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Financial behaviours of consumers in credit counselling

Jing Jian Xiao,[1] Benoit Sorhaindo[2] and E. Thomas Garman[3]

1 Take Charge America Institute for Consumer Financial Education and Research, University of Arizona, Tucson, AZ, USA
2 InCharge Education Foundation, Orlando, FL, USA
3 Department of Apparel, Housing, and Resource Management, Virginia Tech University, Orlando, FL, USA

Abstract

Positive financial behaviours of consumers are examined using a national sample of consumers who use credit counselling services in the US from a behavioural economic perspective. The findings indicate that consumers in credit counselling may follow a hierarchical pattern in their financial behaviours, paying off debts and adjusting spending before considering saving. Consumers who are older, have a part-time job (vs. the unemployed), and report a more secure retirement, a better family relationship, and a higher score of self-evaluation of financial behaviours are likely to report more positive financial behaviours. Reporting more financial behaviours and a higher score of self-evaluation of financial behaviours, along with several demographic and perception variables, tend to reduce financial stress and increase financial satisfaction among consumers who use credit counselling services.

Keywords Credit counselling, financial behaviour, hierarchy of needs.

Correspondence
Jing Jian Xiao, Take Charge America Institute for Consumer Financial Education and Research, University of Arizona, PO Box 210033, Tucson, AZ 85721, USA. E-mail: xiao@email:.arizona.edu

Consumer borrowing is closely related to the financial health of America's households.[1] Many consumers may be experiencing financial troubles, which is indicated by at least two facts. In 2002, outstanding household debt increased by more than 9%, the largest rate of increase since 1989, whilst non-business bankruptcy filings reached record highs.[2] Traditional consumer credit counselling services have provided assistance in helping these debt troubled consumers since the 1970s.[3] Their services improved consumer debt repaying behaviour.[4] In recent years, more competitors entered the credit counselling business and several problematic practices in the credit counselling industry are revealed by a recent study conducted by Consumer Federation of America and National Consumer Law Center.[5] As suggested in a panel at the 2003 Annual Conference of American Council on Consumer Interests, the industry, government agencies, and consumer advocates need to work together to address these issues in order to protect consumer interests in this area.[6]

The rapid growth of consumer credit consulting business implies that there is an increasing consumer need for this kind of service. Services offered by various types of credit counselling companies may give consumers more choices when fully informed. To help these companies better meet the needs of consumers, more knowledge about their behaviours is needed. Financial behaviours have been studied by consumer economists for many years,[7,8] but few focused on consumers who use credit counselling services.[4,9–11] More research is needed to further understand the behaviour of these consumers to better serve their financial needs.

The purpose of this study is to identify the factors associated with financial behaviours of consumers who use credit counselling services and to examine whether or not the behaviours are associated with these consumers' financial stress and satisfaction. Specifically, this study will:

1 From a perspective of behavioural economics, develop hypotheses about financial behaviours of consumers who use credit counselling services;
2 Identify the factors associated with financial behaviours of these consumers;
3 Examine whether or not the behaviours are associated with these consumers' financial stress and satisfaction;
4 Based on the findings, develop implications for credit professionals to better meet the needs of consumers in credit counselling.

In the rest of the paper, we first conduct a literature review on previous relevant research. Then we present our hypotheses. Method, findings, and discussion sections follow. The last section concludes the paper and discusses implications of the findings.

Literature review

Financial behaviours

Consumer economists always provide advice for positive financial behaviours in their textbooks.[12,13] Fitzsimmons, Hira, Bauer, and Hafstrom provided a good review for financial behaviour research from the 1970s to the early 1990s[8] In their own research, they used data from a cooperative regional research project and developed a scale of financial management. The scale included two factors. The first factor has six variables that are considered as bad financial behaviours. The second factor includes four variables that are considered as good financial behaviours. These behaviours include 'make plans on how to use your money', 'write down where money is spent', 'evaluate spending on a regular basis', and 'use a written budget.' Based on their qualitative study, Muske and Winter reported that consumers did not use the recommended practices because of the routine nature of their cash-flow management and the lack of benefit recognized for those using these tools.[14] In an online financial quiz posted on an US cooperative extension web site, 20 recommended financial practices were asked. The average scores were 67 and 65 out of 100 in 2001 and 2002, respectively, which implies that consumers do not follow the recommended practices well.[15]

Hogarth, Hilgert, and Schuchardt used data from the 2001 Survey of Consumers to report a profile of money managers. Financial behaviour variables were collected in the form of a financial IQ quiz.[16] In their research, they used financial product ownership and financial behaviour to develop a typology of money managers and reported a profile of these types of managers. Fourteen variables are used to measure financial behaviours. Using data from the same survey, Hogarth, Beverly, and Hilgart examined patterns of financial behaviours and concluded that many households do not follow recommended financial practices.[17] In another study using the same data set, Hilgert, Hogarth, and Beverly divided the financial behaviours in four categories: cash-flow management, credit management, saving, and investment.[18] Their findings suggest that financial behaviours may be hierarchical. For example, consumers who are cash-constrained may engage in cash-flow management practices and obtain credit, but may not save and invest. They also found that financial knowledge in credit, saving, and investment would contribute to financial practices in these areas.

Financial behaviours and financial stress

Many previous studies examined the relationship between financial stress and general stress and the relationship between financial/economic stress and family well-being. For example, credit card debt and stress regarding debt are associated with health.[19] Financial stress is positively associated with absenteeism in a sample of white-collar workers.[20] Weisman demonstrated a case study on how to reduce financial stress and improve workplace performance.[21] Data from a sample of unemployed youths in Australia showed that financial strain is positively related to general psychological distress.[22] Economic pressure contributes to lower quality of marriage.[23] Financial stress contributes to coping functions of alcohol, drinking motives, and alcohol involvement.[24–26] Role strains especially economic strains erode positive concepts of self that results in depression.[27] Family economic distress adversely affects family well-being.[28] A study of health care professionals found that financial stress explains 30% of the variances in participant financial satisfaction scores.[29] However, no research is found to examine the relationship between financial behaviour and financial stress in the general population.

Financial behaviours and satisfaction

Economic well-being is the degree to which individuals and families have economic adequacy and security.[30] Using the same wording, financial well being is the degree to which individuals and families have financial adequacy and security. Financial well-being can be measured in both objective and subjective measures. For objective measures, income and new worth are commonly used.[31,32] In this study, we focus on the subjective measure of financial well-being. More specifically, we focus on consumer satisfaction of their financial statuses.

Many studies have used financial satisfaction to measure financial well-being.[33–41] Positive financial behaviours are associated with financial satisfaction.[42–44] The subjective assessment of credit obligations is more important in explaining financial satisfaction than the objective measurement of family debt burden such as debt repayment-to-income ratio.[45] Using a sample of white-collar clerical workers, Joo and Grable proposed and tested a framework for understanding the determinants of financial satisfaction.[46] Based on their findings, financial satisfaction is associated with financial behaviours, financial stress levels, income, financial knowledge, financial solvency, risk tolerance, and education.

Financial behaviours of consumers in credit counselling

A few studies researched financial behaviours of consumers who use credit counselling services. Tokunaga compared consumers who used credit counselling services and a control group in San Jose and found that credit counselling clients took fewer steps to retain their money and expressed greater anxiety about financial matters.[47]

A few recent studies focused on whether or not consumer credit counselling services improve consumer credit management practices. Using data from clients of agencies affiliated with National Foundation of Consumer Credit (NFCC), the results provide evidence that credit counselling that utilizes the NFCC agency methodology affects credit use and payment behaviours in a positive way.[4] Another group of researchers using data collected from an independent credit counselling company and also documented that credit counselling improves these clients' financial hehaviours.[9–11] In their studies, they found that credit counselling and financial behaviours contribute to family well-being and then contribute to consumers' health. In their studies, the financial behaviour is measured by the number of positive financial behaviours reported by the respondents. Among consumers who use credit counselling services, financial stress and satisfaction measures might be better indicators of work outcomes than some objective variables, such as household income or debt load percentage.[48] When the educational desires of credit counselling clients are examined, their desires are similar but quite different in prioritization from those who presumably are adequately managing their financial resources. Credit counselling clients gave priority to budgeting and credit management.[49]

This study used data and variables collected from consumers who use credit counselling services but expanded upon previous studies in several aspects. First, this study developed hypotheses from a behavioural economic perspective in order to understand the financial behaviour of consumers who have debt troubles and use credit counselling services. Second, this study examined a new dependent variable, self-evaluation of financial behaviours, which is not used by previous studies. Third, this study examined several independent variables that are not included in previous studies, such as perceived retirement security, perceived family relationship, number of family members to support, year of residency, and credit card debt balance. Fourth, unlike previous studies that used only the number of financial behaviours as a composite measure of financial behaviours, this study used both the composite measure and individual, specific financial behaviours among other independent variables to examine their associations with financial stress and satisfaction.

Hypotheses

Previous theoretical research demonstrated that credit use is a rational choice for consumers under various circumstances. For example, the simple Fisher model demonstrates that it may be rational for the household to borrow against future income in order to obtain a preferred path of consumption over time.[50] Based on the two-period utility model and in a situation where real income can safely be assumed to either remain constant or increase, credit use depends crucially upon the probability that real income increases.[51] However, for consumers who have debt troubles and use credit counselling services, the desirable practices are to stop using credit cards, make more than minimum creditor-required payments, and work with the counselling company to make and follow a plan for repaying debt.[4]

Consumers with debt troubles have three options to distribute their current income: repaying debts, adjusting spending, and saving for the future. If their income is limited, they may set priorities for these three goals. A reasonable assumption is that they will use income for spending and debt repaying first and then consider saving, which is consistent with the hierarchical pattern discussed by previous researchers. For example, based on national data, most consumers demonstrated high scores of practices in cash-flow management, lower in credit management, and much lower in saving and investment.[18] This hierarchical nature is also reflected in credit counselling clients' educational desires,[29] consumer reported saving reasons,[52] and financial asset holdings.[53] Consumers may use mental accounting when they make choices between current and future consumption. They may need to exert more willpower to save when their economic resources are limited, as described by the behavioural life-cycle hypothesis,[54] which is based on the prospect theory,[55] the leading theory in behavioural economics. Therefore, we have following hypothesis in terms of financial behaviours for consumers who use credit counselling services:

H1: Credit counselling clients would more frequently practice activities related to current spending and debt repaying but less frequently practice activities related to saving and investment.

Previous research indicates that for the general population, many consumers do not practice the recommendations of family economists, but for credit counselling clients, they have to take certain actions if they desire to remain in the debt management plan. Assuming economic and noneconomic resources (such as agency and family support) are important factors to encourage their positive financial behaviours, we have developed the following hypothesis:

H2: Positive financial behaviours, measured either objectively or subjectively, are positively associated with the level of economic and noneconomic resources.

Previous research did not examine the relationship between financial behaviour and financial stress specifically. However, previous research indicated that financial satisfaction is negatively associated with financial stress and positively associated with financial behaviour positively. We then have the following hypothesis:

H3: Positive financial behaviours, measured both objectively and subjectively, would reduce financial stress.

Previous research indicated that positive financial behaviours increase financial satisfaction in the general population, which should be the same for consumers who use credit counselling services. Then, the last hypothesis is therefore:

H4: Positive financial behaviours, measured both objectively and subjectively, would increase financial satisfaction.

Method

Data

The population for this study was a group of financially distressed consumers who telephoned a large national non-profit credit counselling organization seeking assistance with outstanding credit. In mid-June 2003, a 32-item 'Personal Finances Survey' questionnaire was mailed to a sample of 7200 who joined the programme between February and April 2003. Four weeks later, a follow-up postcard was mailed to people who had not yet responded, reminding them to return the questionnaire. After two additional weeks, a second questionnaire and follow-up letter were mailed to non-respondents. A total of 443 surveys were returned as undeliverable, typically because an address was incomplete, a person moved without providing a forwarding address, or the person was deceased. Thus, 6757 questionnaires were mailed and 3121 respondents returned useable questionnaires. The response rate is 46% (3121/6757). The data were self-reported by the respondents on printed questionnaires and there was no reason to believe that any respondents misreported responses to the questions. Additional information on debt load, debt load percentage, and credit card debt balance were obtained from client records maintained by the credit counselling organization. Excluding observations with missing values of variables relevant to this study, the samples size used for data analyses is 2044.

Variables

Financial behaviours
This concept was measured in two variables. The first is the number of positive financial behaviours, an objective measure. The respondents were asked to respond to binary questions (yes – 1 or no – 0) of nine self-reported positive financial behaviours. The total score of these questions was used as the number of financial behaviours. Five out of the nine questions were used in Kim *et al.*[9] The second variable is the self-evaluation of financial behaviours, a subjective measure. The question is 'On the whole, how would you characterize your financial behaviours?' very good – 1, good – 2, satisfactory – 3, and poor – 4. In the analyses, the values were reverse coded for convenience of reading the findings.

Financial stress
A single measure of financial stress was used. The question is 'What do you feel is the level of your financial stress *today*?' with five options: 1 – overwhelming, 2 – severe, 3 – moderate, 4 – low, 5 – none. In the analyses, the values were reverse coded for convenience of reading the findings.

Financial satisfaction
It was measured by a self-anchoring ladder that was originally developed by Cantril[56] and used by Porter and Garman.[57] In this measure, 1 refers to dissatisfied and 10 refers to satisfied.

Demographic and other control variables
The demographic variables included employment status, marital status, number of family members to support, family income, age, gender, home ownership, and year of residence. In addition, perceived retirement security, perceived health, perceived family relationship, debt load percentage, and credit card debt balance were also included in the analyses. Debt load percentage is defined as the ratio of average annual debt payment to annual family income. Log credit card debt balance and log family income were used in the regression analyses.

Analyses

As the data were from a cross-section survey, only associations between the dependent variables and independent variables can be explored. Four sets of linear regression models were used to explore factors associated with the number of financial behaviours, self-evaluation of financial behaviours, financial stress, and financial satisfaction respectively. For each set, various specifications of the models were explored for better explaining powers or further explorations. Additional bivariate and multivariate analyses were also conducted to explore the data and seek explanations.

Findings

Descriptive statistics

Table 1 presents descriptive statistics of the sample. Most respondents are full-time workers, married, female, and supporting at least one person. A little less than half of them are homeowners. Their average age is 39.4 years old and they have lived in their residence for an average of 7.3 years. On average, their annual family income is \$26 007 with credit card debt balance of \$15 657. The average debt load percentage is 20.3%. The average score for financial satisfaction (1 – dissatisfied, 10 – satisfied) is 4.3, financial stress (1 – none, 5 – overwhelming) 3.3, self-evaluation of financial behaviour (1 – poor, 4 – very good) 2.0, perceived retirement security (1 – very insecure, 4 – very secure) 2.1, perceived health (1 – poor, 4 – very good) 2.9, and perceived family relationship (1 – poor, 4 – very good) 3.1.

Table 2 presents frequencies of self-reported financial behaviours. Among the nine behaviours, four had higher percentages that imply being practised more frequently, having reduced debts (89%, shorter descriptive wording is used here and the exact wording from the questionnaire can be found in Table 2), cut down expenses (80%), followed a budget (74%), and developed a plan (68%). Five behaviours have lower percentages, having contacted a financial planner (17%), participated in a flexible spending plan (20%), determined retirement needs (34%), contributed to retirement (38%), and started savings (52%). The findings support H1. Table 3 presents frequencies of self-

Table 1 Descriptive statistics of the sample ($n = 2044$)

Variable	Percent	Mean	SD
Job status			
No job	11		
Part time	11		
Full time	78		
Marital status			
Married	53		
Single with a partner	10		
Single living alone	37		
Number of people to support			
None	48		
One	34		
Two of more	18		
Gender			
Male	31		
Female	69		
Home owner			
Yes	47		
No	53		
Age		39.4	12.5
Credit card debt balance		15 657	14 776
Debt load percentage		20.3	17.0
Annual family income		26 007	14 444
Year of residence		7.3	8.6
Financial satisfaction		4.3	2.1
Financial stress		3.3	0.9
Self-evaluation of financial behaviour		2.0	0.7
Perceived retirement security		2.1	0.8
Perceived health		2.9	0.8
Perceived family relationship		3.1	0.8

SD, standard deviation.

Table 2 Percentages of reported financial behaviours ($n = 2044$)

Financial behaviour	Percent
Reduced some of my personal debts	89
Cut down on living expenses	80
Followed a budget or spending plan	74
Developed a plan for my financial future	68
Started or increased my savings	52
Contributed to my employer's retirement plan	38
Tried to determine how much I will need to live comfortably in retirement	34
Participated in and contributed money to pre-tax dependent care or health care programme	20
Contacted a financial planner	17

Table 3 Numbers of reported financial behaviours ($n = 2044$)

Number of financial behaviours	Percent
0	1
1	3
2	8
3	15
4	21
5	21
6	16
7	9
8	4
9	2
Mean	4.6
Mode	4
Median	5
Standard deviation	1.8

reported financial behaviours. Most consumers reported three to six financial behaviours. The mean, mode, and median of the number of behaviours are 4.6, 4, and 5 out of 9 behaviours.

Factors associated with the number of financial behaviours

Two regression models were used to examine factors associated with the number of financial behaviours, one without the self-evaluation of financial behaviour as an independent variable and the other with it (Table 4). The second model improved the explaining power by 33% and then results of the second model are discussed. Regression results at the significance level of 5% indicate that age, employment status, retirement security, family relationship, and self-evaluation of financial behaviours are associated with the number of positive financial behaviours. Consumers who are older, have a part time job (vs. the unemployed), perceive a more secure retirement and a better family relationship, and report a higher score of self-evaluation of financial behaviours tend to report significantly more positive financial behaviours.

To explore differences between consumers who reported substantially more or fewer financial behaviours, bivariate analyses were conducted (for categorical variables, we used Chi-square tests and for continuous variables, we used ANOVA; tables are not presented but

Table 4 Parameter estimates of factors associated with the number of financial behaviours

Variable	Model 1	Model 2
Intercept	–6.8300	–9.4415
Full time	0.1571	0.1741
Part time	0.4712***	0.4686***
Married	0.1873	0.1840
Living with a partner	–0.0656	–0.0773
Support one person	0.0759	0.0602
Support two or more persons	0.1144	0.0693
Own home	–0.1930*	–0.1514
Male	0.0602	0.0260
Age	0.0106**	0.0109**
Log credit card debt balance	–0.0070	–0.0442
Log family income	1.5081	1.9525
Log family income squared	–0.0680	–0.0898
Debt load percentage	0.0028	0.0047
Year of residence	0.0076	0.0068
Perceived retirement security	0.6864***	0.5512***
Perceived health	0.0668	0.0152
Perceived family relationship	0.1917***	0.1513***
Self-evaluation of financial behaviour		0.6181***
F	18.62	24.53
P	<0.0001	<0.0001
Adj. R^2	0.1437	0.1918

$^*P < 0.05$; $^{**}P < 0.01$; $^{***}P < 0.001$.

Table 5 Parameter estimates of factors associated with self-evaluation of financial behaviours

Variable	Model 1	Model 2
Intercept	4.2253	4.8520
Full time	–0.0276	–0.0420
Part time	0.0041	–0.0391
Married	0.0052	–0.0120
Living with a partner	0.0190	0.0250
Support one person	0.0253	0.0183
Support two or more persons	0.0730	0.0625
Own home	–0.0673	–0.0496
Male	0.0553	0.0498
Age	–0.0005	–0.0015
Log credit card debt balance	0.0602*	0.0608*
Log family income	–0.7190	–0.8574
Log family income squared	0.0353	0.0416
Debt load percentage	–0.0030	–0.0033*
Year of residence	0.0014	0.0007
Perceived retirement security	0.2188***	0.1558***
Perceived health	0.0834***	0.0772***
Perceived family relationship	0.0654***	0.0478***
Number of financial behaviours		0.0918***
F	13.66	19.57
P	<0.0001	<0.0001
Adj. R^2	0.1076	0.1577

$^*P < 0.05$; $^{**}P < 0.01$; $^{***}P < 0.001$.

available upon request). The high number of financial behaviours group included consumers who reported six or more financial behaviours. The low number group included those who reported three or fewer financial behaviours. Consumers are more likely to be in the high number of financial behaviours group if they are male, married, and older, have a full-time job and a higher family income, and perceive a more secure retirement, better health, and a better family relationship.

Factors associated with the self-evaluation of financial behaviours

Two models were used to examine factors associated with self-evaluation of financial behaviours, one without the number of financial behaviours as an independent variable and the other with it (Table 5). The second model explained the variances better by 39%. The results from the second model are discussed. Credit card debt balance, debt load percentage, retirement security, health, family relationship, and the number of positive financial behaviours are associated with the self-evaluation of financial behaviours. Consumers who have a higher balance of credit card debt, lower debt load percentage, perceive a more secure retirement, better health, and a better family relationship, and report more positive financial behaviours tend to report a higher score on self-evaluation of their financial behaviours.

Factors associated with financial stress

Three models were used to examine factors associated with the financial stress variable (Table 6). The first model excluded the two behavioural variables while the second model included them. The purpose of the third model is to explore what specific behaviours are associated with financial stress. We first report findings from the second model. Financial stress is associated with

Table 6 Parameter estimates of factors associated with financial stress

Variable	Model 1	Model 2	Model 3
Intercept	–2.4161	–1.9413	–5.7321
Full time	–0.2698**	–0.2675**	–0.2291**
Part time	–0.1545*	–0.1308*	–0.2160*
Married	–0.0721	–0.0620	–0.0991
Living with a partner	–0.0468	–0.0464	–0.0352
Support one person	–0.0537	–0.0452	–0.0115
Support two or more persons	–0.0551	–0.0356	–0.0025
Own home	0.0664	0.0442	0.0439
Male	–0.0827	–0.0693	–0.1076
Age	–0.0070***	–0.0065***	–0.0070**
Log credit card debt balance	–0.0068	0.0044	0.0058
Log family income	1.3435	1.2795	2.0069
Log family income squared	–0.0626	–0.0592	–0.0937
Debt load percentage	0.0074***	0.0070***	0.0070*
Year of residence	0.0027	0.0033	0.0061
Perceived retirement security	–0.2151***	–0.1400***	–0.1882***
Perceived health	–0.0657*	–0.0466	–0.0468
Perceived family relationship	–0.1191***	–0.0973***	–0.1128**
Number of financial behaviours		–0.0486***	
Self-evaluation of financial behaviours		–0.1909***	
Developed a plan for my financial future			0.0283
Started or increased my savings			–0.1150
Reduced some of my personal debts			–0.3107***
Followed a budget or spending plan			–0.1438*
Cut down on living expenses			0.0653
Contacted a financial planner			0.0842
Participated in flexible spending programme			0.0249
Tried to determine retirement needs			–0.0339
Contributed to employer's retirement plan			–0.0603
F	11.17	14.11	7.37
P	<0.0001	<0.0001	<0.0001
Adj. R^2	0.0883	0.1225	0.1385

$^*P < 0.05$; $^{**}P < 0.01$; $^{***}P < 0.001$.

employment status, age, debt load percentage, retirement security, family relationship, number of financial behaviours, and self-evaluation of financial behaviours. A higher number of financial behaviours and higher score of self-evaluation of financial behaviours are associated with a lower stress level. In addition, a lower stress level is associated with those who are employed, older, having a lower debt load percentage, and perceive better health and a better family relationship.

Further examination (model 3) found that two specific financial behaviours might help reduce stress significantly. Having reduced some personal debts and having followed a budget or spending plan are associated with a lower level of stress. However, other behaviours do not show significant associations with financial stress.

To explore differences between consumers with extremely high or low stress levels, we conducted bivariate analyses (tables are not presented but available upon request). The high stress group included consumers who reported 'severe' or 'overwhelming' to the stress question. The low stress group included those who reported 'low' or 'none' when the financial stress question is asked. Consumers who are younger, have a higher debt load percentage, and perceive a less secure retirement, poorer health, and a poorer family relation-

Table 7 Parameter estimates of factors associated with financial satisfaction

Variable	Model 1	Model 2	Model 3
Intercept	–2.4547	–4.6607	–6.7839
Full time	0.0320	0.0206	0.1291
Part time	0.0953	–0.0164	0.1991
Married	0.1542	0.1066	0.0197
Living with a partner	–0.0018	–0.0037	–0.2797
Support one person	–0.0711	–0.1111	–0.1311
Support two or more persons	–0.0071	–0.0985	–0.1316
Own home	–0.3657***	–0.2614**	–0.1403
Male	0.0975	0.0343	0.0510
Age	0.0176***	0.0157***	0.0171**
Log credit card debt balance	–0.1370	–0.1890*	–0.2651*
Log family income	1.1160	1.4121	1.8792
Log family income squared	–0.0677	–0.0837	–0.0946
Debt load percentage	–0.0075	–0.0054	0.0015
Year of residence	0.0217***	0.0187**	0.0097
Perceived retirement security	0.8301***	0.4773***	0.6896***
Perceived health	0.1722**	0.0824	0.1421
Perceived family relationship	0.2453***	0.1430*	0.0981
Number of financial behaviours		0.2293***	
Self-evaluation of financial behaviours		0.8928***	
Developed a plan for my financial future			0.4901**
Started or increased my savings			0.8896**
Reduced some of my personal debts			0.8227***
Followed a budget or spending plan			0.2205
Cut down on living expenses			–0.0875
Contacted a financial planner			0.3783*
Participated in flexible spending programme			–0.3306*
Tried to determine retirement needs			0.2336
Contributed to employer's retirement plan			–0.5657***
F	21.30	39.69	17.84
P	<0.0001	<0.0001	<0.0001
Adj. R^2	0.1620	0.2917	0.2983

$*P < 0.05$; $**P < 0.01$; $***P < 0.001$.

ship are more likely to be in the high stress group. On average, consumers in the high stress group, compared with the low stress group, reported a lower number of financial behaviours (4.0 vs. 5.4) and a lower score of self-evaluation of financial behaviours (1.8 vs. 2.3).

Factors associated with financial satisfaction

Similar to financial stress, three models were used to examine factors associated with financial satisfaction (Table 7). Findings from the second model are presented. Financial satisfaction is associated with home ownership, age, credit card debt balance, year of residence, perceived retirement security, perceived family relationship, number of financial behaviours, and self-evaluation of financial behaviour. Consumers who are renters and older, have a lower balance of credit card debt, live longer years in their residence, perceive a more secure retirement and a better family relationship, report more financial behaviours, and provide a higher score of self-evaluation of financial behaviours are associated with a higher level of satisfaction.

Further examination (model 3) found that four financial behaviours might increase financial satisfaction. The four specific financial behaviours are: having developed a plan for my financial future, started or increased my savings, reduced some of my personal debts, and contacted a financial planner. However, two behaviours (having participated in flexible spending programme and contributed to my employer's retirement plan) are negatively associated with financial satisfaction. One possible explanation is that consumers who participated in a flexible spending programme and contributed to their retirement plan while having debt problems would have to sacrifice their current spending and divert their resources for debt repaying that decreases satisfaction about their finances.

To explore the differences between consumers who are most satisfied with their finances and those who are least satisfied, we conducted several bivariate analyses (tables are not presented but available upon request). The high satisfaction group included consumers whose satisfaction score is seven or higher. The low satisfaction group included those whose score is four or lower. Consumers are more likely to be in the high satisfaction group if they are older, live in the current residence longer, and perceive a more secure retirement, better health, and a better family relationship. Compared with the low satisfaction group, consumers in the high satisfaction group averagely reported more financial behaviours (5.8 vs. 3.9) and a higher score of self-evaluation of financial behaviours (2.5 vs. 1.7).

Discussion

Some evidence shows that consumers may follow a hierarchical pattern in their financial behaviours when they have financial troubles and use credit counselling services. They may be more concerned about how to reduce debts and adjust current spending and less concerned about their savings and future consumption as indicated in the findings presented in Table 2. Similar hierarchical behavioural patterns were also found in previous studies.[18,29,52,53]

In this study, two behaviour variables are used: the number of financial behaviours and self-evaluation of financial behaviours. Both variables showed significant negative associations with financial stress and positive associations with financial satisfaction, supporting H3 and H4. When the two variables are used as dependent variables, several differences are shown. Age and employment status have significant associations with the number of behaviours, but insignificant associations with the self-evaluation of behaviours. Perceived health and credit card debt balance are positively associated with the self-evaluation but not with the number of behaviours. These differences imply that the two variables may measure two different concepts and need to be used together to better explain financial stress and satisfaction.

Both economic and non-economic factors may contribute to positive financial behaviours. For example, factors associated with the number of financial behaviours (Table 4, Model 2), such as employment status (part-time workers vs. unemployed), age, and perceived retirement security can be considered factors relating to economic resources. Perceived family relationship and self-evaluation of financial behaviours can be considered as non-economic factors. The higher levels of these economic and non-economic resources are associated with more positive financial behaviours, which supports H2.

Conclusion and implications

Before the conclusion is presented, a note of caution is needed. The data used in this study are from a cross-section survey, which limits the findings that show only associations between the dependent and independent variables. The findings only suggest but do not show causal relationships for those having significant associations. To examine possible causal relationships of these variables, panel data are needed in future research. Thus, the following conclusion and implications are suggestive but not conclusive.

Data from a national sample of credit counselling clients are used to examine factors associated with financial behaviours and the effects of financial behaviours on financial stress and satisfaction. Financial behaviours of consumers in credit counselling may follow a hierarchical pattern in their financial behaviours. They may be more concerned about debt repaying and spending adjustment and less concerned about saving and investment.

Regression results indicate that consumers who are older, have a part-time job (vs. the unemployed), perceive a more secure retirement and a better family relationship, and report a higher score of self-evaluation of financial behaviours are likely to report more positive financial behaviours.

Consumers who have a higher level of credit card debt and a lower level of debt load percentage, perceive a more secure retirement, better health, and a better family relationship, and report more positive financial behaviours are likely to evaluate their own financial behaviours more positively.

More positive financial behaviours and a higher score of self-evaluation of financial behaviours, along with several demographic and perception variables, tend to reduce financial stress. In addition, consumers who report having reduced some of their personal debts and followed a budget or spending plan are likely to report a lower level of financial stress.

Financial satisfaction tends to be increased when consumers report more positive financial behaviours and a higher score of self-evaluation of financial behaviours, along with several demographic and perception variables. Four specific financial behaviours are likely to increase financial satisfaction: having developed a plan for one's financial future, started or increased one's savings, reduced some of one's personal debts, and contacted a financial planner. However, two financial behaviours, having participated in a flexible spending programme and contributed to employer's retirement plan, are likely to lower the financial satisfaction level.

Implications for credit counselling professionals

Credit counsellors may consider the hierarchical nature of behaviours when they encourage their clients to engage in positive financial behaviours. Counsellors may help their clients reduce debts and cut current spending first. Encouraging savings for retirement and other purposes may be the next step only when their clients are ready for these activities.

To encourage their clients to engage in more positive financial behaviours, counsellors may need to ask them to think about their retirement security and to maintain good family relations. Counsellors may need to pay special attention to people who are younger and unemployed, and develop effective strategies to help these clients engage in positive financial behaviours.

As a higher score of self-evaluation of financial behaviour may help reduce financial stress and increase financial satisfaction, counsellors should encourage their clients to think about their retirement security, maintain good health and good family relationships, and encourage more positive financial behaviours to help clients feel better about their own financial behaviours because this may lead to less stress and more satisfaction.

Credit counsellors should realize that both the number of positive financial behaviours and a positive self-evaluation of financial behaviours may help reduce clients' financial stress. These two factors interact; therefore, counsellors should motivate their clients to engage in more positive financial behaviours and help them realize that a positive self-evaluation of their financial behaviours may reduce financial stress. Counsellors can also advise clients that reducing debts and following a budget may significantly help reduce financial stress. Counsellors should use all available suggestions and strategies that are appropriate to help their clients achieve their financial goals and reduce their distress about financial matters.

Both the behaviours and self-evaluation of the behaviours increase financial satisfaction. Similar strategies aimed at reducing stress could work to increase financial satisfaction. In particular, several behaviours may significantly increase financial satisfaction and should be emphasized in counselling. These include developing a plan, starting to save, reducing debt, and contacting a financial planner. Also note that two behaviours may decrease financial satisfaction based on the findings from this study: participating in a flexible spending programme and contributing to a retirement plan. Counsellors should work with their clients to determine whether or not they should participate in these planned spending and saving programmes based on their economic and non-economic circumstances. However, they should be aware that these activities might decrease clients' financial satisfaction.

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