor events and financial behaviors, were not included in the model. This decision was made because the nature of the financial stressor events question changed from the initial to the follow-up study and financial behaviors were measured only in the follow-up study. These variables were excluded because variables in the model (measured consistently from the initial to the follow-up study) are compared using the results of both data sets.

Seven individual and family characteristics were assessed: (1) age, (2) gender, (3) marital status, (4) household income, (5) number of financial dependents, (6) housing situation, and (7) heritage. Health status was assessed by a composite score of two items: (1) self report of physical health status compared to others, and (2) frequency of being bothered by health problems.

Four items measured financial concerns and related stress. Financial concerns were measured by a composite score of three items: frequency of concerns about personal finances interfering with work (2 similar questions), and frequency of stress about money

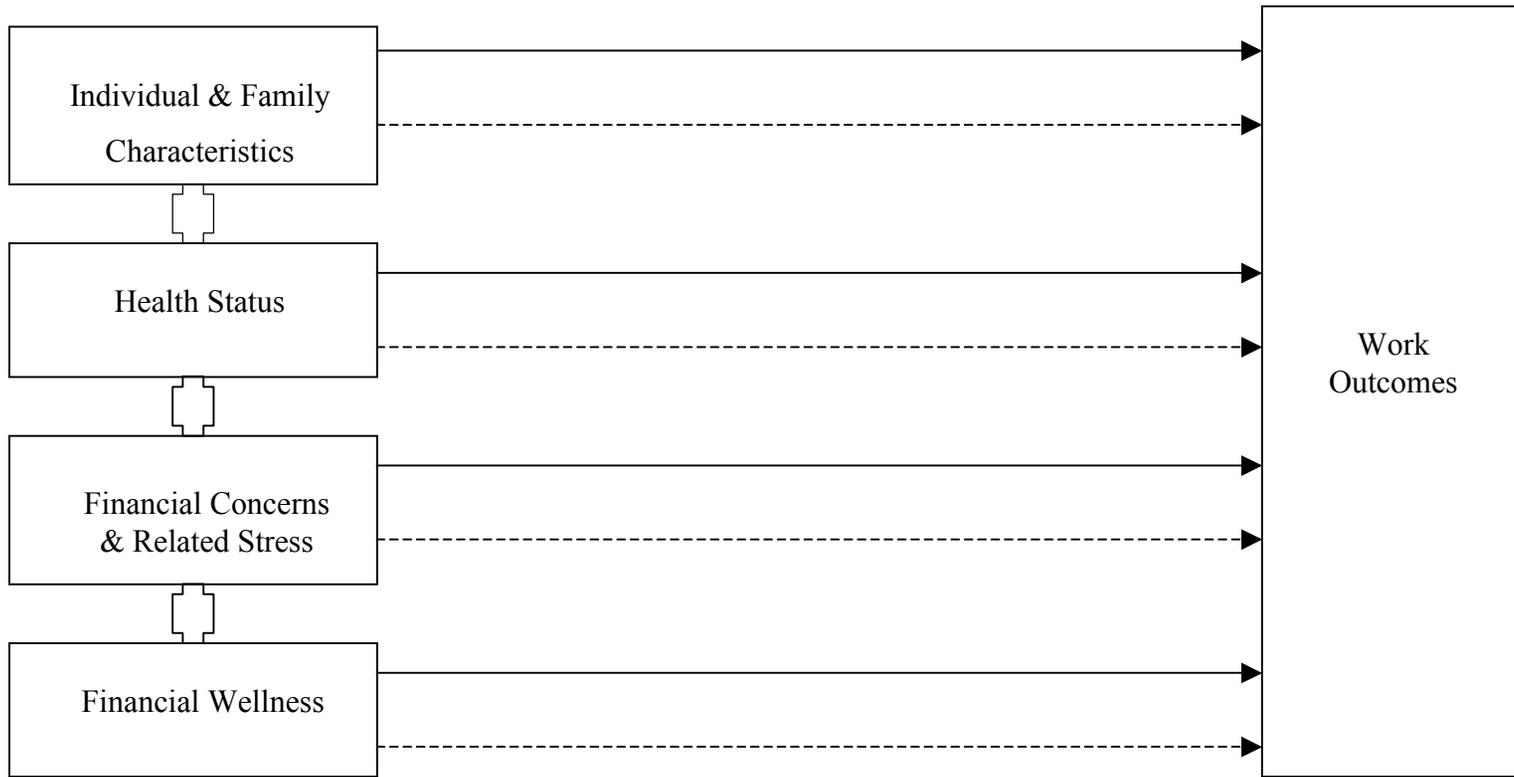


Figure 3. Empirical Model

problems interfering with work. Financial stress was measured by one item: level of stress about personal finances.

Financial wellness was measured using a composite score of three items: (1) satisfaction with present financial situation, (2) perceived financial wellness, and (3) feeling about financial situation. Work outcomes were assessed by three measures: productivity (a composite score of three items), work-time used for personal financial matters (a composite score of 18 items), and presenteeism (a composite score of two items).

Data Collection

Data for this study were collected from each respondent at two points in time. Initial data were collected within the first few weeks of contacting the non-profit consumer credit counseling agency to generate a “baseline” measurement against which changes could be measured, and were collected again one year later.

Initial Study Procedures

Data for the initial study were collected March through May 1999 by means of a paper and pencil questionnaire distributed to clients of a non-profit consumer credit counseling agency in the mid-Atlantic. Following conclusion of their regularly scheduled counseling sessions, the project was explained to clients by their counselors. Clients were then asked for their voluntary agreement to participate in the study. Because the credit counseling agency is in the business of conducting both in-person and telephone counseling, it was possible to gather data from several states nationwide.

A slightly modified version of the mail survey procedure outlined by Dillman's (1978) Total Design Method was used. A letter was given to each counselor explaining the procedures for the study, and each counseling office received identical numbers of survey packets and follow-up reminder postcards. Those client volunteers who agreed to participate in the project were given a survey packet by their counselor containing a cover letter explaining the nature of the study (see Appendix C). The letter introduced the research study, assured confidentiality, and stressed the need for participation. It was printed on white 8 ½ x 11 Virginia Tech National Institute for Personal Finance

Employee Education (NIPFEE) business letterhead. In addition, the packet contained a copy of the instrument and a stamped, pre-addressed reply envelope (with NIPFEE's address) for its return.

Respondents were asked to complete and return the survey as soon as possible. One week following the distribution of the original survey packet, a reminder postcard (see Appendix D) was mailed to non respondents, emphasizing the importance of completing and returning the survey. Postcards for those clients who participated in telephone counseling sessions were addressed, dated, and labeled by counselors. Counseling offices collected these postcards at the end of each week and placed the postcards together in a large envelope and mailed them to the main office of the credit counseling agency. Weekly, a NIPFEE representative traveled to the credit counseling agency and collected the previous week's follow-up cards. These cards were then taken to the NIPFEE offices where they were stamped and mailed one week later.

Two weeks after the postcards were mailed (three weeks after the original mailing), a second complete survey packet with an identical survey was mailed to non-respondents in a standard effort to increase the response rate. This packet contained a slightly different cover letter (See Appendix E). As surveys were returned, respondents' names were deleted from the initial mailing list to avoid excessive duplication.

Deviations from Dillman's recommendations included the deletion of a third follow-up mailing recommended seven weeks after the original mailing. Additionally, correspondence was not personalized, and the survey exceeded the length recommended by Dillman.

A total of 1,000 surveys were delivered to the agency for distribution to their clients by credit counselors at satellite offices in the geographic area. The questionnaires were numbered consecutively for later identification by the credit counseling agency. The agency maintained a master log of all clients to whom survey packets were distributed. The questionnaire numbers were logged in by counselors as they were distributed. While the questionnaire was being given to the client, they were asked to self-address a postcard to be used as a reminder to return the questionnaire. As the postcards were returned, the agency deleted respondents' names from the initial mailing list to avoid excessive duplication of mailings. As the questionnaires continued to be returned, the agency

deleted respondents' names from the initial mailing list to avoid excessive duplication of mailings.

A financial incentive was used to encourage participation. In an effort to increase response rate, a postcard was enclosed in the packet that enabled the respondent to participate in a drawing for \$100. Postcards were pre-stamped, and respondents were instructed to return them separately from the survey in order to preserve their anonymity. Of the 332 respondents, 306 usable postcards were returned. Of the 1,000 surveys delivered to the credit counseling agency, 709 surveys were distributed to clients by the counselors and 332 usable surveys were returned for a response rate of 46% of the questionnaires distributed to the population.

Follow-up Study Procedures

Prior to conducting the study, an application was made to the Institutional Review Board of Virginia Tech for approval of research involving human subjects (see Appendix F). After approval was received, data collection commenced.

The credit counseling agency maintained the data and had sole possession of all identifying information in the initial study. The follow-up study did not have the same anonymity as in the initial study because the researcher maintained the data. This occurred because there was never an intention to conduct a follow-up study and to do so required identification of the respondents in the initial study.

To conduct the follow-up study, the names of the population had to be identified and were done so by the lottery postcards that were retained in the NIPFEE files and then matched to the agency database of client numbers. This was required to assist in data collection. Thus, in the follow-up study the questionnaires were identified with the agency's client numbers. Also, each returned questionnaire was assigned a sequential number, and this became the subject number used to describe and analyze the population. Finally, to obtain the current client status (debt management plan clients, financial counseling only, or dropped from a debt management plan), the client numbers were used to examine the agency database. In January 2000, the lottery postcards from the initial study were given to the credit counseling agency to update addresses for labels and to identify their current status (e.g., debt management plan, dropped from debt management

plan, or received credit counseling only). Labels were printed by the agency for the mailings.

The data for the follow-up study were collected in April and May 2000. Data for the follow-up study were gathered by the same means as the original study using a study instrument mailed to the clients who participated in the initial study. The instrument was a slightly modified version of the "Work and Family Life Survey." The questions remained the same with the addition of 15 questions and rewording of two questions (last month versus last year). Because respondents to the initial study could not be identified with their returned surveys due to a missing data log, those who responded in the follow-up study could not be matched with their original responses.

A modified version of the mail survey procedure outlined by Dillman's (1978) Total Design Method was also used in the follow-up study. A cover letter printed on white 8 ½ x 11 Virginia Tech National Institute for Personal Finance Employee Education business letterhead (see Appendix G) reacquainted original participants with the purpose of the study, outlined the confidential nature of the study, and addressed the importance of their participation. This letter was signed in blue ink and placed in a 9 x 13 manila envelope. The eight page questionnaire was printed front and back on white 11 x 17 paper. It was then folded and saddle stapled in the middle to form a booklet. As with the initial study that allowed respondents to participate in a cash lottery drawing, a financial incentive was offered to encourage participation. This time each individual received \$5 in cash clipped to the front of the cover letter with the first survey packet.

The first mailing occurred on April 14. Respondents were asked to complete and return the survey as soon as possible. A stamped, pre-addressed reply envelope was enclosed for the return of the survey to NIPFEE. On April 21st, a week after the first survey was mailed, a reminder postcard was mailed to non-respondents, emphasizing the importance of completing and returning the survey (See Appendix H). The postcard served as a thank you for those who had completed the survey and a reminder for those who had not.

Two weeks after the postcard was sent, a replacement survey identical to the first was sent on May 6th with a different cover letter as a further inducement for the non-respondents to participate in the study, (See Appendix I). This packet contained a

stamped, pre-addressed reply envelope to be returned to NIPFEE. To avoid duplication in the follow-up mailings, respondents' names were deleted from the initial mailing list as surveys were returned.

In the follow-up study, 306 questionnaires were mailed. Of these, 10 were returned as undeliverable by the post office, reducing the total sample size to 296. The total number of questionnaires returned was 217 yielding a return rate of 73.3%. Three of the returned questionnaires were unusable due to missing information. A survey was determined unusable if more than 75% of the data were missing. Therefore, the usable return rate was 73.0% (214/293). A daily log of returned surveys was kept and is reported in Table 15.

For this study, only those respondents who were currently employed were analyzed. Those who indicated they were unemployed, retired, or disabled were excluded from the final sample. In the initial study, 285 of the respondents were currently employed (85%; 285/332). In the follow-up study, 163 of the respondents (76%; 163/214) were currently employed. The final sample consisted of 285 subjects from the initial study and 163 from the follow-up study.

Data Coding

Previously coded data from the initial study were given to the researcher by NIPFEE. The data file was in Statistical Package for the Social Sciences (SPSS) format. For the follow-up study, each question was entered into a SPSS data sheet similar to the format of the initial study data and labeled with a variable name. An identification number was listed in the first column which corresponded to the order in which the questionnaires were received.

Data Analysis

Data were screened before conducting analyses. A scan was conducted using frequencies, crosstabs, and scatterplots to identify recording errors and out of range responses. Data in doubt were compared with the questionnaires and errors were corrected. Descriptive statistics, such as frequencies, percentages, and ranges, were used to describe the demographic profile of the sample from the initial and follow-up studies.

Table 15

Daily and Cumulative Response Rate: Follow-up Study (N = 296)

Date Returned	Total Number Returned	Number Unusable	Daily %	Cumulative %	Returned as Undeliverable
4/19/00	24	1	7.8%	7.8%	2
4/20/00	12	0	3.9%	11.8%	0
4/21/00	15	0	4.9%	16.7%	1
4/24/00	21	0	6.9%	23.5%	1
4/25/00	21	0	6.9%	30.4%	4
4/26/00	8	0	2.6%	33.0%	2
4/27/00	13	0	4.2%	37.3%	0
4/28/00	6	0	2.0%	39.2%	0
5/01/00	12	0	3.9%	43.1%	0
5/02/00	10	0	3.3%	46.4%	0
5/03/00	5	0	1.6%	48.0%	0
5/04/00	9	0	2.9%	51.0%	0
5/05/00	4	1	1.3%	52.3%	0
5/08/00	9	0	2.9%	55.2%	0
5/09/00	3	0	1.0%	56.2%	0
5/10/00	3	0	1.0%	57.2%	0
5/11/00	3	0	1.0%	58.2%	0
5/12/00	2	0	0.7%	58.8%	0
5/15/00	9	0	2.9%	61.8%	0
5/16/00	9	0	2.9%	64.7%	0
5/17/00	5	0	1.6%	66.3%	0
5/18/00	1	1	0.3%	66.7%	0
5/19/00	2	0	0.7%	67.3%	0
5/22/00	2	0	0.7%	68.0%	0
5/23/00	1	0	0.3%	68.3%	0
5/26/00	2	0	0.7%	69.0%	0
5/31/00	2	0	0.7%	69.6%	0
6/01/00	2	0	0.7%	70.3%	0
6/02/00	1	0	0.3%	70.6%	0
6/05/00	1	0	0.3%	70.9%	0
Totals	217	3	70.9%	70.9%	10

To answer the first research question (to what extent do work outcomes, financial wellness, financial concerns, financial stress, and health status change one year after commencing credit counseling through a non-profit consumer credit counseling agency), descriptive statistics were used to compare frequencies among responses from the initial study (time one) and the follow-up study (time two). Responses to these questions in the follow-up study were compared to responses from the initial study to assess whether or not changes had occurred. For time one and time two comparison (original and follow-up study), a dependent samples t-test (Shavelson, 1988) was used to determine whether there was a statistically significant difference in the mean scores of the variables of interest (financial concerns, financial stress, financial wellness, health status, and productivity, presenteeism, total number of work time hours used for personal financial matters, and total number of work time hours used for personal financial matters excluding hours spent worrying about personal finances) from the initial and the follow-up studies. The Bonferroni-adjustment procedure ($\alpha = .05/8$) was used to establish the significance level of .006. This is used to control the risk of a Type I error where multiple tests are conducted (Howell, 1997).

With few exceptions, most of the cases in the initial and follow-up studies could not be matched. Although it was known who participated in the initial study (as identified by postcards returned to NIPFEE), identification data for the respondents to the study was not available so responses could not be matched to the follow-up study. A limited sample of cases ($n = 25$) could be matched between responses in the initial and follow-up studies by identification on constant demographic variables such as gender, year of birth, and heritage. Mean scores on the variables of interest (financial stress, financial concerns, financial wellness, health status, productivity, presenteeism, and work time used for personal financial matters) were obtained for the initial and follow-up studies. For those cases that could be matched, correlations between the mean score of the initial study and the mean score of the follow-up study were obtained. These correlations then served as a proxy correlation between the scores measured at the two times for use in computing the dependent samples t-test used to determine if changes from the initial to the follow-up study had occurred.

Descriptive statistics were used to answer research question two (to what extent have respondents instituted positive financial behaviors one year after commencing credit counseling through a non-profit consumer credit counseling agency). These statistics were derived from responses to the financial behaviors questions and were collected only in the follow-up study.

Analyses were conducted to compare groups on demographic variables to answer the third research question (are there any differences in individual characteristics among [a] clients on a debt management plan, [b] those who received counseling only, and [c] individuals who dropped out of debt management plans. Respondents in the follow-up study were grouped according to the service they received from the credit counseling agency: those who received counseling only and those who enrolled in a debt management plan). A third category emerged from these groups because some individuals who enrolled in the debt management plan had dropped out after the initial study was conducted.

A chi-square test of independence was performed with each of the six categorical variables (gender, marital status, education level, household income, home ownership, and occupation) to compare the three groups and to determine if any significant differences were present. For the analysis some categories within the variables were collapsed to increase the cell value counts. After collapsing categories, two of the variables had cells with expected counts less than five: education (“some high school” 16.7% of the cells) and heritage (“other” 22.2% of the cells). Some researchers use the guideline of no cell having an expected value less than five, while others recommend that no more than 20% of the cells have expected values less than five (SPSS, 1999). Using the guideline of less than five cases, these cases were omitted from the final chi-square test via the “Select Cases” option in SPSS.

An analysis of variance (ANOVA) was performed for the two continuous variables of age and number of financial dependents with client status as the independent variable. ANOVA was used to determine if any significant differences were present among the three groups. An alpha level of .05 was the cutoff point in determining differences among the groups.

Answers to the fourth research question (to what extent do the individual and family characteristics and personal financial variables in the empirical model explain the variance in work outcomes (i.e., productivity, presenteeism, work time used for personal financial matters) were obtained through hierarchical regression analyses. This method is used to determine the amount of variance a particular variable (or set of variables) explains above and beyond what another variable (or set of variables) already explains. It also is known as incremental partitioning of variance (Pedhazur, 1997). The use of hierarchical regression only permitted testing of the direct relationships between the explanatory variables and the outcome variable. Path analysis would have allowed for testing of both the direct and indirect relationships, however there were too many variables of interest in proportion to subjects in the sample to use path analysis.

A higher score on the financial and health status items was indicative of higher levels of financial wellness, no financial concerns, and better health. The financial stress item was reverse coded so that it would be in the same direction as the financial and health status items. A higher score on the recoded financial stress item was indicative of no financial stress.

In addition, four variables were dummy coded because the data were categorical or nominally scaled. Dummy coding consists of assigning 0's and 1's with 1 signifying group membership in a category and 0 signifying no membership in that group (Pedhazur, 1997). Gender was dummy coded "1" if the respondent was female. This new variable was labeled GENDERD. Marital status (label = MSTD) was dummy coded as "1" if married and "0" for all other categories. Cultural heritage (HERITD) was coded as "1" if white and "0" if any other heritage. Housing situation (HOUSED) was coded as "1" if the respondent indicated he or she owned a home or were making payments on a mortgage, all others were coded as "0."

Separate hierarchical regression analyses were performed with data from the initial and follow-up surveys. Six regression equations were developed with three dependent variables: productivity, presenteeism, and work time used for personal financial matters. Cases missing data from the composite variables were excluded listwise to reduce error.

The independent variables were entered in four separate blocks. Individual and family characteristics of gender, marital status, age, number of financial dependents, income, housing situation, and cultural heritage were entered into the equation as block 1. Health status was then entered as block 2. Financial concerns and financial stress were entered as block 3, and financial wellness was entered as block 4.

Before interpreting regression results, the data were examined for potential problems such as outliers and influential cases, assumption violations and collinearity. Casewise diagnostics, residuals plots, leverage, and Cook's D were reviewed (Pedhazur, 1997).

Summary of Methodology

The purpose of this study was to examine a sample of employed individuals who have participated in credit counseling. This chapter described the source of the data and the population and sample for the study. Data were collected at two points in time, immediately following credit counseling and again, at one year later. Only those individuals who were currently employed were examined in this study.

The development and content of the instruments used, data collection and data analysis methods used to answer the research questions also were discussed. A strength of this study is that it was conducted over a one-year time period. Although originally not designed as a longitudinal study, administering a second survey to this sample as a dissertation study, allowed for comparisons to assess changes.

CHAPTER IV. RESULTS

This chapter presents the results of this study to answer the research questions. The purpose of this study was to examine a sample of employed individuals in the Mid-Atlantic who have participated in credit counseling. Using data collected at two points in time, the sample ($N = 285$ in the initial study; $N = 163$ in the follow-up study) was examined to measure changes in personal financial variables, health status and work outcomes. The sample was also examined to determine the extent to which they instituted positive financial behaviors following participation in credit counseling. In addition, this research assessed differences in the demographics among the clients. The extent to which individual and family characteristics, health status, financial concerns and related stress, and financial wellness accounted for the variance in work outcomes of productivity, presenteeism, and work time used for personal financial matters also was assessed. The chapter also includes a discussion of the demographic characteristics of the sample and the results of the four research questions. In addition, supplementary analyses are discussed at the end of the chapter.

Demographic Characteristics of the Sample

This section presents the demographic characteristics of the respondents in the initial and follow-up studies. These demographic variables include gender, marital status, age, level of education, heritage, number of financial dependents, household income, housing situation, and occupation. The sample was comprised of credit counseling clients who were currently employed at the time of the study ($N = 285$ in the initial study; $N = 163$ in the follow-up study conducted one year later).

As shown in Table 16, two-thirds (66.3%) of the respondents in the follow-up study were female (69.6% in the initial study) and 33.7% were male (30.4% in the initial study). A little over one half of the respondents (52.1%) were married (50.2% in the initial study), 4.3% were not married but living with a partner (9.1% in the initial study), 17.8% were never married (15.8% in the initial study), 22.1% were separated or divorced (22.8% in the initial study), and 3.1% were widowed (2.1% in the initial study).

Table 16

Demographic Characteristics of the Initial and Follow-up Respondents

Demographic Characteristics	Initial Study		Follow-up Study	
	n ^a	% ^b	n	% ^b
Gender	<u>N</u> = 283		<u>N</u> = 163	
Male	86	30.4	55	33.7
Female	197	69.6	108	66.3
Marital Status	<u>N</u> = 285		<u>N</u> = 163	
Married	143	50.2	86	52.1
Never Married	45	15.8	29	17.8
Not Married but Living with Partner	26	9.1	7	4.3
Separated/Divorced	65	22.8	36	22.1
Widowed	6	2.1	5	3.1
Age (in years)	<u>N</u> = 282		<u>N</u> = 162	
20 to 29	68	24.1	36	22.2
30 to 39	80	28.4	48	29.6
40 to 49	81	28.7	41	25.3
50 to 59	32	11.3	26	16.0
60 to 69	16	5.7	10	6.2
70 to 79	5	1.8	1	0.6
Highest level of formal education	<u>N</u> = 282		<u>N</u> = 162	
Some high school	29	10.3	16	9.9
High school graduate	75	26.6	33	20.4
Trade/Vocational training	33	11.7	15	9.3
Some college or Associates degree	100	35.5	60	37.0
Bachelor's degree	26	9.2	25	15.4
Some graduate work completed	8	2.8	6	3.7
Graduate/Professional degree	11	3.9	7	4.3
Heritage	<u>N</u> = 282		<u>N</u> = 163	
Caucasian (white)	210	74.5	123	75.5
African-American	55	19.5	25	15.3
Native American	9	3.2	6	3.7
Hispanic	5	1.8	4	2.5
Asian/Pacific Islander	1	0.4	2	1.2
Other	2	0.7	3	1.8
Number of Financial Dependents	<u>N</u> = 285		<u>N</u> = 163	
Partner	142	49.8	89	45.4
Children younger than age 6	55	19.3	33	20.3
Children age 6-12	67	23.6	29	17.7
Children age 13-18	61	21.5	39	23.9
Children 19 or older	28	9.8	14	8.5
Parents, grandparents, or other adults	24	8.5	7	4.3

Table 16 (continued)

Demographic Characteristics	Initial Study		Follow-up Study	
	<u>n</u>	% ^b	<u>n</u>	%
Annual Household Income	<u>N</u> ^a = 281		<u>N</u> = 163	
Less than \$20,000	95	33.8	37	22.7
\$20,001 - \$30,000	72	25.6	46	28.2
\$30,001 - \$40,000	49	17.4	32	19.6
\$40,001 - \$50,000	27	9.6	20	12.3
\$50,001 - \$60,000	19	6.8	13	8.0
\$60,001 - \$70,000	8	2.8	8	4.9
\$70,001 - \$80,000	5	1.8	5	3.1
More than \$80,000	6	2.1	2	1.2
Current Housing Situation	<u>N</u> = 280		<u>N</u> = 163	
Own a home	38	13.6	25	15.3
Buying a home and making payments	84	30.0	50	30.7
Renting	106	37.9	72	44.2
Live with friend or relative	35	12.5	13	8.0
Other	17	6.1	3	1.8
Occupation Description			<u>N</u> = 151	
Executive, managerial, administrative and professional	--	--	57	37.7
Technical, sales and administrative support	--	--	29	19.2
Service	--	--	25	16.6
Machine operators	--	--	25	16.6
Business managers and owners of businesses	--	--	7	4.6
Precision production, craft, and repair	--	--	7	4.6
Farming, forestry and fishing	--	--	1	0.7

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

Note. A dash (--) indicates data were obtained only in the follow-up study.

The respondents in the sample ranged from 21 to 77 years of age (M = 40 years, SD = 11.7). As shown in Table 16, and after combining categories, over half (54.9%) of the respondents were between the ages of 30 and 49 (57.1% in the initial study). Two-tenths (22.2%) were between 20 and 29 years old (24.1% in the initial study) while nearly two-tenths (16%) were between 50 and 59 (11.3% in the initial study).

The level of education ranged from less than a high school diploma to a graduate or professional degree. Two-tenths (20.4%) of respondents in the follow-up study had completed high school (26.6% in the initial study). The largest group (37.0%) had some

college or an associate's degree (35.5% in the initial study) followed by more than one-tenth (15.4%) who had completed a bachelor's degree (9.2% in the initial study). A small group of respondents (3.7%) had completed some graduate work (2.8% in the initial study), and a fraction (4.3%) held graduate or professional degrees (3.9% in the initial study). Another 9.3% had received trade and vocational training (11.7% in the initial study).

Of the respondents, three-quarters (75.5%) identified themselves as white (Caucasian) (74.5% in the initial study), while 15.3% reported their heritage as African-American (19.5% in the initial study). A small percentage (3.7%) reported their heritage as Native American, Hispanic (2.5%), or Asian/Pacific Islander (1.2%). The category of "other" contained those respondents who did not match the above racial classifications or were racially mixed and comprised another 1.8% of the sample.

Regarding financial dependents, almost half (45.4%) of respondents indicated having a partner as financial dependent (49.8% in the initial study). When combining categories, in the follow-up study, households with children less than age 12 accounted for 38% (42.9% in the initial study) and children aged 13 to 18 were reported by 23.9% (21.5% in the initial study). Less than one tenth (8.5%) of respondents reported children 19 or older (9.8%) or caring for parents, grandparents, or older adults (4.3%). The average number of financial dependents in the initial study was 2.5 ($SD = 1.5$) and in the follow-up study the average number was 1.4 ($SD = 1.3$); however, this is not shown in tabular form.

Over two-tenths (22.7%) reported earning less than \$20,000 in household income (33.8% in the initial study), while over one-fourth (28.2%) earned between \$20,001 and \$30,000 (25.6% in the initial study). Between \$30,001 and \$40,000 was earned by 19.6% (17.4% in the initial study) and 12.3% had household incomes between \$40,000 and \$50,000 (9.6% in the initial study). Combining categories, an additional 17.2% earned incomes greater than \$50,000 annually (13.5% in the initial study). Four-tenths of the sample (44.2%) rented their current housing (37.9% in the initial study), with another 30.7% reporting they were making payments on a mortgage (30% in the initial study). Homes were owned by 15.3% of the sample (13.6% in the initial study), and 8% lived with a friend or relative (12.5% in the initial study).

When asked to describe their occupation, nearly four-tenths (37.7%) reported executive, managerial, administrative or professional occupations. Technical, sales, and administrative support accounted for 19.2% of occupations, followed by service (16.6%), machine operators (16.6%), business manager and owners of business (4.6%), and precision production, craft, and repair (4.6%). Data were not collected for this item in the initial study.

Representativeness of the Sample

A comparison was made of the characteristics of the sample to individuals who received credit counseling in 1999 from the nation's oldest and largest nonprofit organization providing counseling and education services on credit and budgeting, the National Foundation for Credit Counseling (NFCC). The comparison is shown in Table 17. The purpose of this comparison was to ascertain whether the sample could be generalized to a broader population of those who received counseling from the largest national provider of credit counseling. Results shown in Table 17 indicate that in certain respects the sample was somewhat representative of those who sought credit counseling, as they were similar in average age, the percentage of those who were married, and in household size. They differed in gender, the percentage of those not married, and home ownership. Tests were not performed to assess statistically significant differences between the demographic characteristics of the sample and those of the average credit counseling client.

Research Question 1

The first research question was to what extent do work outcomes, financial concerns, financial stress, financial wellness, and health status change one year after commencing credit counseling administered by a non-profit consumer credit counseling agency?

Table 17

Demographic Characteristics of the Initial and Follow-up Respondents Compared to the Profile of the Average Credit Counseling Client of the NFCC

Characteristic	1999 Client [†] Profile	Initial Sample	Follow-up Sample
Gender			
Male	46.2%	30.4%	33.7%
Female	53.8%	69.6%	66.3%
Marital Status			
Never Married	35.0%	15.8%	17.8%
Not Married But Living With Partner	--	9.1%	4.3%
Married	46.2%	50.2%	52.1%
Separated/Divorced/Widowed	18.8%	24.9%	25.2%
Average Age	36.5	39	40
Household Size			
Number in Household	2.8	2.5	1.5
Housing Situation			
Percent Buying a Home	41.6%	30%	30.7%
Household Income			
Average Annual Gross Income	\$29,425	\$28,500 ^a	\$25,600 ^b

[†] Source: National Foundation for Credit Counseling, 2000

^a The mean was calculated from the categorical mean of 2.85. The category 2 was the income range \$20,001 to \$30,000.

^b The mean was calculated from the categorical mean of 2.56. The category 2 was the income range \$20,001 to \$30,000.

Financial Stress Level of Respondents

This section reports the extent of change in the financial stress level of respondents. Three items measured the level of financial stress. Responses from the initial and follow-up studies were compared to assess the extent of change in the level of financial stress. The first question asked “how stressed do you feel about your personal finances?” The responses to this question were on a 5-point scale from 1 (no stress at all) to 5 (extremely stressed).

In the initial study, when categories are combined, as shown in Table 18, the vast majority of respondents (98%) reported feeling some level of stress about their personal finances. Combining categories of responses, 69.5% reported an above-average amount

of financial stress with another 42.5% reporting being extremely stressed due to personal finances.

In the follow-up study, nearly the same percentage of respondents (97%) reported feeling financially stressed. When categories were combined, the proportion of those who reported being extremely stressed decreased to 16.6% as compared with 42.5% in the initial study. The number of individuals reporting an above average financial stress level also decreased from 69.5% to 44.2%. A below average stress level was reported by 19.6% of respondents, while no stress was reported by five respondents (3.1%).

Two additional items were included in the follow-up study to assess the comparative financial stress level of respondents by rating their current level of financial stress and their past level of financial stress before they contacted the credit counseling agency. The responses to both items were on a 5-point scale where 1 was overwhelming and 5 was none.

Responses to the second financial stress question, “before contacting [agency name], how would you rate your financial stress?” showed an overwhelming level of financial stress reported by 34.8% of the respondents prior to contacting the credit counseling agency. A severe level of financial stress was felt by 44.1%.

When asked how they would rate their level of financial stress today since contacting the credit counseling agency (about one year ago), the number of respondents reporting an overwhelming level of financial stress decreased to 6.8% (34.8% in the initial study). A fraction (5.6%) rated their financial stress level as severe. The most frequently cited response to this question was moderate stress reported by half of the respondents (51.9%), followed by nearly a third (29.6%) who reported low financial stress.

Further, a distinct change or reduction in the level of financial stress is descriptively noted in two ways. The first is by comparisons of the level of financial stress from the initial and follow-up studies. The second is by comparing the level of financial stress before and after contacting the credit counseling agency. Results of a dependent samples t-test indicated statistically significant decreases in the level of financial stress between the initial and follow-up studies ($t = 7.340$, $p < .01$). Thus, respondents reported lower financial stress one year following credit counseling.

Financial Concerns of Respondents

Financial concerns were assessed by three items that measured the frequency of financial concerns and money stress interfering with their work. Two similar items asked respondents to indicate the frequency of financial concerns interfering with their work. One question asked, “How often do you feel that concerns about your personal finances interfere with your responsibilities at work, such as getting to work on time, accomplishing daily tasks or working overtime?” and the other asked “How often have your financial concerns kept you from spending the amount of time you would like on your job activities?” As shown in Table 19, these two items were very similar in wording with the exception of the anchor point for “1” on the 5-point scale. The first question ranked 1 as “often” while the second question ranked 1 as “very often”. Both items were anchored in the middle (3 = sometimes) to never (5).

In regards to answers for the question about personal finances interfering with work responsibilities and with combining categories, nearly three fourths (72.7%) of the respondents reported a 4 or 5 (never) in the follow-up study (63.8% in the initial study). Thus, over one-quarter (27.3%) reported some interference at work (36.2% in the initial study).

Regarding the second question that asked about financial concerns interfering with job activities, findings were similar to those of the first question. Combining categories, three-fourths (77.8%) of the respondents reported a 4 or 5 (never) (67.3% in the initial study).

The third question, “how often has the stress from your money problems interfered with your work” was on a 5-point scale from very often (1) to never (5). Combining categories, over half (67.5%) reported a 4 or 5 (never) (59.9% in the initial study).

Results of a dependent samples t-test indicated statistically significant decreases in the level of financial concerns between the initial and follow-up studies ($t = -3.378$, $p < .01$). The data show that approximately two-thirds to three-fourths of credit counseling clients reported that their personal financial concerns did not interfere with their ability to work. For those that did report that concerns interfered with their work, a reduction in the frequency of occurrence is evidenced. Also, approximately, one-fifth to

one-third of respondents did in fact report that their financial concerns interfered with their work.

Table 18

Level of Financial Stress

	Initial		Follow-up	
	<u>n</u> ^a	% ^b	<u>n</u> ^a	% ^b
Stress about personal finances	<u>N</u> = 285 ^a		<u>N</u> = 163	
No stress at all	4	1.4	5	3.1
2	18	6.3	32	19.6
3 Average	65	22.8	53	32.5
4	77	27.0	45	27.6
Extremely stressed	121	42.5	28	17.2
Level of financial stress before			<u>N</u> = 161	
Overwhelming	--	--	56	34.8
Severe	--	--	71	44.1
Moderate	--	--	29	18.0
Low	--	--	5	3.1
None	--	--	0	0.0
Level of financial stress today			<u>N</u> = 162	
Overwhelming	--	--	11	6.8
Severe	--	--	10	6.2
Moderate	--	--	84	51.9
Low	--	--	48	29.6
None	--	--	0	0.0

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

Note. A dash (--) indicates that data were obtained on the level of stress before and after contacting the credit counseling agency only in the follow-up study.

Table 19

Frequency of Financial Concerns Interfering with Work

Variables	Initial		Follow-up	
	<u>n</u> ^a	% ^b	<u>n</u> ^a	% ^b
	<u>N</u> = 268		<u>N</u> = 161	
Concerns About Personal Finances				
1 Often	26	9.7	4	2.5
2	19	7.1	5	3.1
3 Sometimes	52	19.4	35	21.7
4	54	20.1	32	19.9
5 Never	117	43.7	85	52.8
Financial Concerns				
	<u>N</u> = 272		<u>N</u> = 162	
1 Very Often	13	4.8	3	1.9
2	12	4.4	5	3.1
3 Sometimes	64	23.5	28	17.3
4	62	22.8	40	24.7
5 Never	121	44.5	86	53.1
Stress from Money Problems				
	<u>N</u> = 269		<u>N</u> = 163	
1 Very Often	14	5.2	5	3.1
2	23	8.6	12	7.4
3 Sometimes	71	26.4	36	22.1
4	83	30.9	39	23.9
5 Never	78	29.0	71	43.6

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

Subjective Financial Wellness Assessment of Respondents

This section reports the changes in subjective financial wellness which was assessed by three measures: satisfaction with the present financial situation, perceived financial wellness, and feeling about the current financial situation. Results are shown in Tables 20, 21, and 22.

In the follow-up study, as shown in Table 20, when asked to rate their satisfaction with their present financial situation on a 10-point stair step scale anchored at the ends with “satisfied” and “dissatisfied,” two-tenths (20.4%) of respondents indicated the lowest level of satisfaction (50.4% in the initial study). In addition, after combining categories, those who marked the lower half of the scale by indicating a 5 or less, comprised 69.2% (94.5% in the initial study). Further, 14.8% marked the upper three categories (8, 9, or satisfied) (1.5% in the initial study). The proportion of respondents reporting financial dissatisfaction with their present financial situation decreased in the follow-up study.

The second question of perceived financial wellness was on a 5-point scale from always in trouble (1) to doing pretty well (5). As shown in Table 21, nearly two-tenths (16.6%) of respondents reported they were always in trouble as compared with one-third (36.8% in the initial study) reporting this. Combining categories, 50.3% rated their financial wellness as less than average (72.2% in the initial study). Only a fraction (6.7%) indicated they were doing pretty well (0.7% in the initial study). The proportion of respondents reporting “always in trouble” on the perceived financial wellness decreased in the follow-up study.

Regarding the third question that asked how respondents felt about their current financial situation on a 5-point scale ranging from hard to pay bills (1) to easy to save (5), almost three-tenths (28.2%) reported it was hard to pay bills (36.8% in the initial study). Almost one-third (29.4%) rated their situation as a 2, which is the response that falls between hard to pay bills and average. Therefore, the respondents’ feeling about their current financial situations improved.

Statistically significant differences were found between financial wellness in the initial and follow-up studies ($t = -9.022$, $df = 429$; $p < .01$). Therefore, respondents reported improved financial wellness one year following credit counseling.

Table 20

Satisfaction With Present Financial Situation

	Initial		Follow-up	
	<u>n</u> ^a	% ^b	<u>n</u> ^a	% ^b
	<u>N</u> = 270		<u>N</u> = 162	
Dissatisfied	136	50.4	33	20.4
2	42	15.6	21	13.0
3	44	16.3	23	14.2
4	16	5.9	19	11.7
5	17	6.3	16	9.9
6	5	1.9	15	9.3
7	6	2.2	11	6.8
8	3	1.1	17	10.5
9	0	0.0	0	0.0
Satisfied	1	0.4	7	4.3

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

Health Status of Respondents

This section reports the health status of respondents. Two physical health status items were asked in the initial study and three were asked in the follow-up study. Results are shown in Table 23.

Respondents were asked to rate their physical health compared to other people their age on a 5-point scale from worse than others (1) to better than others (5). Combining categories as shown in Table 23, most of the respondents (85.3%) rated their health as average or better (83.1% in the initial study). Also combining categories, those

Table 21

Perceived Financial Wellness

Group	Always in trouble		Average		Doing pretty well
	1	2	3	4	5
Initial ($N^a = 285$)	105	101	71	6	2
% ^b	(36.8)	(35.4)	(24.9)	(2.1)	(0.7)
Follow-up ($N^a = 163$)	27	55	56	14	11
% ^b	(16.6)	(33.7)	(34.4)	(8.6)	(6.7)

Note. The N s for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^aSome categories do not add to 100 due to rounding.

Table 22

Feeling About Current Financial Situation

Group	Hard to pay bills		Average		Easy to save
	1	2	3	4	5
Initial ($N^a = 285$)	167	78	36	3	1
% ^b	(36.8)	(27.4)	(12.6)	(1.1)	(0.04)
Follow-up ($N^a = 163$)	46	48	57	10	2
% ^b	(28.2)	(29.4)	(35.0)	(6.1)	(1.2)

^aThe N s for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

reporting below average health accounted for more than one-tenth (14.7%) of the sample (16.9% in the initial study).

The second question asked respondents how often they had been bothered by health problems (e.g., headaches, upset stomach, back pain, etc.) on a 5-point scale from very often (1) to never (5). Of the respondents, one-fourth (26.4%) reported being

Table 23

Health Status Characteristics of Respondents

Variables	Initial		Follow-up	
	<u>n</u> ^a	% ^b	<u>n</u> ^a	% ^b
Physical Health Status	<u>N</u> = 284		<u>N</u> = 163	
Compared to Others				
1 Worse than Others	14	4.9	6	3.7
2	34	12.0	18	11.0
3 Average	138	48.6	73	44.8
4	58	20.4	41	25.2
5 Better than Others	40	14.1	25	15.3
Frequency of Health Problems				
1 Very Often	65	22.9	20	12.3
2	44	15.5	23	14.1
3 Average	100	35.2	61	37.4
4	50	17.6	44	27.0
5 Never	25	8.8	15	9.2
Overall Health Status				
1 Very Good	--	--	26	16.0
2 Good	--	--	76	46.6
3 Satisfactory	--	--	46	28.2
4 Poor	--	--	13	8.0
5 Very Poor	--	--	2	1.2

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

Note. Data were obtained on overall health status only in the follow-up study.

A dash (--) indicates the response category "N/A" was not available for these questions.

bothered by these problems more than average (38.4% in the initial study). Those reporting average or better comprised 73.6% of the respondents (6.6% in the initial study).

A third health status question was added in the follow-up study to assess respondents' self-report of their overall health status on a 5-point scale from very good (1) to very poor (5). Combining categories, results indicated that the majority of the sample (90.8%) ranked their health as satisfactory to very good. Another one-tenth (9.2%) reported that their health was poor or very poor.

Health status scores between the initial and the follow-up study were compared and statistically significant changes in health status were found between the two times ($t = -4.613$, $df = 445$; $p < .01$). Thus, when asked about their health, most respondents reported an average or significantly better physical health status. Note that a distinct proportion (one-tenth to one-fourth) did report a poor health status.

Work Outcomes Assessment of Respondents

The following sections report the changes in the three types of work outcomes assessed in this research: productivity, presenteeism, and work time used for personal financial matters. Each of the three types and the changes are discussed below.

Productivity

The first type of work outcome assessed in this research was productivity. A self-report of the quality and quantity of work performance and the performance rating from the respondents' boss in the previous year were the measures of productivity. These three items were each measured on a 5-point scale ranging from poor (1) to excellent (5) and anchored in the middle with average (3).

In the follow-up study, as shown in Table 24, by combining categories, more than three quarters (79.0%) of respondents rated their quantity of work as above average (76.3% in the initial study). No respondents rated themselves as poor or below average on quantity of productivity in the follow-up study, and only one did so in the initial study.

Regarding the quality of their work, with combined categories, nearly nine-tenths

(86.4%) rated their quality of work as above average (81.8% in the initial study) while 13% reported an average rating of quality of work (17.8% in the initial study).

Table 24

Productivity Assessment

Variables	Initial		Follow-up	
	<u>n</u> ^a	% ^b	<u>n</u> ^a	% ^b
Quantity of Work Accomplished	<u>N</u> = 270		<u>N</u> = 162	
1 Poor	1	0.4	0	0.0
2	1	0.4	0	0.0
3 Average	62	23.0	34	21.0
4	121	44.8	56	34.6
5 Excellent	85	31.5	72	44.4
Quality of Performance	<u>N</u> = 269		<u>N</u> = 162	
1 Poor	1	0.4	0	0.0
2	0	0.0	1	0.6
3 Average	48	17.8	21	13.0
4	114	42.4	63	38.9
5 Excellent	106	39.4	77	47.5
Performance Rating from Boss	<u>N</u> = 262		<u>N</u> = 155	
1 Poor	2	0.8	1	0.6
2	1	0.4	1	0.6
3 Average	42	16.0	22	14.2
4	99	37.8	50	32.3
5 Excellent	118	45.0	81	52.3

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

When asked about the performance rating from their boss in the previous year, 14.2% ranked themselves as average workers (16% in the initial study). Eight-tenths (84.6%) said they were rated as above average or higher (82.8% in the initial study).

The mean scores for productivity were compared between the initial and follow-up studies. Statistically significant differences in productivity scores were found between the initial and the follow-up study ($t = -3.378$, $df = 415$; $p < .01$). Thus, respondents reported improved levels of productivity one year following credit counseling.

Presenteeism

The second type of work outcomes assessed in this research was presenteeism, which is a measure of work-loss days and a proxy of productivity. This outcome was assessed by responses to two items. Respondents were asked to indicate (1) on how many days during the previous month they were totally unable to carry out their normal work activities and (2) on how many days did they have to cut down on their activities or did they not get as much as usual done. Respondents were asked to indicate one of 12 responses (from none to 11 or more days).

On the first question, when asked to report the total number of work days lost in the past month as noted in Table 25, four-fifths of respondents (82.1%) indicated that they did not experience any days where they were unable to carry out their normal work activities as compared with 70.7% in the initial study. Combining categories, about one-tenth (11.1%) noted that on one to two days in the previous month they were not able to carry out their work activities (13.4% in the initial study), and only 3.7% were not able to work from three to five days (6.0% in the initial study). Those reporting 3 days to 11 days or more (6.8% when combining categories) accounted for nearly one-tenth (9.6% in the initial study).

On the second question, when asked to report the number of days in the past month they had to cut down on their activities, combining categories (see Table 25) showed six-tenths (60.1%) indicating that they did not experience any days where they had to cut down on their normal work activities (50.7% in the initial study). Further, when combining categories, two-tenths (20.9%) indicated they had to cut down their work activities on one to two days in the previous month and that they had to cut down on their work activities (20.5% in the initial study). Those reporting three days to 11 days or more (18.4% when combining categories) accounted for nearly two-tenths (21.2% in the initial study). Respondents reported fewer total workdays lost in the follow-up study.

Table 25

Frequency of Occurrence of Presenteeism

	Initial		Follow-up	
	<u>n</u> ^a	% ^b	<u>n</u> ^a	% ^b
Total Work Days Lost	<u>N</u> = 283		<u>N</u> = 162	
None	200	70.7	133	82.1
1	23	8.1	11	6.8
2	15	5.3	7	4.3
3	17	6.0	2	1.2
4	0	0.0	3	1.9
5	0	0.0	1	0.6
6	3	1.1	2	0.0
7	2	0.7	0	0.0
8	0	0.0	0	0.0
9	0	0.0	0	0.0
10	1	0.4	0	1.2
11 or more days	4	1.4	3	1.9
Days Cut Down on Work Activities	<u>N</u> = 282		<u>N</u> = 163	
None	143	50.7	98	60.1
1	32	11.3	15	9.2
2	26	9.2	19	11.7
3	20	7.1	11	6.7
4	10	3.5	5	3.1
5	10	3.5	4	2.5
6	2	0.7	3	1.8
7	5	1.8	1	0.6
8	0	0.0	1	0.6
9	0	0.0	1	0.6
10	5	1.8	1	0.6
11 or more days	8	2.8	4	2.5

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

On the total workdays lost item, the difference from the initial to the follow-up study was 103 fewer workdays lost. On days cut down, the difference from the initial to the follow-up study was 98 days.

A dependent samples t-test using a composite score of presenteeism (workdays lost) indicated that the decrease in presenteeism was not statistically significant between the initial and follow-up studies. However, inspection of the data revealed that the distributions of the data looked different from the initial to the follow-up survey, in that there were fewer occurrences of presenteeism. Therefore, a chi-square test of independence was used to further examine the data and to test whether the distributions on the presenteeism scores were different. The composite score for presenteeism was collapsed into four categories (no days missed, .5 to 1 day missed, 1.5 to 2 days missed, and 2.5 or more days missed). Analyses revealed a significant difference between the initial and follow-up studies, $\chi^2 = 14.37$ ($df = 3$), $p < .05$. Inspection of the cells between the initial and follow-up data suggests that the decreases occurred for three of the four categories (no days missed, .5 to 1 day missed, and 2.5 or more days missed). Thus, respondents reported fewer work-loss days one year following credit counseling.

Work Time Used for Personal Financial Matters

The third type of work outcomes measured was the amount of work time used to handle personal financial matters. To assess how much work time was used by respondents to handle their personal financial matters, they were asked to indicate the number of hours spent in the last month doing things unrelated to their jobs while at work. There were 19 items in the question.

Responses to the work time used for personal financial matters items were analyzed in several ways to determine if there were changes in the number of hours used. First, the total number of work time hours used was calculated by summing the responses of those who reported using work time. As shown in Table 26, eight-tenths (80.9%) of respondents in the follow-up study reported using time while at work to handle personal financial matters. The average number of work time hours they used was 13.18 hours per month. In the initial study, 84.6% of respondents reported using work time. An average of 26.76 hours per month was used on personal financial matters.

Table 26

Work Time Used for Personal Financial Matters

	<u>n</u> ^a	%	Hours Used Per Month
Initial Study	241	84.6	26.76
Follow-up Study	132	80.9	13.18
Initial Study (excluding worrying about money)	234	82.1	8.83
Follow-up Study (excluding worrying about money)	117	71.7	6.50

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

Note that because one of the items asked respondents to indicate the number of hours they spent “worrying about their finances” while at work, the average score was also computed without this particular item. The reason for this is because worrying and working are not necessarily independent of one another. Of the 19 items, 18 can be classified as actual behaviors (e.g., talked with a coworker about personal financial problems), while spending time worrying is an internal process. An individual may be at work and worrying about his or her finances but still be able to perform work activities. Work time used excluding the item “spent time worrying” was reported by 71.8% of the respondents in the follow-up study. Of those, an average of 6.5 hours of work time per month was used. Excluding the number of hours spent worrying about personal finances, 82.1% respondents in the initial study indicated that they spent 8.83 hours of work time handling personal financial matters.

Statistically significant differences in the means of the composite score for work time used for personal financial matters were found between the initial and the follow-up studies. ($t = 6.809$, $df = 335$, $p < .01$). Further, the work time used for personal financial matters composite score, excluding the item “spent time worrying about personal finances,” was also found to be statistically significant between the initial and follow-up studies ($t = 4.235$, $df = 370$, $p < .01$). Thus, respondents spent fewer hours at work dealing with personal financial matters one year following credit counseling.

Next, items in this question were classified according to yes or no responses for each of the 19 items to show the proportion of the sample that reported using work time for personal financial matters. Findings are reported in Table 27 and arranged according to the frequency of occurrence in the initial study. The behaviors most frequently committed in the initial study were spending time worrying about personal finances (63.5%), followed by talking to creditors about past due payments (51.2%). In the follow-up study, the most frequently occurring behavior was talking to a collection agency about past due payments (63.8%) and talking with a co-worker about personal financial problems (48.5%).

Finally, the 19 items were re-classified according to frequency of occurrence from most to least frequent occurring activities according to total hours used (see Table 28). A mean score of total hours used for each personal financial activity was computed from all responses.

Results of the all of the dependent samples t-tests that were conducted are reported in Table 29. These were conducted to assess if statistically significant changes occurred between the initial and follow-up studies on personal financial outcomes, work outcomes, and health status. Statistically significant differences between the mean scores of financial stress, financial concerns, financial wellness, health status, productivity, and work time used for personal financial matters were found between the initial and follow-up studies.

Table 27

Percentage of Respondents Indicating Work Time Used for Financial Matters

Statement	Initial <u>n</u> ^a (%)	Follow-up <u>n</u> ^a (%)
Spent time worrying about personal finances	181 (63.5)	64 (39.3)
Talked to creditor about past due payments	146 (51.2)	38 (23.3)
Taken time to handle personal financial issues while at work	123 (43.2)	29 (17.8)
Consulted a lender about consolidating debts	96 (33.7)	9 (5.5)
Talked with a co-worker about personal financial problems	91 (31.9)	79 (48.5)
Talked to a collection agency about past due payments	74 (26.0)	104 (63.8)
Consulted with a financial planner	73 (25.6)	5 (3.1)
Talked to a credit or budget counselor while at work	67 (23.5)	11 (6.7)
Talked to EAP professional about financial problems	55 (19.3)	29 (17.8)
Read or studied about money matters while at work	48 (16.8)	8 (4.9)
Talked to a lawyer about bankruptcy	29 (10.2)	35 (21.5)
Talked to a lender about taking out a second mortgage to pay debts	21 (7.4)	8 (4.9)
Talked to a lender about a home equity line of credit to pay debts	22 (7.7)	16 (9.8)
Searched the Internet for information on personal finances	20 (7.0)	2 (1.2)
Attended workshop to learn more about money matters	19 (6.7)	52 (31.9)
Asked about payroll advances	15 (5.3)	0 (0.0)
Used personal finance computer software	9 (3.2)	43 (26.4)
Changed the asset allocation in my retirement portfolio	9 (3.2)	0 (0.0)
Talked to human resources about changing my fringe benefits	2 (0.7)	9 (5.5)

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

Note. Some categories equal more than 100 because a respondent could indicate multiple responses.

Table 28

Frequency of Personal Finance Activities During Work Hours

Activity		Hours Used Last Month		
		<u>n</u> ^a	<u>M</u>	<u>S.D.</u>
Talked with co-worker about personal financial problem	Initial	258	1.19	3.98
	Follow-up	160	0.64	2.09
Talked to creditor about past due payments	Initial	246	1.32	3.19
	Follow-up	161	0.49	1.27
Talked to a collection agency about past due payments	Initial	250	0.71	3.12
	Follow-up	160	0.28	0.96
Spent time worrying about personal finances	Initial	219	20.01	35.11
	Follow-up	150	6.51	15.94
Taken time to handle personal financial issues while at work	Initial	248	1.28	3.89
	Follow-up	160	1.11	4.14
Talked to EAP professional about financial problem	Initial	248	0.27	0.58
	Follow-up	160	0.04	0.23
Read or studied about money matters while at work	Initial	252	0.73	4.27
	Follow-up	160	0.69	2.65
Attended workshop to learn more about money matters	Initial	253	0.14	0.67
	Follow-up	161	0.03	0.17
Consulted a lender about consolidating debts	Initial	248	0.81	2.31
	Follow-up	160	0.50	3.82
Talked to lender about taking out 2nd mortgage to pay debts	Initial	252	0.17	0.84
	Follow-up	160	0.05	0.27
Talked to lender about a home equity line of credit to pay debts	Initial	250	0.21	1.04
	Follow-up	161	0.05	0.22
Talked to a lawyer about bankruptcy	Initial	251	0.18	0.64
	Follow-up	161	0.13	0.52
Talked to a credit or budget counselor during work hours	Initial	255	0.34	0.75
	Follow-up	159	0.15	6.08

Table 28 (continued)

Activity		Hours Used Last Month		
		<u>n</u> ^a	<u>M</u>	S.D.
Used personal finance computer software	Initial	249	0.06	0.42
	Follow-up	161	0.06	0.43
Searched the Internet for information on personal finances	Initial	252	0.11	0.46
	Follow-up	161	0.17	0.67
Consulted with a financial planner	Initial	250	0.43	0.90
	Follow-up	160	0.14	0.83
Changed the asset allocation in my retirement portfolio	Initial	251	0.04	0.27
	Follow-up	161	0.06	0.26
Talked to human resources about changing my fringe benefits	Initial	251	0.00	0.07
	Follow-up	161	0.07	0.42
Asked about payroll advances	Initial	250	0.14	1.17
	Follow-up	161	0.02	0.14

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

Research Question 2

The second research question was to what extent have respondents instituted positive financial behaviors one year after commencing credit counseling administered by a non-profit consumer credit counseling agency?

A scale with nine items was added in the follow-up study to establish a profile of respondents' current financial behaviors and to identify whether clients made positive changes in their financial behaviors following counseling. Respondents were given a list of nine financial behaviors and asked to indicate with a yes or no response if they instituted any of these behaviors since receiving counseling from the credit counseling agency one year ago. Two of the behaviors also had the option "not applicable" as a response. Descriptive analyses were used with the data from the follow-up study.

Table 29

Dependent Samples t-test Results

Variable		<u>N</u>	<u>M</u>	<u>t</u>
Financial Stress	Initial	285	4.02	7.340**
	Follow-up	163	3.34	
Financial Concerns	Initial	264	11.5	-3.378**
	Follow-up	160	12.3	
Financial Wellness	Initial	270	4.64	-9.022**
	Follow-up	161	6.88	
Health Status	Initial	284	6.01	-4.613**
	Follow-up	163	6.45	
Productivity	Initial	262	12.5	-2.875**
	Follow-up	155	12.9	
Presenteeism	Initial	264	1.55	-1.246
	Follow-up	162	1.90	
Work Time Used for Financial Matters	Initial	192	29.1	6.809**
	Follow-up	145	10.6	
Work Time Used for Financial Matters (without “spent time worrying”)	Initial	216	8.15	4.235**
	Follow-up	156	4.79	

**p < .01. *p < .05.

Responses to the financial behaviors items were rank ordered according to frequency of occurrence from high to low and are presented in Table 30. The most frequent behavior (87%) was “reduced some of my personal debts.” The next behavior (78.1%) was “cut down on living expenses.” Almost six-tenths (57.9%) reported they “followed a budget or spending plan” and over four-tenths of the sample (41.9%) indicated that they started or increased their savings. Fewer respondents had contributed money to a pre-tax program (18.9%) or contacted a financial planner (15.1%).

Table 30

Percentage Responses of Financial Behaviors

Statement	Yes		No		N/A	
	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Reduced some of my personal debts	144	87.0	21	13.0	--	--
Cut down on living expenses	125	78.1	35	21.9	--	--
Followed a budget or spending plan	92	57.9	67	42.1	--	--
Developed a plan for my financial future	81	50.9	78	49.1	--	--
Started or increased my savings	67	41.9	93	58.1	--	--
Contributed to my employer's retirement plan	61	37.9	69	42.9	31	19.3
Tried to determine how much I will need to live comfortably in retirement	42	27.3	112	72.7	--	--
Participated in and contributed money to a pre tax dependent care or health care program	30	18.9	79	49.7	50	31.4
Contacted a financial planner	24	15.1	135	84.9	--	--

Note. Data were obtained only in the follow-up study. A dash (--) indicates the response category "N/A" was not available for these questions.

Research Question 3

The third research question was are there any differences in individual characteristics among (a) clients on a debt management plan, (b) those who received counseling only, and (c) individuals who dropped out of debt management plans?

Respondents in the follow-up study were grouped according to the service they received from the credit counseling agency: those who received counseling only and those who enrolled in a debt management plan. A third category emerged out of these groups because some individuals who enrolled in the debt management plan dropped out since the initial study. Therefore, respondents were arranged into three groups to answer research question three. There were 87 clients enrolled in a debt management plan, 33 had dropped from a debt management plan since the initial study was conducted, and 43 had received financial counseling only.

A chi-square test of independence was conducted to determine if the individual and family characteristics among the three groups were significantly different. Results

indicated that only one of the characteristics, marital status, was significant $\chi^2 = 6.086$ ($df = 2$, $n = 151$), $p < .05$. There was a significant association between marital status and client status. The group that had dropped from the debt management plan had a higher proportion of individuals who were married. As indicated in Table 31, the analysis revealed no significant associations between the individual and family characteristics of gender, education level, income, housing situation, occupation, heritage, and client status.

One-way analysis of variance (ANOVA) was run to compare the client status groups on two continuous variables (age and number of financial dependents). As reported in Table 32, results showed no statistically significant differences in either of these variables among the three different client groups. Therefore, any differences among the groups may be attributed to variables other than age and the number of financial dependents.

Table 31

Cross Tabulations of Chi-Square Results: Individual and Family Characteristics
by Client Status

	Client Status			
	DMP	Drop	FCO	Total
Gender				
Male	29	13	13	55
	33.30%	39.40%	30.20%	33.70%
Female	58	20	30	108
	66.70%	60.60%	69.80%	66.30%
	87	33	43	163
<u>N</u> = 163	$\chi^2 = .715$	<u>df</u> = 2	<u>p</u> = .699	
Marital Status				
Not Married	37	22	18	77
	42.50%	66.70%	42.90%	47.50%
Married	50	11	24	85
	57.50%	33.30%	57.10%	52.50%
	87	33	42	162
<u>N</u> = 151	$\chi^2 = 6.086$	<u>df</u> = 2	<u>p</u> = .048*	
Education Level				
High School Graduate	11	8	6	25
	12.90%	24.20%	14.30%	15.60%
Trade or Voc. Training, Assoc. Degree/Some College	38	19	18	75
	43.70%	57.60%	42.90%	46.30%
Bachelor's Degree or Higher	22	4	12	38
	25.30%	12.10%	28.60%	23.50%
	77	31	38	146
<u>N</u> = 146	$\chi^2 = 3.657$	<u>df</u> = 4	<u>p</u> = .454	

(table continues)

Table 31 (continued)

	Client Status			
	DMP	Drop	FCO	Total
Household Income				
Less than \$20,000	17 19.50%	10 30.30%	10 23.30%	37 22.70%
\$20,001 to \$30,000	24 27.60%	11 33.30%	11 25.60%	46 28.20%
\$30,001 to \$40,000	16 18.40%	6 18.20%	10 23.30%	32 19.60%
\$40,001 or more	30 34.50%	6 18.20%	12 27.90%	48 29.40%
	87	33	43	163
<u>N</u> = 163	$\chi^2 = 4.25$	<u>df</u> = 6	<u>p</u> = .643	
Home Ownership				
Own or buying a home	39 44.80%	16 48.50%	20 46.50%	75 46.00%
Renting or live with a friend	48 55.20%	17 51.50%	23 53.50%	88 54.00%
	87	33	43	163
<u>N</u> = 163	$\chi^2 = .135$	<u>df</u> = 2	<u>p</u> = .935	
Occupation				
White Collar	54 65.10%	16 55.20%	23 59.00%	93 61.60%
Service	13 15.70%	7 24.10%	5 12.80%	25 16.60%
Blue Collar	16 19.30%	6 20.70%	11 28.20%	33 21.90%
	83	29	39	151
<u>N</u> = 151	$\chi^2 = 2.765$	<u>df</u> = 4	<u>p</u> = .598	

(table continues)

Table 31 (continued)

	Client Status			Total
	DMP	Drop	FCO	
Heritage				
Caucasian (White)	68 42.50%	22 66.70%	33 42.90%	123 47.50%
African American	11 12.90%	8 24.20%	6 14.30%	25 15.60%
	79	30	39	148
	$\underline{N} = 148$	$\chi^2 = 2.601$	$\underline{df} = 2$	$p = .272$

Note. For client status, “DMP” refers those clients on a debt management plan, “Drop” refers clients who dropped from a debt management plan, and “FCO” refers those clients who received financial counseling only.

Table 32

Analysis of Variance for Age and Number of Financial Dependents (N = 162)

	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	Sig.
Age					
Between Groups	59.94	2	29.97	0.216	0.806
Within Groups	22016.10	159	138.46		
Total	22076	161			
Number of Fin. Dependents					
Between Groups	1.17	2	0.58	0.306	0.737
Within Groups	305.26	159	1.92		
Total	306.44	161			

Research Question 4

The fourth research question was to what extent do the individual and family characteristics and personal financial variables in the empirical model explain the variance in work outcomes (i.e., productivity, presenteeism, work time used for personal financial matters). This section reports the findings of the hierarchical regression analyses used to answer the research question.

Six analyses were run. The first two analyses examined the relationship between the independent variables and productivity in the initial and follow-up studies. The second two analyses examined the relationship between the independent variables and presenteeism in the initial and follow-up studies. The third two examined the relationship between the independent variables and work time used for personal financial matters (which excluded the item of spending time worrying about finances) in the initial and follow-up studies.

The eleven independent variables were entered into regression equations in four steps using a $p < .05$ level of entry. The independent variables at the first step were gender, marital status, age, number of financial dependents, household income, housing situation, and heritage. The independent variable entered in the second step was health status, and in the third step financial concerns and financial stress were added. In the final step, financial wellness was added.

The assumptions for regression are error-free measurement and correct model specification. Reliability estimates for the independent and dependent variables were examined to determine if the data violated the assumption of error-free measurement. Reliability estimates for the independent variables and dependent variables were considered acceptable. To check the assumption that the regression model had been correctly specified, a scatterplot of residuals against predicted values was examined. This suggested that variables might have been missing from the analysis. There was evidence of heteroscedasticity as the data were positively skewed as revealed in a histogram of residuals.

To assess the possible presence of outliers, assumption violations and collinearity, Cook's D, and the variance inflation factor were checked (Pedhazur, 1997). No outliers or influential points were detected. Collinearity diagnostics indicated acceptable variance

inflation factors (VIFs) for the independent variables; therefore, collinearity was not found to be present.

Productivity

The dependent variable, productivity, was measured by a composite score of quality and quantity of work and performance rating from boss. A review of the diagnostics revealed no outliers for both the initial and follow-up studies with productivity as the dependent variable.

A summary of the regression results using data from the initial study is shown in Table 33. In the first step, productivity was regressed on the seven individual and family characteristics. This regression produced a statistically significant R^2 of .097, meaning that 10% of the variance in productivity could be explained by the combination of the individual and family characteristics. The R^2 was statistically significant, $F(7, 236)= 3.631, p < .05$.

At this step, only age was contributing significantly to the explained variance. To determine the amount of variance the remaining three sets of independent variables explained, above and beyond what the individual and family characteristics already explained, the change in R^2 was reviewed at the second, third, and fourth steps. Health status, added at the second step, accounted for a significant additional 9% of the cumulative variance (R^2 change = .091; $F(1, 235)= 26.385, p < .05$). At this step, marital status, age, and health status were contributing significantly to the explained variance. Financial concerns and financial stress added in the third step accounted for an additional statistically significant 11% of the variance (R^2 change = .109; $F(2, 233)= 17.998, p < .05$). Of the two variables added in this step, both were significant. Financial wellness was added in the fourth and final step and the change in R^2 was .003, $F(1, 232)= 1.088, p > .05$ and was not statistically significant. Therefore, using data from the initial study, 30% of the variance in productivity was explained by individual and family characteristics, health status, and financial concerns.

Table 33

Summary of Hierarchical Regression Analysis for Variables Explaining Productivity
in the Initial Study (N = 244)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 1	(Constant)	14.328	.596		.000	.097
	Gender	-.484	.259	-.119	.062	
	Marital Status	.640	.310	.170	.040	
	Age	-.0437	.012	-.244	.000	
	Dependents	-.0991	.091	-.077	.278	
	Income	.130	.076	.119	.090	
	Housing Situation	-.180	.269	-.047	.504	
	Heritage	-.166	.290	-.037	.566	
	Step 2	(Constant)	12.174	.705		
Gender		-.277	.249	-.068	.268	
Marital Status		.760	.296	.202	.011	
Age		-.04387	.011	-.245	.000	
Dependents		-.09325	.088	-.007	.916	
Income		.05245	.074	.048	.481	
Housing Situation		-.225	.256	-.059	.380	
Heritage		-.05708	.276	-.013	.836	
Health Status		.307	.060	.320	.000	

(table continues)

Table 33 continued

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 3	(Constant)	8.773	1.087		.000	.109
	Gender	-.234	.234	-.057	.319	
	Marital Status	.684	.278	.181	.015	
	Age	-.03943	.010	-.220	.000	
	Dependents	-.01137	.083	-.009	.891	
	Income	.05837	.070	.053	.403	
	Housing Situation	-.145	.240	-.038	.546	
	Heritage	-.264	.260	-.058	.312	
	Health Status	.207	.066	.216	.002	
	Financial Stress	-.293	.126	-.150	.021	
	Financial Concerns	.239	.040	.375	.000	
	Step 4	(Constant)	8.153	1.239		
Gender		-.225	.234	-.055	.337	
Marital Status		.729	.282	.193	.010	
Age		-.03792	.011	-.212	.000	
Dependents		-.09979	.083	-.008	.904	
Income		.04542	.071	.042	.522	
Housing Situation		-.179	.242	-.047	.460	
Heritage		-.269	.260	-.059	.303	
Health Status		.197	.067	.205	.003	
Financial Stress		-.375	.149	-.192	.012	
Financial Concerns		.239	.040	.375	.000	
Financial Wellness		.06755	.065	.076	.298	

a Dependent Variable: Productivity

A summary of the regression results using data from the follow-up study is shown in Table 34. The same procedure was followed using data from the follow-up study. In the first step, productivity was regressed on the seven individual and family characteristics. This regression produced an R^2 of .057, meaning that 6% of the variance in productivity could be explained by the combination of the individual and family characteristics, $F(7,143)= 1.235$, $p >.05$. At this step, only household income was contributing significantly to the explanation of variance in productivity. The individual and family characteristics did not account for a statistically significant amount of the variance in productivity.

To determine the amount of variance the remaining three sets of independent variables explained, above and beyond what the individual and family characteristics already explained, the change in R^2 was reviewed at the second, third, and fourth steps. Health status, added at the second step, accounted for a significant additional 5% of the cumulative variance (R^2 change = .054; $F(1,142)= 8.603$, $p < .05$). Financial concerns and financial stress added in the third step accounted for an additional statistically significant 11% of the variance (R^2 change = .114; $F(2 ,140)= 10.333$, $p < .05$). Of the two variables added in this step, only financial concerns was significant. Financial wellness was added in the final step and the change in R^2 was .003 and it was not statistically significant $F(1,139)= .486$, $p >.05$. Therefore, using data from the follow-up study, 23% of the variance in presenteeism was explained by individual and family characteristics, health status, and financial concerns.

Results of the hierarchical regression using data from the initial and follow-up studies revealed that the independent variables of individual and family characteristics, health status, and financial concerns moderately explained the work outcome of productivity. Data from the initial study explained slightly more of the cumulative variance than it did in the follow-up study. Therefore, variables other than demographic or financial may offer additional explanations of the variance in productivity.

Table 34

Summary of Hierarchical Regression Analysis for Variables Explaining Productivity
in the Follow-up Study (N = 151)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 1	(Constant)	11.788	.868		.000	.057
	Gender	-.045	.357	-.011	.901	
	Marital Status	-.206	.413	-.052	.618	
	Age	.004	.015	.024	.776	
	Dependents	.104	.135	.074	.442	
	Household Income	.251	.110	.215	.024	
	Housing Situation	.149	.472	.027	.753	
	Heritage	.244	.417	.049	.560	
Step 2	(Constant)	10.080	1.027		.000	.054
	Gender	.093	.351	.023	.791	
	Marital Status	-.101	.404	-.026	.803	
	Age	.001	.014	.005	.947	
	Dependents	.135	.132	.096	.308	
	Household Income	.200	.108	.172	.067	
	Housing Situation	.080	.461	.014	.862	
	Heritage	.454	.412	.091	.273	
	Health Status	.252	.086	.243	.004	

(table continues)

Table 34 (continued)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 3	(Constant)	6.665	1.540		.000	.114
	Gender	.015	.331	.004	.964	
	Marital Status	-.239	.383	-.061	.534	
	Age	.001	.014	.005	.944	
	Dependents	.103	.125	.073	.409	
	Household Income	.231	.104	.198	.027	
	Housing Situation	.204	.434	.037	.639	
	Heritage	.226	.393	.045	.566	
	Health Status	.124	.096	.120	.196	
	Financial Stress	.261	.169	.143	.125	
	Financial Concerns	.294	.065	.405	.000	
Step 4	(Constant)	6.165	1.702		.000	.003
	Gender	.013	.331	.003	.968	
	Marital Status	-.237	.384	-.060	.538	
	Age	.002	.014	.012	.881	
	Dependents	.104	.125	.074	.405	
	Household Income	.230	.104	.197	.029	
	Housing Situation	.175	.437	.031	.689	
	Heritage	.240	.394	.048	.543	
	Health Status	.120	.096	.116	.213	
	Financial Stress	.343	.206	.187	.098	
	Financial Concerns	.284	.067	.391	.000	
	Financial Wellness	.049	.071	.076	.487	

a. Dependent Variable: Productivity

Presenteeism

Presenteeism was a measure of the number of work-loss days and a proxy of productivity. Reliability estimates for the independent and dependent variables were examined to determine if the data violated the assumption of error-free measurement. Reliability estimates for the independent variables and dependent variables were considered acceptable. To check the assumption that the regression model had been correctly specified, a scatterplot of residuals against predicted values was examined. This suggested that variables might have been missing from the analysis. There was evidence of heteroscedasticity as the data were positively skewed as revealed in a histogram of residuals.

Casewise diagnostics revealed five outliers using the data from the initial study. The data were then examined for coding errors, and none were found. Regression analyses were then rerun without each of these cases individually. Results indicated that when these cases were excluded, there was no significant difference in R^2 change. No other justification was found for eliminating the cases; therefore, they were left in the final regression equation. Collinearity diagnostics indicated acceptable VIFs for the independent variables; therefore, collinearity was not found to be present.

A summary of the regression results using data from the initial study is shown in Table 35. In the first step, presenteeism was regressed on the seven individual and family characteristics. This regression produced an R^2 of .028, $F(7, 239) = .972$, $p > .05$, meaning that 3% of the variance in presenteeism could be explained by the combination of the individual and family characteristics. The individual and family characteristics did not account for a statistically significant amount of the variance in presenteeism. To determine the amount of variance the remaining three sets of independent variables explained, above and beyond what the individual and family characteristics already explained, the change in R^2 was reviewed at the second, third, and fourth steps. Health status, added at the second step, accounted for a significant additional 12% of the cumulative variance (R^2 change = .122; $F(1, 238) = 34.29$, $p < .05$). At this step, only health status was contributing significantly to the explained variance; this increment was statistically significant. Financial concerns and financial stress added in the third step accounted for an additional statistically significant 11% of the variance (R^2 change = .105;

$F(2, 236) = 16.68, p < .05$). Of the two variables added in this step, only financial concerns was significant. Financial wellness was added in the fourth step and it explained zero variance in presenteeism. Adding financial wellness was not statistically significant. Therefore using data from the initial study, 25% of the variance in presenteeism was explained by individual and family characteristics, health status, and financial concerns.

Regarding tests of assumptions for regression using data from the follow-up study, reliability estimates for the independent and dependent variables were examined to determine if the data violated the assumption of error-free measurement. Reliability estimates for the independent variables and dependent variables were considered acceptable. To check the assumption that the regression model had been correctly specified, a scatterplot of residuals against predicted values was examined. This suggested that variables might have been missing from the analysis. There was evidence of heteroscedasticity as the data were positively skewed as revealed in a histogram of residuals.

A review of the casewise diagnostics revealed five outliers using the data from the follow-up study. The data were then examined for coding errors and none were found. Regression analyses were then rerun without each of these cases individually. Analyses revealed that when these cases were excluded there was no significant difference in R^2 change. No other justification was found for eliminating the cases; therefore, they were left in the final regression equation. Collinearity diagnostics indicated acceptable VIFs for the independent variables, therefore, collinearity was not found to be present.

A summary of the regression results using data from the follow-up study is shown in Table 36. The same procedure was followed using data from the follow-up study. In the first step, productivity was regressed on the seven individual and family characteristics. This regression produced an R^2 of .038, $F(7, 150) = .844, p > .05$., meaning that 4% of the variance in presenteeism could be explained by the combination of the individual and family characteristics. The individual and family characteristics did not account for a statistically significant amount of the variance in presenteeism. To determine the amount of variance the remaining three sets of independent variables explained, above and beyond what the individual and family characteristics already

Table 35

Summary of Hierarchical Regression Analysis for Variables Explaining Presenteeism
in the Initial Study (N = 246)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 1	(Constant)	2.925	.878		.001	.028
	Gender	-3.669E-02	.387	-.006	.925	
	Marital Status	-.402	.465	-.073	.389	
	Age	-1.986E-02	.017	-.078	.240	
	Dependents	8.210E-02	.138	.043	.551	
	Income	-.119	.115	-.075	.299	
	Housing Situation	.376	.403	.068	.352	
	Heritage	-.621	.433	-.093	.153	
Step 2	(Constant)	6.603	1.035		.000	.122
	Gender	-.399	.368	-.067	.279	
	Marital Status	-.580	.437	-.106	.185	
	Age	-2.056E-02	.016	-.080	.195	
	Dependents	-6.757E-02	.131	-.036	.607	
	Income	1.514E-02	.110	.009	.891	
	Housing Situation	.472	.378	.085	.213	
	Heritage	-.865	.408	-.130	.035	
	Health Status	-.519	.089	-.372	.000	

(table continues)

Table 35 (continued)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 3	(Constant)	8.736	1.046		.000	.105
	Gender	-.343	.347	-.058	.324	
	Marital Status	-.405	.413	-.074	.328	
	Age	-1.743E-02	.015	-.068	.253	
	Dependents	-4.862E-02	.124	-.026	.694	
	Income	-1.346E-02	.104	-.008	.897	
	Housing Situation	.280	.358	.050	.435	
	Heritage	-.566	.388	-.085	.146	
	Health Status	-.268	.098	-.192	.007	
	Financial Stress	-7.425E-02	.180	-.027	.681	
	Financial Concerns	-.333	.060	-.360	.000	
Step 4	(Constant)	8.714	1.060		.000	.000
	Gender	-.341	.348	-.057	.327	
	Marital Status	-.396	.418	-.072	.344	
	Age	-1.710E-02	.015	-.067	.269	
	Dependents	-4.854E-02	.124	-.026	.695	
	Income	-1.596E-02	.106	-.010	.880	
	Housing Situation	.273	.362	.049	.451	
	Heritage	-.567	.389	-.085	.146	
	Health Status	-.270	.100	-.194	.007	
	Financial Stress	-8.881E-02	.211	-.032	.674	
	Financial Concerns	-.333	.060	-.360	.000	
	Financial Wellness	1.293E-02	.096	.010	.893	

a Dependent Variable: Presenteeism

explained, the change in R^2 was reviewed at the second, third, and fourth steps. Health status, added at the second step, accounted for a significant additional 6% of the cumulative variance (R^2 change = .057; $F(1, 149) = 9.465, p < .05$). Financial concerns and financial stress added in the third step accounted for an additional statistically significant 8% of the variance (R^2 change = .083; $F(2, 147) = 7.460, p < .05$). Of the two variables added in this step, only financial concerns was significant. This was statistically significant at the .05 level. Financial wellness was added in the fourth step and the change in R^2 was .004, $F(1, 146) = .730, p > .05$ and it was not statistically significant at the .05 level. Therefore using data from the follow-up study, 18% of the variance in presenteeism was explained by individual and family characteristics, health status, and financial concerns.

Results of the hierarchical regression using data from the initial and follow-up studies revealed that the independent variables of individual and family characteristics, health status, and financial concerns moderately explained the work outcome of productivity. Data from the initial study explained slightly more of the cumulative variance than it did in the follow-up study. Therefore, variables other than demographic or financial may offer additional explanations of the variance in presenteeism.

Work Time Used for Personal Financial Matters

Regarding tests of assumptions for regression, reliability estimates for the independent and dependent variables were examined to determine if the data violated the assumption of error-free measurement. Reliability estimates for the independent variables and dependent variables were considered acceptable. To check the assumption that the regression model had been correctly specified, a scatterplot of residuals against predicted values was examined. This suggested that variables might have been missing from the analysis. There was evidence of heteroscedasticity as the data were positively skewed as revealed in a histogram of residuals.

A review of the casewise diagnostics revealed five outliers using the data from the initial study. The data were then examined for coding errors, and none were found. Regression analyses were then rerun without each of these cases individually. Results

Table 36

Summary of Hierarchical Regression Analysis for Variables Explaining Presenteeism
in the Follow-up Study (N =158)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 1	(Constant)	1.565	1.694		.357	.038
	Gender	.153	.706	.019	.828	
	Marital Status	-.753	.820	-.096	.360	
	Age	2.025E-04	.028	.001	.994	
	Dependents	.471	.270	.167	.083	
	Income	-.153	.216	-.066	.480	
	Housing Situation	1.226	.926	.111	.187	
	Heritage	.295	.830	.029	.723	
	Step 2	(Constant)	5.161	2.020		
Gender		-.155	.694	-.019	.824	
Marital Status		-.975	.801	-.125	.225	
Age		6.238E-03	.027	.018	.819	
Dependents		.408	.264	.145	.123	
Income		-4.468E-02	.213	-.019	.834	
Housing Situation		1.331	.901	.120	.142	
Heritage		-.158	.821	-.016	.847	
Health Status		-.525	.171	-.251	.002	

(table continues)

Table 36 continued

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 3	(Constant)	8.258	2.098		.000	.083
	Gender	6.302E-02	.668	.008	.925	
	Marital Status	-.783	.775	-.100	.314	
	Age	9.944E-03	.026	.029	.707	
	Dependents	.464	.253	.164	.069	
	Income	-9.543E-02	.207	-.041	.646	
	Housing Situation	1.183	.865	.107	.173	
	Heritage	.303	.799	.030	.705	
	Health Status	-.290	.193	-.139	.136	
	Financial Stress	.314	.340	.086	.357	
	Financial Concerns	-.495	.129	-.340	.000	
	Step 4	(Constant)	8.287	2.100		
Gender		6.727E-02	.669	.008	.920	
Marital Status		-.794	.776	-.102	.308	
Age		7.643E-03	.027	.023	.774	
Dependents		.459	.254	.163	.072	
Income		-9.582E-02	.207	-.042	.644	
Housing Situation		1.246	.869	.113	.154	
Heritage		.271	.800	.027	.735	
Health Status		-.280	.194	-.134	.151	
Financial Stress		.516	.415	.141	.215	
Financial Concerns		-.471	.132	-.323	.000	
Financial Wellness		-.120	.140	-.093	.394	

a Dependent Variable: Presenteeism

indicated that when these cases were excluded, there was no significant difference in R^2 change. No other justification was found for eliminating the cases; therefore, they were left in the final regression equation. Collinearity diagnostics indicated acceptable VIFs for the independent variables; therefore, collinearity was not found to be present.

A summary of the regression results using data from the initial study is shown in Table 37. In the first step, work time used for personal financial matters was regressed on the seven individual and family characteristics. This regression produced an R^2 of .045, $F(7, 194)= 1.303$, $p >.05$, meaning that 4% of the variance in productivity could be explained by the combination of the individual and family characteristics. The individual and family characteristics did not account for a statistically significant amount of the variance in work time used for personal financial matters. At this step, only gender was contributing significantly to the explained variance.

Health status, added at the second step, was not significant, and did not add any explanation to the variance (R^2 change = .005; $F(1, 193)= 1.041$, $p >.05$). Financial concerns and financial stress added in the third step accounted for an additional statistically significant 4% of the variance (R^2 change = .044; $F(2, 144)= 4.660$, $p <.05$). Of the two variables added in this step, only financial concerns was significant. Financial wellness was added in the fourth step and it explained zero variance in work time used for personal financial matters. Therefore using data from the initial study, 9% of the variance in work time used for personal financial matters was explained by individual and family characteristics, health status, and financial concerns.

Regarding tests of assumptions for regression, reliability estimates for the independent and dependent variables were examined to determine if the data from the follow-up study violated the assumption of error-free measurement. Reliability estimates for the independent variables and dependent variables were considered acceptable. To check the assumption that the regression model had been correctly specified, a scatterplot of residuals against predicted values was examined. This suggested that variables might have been missing from the analysis. There was evidence of heteroscedasticity as the data were positively skewed as revealed in a histogram of residuals. Casewise diagnostics revealed one outlier using the data from the follow-up study. Data were then examined for coding errors, and none were found. Regression analyses were

Table 37

Summary of Hierarchical Regression Analysis for Variables Explaining Work Time Used for Personal Financial Matters in the Initial Study (N = 202)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 1	(Constant)	14.383	4.534		.002	.045
	Gender	-4.185	2.003	-.150	.038	
	Marital Status	-3.350	2.417	-.129	.167	
	Age	-9.338E-02	.091	-.075	.305	
	Dependents	1.112	.739	.125	.134	
	Income	-.361	.600	-.047	.548	
	Housing Situation	.584	2.059	.022	.777	
	Heritage	8.779E-02	2.329	.003	.970	
	Step 2	(Constant)	17.882	5.685		
Gender		-4.556	2.035	-.164	.026	
Marital Status		-3.613	2.430	-.140	.139	
Age		-9.356E-02	.091	-.075	.304	
Dependents		.974	.751	.110	.197	
Income		-.206	.618	-.027	.740	
Housing Situation		.654	2.060	.025	.751	
Heritage		-.104	2.336	-.003	.965	
Health Status		-.500	.490	-.077	.309	

(table continues)

Table 37 (continued)

		<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change
Step 3	(Constant)	25.302	6.129		.000	.044
	Gender	-4.385	2.007	-.158	.030	
	Marital Status	-3.083	2.401	-.119	.201	
	Age	-7.546E-02	.091	-.061	.409	
	Dependents	1.068	.738	.120	.149	
	Income	-.337	.609	-.044	.581	
	Housing Situation	.236	2.027	.009	.907	
	Heritage	.255	2.299	.008	.912	
	Health Status	.199	.567	.031	.726	
	Financial Stress	7.726E-02	1.103	.006	.944	
	Financial Concerns	-1.088	.366	-.237	.003	
Step 4	(Constant)	25.302	6.204		.000	.000
	Gender	-4.385	2.013	-.158	.031	
	Marital Status	-3.083	2.435	-.119	.207	
	Age	-7.546E-02	.092	-.061	.414	
	Dependents	1.068	.740	.120	.151	
	Income	-.337	.626	-.044	.591	
	Housing Situation	.237	2.046	.009	.908	
	Heritage	.255	2.305	.008	.912	
	Health Status	.199	.574	.031	.729	
	Financial Stress	7.746E-02	1.297	.006	.952	
	Financial Concerns	-1.088	.367	-.237	.003	
	Financial Wellness	-1.691E-04	.582	.000	1.000	

a Dependent Variable: Work Time Used for Personal Financial Matters

then rerun without this case. Results indicated that when this case was excluded, there was a significant difference in R^2 change. Therefore, this case was left out in the final regression equation. Collinearity diagnostics indicated acceptable VIFs for the independent variables; therefore, collinearity was not found to be present.

A summary of the regression results using data from the follow-up study is shown in Table 38. In the first step, work time used for personal financial matters was regressed on the seven individual and family characteristics. This regression produced an R^2 of .024, meaning that 2% of the variance in productivity could be explained by the combination of the individual and family characteristics. The individual and family characteristics did not account for a statistically significant amount of the variance in work time used for personal financial matters. Health status, added at the second step, was significant (R^2 change = .075; $F(1, 141) = 11.723, p < .05$).

Financial concerns and financial stress added in the third step accounted for an additional statistically significant 9% of the variance (R^2 change = .088; $F(2, 139) = 7.556, p < .05$). Of the two variables added in this step, only financial concerns was significant. Financial wellness was added in the fourth step and it explained zero variance in work time used for personal financial matters. Therefore, using data from the follow-up study, 11% of the variance in work time used for personal financial matters was explained by individual and family characteristics, health status, and financial concerns.

With one exception, the individual and family characteristics, entered as a block in the first step of the regression analyses, did not significantly explain the variance observed in each of the three work outcomes. The addition of health status as a variable, above and beyond what individual and family characteristics, accounted for a small amount of incremental change in the explanation of the variance in the work outcomes. Financial concerns, above and beyond, individual and family characteristics and health status, accounted for a significant increment in the explained variance for all three work outcomes using both data sets. The addition of financial wellness as a final step into the equation did not explain any variance in each of the three work outcomes. These findings were consistent using data from both the initial and the follow-up studies.

In summary, some of the elements of the model were not supported by the data. The explanatory variables accounted for only a moderate amount of the variance in work outcomes. In general, the variables in the model explained slightly less of the variance in the work outcomes using data from the follow-up study as compared with data from the initial study. Therefore, the variables in the model were partially relevant for explaining the work outcomes of productivity, presenteeism, and work time used for personal financial matters.

Table 38

Summary of Hierarchical Regression Analysis for Variables Explaining Work Time Used for Personal Financial Matters in the Follow-up Study (N = 150)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change		
Step 1	(Constant)	5.469	2.707		.045	.024		
	Gender	-8.909E-02	1.132	-.007	.937			
	Marital Status	-7.012E-02	1.312	-.006	.957			
	Age	-2.782E-02	.046	-.051	.546			
	Dependents	.185	.444	.042	.678			
	Income	.295	.339	.084	.386			
	Housing Situation	-.870	1.446	-.052	.548			
	Heritage	-1.604	1.325	-.102	.228			
	Step 2	(Constant)	11.774	3.194			.000	.075
		Gender	-.619	1.102	-.049		.575	
Marital Status		-.427	1.269	-.035	.737			
Age		-1.982E-02	.044	-.037	.656			
Dependents		3.974E-02	.430	.009	.927			
Income		.489	.332	.140	.142			
Housing Situation		-.654	1.396	-.039	.640			
Heritage		-2.338	1.296	-.149	.073			
Health Status		-.915	.267	-.286	.001			

Table 38 (continued)

	Variable	<u>B</u>	<u>SE B</u>	β	Sig.	R ² Change		
Step 3	(Constant)	15.613	3.324		.000	.088		
	Gender	-.392	1.057	-.031	.711			
	Marital Status	-.458	1.220	-.038	.708			
	Age	-1.976E-03	.043	-.004	.963			
	Dependents	1.925E-02	.412	.004	.963			
	Income	.556	.322	.159	.086			
	Housing Situation	-.859	1.336	-.051	.522			
	Heritage	-1.417	1.263	-.090	.264			
	Health Status	-.327	.300	-.102	.278			
	Financial Stress	-.556	.202	-.247	.007			
	Financial Concerns	-.938	.540	-.165	.084			
	Step 4	(Constant)	15.612	3.335			.000	.000
		Gender	-.391	1.060	-.031		.713	
Marital Status		-.461	1.224	-.038	.707			
Age		-7.317E-04	.043	-.001	.987			
Dependents		1.987E-02	.413	.004	.962			
Income		.558	.323	.160	.086			
Housing Situation		-.886	1.344	-.053	.511			
Heritage		-1.410	1.267	-.090	.268			
Health Status		-.332	.301	-.104	.273			
Financial Stress		-.569	.208	-.252	.007			
Financial Concerns		-1.046	.667	-.184	.119			
Financial Wellness		6.160E-02	.222	.031	.782			

a Dependent Variable: Work Time Used for Personal Financial Matters

Supplementary Analyses

This section presents supplementary analyses that were conducted but were not in the scope of the research questions addressed in the study. Descriptive analyses of additional data collected in the initial and follow-up studies are presented to further illustrate the work and personal financial outcomes of respondents. The following topics are discussed in this section: cause of contacting the credit counseling agency, occurrence of financial stressor events, job quality and productivity issues, health status as affected by financial problems, and additional services received from the credit counseling agency.

Cause of Financial Problems

Respondents in the initial study were asked to think about their financial situation and what happened in their household to cause their financial problems. They could indicate multiple answers to this question from a list of 20 possible reasons. This question was asked only in the initial study.

As shown in Table 39, the overuse of credit was the cause of financial problems as reported by six-tenths (66.3%) of respondents. A similar number (63.5%) reported not having enough income as the cause of their financial problems. Cash flow management problems were also indicated by nearly half of respondents. Of those, 48.8% of respondents reported their financial problems were due to lack of a spending plan and 47.4% of respondents reported spending too much.

Medical bills were the cause of financial problems for over one-third (35.8%) of respondents with illness reported by an additional one-fourth (25.3%). Unemployment was listed as a cause by one-fourth (24.2%), and partner's unemployment was reported by less than two-tenths (14.7%). Only a fraction of respondents (2.1%) indicated that they did not really have any financial problems. Other causes are reported in Table 39.

Table 39

Reported Cause of Financial Problems

Cause	<u>n</u>	%
Overuse of credit	189	66.3
Not enough income	181	63.5
Lack of a spending plan	139	48.8
Spending too much	135	47.4
Medical bills	102	35.8
Illness	72	25.3
My unemployment	69	24.2
Got divorced/separated from partner	57	20.0
Layoff/cutback in my hours	56	19.6
Buying too many gifts	47	16.5
Caring for dependents or parents	44	15.4
Partner's unemployment	42	14.7
Just didn't get around to paying the bills	36	12.6
Other	30	10.5
Layoff/cutback in partner's hours	25	8.8
Accident	22	7.7
Alcohol or drug use	14	4.9
Legal problems	13	4.6
Lottery or gambling	12	4.2
I do not really have any financial problems	6	2.1

Note. Respondents could indicate multiple answers.

Cause for Contacting the Credit Counseling Agency

In addition to being asked about the cause of their financial problems, respondents were also asked to indicate what happened to cause them to contact the non-profit credit counseling agency. This question was open-ended and was asked only in the initial study. The most frequently cited causes were related to the overuse of credit (66.3%) and not

enough income (63.5%). Cash management issues (e.g., lack of a spending plan and spending too much) were reported by nearly one-half of the respondents as causes of their financial problems. Other reported causes were medical bills (35.8%), illness (25.3%) and unemployment (24.2%). Select responses are presented below to describe some of the issues faced by the sample that caused them to contact the credit counseling agency.

Credit and Debt Problems

“The bills seemed to get further behind and I knew I had to get a grip on them before they took over our lives completely.”

“I support myself through school and my entire bill and credit card just started adding up fast. I was putting out more that [sic] what I was thinking.”

Cash Management Problems

“...realization that I could not adequately manage my finances- a sense that finances were spinning out of control.”

Job Loss

“My employer terminated my supervisor's position after 42 years with the company and gave me a 50% cut in pay. My financial obligations were based on my salary as a supervisor and I cannot meet my obligation now.”

Divorce or Separation

“I had a life style change" left my job left my marriage ended up with a lower income then I previously had. From there I realized that I did not want to be in debt 20 years, and I sought help...”

Other

“An absolute feeling of despair, depression, and the feeling that I have ruined my life. My husband and I retired from the teaching profession each with 31 years of service. We had saved for retirement but had to use savings to help son and family.”

Financial Stressor Events

Respondents were asked in the initial and follow-up studies to indicate how frequently they had experienced any of 23 nonnormative financial events believed to be indicative of financial stress. All financial stressor events were negative, and respondents

were asked to report the frequency of occurrence for each item from 0 (never) to 1 (once) to 2 (more than once). These categories were collapsed into never or once or more for reporting. In the initial study, respondents were asked to indicate how frequently they had experienced these events during the past year. In the follow-up study, the timeline for reporting these events was different in that respondents were asked to indicate how frequently they had experienced these events during the past month. The reason for the different time periods is that the time one responses provide a robust insight to the credit counseling clients' financial lives while the single most recent month (for the follow-up study) provides a relatively clear snapshot of their finances today.

Financial stressor events for both the initial and follow-up studies are reported in Table 40. They are sorted in descending order by reported frequency of occurrence based on findings from the initial study.

In the initial study, using the year prior to receiving credit counseling as a reference point, nine-tenths of respondents reported the following occurring once or more: paying a service charge for paying a bill late (94.3%), receiving an overdue notice from a creditor (93.6%), and not being able to afford to go out when they desired (91.2%). Respondents in the follow-up study also reported these responses as the top three in terms of frequency of occurrence, but the percentages for each were much lower and are as follows: paying a service charge for paying a bill late (56.6%), receiving an overdue notice from a creditor (58.0%), and not being able to afford to go out when they desired (67.5%).

Of respondents in the initial study, eight tenths reported the following occurring once or more: receiving a phone call from a creditor about a past due bill (88.3%), paying a credit card bill late (85.9%), credit card balance reached maximum limit (81.2%). In the follow-up study, these occurred for nearly one-third of respondents but not as frequently as with the initial study. Frequency of occurrence for each event in the follow-up study was as follows: receiving a phone call from a creditor about a past due bill (41.6%), paying a credit card bill late (32.3%), credit card balance reached maximum limit (29.5%). Additional financial stressors are reported in Table 40.

Table 40

Frequency of Occurrence of Financial Stressor Events

Event	Past 12 months (Initial)				Past Month (Follow-up)			
	Never		Once or More		Never		Once or More	
	<u>n</u> ^a	%	<u>n</u> ^a	%	<u>n</u> ^a	%	<u>n</u> ^a	%
Paid a service charge for paying a bill late	16	5.7	266	94.3	69	43.4	90	56.6
Received an overdue notice from a creditor	18	6.4	265	93.6	68	42.0	94	58.0
Could not afford to go out when desired	25	8.8	258	91.2	52	32.5	108	67.5
Got phone call from creditor about past due bill	33	11.7	249	88.3	94	58.4	67	41.6
Paid credit card bill late	40	14.1	243	85.9	107	67.7	51	32.3
Credit card balance reached maximum limit	52	18.8	224	81.2	110	70.5	46	29.5
Did not have enough money to pay for emergency	69	24.7	210	75.3	89	55.6	71	44.4
Paid utility bill late	69	24.4	214	75.6	89	55.6	71	44.4
Could not afford to make needed vehicle repairs	77	27.3	205	72.7	92	56.8	70	43.2
Bounced a check	103	36.9	176	63.1	111	68.9	50	31.1
Got collection agency call about overdue bill	106	37.6	176	62.4	121	75.2	40	24.8
Took cash advance on a credit card	118	42.3	161	57.7	140	87.5	20	12.4

(table continues)

Table 40 (continued)

Event	Past 12 Months (Initial)				Past Month (Follow-up)			
	Never		Once or More		Never		Once or More	
	<u>n</u> ^a	%	<u>n</u>	%	<u>n</u>	%	<u>n</u>	%
Made vehicle loan/lease payment late	117	42.5	158	57.5	113	69.8	48	29.7
Could not afford to pay auto insurance premium	139	49.6	141	50.4	134	83.2	27	16.8
Paid rent/mortgage late	140	50.7	136	49.3	115	72.3	44	27.7
Could not afford medical care	153	54.8	126	45.2	124	76.5	38	23.5
Could not afford to pay for medical insurance	183	66.8	91	33.2	134	84.3	25	15.6
Used cash advance on a credit card to pay another	186	67.1	91	32.9	148	92.5	12	7.5
Been sued for collection of debt	225	79.8	57	20.2	149	92.5	12	7.5
Could not afford transportation to work	227	81.9	50	18.1	150	93.2	11	6.8
Had wages garnished or attached	245	87.2	36	12.8	155	96.3	6	3.7
Had items repossessed	252	89.4	30	10.6	153	94.4	9	5.56
Home went into foreclosure	264	94.6	15	5.4	159	98.9	2	1.2

Note. Events are sorted by frequency of occurrence in descending order based on results of the initial study.

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

Absenteeism

Respondents in the initial and follow-up studies were asked to indicate frequency of their absences. One item was used to measure the number of days absent for personal reasons over the past year. Responses could range from none to more than 12 days. As shown in Table 41, about one quarter (24.1%) of respondents in the initial study reported no absences over the past year excluding holidays and vacation (31.9% in the follow-up study). The largest group of the respondents (26.3%) reported being absent one to two

days (27.0% in the follow-up study). Another two-tenths (20%) were absent three to four days (15.4% in the follow-up study). Those reporting absences of more than 12 days were 7% of the respondents (5.5% in the follow-up study).

Table 41

Number of Days of Missed Work Over the Past 12 Months

		<u>n</u> ^a	<u>%</u> ^b
No days missed	Initial	65	24.1
	Follow-up	52	31.9
1 to 2 days	Initial	71	26.3
	Follow-up	44	27.0
3 to 4 days	Initial	54	20.0
	Follow-up	25	15.4
5 to 6 days	Initial	31	11.5
	Follow-up	21	12.9
7 to 8 days	Initial	18	6.7
	Follow-up	7	4.3
9 to 10 days	Initial	7	2.6
	Follow-up	2	1.2
11 to 12 days	Initial	5	1.9
	Follow-up	3	1.8
More than 12 days	Initial	19	7.0
	Follow-up	9	5.5

^aThe Ns for individual categories may not equal 285 (initial) or 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions.

^bSome categories do not add to 100 due to rounding.

Health Status As Reported Being Affected by Financial Problems

In addition to objective questions on health status, an open-ended question was used in the initial and follow-up studies to find out if respondents felt that their health had been affected by their financial problems. Specifically, the question asked, “In general, do you feel your health has been affected by your financial problems? If so, please explain”. Responses to the question from both the initial and follow-up study were analyzed for common themes by the researcher with the aid of a faculty member and doctoral student in the health promotion field. Eleven themes emerged, and responses were recoded into the eleven categories. Results are presented in Graph 1.

In the initial study, as shown in Graph 1, 52% of those who responded to the question ($n = 162$) reported general stress, anxiety, and worry as a result of their financial problems. Another 23% reported experiencing headaches, 18% reported general health problems, 13% reported sleeping disorders and 12% reported stomach problems as a result of financial problems.

Select responses to this question from the initial study are presented below.

“I feel very stressed mainly because I do not see any solution to our financial situation. Headaches, depression and poor diet is [sic] the results of worrying continuously.”

“Yes, I lose a lot of sleep. I get all these problems on my mind. Feel sick a lot, at times, when I do sleep some it’s the first think [sic] on my mind and I fell [sic] so depressed, I don’t even want to get out of bed.”

“My mental health has been affected a feeling of hopelessness can result from being in long-term debt.”

This question was also asked in the follow-up study. As shown in Graph 2, 55% of respondents ($n = 76$) attributed general stress, anxiety, and worrying as the major cause of health being affected by their financial problems followed by % reporting headaches. Select responses to the question from the follow-up study are presented below.

“There is no doubt that financial problems cause stress in your life! Anyone faced with difficulty in paying their bills gets stressed. “What am I going to do now?” plays over and over in your mind.”

“Needless to say, stress or worrying eventually works on you physically and weakens your immune system making it easier to become ill, also a lack of sleep adds to this.”

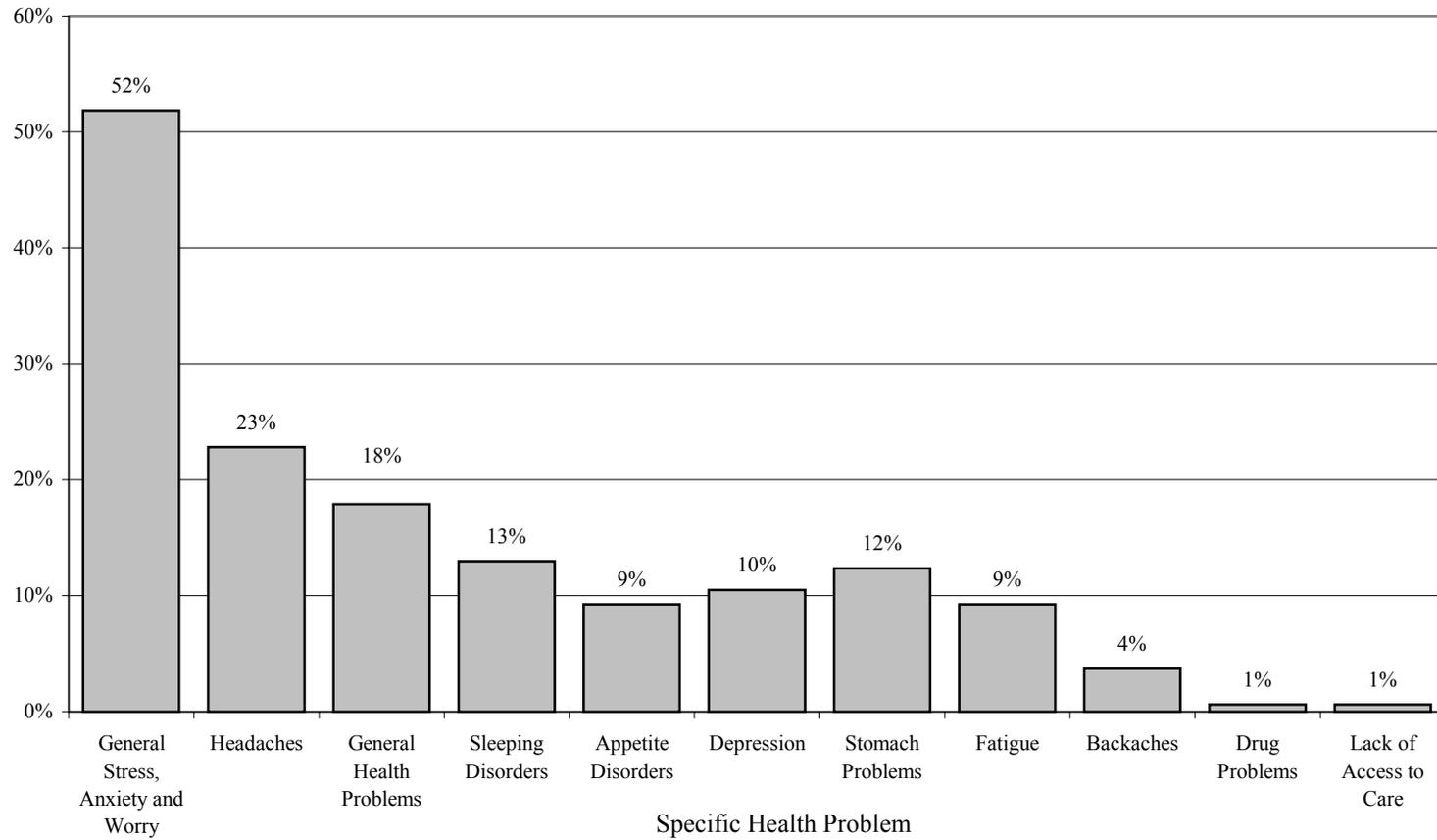
“Migraines are caused by financial problems (stress). Not enough money to buy prescription meds for migraines. Work 2 jobs, no time, lose sleep, no visit family or friends.”

Additional Services Received from the Credit Counseling Agency

Many non-profit consumer credit counseling agencies offer education programs in addition to their counseling and debt management services. A question was added to the follow-up study to find out what additional services beyond financial counseling and/or a debt management plan were received, if any, by respondents. This question was asked only in the follow-up study. Responses were classified according to the three client status groups.

As shown in Table 42, those individuals on a debt management plan received more additional services than those who dropped from a debt management plan and those who received financial counseling only. The service most frequently reported was a newsletter, reported by 21.3% of those on a debt management plan, followed by education programs reported by 7.1% of those on a debt management plan.

Graph 1. Self Report of Health as Affected by Financial Problems (Initial Study, $n = 162$)



Graph 2. Self Report of Health as Affected by Financial Problems (Follow-up Study, $n = 76$)

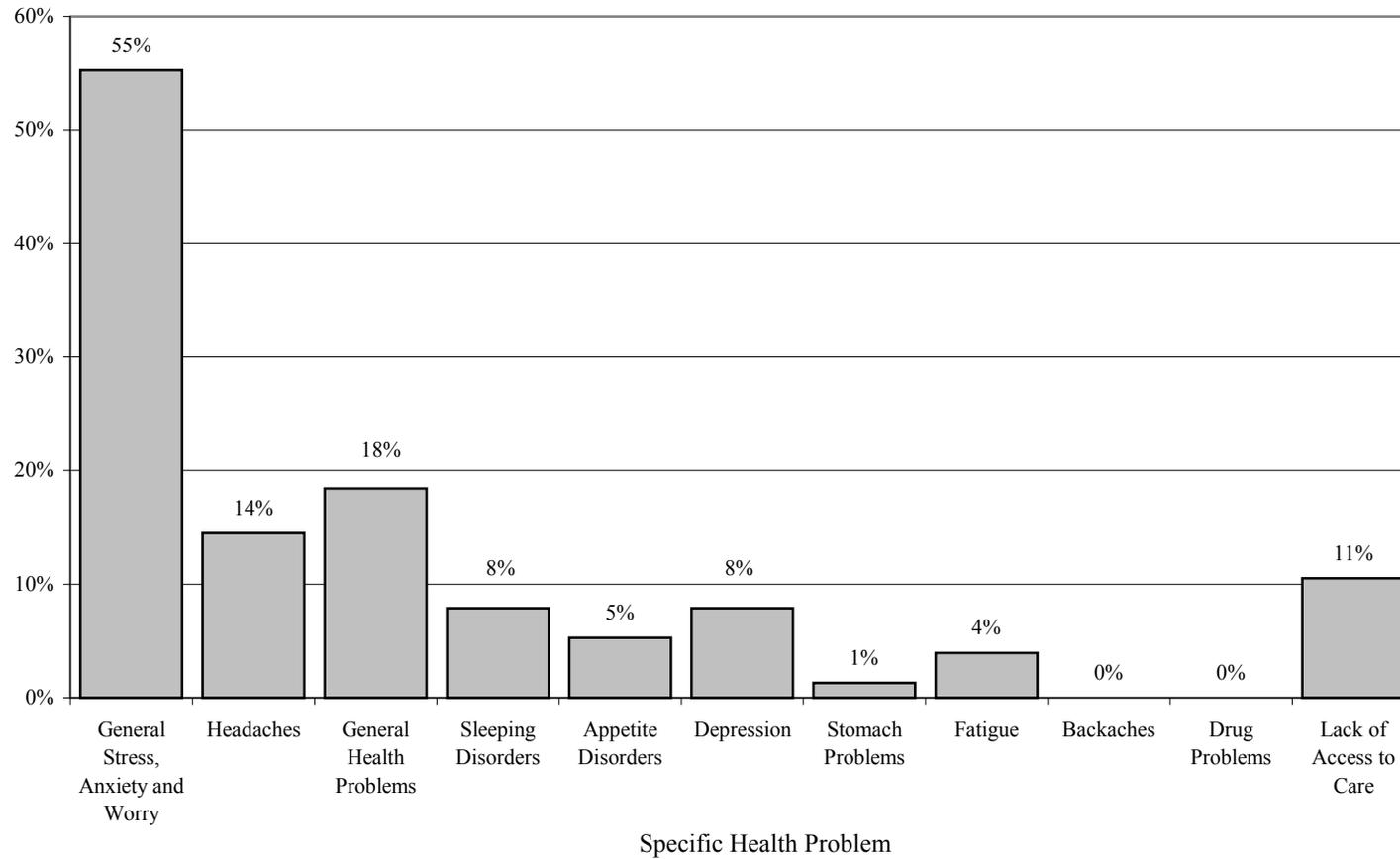


Table 42

Additional Services Received from the Credit Counseling Agency (N = 155)

Services	Client Status			Total
	DMP	Drop	FCO	
No additional services	36 (23.2%)	24 (15.5%)	39 (25.2%)	99 (63.9%)
Housing workshop	5 (3.2%)	1 (0.6%)	1 (0.6%)	7 (4.5%)
Newsletter	33 (21.3%)	2 (1.3%)		35 (22.6%)
Education workshop	6 (7.1%)	2 (1.3%)		8 (5.2%)
Other	5 (3.2%)	1 (0.6%)		6 (3.9%)
Total	85 (54.8%)	30 (19.4%)	39 (25.8%)	155 (100%)

Note. The Ns for individual categories may not equal 163 (follow-up) because some respondents inadvertently or intentionally did not answer some questions. For client status, “DMP” refers those clients on a debt management plan, “Drop” refers clients who dropped from a debt management plan, and “FCO” refers those clients who received financial counseling only.

Summary of Results

Analyzing data collected at two points in time allowed for a comparison of changes to answer the first research question. Descriptive changes in financial stress, financial concerns, financial wellness, productivity, presenteeism, and work time used for personal financial matters were reported. In addition, the mean differences in financial stress, financial concerns, financial wellness, productivity, presenteeism, and work time used for personal financial matters were examined with a dependent samples t-test. Findings suggested significant changes in mean scores on work outcomes and personal financial outcomes and health status between the initial and follow-up study, with the exception of presenteeism. Chi-square analyses revealed a significant difference in the distributions of presenteeism scores, thus respondents reported fewer work-loss days in the follow-up study.

The second research question was to what extent had respondents instituted positive financial behaviors since receiving credit counseling one year ago. Most had reduced some of their personal debts and cut down on living expenses since receiving counseling. Fewer respondents had participated in or contributed to a pre-tax program or contacted a financial planner.

The third research question was to assess if there were any differences in individual and family characteristics (demographics) among the three groups of clients (those on a debt management plan, those who had dropped from a debt management plan, and those who received financial counseling only). These three groups could only be identified in the follow-up study. A chi-square test of independence suggested a small difference in marital status among the groups. The group that had dropped from the debt management plan had a higher proportion of individuals who were married. Otherwise, there were no significant demographic differences among the groups of clients.

An empirical model was presented in this study and the variables in the model were analyzed to answer research question four: to what extent do the individual and family characteristics and personal financial variables in the empirical model explain the variance in work outcomes of the model: productivity, presenteeism, and work time used for personal financial matters. Hierarchical regression analyses were run using data from the initial and follow-up studies, where work outcomes were the dependent variables and the independent variables were demographic variables of gender, education level, income, housing situation, heritage, age, and number of financial dependents, health status, financial concerns and related stress, and financial wellness.

Regression results revealed that health status and financial concerns explained a moderate amount of the variance in work outcomes of productivity, presenteeism, and work time used with data from both the initial and follow-up studies.

The last section presented included supplementary descriptive analyses beyond the scope of the research questions. Topics covered were cause for contacting the credit counseling agency, number of days of missed work over the past 12 months, health status as reported being affected by financial problems, and additional services received from the agency. These were used to further describe the work and personal financial outcomes of the respondents.