TCAI Working Paper

CREDIT CARD DEBT REDUCTION AND DEVELOPMENTAL STAGES OF THE LIFESPAN

Shayna Lee Slagel, Research Assistant
University of Rhode Island
Department of Human Development and Family Studies
Transition Center, Kingston, RI 02881
Phone: 401-874-7135; Fax: 401-874-4020; Email: ssla4714@postoffice.uri.edu

Barbara M. Newman, Ph.D., Professor and Chair
University of Rhode Island
Department of Human Development and Family Studies
Transition Center, Kingston, RI 02881
Phone: 401-874-7135; Fax: 401-874-4020; Email: bnewman@uri.edu

Jing Jian Xiao, Ph.D., TCA Professor and Director
University of Arizona
Take Charge America Institute for Consumer Financial Education and Research
P.O. Box 210033, Tucson, AZ 85721
Phone: 520-621-5948; Fax: 520-621-3209; Email: xiao@email.arizona.edu

May, 2006

An earlier version of this paper has been presented at the 2005 Annual Conference of National Council on Family Relation.

Abstract

Credit card debt is a large and growing problem. Few studies have focused on barriers to getting out of debt or helping consumers change their behaviors. The current study examined the link between theory-based developmental stages of the lifespan and factors associated with troubling debt and change. Results are based on survey responses of 263 participants. Stages of the lifespan were linked to anxiety over credit card debt and the confidence participants felt in their ability to get out of debt. Results were tied to events at each lifespan stage that encourage credit card usage.

Credit card debt is a large and growing problem. Not including mortgages or car payments, the combined debt of Americans in 2001 was around $700 billion (Razzi, Siskos, & Jones, 2001). When looking at individual families, while some of the debt is made up of student loans, the majority of it seems to be credit card debt (Razzi et al., 2001). From 1990 to 2002, the average household credit card debt increased from $2,985 to $8,562 (Breitbard & Reynolds, 2003). High levels of debt may result in financial stress, and evidence is beginning to support a link between financial stress and mental, as well as physical, health (Drentea & Lavrakas, 2000). Both troubling debt and financial stress have been observed across the life span.

Previous research on credit card debt behavior falls in two categories: 1. Descriptions of current status and trends (Aizcorbe, Kennickell, & Moore, 2003; Durkin, 2000; Godwin, 1997), and 2. Identification of factors associated with credit card debts (Chien & DeVaney, 2001; Godwin, 1998; Hayhoe, Leach, & Turner, 1999; Hayhoe, Leach, Turner, Bruin, & Lawrence, 2000; Kim, & DeVaney, 2001; Lee, & Hogarth, 1999; Lee, & Kwon, 2002; Zhu & Meeks, 1994. Also see DeVaney & Lytton, 1996, for an earlier but informative survey of research in this area). Few studies have focused on psychological, social, or economic barriers to getting out of debt or on how to help consumers actually change their behaviors to eliminate credit card debt.

The first stage of the study for which these data were collected was conducted in order to develop a measure of people's intention to reduce their credit card debt, and to create a manual for professionals to use in helping debt-troubled consumers change their behavior. The purpose of this second stage is to examine the link between theory-based stages of the lifespan, factors associated with troubling debt, and behavioral change. The framework used in both stages of the research is the Transtheoretical Model of Change (TTM), which is commonly applied to help people stop unhealthy behaviors and/or develop healthy behaviors.

The Transtheoretical Model of Change (TTM) and its Application to Debt Reduction

The Transtheoretical Model of Change (TTM) was developed in the 1970s (Prochaska, 1979). The Model was first applied to cessation of smoking, and then to a variety of other health-related behaviors including alcohol abuse, drug abuse, high fat diet and weight control, psychological distress, and sun exposure (Prochaska, Redding, Harlow, Rossi, & Velicer, 1994). A few studies applied the TTM to other areas, such as organizational change (Prochaska, 2000), collaborative service delivery (Levesque, Prochaska, & Prochaska, 1999), and domestic violence (Levesque, Geller, & Velicer, 2000). The application of the TTM to debt reduction is a relatively new concept.

The key constructs of the TTM include **stages of change, processes of change, decisional balance,** and **self-efficacy**. The five **stages of change** are: *Precontemplation* (not intending to take action within the next 6 months), *Contemplation* (intending to take action within the next 6 months), *Preparation* (intending to take action within the next 30 days), *Action* (made overt changes less than six months ago), and *Maintenance* (made overt changes more than six months ago). The ten **processes of change** are: *consciousness-raising (CR), social liberation (SO), dramatic relief (DR), environmental reevaluation (ER), self-reevaluation (SR), self-liberation (SL), counter-conditioning (CC), stimulus control (SC), contingency management (CM),* and *helping relationships (HR)*. Table 1 presents definitions of the processes of change. In the early stages of change, people apply the experiential processes such as consciousness-raising, environment reevaluation, and dramatic relief to support their progress through the stages. The experiential processes are cognitive, affective, and evaluative. In the later stages, people rely more on the behavioral processes of counter-conditioning, contingency management, environmental controls, and social support for progressing toward termination (Pro-Change Behavior Systems, 2002). Figure 1 describes the theoretical relationship between stages of change and processes of change. The key to fostering successful change is to know what stage a person is in, and then to use the appropriate strategies (processes) to help the person move forward (Prochaska, Redding, & Evers, 1996). **Decisional balance** reflects an individual's relative weighing of the pros and cons of changing (Prochaska et al, 1996). *Confidence*, the primary construct in **self-efficacy**, is the situation-specific confidence people have that they can cope with high-risk situations or temptations without relapsing back to their unhealthy or high-risk habits (Prochaska et al., 1996).

Applying the TTM to financial behavior started in the last few years. Kerkman (1998) discussed how to use the TTM in financial counseling and presented a case to demonstrate her approach. Bristow (1997) suggested that this model could be used to change people's financial behavior in Money2000, a USDA extension program on financial education. Money2000 is a successful financial education program which was adopted by 29 states and reported a total dollar impact of $20 million (O'Neill, 2001). Based on the data collected among the program participants in New Jersey and New York in 1998, preliminary evidence indicated that certain processes of change were used more frequently by the participants who reported behavioral changes (Xiao, O'Neill, Prochaska, Kerbel, Brennan, & Bristow, 2004). The present study is part of a larger project aimed at developing a measure for professionals and researchers to use in consumer credit counseling.

Application of the Lifespan Perspective

Recently, problematic consumer debt has spread to affect people from age 18 all the way to the elderly. Nearly 40% of baby boomers in 2000 had total debts larger than the value of their possessions (Knight & Knight, 2000). In 2002 the average household credit card debt was $8,562 (Breitbard & Reynolds, 2003). A growing body of literature addresses the alarming rate at which the newest additions, college age and older age consumers, have entered into the world of troubling debt. For example, credit cards are used by one-third of American 18 and 19 year olds (Breitbard & Reynolds, 2003). In recent research of college students, the consensus of multiple studies was that at least one credit card is held by at least 70% of college students (Lyons, 2004; Pinto, Mansfield, Parente, 2004). Markovich and De Vaney (1997) reported that by senior year of college 93% of students studied had obtained a credit card (Norvilitis & Santa Maria, 2002), and other studies indicate that 5% of students have balances of more than $3000 (Lyons, 2004). Many students with credit card debt feel forced to put jobs ahead of school in order to keep up with payments, and when faced with academic hearings, some students mention working multiple jobs to pay on debts as reasons for poor academic performance (Norvilitis & Santa Maria, 2002; Mannix, 1999). Consequences of credit card debt among college students may include working multiple jobs, dropping out of school, starting off careers with high debts, poor credit ratings leading to an inability to obtain loans, continue education, or acquire a job, and bankruptcy (Lyons, 2004; Norvilitis & Santa Maria, 2002; Mannix, 1999).

College students are not the only population for whom concerns about credit card debt are rising. Stress related to debt was found to be highest among participants in Early Adulthood (Drentea, 2000). Drentea (2003) also suggested that the elderly, or those in Later Adulthood (ages 60-75) and Very Old Age (age 75 and over), have little debt stress because they have little debt. However, conflicting literature suggests debt and bankruptcy rates have been increasing among older adults (Keeping seniors…, 2003). According to the *Wall Street Journal*, from 1992-2001 the amount of debt held by those age 65 and older nearly tripled (Simon, 2001). A report published in the same publication in 2004 found that during the same years, credit card balances rose 89% among those in Later Adulthood and Very Old Age (Hwang, 2004).

People of all ages are facing situations in which turning to their credit cards time and time again seems necessary. Events occur at each stage of the lifespan which spark the need many Americans feel to use their credit cards. In order to assist people in reducing troubling credit card debt, we need to take a more differentiated approach which considers the person's life stage, their level of concern about reducing their debt, and their confidence that they can take steps to reduce their debt.

The current study is a first step in examining the relationship between age and concerns about debt. The study contrasts two approaches to considering age groups, one in which the sample is divided into empirically derived quartiles and one in which the sample is divided into theoretically derived stages of the lifespan (Newman & Newman, 2003). In each analysis, age groups are compared with respect to two variables: How much they worry about their debt and how confident they are that they can successfully resist temptations in order to reduce their debt.

By looking at the data in quartiles, groups are formed with an even distribution of people in each group. This allows for a comparison of the groups with an equal number of participants in each group, and limits the possibility that results could be based on a small representation in any one group. As the participants were ordered by age, the quartile groups represent a younger age group, two groups closer to the sample mean, and an older age group. The quartile grouping also allowed for an atheoretical comparison to the theoretical lifespan groupings.

Looking at the data grouped by developmental stage gives a different picture. Given the aforementioned importance of events in the lifespan on credit card usage, these events can not be ignored in analyzing the data. Each stage of development comes with its own crises, challenges, and key events. By separating the participants developmentally, it allows for the researchers to take these events into account, and to compare and contrast the factors associated with troubling credit card debt in each developmental stage.

Worry and Confidence

With the ties between financial *worry*, stress, and personal well-being, *worry* over troubling debt is an important factor to take into consideration. It is *worry* and stress that link debt to the health problems that have been associated with it. Debt can cause significant worry and concern, especially if collection agencies become involved (Drentea, 2000). Health problems related to financial worry are reported by forty to fifty percent of financially distressed persons (Garman et al., 2005). Financial worry can affect physical and psychological health, and has been linked to problems with affect, such as disorders of anxiety and depression (Garman et al., 2005; Pinto, Mansfield, Parente, 2004). Some physical heath problems linked with worry over credit card debt are trouble sleeping, headaches, and nausea (Garman et al., 2005). Past research has found worry and debt stress to by higher amongst younger age groups (Drentea, 2000).

Confidence in one's abilities in a situation, otherwise known as self-efficacy, plays a large role in whether someone will begin taking steps to get out of troubling debt, and whether they will persist once they start. The higher a person's self-efficacy in a given situation the more likely he or she is to set high goals, try more difficult activities, and make a commitment to these activities (Pinto, Mansfield, & Parente, 2004; Bandura, 1997). Low self-efficacy can also lead to hopelessness and depression, making this another important factor to consider from a health perspective (Bandura, 1997).

Confidence and *worry* are also related. Those with lower confidence or self-efficacy are more likely to have higher levels of worry, due to having less faith in their ability to manage the task at hand (Bandura, 1997). Higher confidence in one's abilities allows a person to perceive or even change their thoughts, emotions, and environments in order to make a situation less stressful, while those lacking in confidence may have more difficulty with these skills (Bandura, 1997).

Sample

With assistance from a national debt counseling company, consumers who have debt problems were recruited to participate in a mail survey in 2003. The staff of the counseling company used their newsletter, direct call, and direct mail to inform potential participants that they were invited to participate in this study. If they agreed to participate and provided their mailing addresses to our research staff, the survey was mailed to them. If they returned the completed survey, they were paid $20 for their participation. In addition, students with debt troubles from several online courses at a university in the Northeast were also recruited. Of the 438 questionnaires issued, 263 were returned and completed, which resulted in a response rate of 60%.

Tables 2 and 3 present descriptive statistics of the sample. Typical participants in the sample were female (77.9%), white (73.4%), with a two-year college education (47.5%), married (41.6%), with a household size of 2 (32.7%), an average age of 39.64 years, and an average monthly take home income of $2,723.38. They had more than six credit cards (43.3%), worried about credit card debt quite often (39.9%), had participated in debt counseling (61.2%), had an average credit card debt of $18,985 and had an average minimum monthly debt payment of $574.67. Most of them were informed about this study by newsletter (55.1%). In terms of stages of change, most of them were in the Action (40.7%) and Maintenance (29.3%) stages.

Measures

Using the literature and interviews (Greninger, Hampton, Kitt, & Achacoso, 1996; Lytton, Garman, & Porter, 1991; O'Neill, 1995), consumers in troubling debt were defined as those whose monthly minimum payment for credit card debt was 20% or more of their take home income. Based on the expert interviews and consumer telephone interviews, the following three behaviors were defined as evidence for *getting rid of credit card debt:* 1) Paying more than the minimum required each month, 2) Stopping unnecessary purchasing, and 3) Stopping credit card use. It was assumed that if a consumer with credit card debt problems was practicing those three behaviors, they would be in the Action or Maintenance stage (Xiao, Newman, Prochaska, Leon, & Bassett, 2004).

Due to the large and varied sample of survey respondents, it was possible to examine age related differences on an individual basis, in quartiles, and in groups by life stage (Newman & Newman, 2003). When categorized by lifespan stages, data for Later Adulthood (ages 60 to 75) and Very Old Age (ages 75 on) had to be combined due to the lack of participants in each of these two categories. First, age was examined as a continuous variable, using correlation as the method of measurement. Next, the participants were divided into quartiles by age, with 62-67 participants in each group (Table 4). The ages of participants in each group were as follows: Q1 = 20-27, Q2 = 28-36, Q3 = 37-49, and Q4 = 50-85. When the participants were divided into these groups, one-way analysis of variance (ANOVA) was used to identify possible group differences. Lastly, the participants were divided into groups based on stages of the lifespan (Newman & Newman, 2003) (Table 5). The stages represented were Later Adolescence (20-24, N= 36), Early Adulthood (25-34, N=73), Middle Adulthood (35-60, N=133), and a combination of Later Adulthood and Very Old Age (61-85, N=19). ANOVA was used once again.

Participants rated their own level of worry about their credit card debt by answering the question, “How often do you worry about your credit card debt?” from the choices of: 1 = “Not at all,” 2 = “A little,” 3 = “Quite a bit,” or 4 = “All the time.” For confidence, participants rated the confidence they felt they would have in getting rid of credit card debt when faced with ten situations, such as “Your car breaks down.” Results from four of the original items were not included in the final confidence rating due to low factor loadings and similarity to other items. The final six confidence items are listed in Table 6 along with their factor loadings. The Chronbach's Alpha for the final scale was .77.

Results

No significant relationships were found between any age groups and income, number of credit cards, stage of change, or processes of change used. When age was examined as a continuous variable using a two-tailed Pearson correlation coefficient, age was correlated with both confidence ($r = .247$, $p<.01$) and worry ($r = -.197$, $p<.01$). These results encouraged the further investigation with age groups. When participants were divided into age-related quartiles, a significant difference was found between age and confidence in ability to get out of debt: F (3, 259) = 6.405, p= .000. The Tukey post hoc comparison indicated that the youngest quartile (ages 20-27) had significantly less confidence than the other three quartiles (Table 4). No significant group differences were observed with regard to the variable of worry. When participants were grouped into theoretically derived developmental stages, those in Later Adolescence (ages 20-24) also exhibited a significantly lower confidence level than the other age groups: F (3, 259) = 8.618, p= .000. In addition, the group made up of those in Later Adulthood and Very Old Age showed significantly *more* confidence in their ability to get out of debt than the other three groups (Table 5). This group of participants was also significantly less worried about their credit card debt than the other age groups: F (3, 259)= 7.429, p=.000 (Table 7).

Discussion

The analyses support the importance of considering stage of life when examining individuals' worries about credit card debt and their confidence about being able to get out of debt. Those in Later Adolescence are less confident in their abilities to resist temptations and thereby to reduce their credit card debt. Those in Later Adulthood and Very Old Age are less worried about their debt and more confident about being able to resist the temptations that would increase their debt.

There are events at each stage of the lifespan which may explain why people feel the need to use their credit cards and more or less confident about their ability to stop. It has been found that an increasing number of people charge their college tuition to their credit cards (Norvilitis & Santa Maria, 2002). Smith College's Women and Financial Independence program conducted a survey which found that almost a quarter of the college students were using their credit cards to pay tuition and fees and half were using credit cards for school supplies (Block, 2005). Many young adults see credit cards as a necessity for obtaining an education or supporting themselves while they are in school (Norvilitis & Santa Maria, 2002). As those in Later Adolescence strive to become more financially independent, or find themselves in a situation where they need to rely on their own financial resources, using a credit card to pay bills, pay for gas, and other living expenses can become increasingly tempting.

In Early Adulthood, "exploring intimate relationships" and "childbearing" are of key importance (Newman & Newman, 2003). Many people get married, and a good number have children. Paying for a wedding, supporting children, and buying things for the home are some ways in which people increase their credit card debt at this stage of life (Korn, 2002; Drentea, 2000). According to the *Expenditures on Children by Families: 2000 Annual Report*, the cost for a married-couple in the middle income bracket ($38,000-$64,000 a year) to raise a child to age 18 in the year 2000 was $165,630 (US Dept. of Agriculture). From Middle Adulthood to Very Old Age, giving money to adult children and grandchildren has been found to contribute to the credit card debt among these age groups (Whitford, 2000). Those in Later Adulthood and Very Old Age may also charge medications and use credit cards to support the rising costs of maintaining their health (Keeping Seniors…, 2003). As people in these later age groups have increased difficulty meeting their monthly bills, it is not uncommon for them to charge them to their credit cards (Hwang, 2004).

In discussion of worry and confidence, those in Later Adolescence may have more concern and less confidence about getting out of debt because they have less experience with money management. They are at the beginning of an uncertain employment trajectory and earnings future, so they may not be able to predict how well they will be able to pay down current debts as they face new expenses for housing, transportation, and educational loans. Self-esteem also tends to be lower during this stage of life, and self-esteem and confidence are often related (Pinto, Mansfield, & Parente, 2004). As people are more open to intervention during times of trouble than times of stability, the lower confidence level of those in Later Adolescence might make them more open to educational support, making this group a good target for intervention.

The most effective way to diminish worry and increase confidence over credit card debt is to begin taking steps to get out of debt. As this can be a challenging process, there are some actions that can help along the way (Bandura, 1997). One is seeking out success stories of others, similar to oneself, who have gotten out of troubling debt. Bandura called this "social modeling," which contributes to self-efficacy. A second strategy is to try relaxation techniques. Relaxation helps to decrease worry and stress, focus the mind, and helps with rational thought. A third is to pay attention to every step a person takes in the right direction towards getting out of troubling debt. The experience of success will help to boost confidence. People can keep track of their debt decreasing, savings increasing, and watch the progress they have made. As confidence builds, worry will decrease, and the potentially overwhelming tasks of getting out of troubling credit card debt will seem more manageable.

Despite being on a fixed income with little expectation for increasing resources, older adults appear to worry less about debt and are more confident about their ability to reduce debt. They have gotten through their whole lives being able to manage their financial responsibilities and may assume that they will be able to continue to do so.   According to Bandura, having “experience of success or mastery in overcoming obstacles” is a key way to raise self-efficacy and confidence (1997). However, this optimism may prove to be unrealistic if future expenses continue to outpace income and action is not taken in the area of debt reduction. The higher levels of confidence and lower levels of worry among older adults might make interventions difficult. The first step with this group is to raise awareness that mounting debt can become a problem with salient consequences. Once older adults view their debt as a problem, willingness to seek help may increase, and their existing high level of confidence can be a resource to help them succeed in getting out of debt.

Table 1. Definitions of Processes of Change

Process of Change	Defined by the Transtheoretical Model of Change
Experiential	
Consciousness-raising	Finding and learning new facts, ideas, and tips that support the healthy behavior change
Dramatic relief	Experiencing the negative emotions that go along with unhealthy behavior risks
Social liberation	Realizing that the social norms are changing in the direction of supporting the healthy behavior change
Environmental reevaluation	Realizing the negative impact of the unhealthy behavior or the positive impact of the healthy behavior on one's proximal social and physical environment
Self-reevaluation	Realizing that the behavior change is an important part of one's identity as a person
Behavioral	
Self-liberation	Making a firm commitment to change
Counter-conditioning	Substituting healthy alternative behaviors and cognitions for the unhealthy behaviors
Stimulus control	Removing reminders or cues to engage in the unhealthy behavior and adding cues or reminders to engage in the healthy behavior
Contingency management	Increasing the rewards for the positive behavior change and decreasing the rewards of the unhealthy behavior
Helping relationships	Seeking and using social support for the healthy behavior change

Source: Prochaska, Redding, and Evers (1996).

Table 2. Characteristics of the Sample (N=263)

Variable	**Percentage**
Gender	
Male	22.1
Female	77.9
Race/Ethnicity	
American Indian	.8
Asian	2.7
Black	12.9
White	73.4
Hispanic	5.7
Other	4.6
Education	
<8th	1.1
<H.S.	2.3
HS	18.3
Col. 2yr	47.5
Col. 4yr	18.6
Col. 4+	12.2
Marital status	
Married	41.6
Never Married	22.5
Partner	8.4
Divorced	17.6
Separated	4.2
Widowed	5.7
Household size	
1	24.3
2	32.7
3	17.5
4	14.4
5>	11.0
Number of credit cards	
1-3	25.1
4-5	31.2
6>	43.3
How often worry about credit card debt	
Not	2.3
Little	10.6
Quite	39.9
All	47.1
Participate in debt counseling	
Y	61.2
Some	17.5
N	21.3

How you are contacted for this survey	
Newsletter	55.1
Phone	26.6
Letter	14.8
E-mail	3.4
Stage of change	
Precontemplation	5.3
Contemplation	16.7
Preparation	8.0
Action	40.7
Maintenance	29.3

Table 3. Descriptive Statistics of Continuous Variables (N=263)

Variable	Mean	Median	Mode	SD
Age	39.64	37.00	24	13.86
Total credit card debt	18985	15000	20000	16958.49
Minimum monthly debt payment	574.67	500.00	500.00	554.15
Monthly take home income	2723.38	2000.00	3000.00	3984.14

Table 4. Means for quartile age groups and confidence.

Group (N)	Means	Std. Deviation	Group Difference
1.00 (65)	17.3692	4.92941	1 < 2,3,4
2.00 (62)	20.5968	3.93996	
3.00 (67)	19.8657	5.10168	
4.00 (67)	20.7313	5.68779	

$\underline{F}$ (3, 259) = 6.405, p= .000; Wilks' Lambda=.912; partial eta squared=.030

Table 5. Means for theory-based age groups and confidence.

Group (N)	Means	Std. Error	Group Difference
1.00 (36)	16.667	.819	1 < 2,3,4
2.00 (73)	19.562	.575	
3.00 (133)	19.925	.426	
4.00 (19)	23.579	1.127	4 > 1,2,3

$\underline{F}$ (3, 259) = 8.618, p= .000; Wilks' Lambda=.890; partial eta squared=.038

Table 6. Confidence Final Items

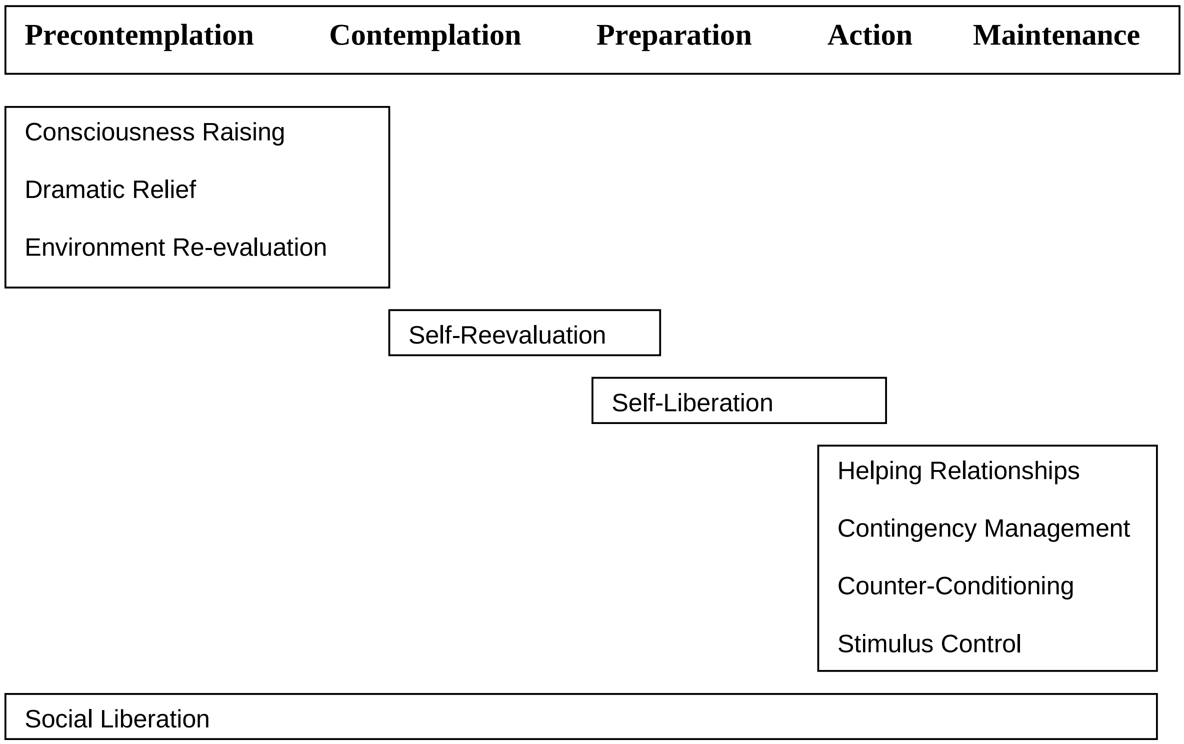
Factor Loading	Item
.610	Your car breaks down.
.648	You become ill.
.745	It's the holidays.
.730	You are feeling stressed.
.707	Your financial situation changes.
.684	It is taking longer than expected to get rid of your credit card debt.

Table 7. Means for theory-based age groups and worry.

Group (N)	Means	Std. Deviation	Group Difference
1.00 (36)	3.500	.122	
2.00 (73)	3.342	.085	
3.00 (133)	3.361	.063	
4.00 (19)	2.579	.167	4 < 1,2,3

$\underline{F}$ (3, 259)= 7.429, p=.000

Figure 1. Stages by Processes of Change (Pro-Change Behavior Systems, 2002)



Acknowledgements

The authors would like to thank Janice M. Prochaska, Ph.D. and Janet J. Johnson, Ph.D., of Pro-Change Behavior Systems, Berta Leon, and Robert L. Bassett, for their contributions to the larger research project and related publications.

References

Aizcorbe, A. M., Kennickell, A. B., & Moore, K. B. (2003, January). Recent changes in U.S. family finances: Evidence from the 1998 and 2001 survey of consumer finances. *Federal Reserve Bulletin,* 1-31.

Bandura, A. (1997). Self-efficacy. *Harvard Mental Health Letter*, 13(9), 4-7.

Block, S. (2005, August 30). Students who charge their education have a lot to learn. *USA Today*.

Boas, S., Gardener, S., Hogarth, J. M., & Xiao, J. J. (2003). Consumer credit counseling and consumer interests: A dialogue between industry, government, and consumer advocate. *Consumer Interest Annual.*

Bollen, K.A. & Long, J.S. (Eds.). (1993). Testing Structural Equation Models. Newbury Park CA: Sage

Breitbard, S., & Reynolds, C. (2003). Jump-starting financial literacy. *Journal of Accountancy*, 196(6), 56-60.

Bristow, B. J. (1997). *Promoting financial well-being: Running a successful MONEY 2000 campaign*. Ithaca, NY: Cornell Cooperative Extension.

Cattell, R.B. (Ed.) (1966). *Handbook of multivariate experimental psychology*. Chicago: Rand-McNally.

Chien, Y-W., & DeVaney, S. A. (2001). The effects of credit card attitude and socioeconomic factors on credit card and installment debt. *The Journal of Consumer Affairs, 35,* 162-179.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences 2nd Ed*.Hillsdale, NJ: Lawrence Erlbaum Associates.

Consumer Federation of America & National Consumer Law Center. (2003). Credit counseling in crisis: The impact on consumers of funding cuts, higher fees and aggressive new market entrants. Washington, DC: Authors.

DeVaney, S. A., & Lytton, R. (1995). Household insolvency: A review of household debt repayment, delinquency, and bankruptcy. *Financial Services Review, 4*(2).

Draut, T., & Silva, J. (2003). *Borrowing to make ends meet: The growth of credit card debt in the '90s*. New York: Demos.

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

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

Durkin, T. A. (2000, Septermber). Credit cards: Use and consumer attitudes, 1970-2000. *Federal Reserve Bulletin*, 623-634.

Garman, E. T., Junk, V.W., Kim, J., O'Neill, B.J., Prochaska-Cue, K., Prawitz, A.D., et al. (2005). Final Report: 30 million workers in America-one in four-are seriously financially distressed and dissatisfied causing negative impacts on individuals, families, and employers.

Godwin, D. D. (1997). Dynamics of households' income, debt and attitudes toward credit, 1983-1989. *Journal of Consumer Affairs. 31*(2), 303-325.

Godwin, D. D. (1998). Household debt quintiles: Explaining changes 1983-1989. *Journal of Consumer Affairs, 32*(2), 369-393.

Greninger, S. A., Hampton, V. L., Kitt, K. A., & Achacoso, J. A. (1996). Ratios and benchmarks for measuring the financial well-being of families and individuals. *Financial Service Review, 5*(1), 57-70.

Harlow, L.L. (1985). *Behavior of some elliptical theory estimators with non-normal data in a covariance structure framework: A Monte Carlo study.* Unpublished doctoral dissertation, University of California, Los Angeles.

Hayhoe, C. R., Leach, L. J., Turner, P. R., Bruin, M. J., & Lawrence, F. (2000). Differences in spending habits and credit use of college students. *Journal of Consumer Affairs, 34*(1), 113-133.

Hayhoe, C. R., Leach, L., & Turner, P. R. (1999). Discriminating the number of credit cards held by college students using credit and money attitudes. *Journal of Economic Psychology, 20,* 643-656.

Hilgert, M. A., Hogarth, J. M., Beverly, S. G. (2003, July). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 309-322.

Hogarth, J. M., Beverly, S. G., & Hilgert, M. A. (2003). Patterns of financial behaviors: Implications for community educators and policy makers. Paper presented at Federal Reserve System Community Affairs Research Conference.

Horn, J.L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, 30(2), 179-185.

Hwang, Suein. (2004). Personal finance – Family finance: More seniors are piling up debt. *Wall Street Journal*, D2.

Joo, S., & Grable, J. E. (in press). An exploratory framework of the determinants of financial satisfaction. *Journal of Family and Economic Issues.*

Keeping seniors out of debt. (2003). *USA Today Magazine*, 132(2703), 4-6.

Kerkman, B. C. (1998). Motivation and stages of change in financial counseling: An application of a transtheoretical model from counseling psychology. *Financial Counseling and Planning*, 9(1), 13-20.

Kim, H., & DeVaney, S. A. (2001). The determinants of outstanding balances among credit card revolvers. *Financial Counseling and Planning, 12*(1), 67-78.

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

Knight, L., & Knight, R. (2000). Counseling clients on credit. *Journal of Accountancy*, 189(2), 61-71.

Korn, J. (2002). Striving to be debt free. *Black Enterprise*, 32(12), 60-62.

Lee, J., & Hogarth, J. M. (1999). Returns to information search: Consumer credit card shopping decisions. *Financial Counseling and Planning, 10*(2), 23-34.

Lee, J., & Kwon, K-N. (2002). Consumers' usage of credit cards: Store credit card usage as an alternative payment and financing medium. *The Journal of Consumer Affairs, 36*(2), 239-262.

Levesque, D., Gelles, R., & Velicer, W. (2000). Development and validation of a stages of change measure for men in batterer treatment. *Cognitive Therapy and Research,* 24(2), 175-199.

Levesque, D. A., Prochaska, J. M., & Prochaska, J. O. (1999). Stages of change and integrated service delivery. *Consulting Psychology Journal, 51*, 226-241.

Lown, J. M., & Ju, I-S. (1992). A model of credit use and financial satisfaction. *Financial Counseling and Planning, 3*, 105-123.

Lyons, A. (2004). A profile of financially at-risk college students. *Journal of Consumer Affairs*, 38(1), 56-81.

Lytton, R. H., Garman, E. T., & Porter, N. M. (1991). How to use financial ratios when advising clients. *Financial Counseling and Planning, 2*, 3-23.

Mannix, M. (1999). The Credit Card Binge. *U.S. News & World Report*, 127(9).

Markovich, C.A., & DeVaney, S.A. (1997). College seniors' personal finance knowledge and practices. *Journal of Family and Consumer Sciences*, 89, 161-166.

Newman, B.M., & Newman, P.M. (2003). Development through life: A psychosocial approach. (8th Ed.). Belmont, CA: Wadsworth.

Norvilitis, J., & Santa Maria, P. (2002). Credit card debt on college campuses: Causes, consequences, and solutions. *College Student Journal*, 36(3), 356-364.

O'Neill, B. (1995). Americans and their debt: Right-sizing for the '90s. *Journal of Financial Planning*, *8*(1).

O'Neill, B. (2001). Updated MONEY 2000™: impact data. Message to MONEY 2000™ electronic mail group, MONEY2000-NATIONAL-L@cce.cornell.edu.

Pinto, M.B., Mansfield, P.M, & Parente, D.H. (2004). Relationship of credit attitude and debt to self-esteem and locus of control in college-age consumers. *Psychological Reports*, 94, 1405-1418.

Pro-Change Behavior Systems. (2002). *Mastering change: Counselors' guide to using the transtheoretical model with clients*. West Kingston, RI: Author.

Prochaska, J. M. (2000). A transtheoretical model for assessing organizational change: A study of family service agencies' movement to time limited therapy. *Families in Society, 80*(1), 76-84.

Prochaska, J. O. (1979). Systems of psychotherapy: A transtheoretical analysis. Homewood, IL: Dorsey.

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

Prochaska, J. O., Redding, C. A., & Evers, K. E. (1996). The transtheoretical model and stages of change. In K. Glanz, F. M. Lewis, & B. K. Rimer (Eds.). *Health behavior and health education: Theory, research, and practice* (2nd ed.) (pp. 60-84). San Francisco: Jossey-Bass.

Razzi, E., Siskos, C., & Jones, K. (2001). Take charge. *Kiplinger's Personal Finance*, 55(11), 74-83.

Simon, Ruth. (2001). Older Americans' debt burden is growing. *Wall Street Journal*, 238 (124), C1.

Staten, M. E., Elliehausen, G., & Lundquist, E. C. (2002). The impact of credit card counseling on subsequent borrower credit card usage and payment behavior. *Georgetown University, Credit Research Center Monograph #36, March 2002.*

U.S. Department of Agriculture Center for Nutrition Policy and Promotion, Misc. (2001). *Expenditures on Children by Families: 2000 Annual Report* (Publication No. 1528-2000). Washington, DC.

Velicer, W.F. (1976). The relation between factor score estimates, image scores and principal component scores. *Educational and Psychological Measurement*, 36,149-159.

Velicer, W.F., Fava, J.L., Zwick, W.R., & Harrop, J.W. (1988). *Component Analysis Extended* [Computer Software]. University of Rhode Island.

Whitford, David. (2000). A bread winner's tale. *Fortune*, 141(2), 114-120.

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

Xiao, J.J., Newman, B.M., Prochaska, J.M., Leon, B. & Bassett, R. (2004). Voices of debt troubled consumers: A theory-based qualitative inquiry. *Journal of Personal Finance*, 3(2), 56-74.

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

Zhu, L. Y., & Meeks, C. B. (1994). Effects of low income families' ability and willingness to use consumer credit on subsequent outstanding credit balances. *The Journal of Consumer Affairs, 28*(2), 403-422.

Zwick W.R., & Velicer, W.F. (1982). Variables influencing four rules for determining the number of components to retain. *Multivariate Behavioral Research, 17,* 253-269.

Zwick, W.R., & Velicer, W.F. (1986). Factor influencing five rules for determining the number of components to retain. *Psychological Bulletin 99,* 432-442.