

Application Of The Transtheoretical Model of Change To Financial Behavior

The Transtheoretical Model of Change has been commonly used in many health related areas. This paper describes a consumer education program that applies the Transtheoretical Model of Change to financial behavior. Based on the data collected from the program participants, it was found that several change processes were used more frequently by the participants who reached their financial goals versus those who did not.

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Introduction

Why do some people make successful behavior changes while others, who say they want to change, never seem to get around to it? Financial counselors and educators interested in improving money management practices of clients have a vested interest in the answer to this question. Understanding factors that foster change of financial behavior is critical for developing effective counseling or educational programs. For example, if seeing results is a powerful change agent, practitioners can design activities that demonstrate how small changes add up over time. Showing learners that saving \$100 monthly with an 8% annual return will grow to \$150,030 in 30 years ("Your Investment Planning Calculator," 1999) is a great motivating activity. Another example is to show how high debt is related to health problems that would have impact on the behavior change. Researchers at Ohio State University recently reported that people with high credit-card balances have more health problems than those with low balances. The study found that the higher the debt-to-income ratio the more health was apt to suffer (Drentea & Lavrakas, 2000).

This study was done to provide insights into changing financial behavior. It describes the application of the Transtheoretical Model of Change (TTM) to a financial wellness campaign called MONEY 2000™. The purpose was to produce insights into factors that lead to personal finance behavior changes. The first objective of this study was to discuss how to apply the TTM to financial behavior using MONEY 2000 as a demonstration. The second objective of the study was to explore change processes that effectively help people who want to change their financial behavior.

Description Of The Transtheoretical Model Of Change

The TTM was developed by Prochaska and his colleagues 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, low fat diet and weight control, psychological distress, and sun exposure (for a comprehensive list of published studies, see Prochaska, Redding, Harlow, Rossi, & Velicer, 1994). Currently, this model is used in research projects on various topics sponsored by government agencies, such as the National Institutes of Health, Centers for Disease Control, and the Health Care and Finance Administration; public interest organizations, such as the American Cancer Society, the American Heart Association and the Robert Wood Johnson Foundation; and corporations, such as Johnson and Johnson, Nelson Communications, and Merck. Many other countries including Great Britain, Israel, Japan, the Netherlands, Germany, Argentina, and Australia have also used this Model to research how to change people's undesirable behavior or acquire desirable behaviors.

The TTM was developed by studying daily human experiences and integrating existing psychotherapy models. It was named transtheoretical because it combines change variables from across many existing counseling theories. In the early stages of their research, Prochaska and his colleagues found that behavior changes are more complicated than those described by many theories. They reviewed existing theories in psychotherapy, including

psychoanalytic, humanistic/existential, gestalt/experiential, cognitive, and behavior sciences and came to a conclusion that all of these theories had merits in helping people change their behaviors, but also had limitations. Then they incorporated change processes from all of these theories and created the Transtherotical Model of Change. The focus of the Model is to help people intentionally change behavior (Prochaska, 1979).

The TTM is considered a revolution in the science of behavior. Traditional action paradigms generally focus on changes that occur dramatically and discretely. TTM has shown through 20 years of research that behavior change is a process, not an event. People progress through five distinct stages: *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 Model also identifies ten major processes of change: *consciousness-raising*, *social liberation*, *dramatic relief*, *environment reevaluation*, *self-reevaluation*, *self-liberation*, *counterconditioning*, *stimulus control*, *contingency management*, and *helping relationships*. The Model specifies the relationship between the change processes and stages (Figure 1). In the early stages, people apply experiential processes that are cognitive, affective, and evaluative to progress through the stages. In later stages, people rely more on the behavioral processes of conditioning, contingency management, environmental controls, and support for progressing toward termination (Prochaska, Redding, & Evers, 1996). The key to fostering successful change is to understand what stage a person is in and then decide what strategies (processes) she or he should use to move forward.

Figure 1: Relationships between Change Stages and Processes

<i>Change Stage:</i>	Precontemplation	Contemplation	Preparation	Action	Maintenance
<i>ChangeProcess:</i>					
	Consciousness-Raising				
	Dramatic relief				
	Environmental reevaluation				
	Social liberation				
		Self-reevaluation			
			Self-liberation		
				Contingency management	
				Counterconditioning	
				Stimulus control	
				Helping Relationships	

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

The TTM has been tested in dozens of empirical studies. One objective has been to establish the efficacy of various treatment interventions based on a person's readiness for change. Originally, the Model was conceptualized as a linear progression through the various change stages. It was later determined that a spiral pattern is the best illustration of how people change because most individuals relapse and return to a previous stage (Prochaska, DiClemente, & Norcross, 1992). People can also remain stuck in the contemplation stage of change for long periods. In one study of self-changers, the model time that smokers spent in the contemplation stage was two years (Prochaska & DiClemente, 1984). Prochaska and Velicer (1997) found that individualized and interactive interventions, such as behavioral counseling and computer-generated expert systems, produce greater long-term results with respect to changes in health habits than do non-interactive interventions such as self-help manuals, newsletters, or media. They concluded that "the future of health promotion programs lies with stage-matched, proactive, and interactive interventions" (Prochaska & Velicer, 1997, p. 47). Almost all studies using the TTM model is in the health related area with two exceptions. Kerkman (1998) discussed theoretically how to use the TTM model in financial counseling and used a case to demonstrate her approach. Bristow (1997) suggested that this model could be used to change people's financial behavior in a USDA extension program on financial education (see the section below about the program).

Description Of Money 2000™ Program

MONEY 2000™ is a Cooperative Extension System program that encourages participants to improve their financial well being through increased savings and/or reduced debt. The objective of MONEY 2000™ is to encourage participants to save and/or reduce debt by a specific dollar amount (e.g., \$2,000) by the end of the year 2000 (or later, in some states). Developed by Rutgers Cooperative Extension in 1995 and first implemented in New Jersey and New York in 1996, MONEY 2000™ is believed to be the only savings education program ever launched in the United States to include a behavioral monitoring component over an extended period of time (O'Neill, 1997). Participants are asked to set financial goals (i.e., a specific amount of increased savings and/or reduced debt) which, to date, have ranged from several hundred dollars to well into six figures. They are then provided educational services (e.g., quarterly newsletters, classes, state conferences, computer analyses, home study courses, and Web sites) by Cooperative Extension personnel and surveyed about changes in their asset and debt level every six months (O'Neill, 1999). Only changes in financial status are requested, not the actual amount of participants' income, assets, or debt. All new savings dollars are counted, including automated mutual fund deposits and 401(k) plan contributions. Debt reduction includes mortgage principal prepayment and payment of unsecured debts (e.g., credit cards).

By the end of 1999, semi-annual reports indicated significant progress by MONEY 2000™ participants. In New Jersey, where the program began, 1,832 participants had enrolled by December 2000 and reported \$7 million of aggregated savings and debt reduction. In the 29 states that reported program participation, there were 13,338 participants and a total dollar impact of \$20 million reported (O'Neill, 2001). This number represents a direct increase in the net worth of program participants. Program sponsors in New Jersey also analyzed the program on a cost-benefit basis and found \$25 of benefit to participants for every \$1 spent to implement the program (O'Neill & Richardson, 1999).

The Role Of Money 2000™ In Developing Saving Behavior

Financial behavior changes can include the following components: eliminating an undesirable behavior, such as credit card debt and impulsive buying, or developing a desirable behavior, such as saving money or investing in stocks regularly. Sometimes, a behavior change includes both components simultaneously. The target behavior change of MONEY 2000™ is to improve the financial well being of participants by increased savings and/or reduced debt. To achieve this goal, participants must generally reduce their spending, especially impulsive and unnecessary expenses. Thus, MONEY 2000™ attempts to promote both behavior change components: to eliminate poor spending behavior and to develop good saving behavior.

The TTM has found that people are in different stages of change. Stage of change can be assessed using self-report methods. Most often a classification algorithm is used to stage individuals on the basis of their responses to a few questions about their intentions, past behavior, and present behavior. Respondents are usually asked to provide binary responses (yes or no) to the following four statements, which form a discrete categorical measure of stages of self-change:

1. I solved my problem more than six months ago.
2. I have taken action on my problem within the past six months.
3. I am intending to take action in the next month.
4. I am intending to take action in the next six months.

Responses to the above statements are used to assess a person's stage of readiness for change. Precontemplators will answer no to all the four statements. Contemplators will answer yes to statement four and no to all the others because they are intending to change in the next six months. They have started to become aware that a problem exists and are seriously thinking about overcoming it, but have yet to commit to action (Prochaska, DiClemente, & Norcross, 1992). Those in the preparation stage will answer yes to statement 3 and no to the others because they are intending to take action in the next month. If a person answers yes to statement 2 and no to statement 1, he or she is in the action stage. Action is the stage in which people have made overt modifications in their lifestyles within the past six months (Prochaska & Velicer, 1997). A person has reached the maintenance stage when he or she answers yes to statement 1. Maintenance is the stage in which people are working to prevent a relapse but they do not apply the change processes as frequently as do people in action (Prochaska & Velicer, 1997).

The MONEY 2000™ program was developed to appeal to people at different stages of readiness for behavior change. Some participants in the program, for example, may be at one of the first three stages: precontemplation, contemplation, or preparation. In the *precontemplation* stage, people may not even be aware that a problem (e.g., high debt load) exists or that a change should be made in their life. In the *contemplation* stage, they

Table 1
Application of the Transtheoretical Model of Change to Financial Behavior

Change Process	Definition of Change Process	Application in Financial Behavior Change	Possible Effects of MONEY 2000™
Consciousness-raising	Finding and learning new facts, ideas, and tips that support the healthy behavior change	“It may be a good idea to start saving.”	News stories that raise awareness about the benefits of saving and/or reducing debt
Social liberation	Realizing that the social norms are changing in the direction of supporting the healthy behavior change	“I heard about 401(k) plan in my company that has tax and other advantages.”	Provision of a voluntary social program that encourages savings
Dramatic relief	Experiencing the negative emotions that go along with unhealthy behavior risks	“It would be a real shame if I do not start saving money. I could end up a bag lady.”	Stories of dramatic life changes by participants in the program
Self-reevaluation	Realizing that the behavior change is an important part of one's identity as a person	“If I start to save, I would feel better about my self.”	Participants who become aware of the program could re-evaluate their own spending and saving behavior
Self-liberation	Making a firm commitment to change	“I will save \$20 per paycheck period.”	Participants set their own individual financial goals
Counterconditioning	Substituting healthy alternative behavior and cognition for the unhealthy behaviors	“I can bring lunch to work instead of buying lunch at the deli.”	Provision of countering strategies for impulsive spending behavior
Stimulus control	Removing reminders or cues to engage in the unhealthy behavior and adding cues or reminders to engage in the healthy behavior	“I will try not to go to the mall more than once a month.”	Provision of strategies of environmental control to avoid impulsive spending and increase savings
Contingency management	Increasing the rewards for the positive behavior change and decreasing the rewards of the unhealthy behavior	“If I decide not to go to the mall today, I will reward myself by listening to my favorite music and taking a long bath.”	Provision of strategies that reward the behavior change in non-monetary ways
Helping relationships	Seeking and using social support for the healthy behavior change	“I ask my husband to stop me if I say I want to buy something unnecessary.”	Provision of strategies for participants to seek family and friends support in developing saving behavior
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	“I think the world would be a better place if more people do not overspend.”	Provision of facts of undersaving and overspending and their consequences through newsletter, classes, and conferences.

Source: The “Change Process” and “Definition of Change Process” columns are from Prochaska, Redding, and Evers (1996). The “Application in Financial Behavior Change” and “Possible Effects of MONEY 2000™” columns were developed by the authors of this study.

gain knowledge about alternative behaviors and begin to understand ways to change (e.g., strategies to reduce spending). In the *preparation* stage, people commit to make a change and gain required skills (e.g., taking a course in personal finance).

Other MONEY 2000™ program participants may be in one of the last two stages: action and maintenance. In the *action* stage, people “take the plunge” and start to change their behavior. In the *maintenance* stage, people work to sustain their change and reap the rewards of their efforts (e.g., an increased savings balance). MONEY 2000™ was developed with the assumption that participants desire a social support mechanism to help improve their financial management behavior. That is why they choose to participate in the program. Table 1 lists the ten change processes noted previously, definitions of these processes, applications in financial behavior, and possible effects of MONEY 2000™.

The TTM recognizes that change is a process and that certain processes facilitate progressive movement through the various stages of change (Samuelson, 1998). Following are additional details about ways that the MONEY 2000™ program incorporates the change processes listed above to facilitate behavior change:

Consciousness-raising

Participants and potential enrollees are given a quarterly newsletter that provides information about various financial topics (e.g., debt reduction). Some states also distribute press release packets for newspapers that increase awareness of financial management issues. State and national (e.g., *Money* magazine) media have written stories about MONEY 2000™, resulting in thousands of follow-up contacts nationwide. Home study courses, brochures, classes, videos, all-day conferences, payroll stuffers, posters, introductory presentations, Web sites, and financial worksheets are additional consciousness-raising methods. Awareness materials emphasize the benefits of a change and are particularly effective in the precontemplation and contemplation stages of change (Samuelson, 1998).

Social Liberation

The MONEY 2000™ program provides a social support mechanism for people who want to change their financial behavior to a more positive direction. Like no-smoking sections and low-fat menus, which are common examples of social liberation, MONEY 2000™ provides encouragement and structure (e.g., semi-annual progress reports) for participants to take action to improve their finances. Motivation and social support were noted as an effect of the MONEY 2000™ program by 13.7% of respondents in a study of the effects of MONEY 2000™ (O’Neill, Xiao, Bristow, Brennan, & Kerbel, 2000).

Dramatic Relief

Some people are highly motivated to change after some form of “teachable moment” or emotional arousal. For example, seeing a close friend die of lung cancer might convince a smoker to quit. Forms of emotional arousal used with MONEY 2000™ include newspaper articles about participants “success stories” and semi-annual reports of the program’s aggregate impact (i.e., the total amount of increased savings and reduced debt). Individual participants may have also had their own emotional arousal (e.g., contact from creditors).

Self-reevaluation

This is the process of helping people see that their life would be better without a destructive behavior (e.g., high debt). An example used in the MONEY 2000™ program is the computerized PowerPay debt reduction analysis program (Miner, Harris, & Bond, 1993). Participants who request a PowerPay analysis are provided with a printout that shows the time and money saved by using PowerPay to apply the monthly payment for paid-off creditors to remaining debts.

Self-liberation

Self-liberation means making a firm commitment to change. This is both the belief that one can change and the commitment to act on that belief (Prochaska & Velicer, 1997). Public commitments are much more powerful than private ones (Samuelson, 1998). An integral component of the MONEY 2000™ program is requiring participants to publicly set their own saving and/or debt reduction goals. These goals are written down on an enrollment form that is sent to their local Cooperative Extension office. Participants are then provided with a variety of teaching methods to encourage them to succeed. Previous research has shown that multiple choices, rather than a single choice, increases commitment levels (Prochaska & Velicer, 1997).

Counterconditioning

This process requires the learning of healthier behaviors to substitute for problem behaviors. Some common examples are relaxation techniques to counter stress, nicotine replacement for cigarette smoking, and the use of low-fat foods to lose weights (Prochaska & Velicer, 1997). An example from MONEY 2000™ is the fact sheets and articles that provided participants with dozens of tips to increase savings and reduce debt. For example, saving \$3 a day, instead of purchasing beverages or lottery tickets, would produce over \$1,000 of savings annually. After the quarterly newsletter, respondents to a study of MONEY 2000™ participants reported that these tips and hints were the most helpful aspect of the program (O'Neill, Xiao, Bristow, Brennan, & Kerbel, in press).

Stimulus Control

Here, people elect to restructure their environment in order to enhance a new, healthy behavior or to avoid negative “triggers.” Walking, instead of driving, to get exercise is a health behavior example. An example from MONEY 2000™ is encouraging participants to enroll in an employer savings plan, such as a 401(k). That way, money is deposited electronically before they get a chance to spend it. Automated U.S. savings bond or mutual fund deposits are another recommended environmental control technique (O'Neill, Bristow, & Brennan, 1999).

Contingency management

This process includes increasing the rewards for the positive behavior change and decreasing the rewards of the unhealthy behavior. Examples in MONEY 2000™ include certificates of completion, parties for participants, and drawings for prizes. Individual participants also undoubtedly created their own personal reward system (e.g., a special dinner out for every \$1,000 saved) to recognize their progress.

Helping Relationships

This is the use of a strong support system (e.g., friends, family, co-workers) and is a critical element to sustain action and ensure maintenance (Samuelson, 1998). Examples from MONEY 2000™ are classes and conferences where participants help each other (almost like a support group) and individualized financial counseling, computer analyses, and telephone consultations provided by Extension personnel. Participants may have also received support from the “significant others” in their life during their participation in the program.

Environmental reevaluation

People who use this process would realize the negative impact of the unhealthy behavior or the positive impact of the healthy behavior on one's proximal social and physical environment (Prochaska, Redding, & Evers, 1996). In MONEY 2000™, facts of undersaving, overspending, and overborrowing, and their negative consequences in the larger population are distributed to the participants via periodic newsletters, classes, and conferences. The information is also spread through mass media that carry news stories of the program.

The MONEY 2000™ program has the potential to help participants in all stages to change their financial behavior, especially people who are in the stages of preparation, action and maintenance. The remainder of this article will discuss results from a study that evaluates the effectiveness of the MONEY 2000™ program and its impact upon financial behavior change of the participants.

Goal Achievement And Change Stage And Process

The purpose of MONEY 2000™ is to ask participants to set a financial goal and then to encourage them to achieve the goal. This study was conducted to determine what change processes are relevant to participant's goal achievement behavior. Data were obtained from a convenience sample of New Jersey and New York MONEY 2000™ who completed an eight-page mailed survey during the Fall of 1998. Respondents received the survey from their county Cooperative Extension office as an enclosure with the Fall 1998 issue of *MONEY 2000™ News*, the quarterly newsletter for program participants. Approximately two months were allowed to return the surveys and incentives (drawing for personal finance books) were given for participation. In New Jersey, 1,268 questionnaires were mailed out, 309 were returned, and 303 were useful. In New York, 1,024 questionnaires were mailed out and 217 were returned. Thus, the response rate for New Jersey was 24.4%, for New York was 21.2%, and for both states was 22.7%.

The survey participants were categorized into four groups. If a participant reported having made progress to achieve the goal of increasing savings at the time of the survey, this person was coded as a *saver*. A *debt reducer* was defined as a person who reported having made progress to achieve the goal of reducing debts. If a participant reported making progress to achieve both goals, this person is coded as *saver and debt reducer*. The rest people were

labeled as pre-actors because they are in the pre-action stages. Although the TTM specifies five stages of change, the participants of the Money 2000 program were broken into two categories: pre-action (not achieving their goal) and action (at their goal). If people joined the program but did not reach their goals, they are considered in pre-action stages (i.e., precontemplation, contemplation or preparation). If people started saving or reducing debts or doing both within six months since they joined the program, they are in the action stage. If people started saving or reducing debts or doing both for more than six months since they joined program, they are in the maintenance stage. Because of the limitation of data collected, the last two groups are not distinguished. Therefore, the goal achievers are considered in the action or maintenance stage and the others are in pre-action.

Nine change process variables were included in this study, with environmental re-evaluation inadvertently excluded. Details of the variable construction will be available from the authors upon request. Table 2 presents frequencies of change processes reported by the total sample and sub-samples. For the total sample, more frequently reported change processes used by program participants were consciousness-raising (99%), self-liberation (99%), contingency management (98%), self-reevaluation (93%), dramatic relief (86%), counterconditioning (72%), and stimulus control (72%). Use of helping relationships (56%) and social liberation (50%) was less frequently reported by the participants.

Table 2
Goal Achievement and Change Process: Chi-square Test Results (N=520)

<i>Change Process</i>	Total Sample	Pre-Actor	Actor		
			<i>Saver</i>	<i>Debt Reducer</i>	<i>Saver & Debt Reducer</i>
Consciousness-raising	99	94	100	100	100 %*
Social liberation	50	28	50	46	60 *
Dramatic relief	86	56	95	81	93 *
Self-reevaluation	93	75	95	91	99 *
Self-liberation	99	90	99	99	100 *
Counterconditioning	72	65	79	66	72
Stimulus Control	72	69	81	67	71
Contingency management	98	90	99	100	100 *
Helping relationships	56	49	66	49	61 *
Sample size	520	81	131	87	221

* The significance level is 5% or better.

Chi-square tests were used to examine whether or not there were associations between the goal achievement and change process variables (Table 2). Seven change processes showed associations: consciousness-raising, social liberation, dramatic relief, self-reevaluation, self-liberation, contingency management, and helping relationships. The actors (respondents in the action and maintenance stages) are more likely to use these processes than pre-actors in the program. The savers in action were indeed better prepared than those in pre-action since they used pre-action processes significantly more. These results would suggest the importance of adequately preparing people if they are to reach their goals.

Two logistic models were used to examine the relationship between the goal achievements and change processes (Table 3). Model 1 used a dependent variable with four levels: pre-actor, saver, debt reducer, and saver and debt reducer. Preliminary examinations also included several demographic variables and only age showed effects. Then age was included in the final model. The findings of this mode indicated that four change processes, social liberation, dramatic relief, self-reevaluation, and contingency management showed expected positive effects on goal achievement variables. However, stimulus control showed an unexpected negative effect. The findings also indicated that there is a behavioral difference between the older (65 or years older) and younger participants (35-44 years old).

Model 2 used a dependent variable with two levels: pre-actor and actor. This time only three change processes showed expected positive effects: social liberation, dramatic relief, and contingency management. Compared to the participants older than 65 years old, the participants younger than 54 year old were more likely to become actors.

Table 3
Goal Achievement and Change Processes: Logistic Results

	Model 1		Model 2	
	Estimate	odds	Estimate	odds
Intercept	-7.0787*		-5.8009*	
Intercept 2	-6.3391*			
Intercept 3	-4.8197*			
Consciousness-raising	0.8806	2.412	0.757	2.132
Social liberation	0.5584*	1.748	0.9375*	2.554
Dramatic relief	0.9827*	2.672	1.9795*	7.239
Self-reevaluation	0.7916*	2.207	0.413	1.511
Self-liberation	1.4306	4.181	1.3028	3.679
Counterconditioning	-0.0374	0.963	0.0271	1.027
Stimulus Control	-0.47*	0.625	-0.7004	0.496
Contingency management	2.4003*	11.026	2.9308*	18.743
Helping relationships	0.00685	1.007	0.042	1.043
under 35	0.5486	1.731	1.2892*	3.63
35-44	0.8335*	2.301	1.1397*	3.126
45-54	0.5396	1.715	0.9353*	2.548
55-64	0.4428	1.557	0.7283	2.072
R-squared	.1646		.1791	
Percent concordant	65		81	
-2 Log Likelihood	1352		450	

* The significance level is 5% or better.

Note: In Model 1, the dependent variable has four levels: pre-actor, saver, debt reducer, and saver and debt reducer. In Model 2, the dependent variable has two levels: pre-actor and actor. Age 65 years or older is the reference category.

Conclusions And Implications

This study has discussed the potential of applying the TTM, which has been successfully used for many health related topics, to financial behavior. This is the first study to apply this model to people's financial behavior, or more specifically, to avoid undesirable debt and to develop healthy saving behavior. As a demonstration financial education program, MONEY 2000™ was developed based on the TTM, which has been offered in many states and generated a notable amount of new savings and reduced debt.

This study also conducted bivariate and multivariate analyses based on data from a sample of program participants in New Jersey and New York regarding the relationship between goal achievement and change processes. Note that the change process variables are quantified from qualitative data sources and the conclusions are only suggestive. What the results support is that people progressing to action and maintenance were more likely to be using particular change processes more. In particular, more systematically preparing program participants for taking action (dramatic relief and social liberation) could produce more goal achievers. The findings also indicate that contingency management is effective to facilitate the goal achievement as described by the theory. The implication for MONEY 2000™ for the future is to assess the stage of change and the use of change processes during the program. Participants could use the feedback that they may be under-utilizing experiential processes and need to increase use if they are to reach their goals.

This study indicated that it is fruitful to develop and offer theory-based financial education programs. It also shows that MONEY 2000™ has affected participants' financial behavior, especially those using the experiential change processes such as consciousness raising, social liberation, dramatic relief, and self-reevaluation. In future program designs, educators should use the theory and results of evaluation studies, such as this one, to refine the original program and develop more effective programs that could have a greater impact on the behavior change.

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