The Effectiveness of Acceptance and Commitment Group Financial Therapy on Financial Literacy, Personal Financial Management and Mental Accounting

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ABSTRACT
The purpose of this study is applied training of financial literacy and personal financial management along with changing and modifying financial beliefs and improving mental accounting using a five-step combined financial therapy model and the commitment and acceptance method.

This research was applied and research method was quasi experimental with a pretest-posttest design with control group. The statistical population of the research consisted of the merchants of shahrekord city in 2019, from which 40 people volunteered were selected to participate in intervention sessions and had other criteria for enter and exit the study and randomly assigned to two experimental and control groups (20 people in each group) and completed research questionnaires including financial literacy, personal financial management and mental accounting. The experimental group then received 120 minutes of interventions related to acceptance and commitment financial therapy by ten sessions. But the control group did not receive any intervention. Data were analyzed using SPSS - 25 software.

The results of the study using multivariable analysis of covariance showed that in the post-test stage, the mean of mental accounting scores in the experimental group improved compared to the control group and financial literacy scores increased significantly (P <0.01) . The effect coefficient was calculated for mental accounting 0.45 and for financial literacy 0.54. It was concluded that acceptance and commitment financial therapy is effective for improving merchant's mental accounting and financial literacy. while the financial therapy approach did not has any significant effect on improving the mean of personal financial management scores.

Keywords: mental accounting, personal financial management, financial literacy, commitment and acceptance method, financial therapy.

1. Introduction

Today , in such an economic situation , most people in society suffer from financial problems and life is not possible without having financial literacy. Financial literacy is a necessary tool for making appropriate financial decisions. Training financial literacy is not a new concept and several workshops are commonly available to individuals. Traditional training in financial literacy and personal financial management begins with this assumption that participants have readiness to create changes in their financial lifestyle. This requires that individuals undergo a practical stage of change (Miller & Rollnick, 2002) . However, this is also possible that financial literacy training does not lead to better financial decisions by itself, while many of our financial decisions are based on feelings and derived from financial beliefs and opinions and it can be argued that financial knowledge does not solve personal financial problems by itself because financial literacy has two aspects, financial knowledge and its application. The use of financial knowledge should be accompanied by changes in financial patterns and behaviors. If a person is not psychologically ready to create changes in his lifestyle, it may financial literacy training is not effective (Proschaska, & DiClemente, 1984). There is still a difference between financial literacy and personal financial management (knowing and understanding personal financial problems) and financial ability (fulfilling personal financial knowledge) (Johnson & Sherraden, 2007).

Financial literacy is not merely financial knowledge and answering financial questions does not guarantee that an individual has the ability to make the correct financial decisions, but individuals must be able to use their financial knowledge effectively. Personality characteristics such as confidence, propensity to plan, willingness to take financial risks might affect on positive financial behaviors such as saving for emergencies, planning for retirement and avoiding overdraft (Elliehausen, 2019).

In this study, it can be determined whether individuals are psychologically ready to make changes in their financial lifestyle and get training financial knowledge through financial therapy. In the pre-change steps, participants realize that there is a problem, but they have not made a decision to solve it. Techniques such as awareness-raising and self-assessment processes help people make aware more about the problems and behaviors raised by them (Velasquez et al, 2001).

Our mental imagery plays an important role in our lives, so we need to seek to correct understand and explain the effects of human feelings on our decision-making process. In recent decades, the introduction of topics among disciplines, especially from psychology to accounting, has been gradually increasing; including financial therapy and the concept of mental accounting in 1980, which has become popular in accounting. Mental accounting was first proposed by Richard Thaler in 1980. He stated that mental accounting attempts to explain the process whereby economic consequences are classified and evaluated (Shams al-Dini et al., 2018). Research in the field of mental accounting can both help to better understand behaviors whose coding is the source of mental accounting and to solve financial problems. The determining factor in the effectiveness or non-effectiveness of these theories is the individuals themselves. Milton Friedman believes that the only person who can truly persuade you is yourself. You must turn the issues over in your mind at leisure .

Since mental accounting is learning more about the psychology of choice and derived from interpretation and analysis of the effect of events occurred in the mind (Balouchi et al., 2013), financial therapy helps to correct understand and explain the effects of human feelings on the decision-making process.

Mental accounting is a heuristic that simplifies decision making and may facilitate self-control. It likely works well in most circumstances but is not optimal (Elliehausen et al., 2019). Mental accounting is inherently a practical and useful method that individual use strategically to simplify cognitive calculations and automatically adjust expenses (Balouchi et al, 013). Financial therapy "studies the cognitive, emotional, behavioral and relational aspects of financial health" (Grable, McGill & Britt, 2010). The commitment and acceptance financial therapy helps an individual to have an overview of his/her own set of decisions and reduce the effect of mental errors on financial decisions. The purpose of this study is to develop financial therapy models and promote financial skills (financial literacy and personal financial management), budgeting, increasing savings and learning investment techniques and empowering people to solve financial problems. It also tries to improve the practical aspect of financial literacy.

2. Literature Review

2.1. Theoretical

Financial literacy can be described as the ability to manage money. Financial literacy means understanding money management and using financial knowledge to make financial decisions. The importance of financial literacy is quite obvious because expresses needing financial training and change in behavior and financial consequences such as savings, investing, credit behaviors to ensure financial health and can ultimately lead to financial well-being (Ismail et al., 2018).

While personal financial management refers to the financial decisions that an individual or a family makes to achieve the budget, savings and money resources spent over time. These decisions involve financial risks and future events (Shirazian, 2017). Personal financial management is one of the most important factors in financial capabilities through which a person can take away the household finances and manage the expenses of household (Atkinson et al., 2006).

Mental accounting is the set of cognitive, emotional, and social operations used by individuals and households to evaluate financial activities. (Thaler, 1999). Individual in the economic environment make decision on financial transactions such as buying, selling and saving. The decision is not made only by the information available in the market. Mental accounting is a decision-making process based on understanding and evaluating results in the human brain (Thaler, 1999).

Commitment and acceptance therapy includes financial therapy exercises based on the six main ACT topics. They are designed to help people overcome psychological barriers to financial health as follows: (a) full acceptance of limiting thoughts and negative feelings about money (b) identifying values (c) assessing the important role of money in achieving the goal d) preparing to perform positive behavioral activities to improve financial and psychological performance

ACT-based financial therapy interventions alleviate individual's the lack of financial readiness by encouraging a new feeling for willingness to accept limiting financial beliefs and related distressing emotions. In addition, it helps people to commit to behavior in a way that lead them to valuable financial goals and clarify their personal values. The purpose of these exercises is to train skills to individuals including mindfulness, acceptance and detachment of thoughts, empowering them to make financial choices based on their own values and experiences not on financial beliefs. The five-step model proposed by Shelton et al. (2019) adapts therapeutic interventions with the treatment of the emotional components of financial behaviors.

2.2. Research background

Muehlbacher et al. (2019) have examined individual differences in mental accounting. The results show that the rate of employment in mental accounting is positively related to being a female, conscientiousness and financial literacy and is negatively related to unplanned training and motivation. Elliehausen et al. (2019) conducted a study entitled behavioral economics, financial literacy, and consumers' financial decisions. Do subjective shortcuts and heuristic decision-making methods always lead to losses and also do those who have adequate financial literacy use less heuristic decision-making methods? The results show that training has little effect on the use of heuristic methods and individuals do not need training and financial interventions in the same way. Nuriyev (2019) has conducted a study entitled mental accounting: the impact of human psychology on financial decisions. In this study, the psychological aspects in financial decision making have been examined and recommendations have been introduced to enhance the effectiveness of financial decision making and to identify the limitations of the psychological impacts on making financial decision. Smith et al.(2015) The study was conducted titled three financial therapy interventions and a study of financial behaviors and beliefs. These three interventions examine the emotional components of financial management. The three interventions introduced in this study use a step-by-step financial therapy model to examine the emotional characteristics and behaviors and financial beliefs. The first intervention is the financial genogram. The second intervention is the financial perspective. The third intervention is the financial mirror. (Shelton et al., 2019) . Research has been conducted titled financial therapy with group: a case of five-step model. In this study, financial therapy in a group has been used in the form of five-step model that the use of this model shows favorable results in financial therapy compared to individual financial therapy.

2.3. Research hypotheses

Considering what mentioned above and the lack of research on the role of financial therapy interventions based on commitment and acceptance on creating changes in adverse financial behaviors, this study intend to investigate the impact of financial therapy model based on commitment and acceptance on personal financial management, financial literacy and mental accounting. The following hypotheses have been proposed for this purpose:

1) Is commitment and acceptance financial therapy effective in improving the personal financial management of Shahrekord merchants ?
2) Is acceptance and commitment financial therapy effective in increasing the financial literacy of Shahrekord merchants?.
3) Is commitment and acceptance financial therapy model effective in improving the mental accounting of Shahrekord merchants?

3. Research method and statistical population

This is a quasi-experimental research with a pre-test-post-test design conducted with a control group. The sample of 40 people randomly assigned to two experimental and control groups. The demographic information of the participants was as follows. 32.5 Men 67.5 Women with a degree 30% Diploma, 52.5% Bachelor, 17.5% Master. 55%Marketers aged 25 to 35 and 27.5% of them were 35 to 45 and 17.5% were 45 to 55 .

4. How to measure research variables

The following three scales were used to measure the research variables:

Mental accounting questionnaire (Mahapatra Raveendran, 2018) This questionnaire was designed by Mahapatra Raveendran and has 14 questions that are measured based on the Likert scale. In this study of the mediator role of mental accounting on financial cognition and financial planning of Indian households, the reliability of the questionnaire has been calculated using Cronbach's coefficient above 0.700.

Financial literacy questionnaire (Candia Bongomin et al., 2016) This questionnaire was designed by Candia bongomin and his colleagues and has 10 questions measured based on the Likert scale. In the study of the role of financial literacy and money management on personal management, the reliability of the questionnaire was calculated using Cronbach's alpha coefficient of 0.776. To measure financial literacy, four components of behavior, skills, attitude and knowledge were used.

Personal financial management questionnaire (Antonides et al., 2011) This questionnaire was designed by Antonides and his colleagues and has 4 questions that are measured based on the Likert scale. In the study of the role of financial literacy and money management on personal management, the reliability of the questionnaire was calculated using Cronbach's alpha coefficient of 0.885 . To measure personal financial management, four components of regular management of personal finances, control of sudden sense of buying, timely payment of bills and installments and the expense is used based on the validity .

5. Methodology

The experimental group in 10 sessions of 120 minutes per week with a financial therapy approach based on commitment and acceptance to increase financial literacy, improve personal financial management and mental accounting under training skills and techniques of financial literacy and personal financial management and strengthen the positive aspects of mental accounting And power reduction of the negative aspects of mental accounting were grouped according to Table (1) and the control group did not receive any intervention. At the end of the experimental group treatment sessions, the questionnaires were completed again and the personal financial management and financial literacy and mental accounting of the group were measured again.

5.1. Therapy Protocol

In this study, a combined five-step financial therapy model and acceptance and commitment treatment methods are used. The five-step therapeutic intervention model uses a meta-theoretical model of behavior change to train financial literacy and personal financial management skills based on preparation steps for change (Proschaska & DiClemente, 1984).

This five-step financial therapy model includes five step of changing: preparation, reflection, modification, action and maintenance. Each stage of change indicates the degree of preparation of the individual to create changes.

the participants announced their readiness to change their financial lifestyle. All identification charactristics of group members have been changed to protect their privacy. Group sessions were held per week for 10 weeks. Each week, the financial therapist introduced a new financial concept and then assigned the relevant exercises to members. Members were encouraged to provide feedback and reflections through weekly exercises . At the same time, participants were able to use the psychological techniques and exercises of the commitment and acceptance method to prepare for lifestyle changes and using the five-step financial therapy model (Shelton et al, 2019) received training financial literacy and Personal financial management and money management skills.

Step 1. “WANT” determining what an individual wants from his/her finances

At this step, participants determine their financial goals and prioritize their wants and needs. These are tasks that are intended for people in the pre-contemplative step (preparation). Searching for goals helps people identify the reason of their treatment. Participants are asked what are their financial goals. It also uses the "miraculous question," a solution-focused therapy method to change a person's lifestyle, to help participants create a picture of their desired lifestyle (De Jong & Berg , 2007). When using this method, therapists ask their participants to imagine what their life would be like if they were facing a problem (e.g debt, low income) suddenly come out of their lives. In this step participants divide their wants to necessary and unnecessary categories. The aim is to prioritize the wants that are necessary to create budget. Classifying wants are important because it causes to create budgeting and having smart habits. In financial therapy, wants and needs are prioritized to develop a new financial lifestyle.

Fortunately, in group therapy, group members are allowed to express their thoughts and financial goals. When group members share stories about their personal finances, they discover similarities and confirm their financial wants. This experience helped them to feel less shame of their financial wrong belief and financial mistakes and to reconsider their financial behaviors and prepare to change and modify these beliefs.

Step 2. “ NEED” determining basic needs of individual

In the second step, the group members start step of thinking and contemplating ,it is a step that examine the idea of change. In this step, the participants focusd on prioritizing the needs, separating the needs from their wants. To separate needs from wants , it is necessary to root out and modify money attitudes and wrong financial beliefs using acceptance and commitment approach. At this step, we use cognitive tools to identify money attitudes (e.g, money scripts, money disorders and financial genograms). One of the assessment tools is money scripts which is beliefs and behavioral patterns that are formed in childhood and affect on individual’s financial well-being while the individual may not be aware of it (Klontz, 2009). At this step, the idea of initiative is used by using the commitment and acceptance treatment method. Heuristic methods are mental shortcuts used in financial decisions. The heuristic methods used by the participants are derived from their lives and values that it is trained how to determine individual values in the commitment and acceptance method to the participants. However, these participants may have created a model for using heuristic methods derived from mental accounting to justify unnecessary buying (wants) and turn those buying into needs. At this step, these patterns are identified and participants are encouraged to use a conscious effort when explore their reasoning of buying as opposed to trusting in financial explorations. These mental shortcuts are related to the psychological aspects of decision - making and mental accounting errors which arises from the flexibility of mental accounting. (Cheema and Soman, 2008).Mental accounting concerns the rationality and the logic of decision making. However, sometimes the rationality of decision can be affected by social, emotional and cognitive factors and prompt individuals to make some irrational decisions. (Nuriyev, 2019).

Identifying money scripts

Money script is an individual's attitude towards money. These scripts are usually a) created in childhood b) often transferred from generation to generation in the family c) are unconscious d) are the factors that most stimulate individual 's financial behavior. Identification of bad and destructive money scripts can be an important task in financial therapy and this process is examined through psychological interventions and financial counseling (Klontz et al., 2012).

Identifying money disorders

Money disorders indicate severe pathological problems related to the money. Money disorders can affect life and can lead to financial problems (Klontz et al., 2012).When individuals engage in unbridled and chronic behavioral patterns, they may have money disorders. Money disorders are not only recognized by overspending or poor financial choices, but also as persistent, predictable patterns including destructive financial behaviors that cause anxiety and stress and severe emotional tensions and lead to many problems in their lives which reduce individual's ability to achieve financial goals and threaten their public health. Behaviors related to money disorders as inconsistent beliefs and behaviors financial patterns that lead to clinical discomfort and severe social or occupational disorders, unwanted financial pressures or inability to properly use individual's financial resources. Generally, these financial behaviors patterns are consciously or unconsciously transferred from parents to children. This transferring easily take place between generations and cultures. People with perfectionist personality and low self-esteem are more expose to money disorders. Financial denial, overwork, financial infidelity and financial dependence are examples of money and financial disorders that affect the quality of an individual's life and financial well-being. (Fattahi, 2018).

Family financial genogram

In order to discover the financial history and beliefs of the family and the origin of these beliefs, the financial genogram of the family is drawn. (Gallo, 2001; Mumford & Weeks 2003,). The purpose of drawing financial genogram is to identify the impact of financial behaviors of family environment on the individual. This helps individual to understand "where he came from and why he spends his money in this way and also will aware of the immediate effect of emotions on his financial behaviors . At the step of drawing the financial genogram, the participants is asked to draw their own financial genogram starting with the initial design of family relationships including parents, siblings and preferably grandparents. Participant shows various financial behaviors of individuals in genogram including whether the individual is involved in economic problems, has a habit affected by financial behavior, overuses credit cards, overspending , financial infidelity , bankruptcy and other important factors included in family financial relationships. Participants should identify key patterns in learning financial teachings in their lifestyle.

Group members were often able to trace the origin of their expected feelings related to the financial decisions from patterns of beliefs or behaviors within their family. In particular, this exercise also helped group members to identify the main reasons of financial decisions based on lateral emotions. Thus, group members were able to distinguish the sudden feelings experienced when making a financial decision from the existing one. Knowing the origin of these sudden feelings can allow a group member to understand why he or she experiences this feeling and thus prevents its negative effect on their financial behaviors . Group therapy helps individuals to gather early family experience (Yalom 1995).

Naturally , individuals are affected by parental management and consumption habits, so they develop similar attitudes and principles. Rivera (2016) observed that parents can influence financial management behavior of the individuals. Parents can be a pattern for their children in managing their finances (Sabri and Falahati 2012,). The family influence the formation of children's financial management behavior. Technically, parents' performance is a pattern for their children. On the other hand, parents may inadvertently teach their children reckless behavior in money management such as overuse of credit card and debt (Wang & Xiao 2009; Pinto et al. 2005; Leclerc 2012). The habit of saving is a pattern of financial behavior that is influenced by emotions and feelings and derived from the money beliefs and opinions of the individual and family (Shelton 2019,). Financial therapists use the family financial genogram to treat and identify these beliefs. They root out these false beliefs trying to remove false financial beliefs and habits and individual often transfer thoughts and feelings from their family experiences to group members and therapists.

Step 3. “HAVE” determining the individual's current financial condition

At this step, individual focus on the step of change preparation. Group members were asked to review their current financial situation and collect documents for budgeting. Collecting documents helps participants become aware of their past saving and spending habits so they have a comprehensive perception on their own patterns of behavior and also realize how their emotions affect their behaviors and find out how much their emotions affect their financial behavior. After collecting necessary documents , a sheet of current budget which is a list of current habits of expenditures is completed then these documents are shown as a kind of mirror to them that reflects their financial self and as "an wake-up alarm ". Group members can monitor their financial performance in this way and commitment and acceptance techniques are used to motivate individual to change their financial habits more. Sharing experiences of stressful feelings from past mistakes allowed members of this group to focus their emotional energy on their preparing for changing lifestyle.

The rational of organizing expenditures in mental accounts is to reduce computational costs for spendings decide, facilitate self-control and prevent overspending (Heath & Soll , 1996). At this step, in order to determine the current financial situation, we must: a) Assess assets and liabilities b) Assess income and expenses c) Assess financial ratios

The current financial situation of the individual is influenced by the attitudes and beliefs , opinions , financial habits and bad behaviors of the individual and economic factors that negatively affect money management. Money attitudes affect budgeting and saving, spending , buying and investment, individual retirement.

Self-control is an essential and determining factor in the amount of personal savings and spending (Nepomuceno et al., 2017). Generally, self control can be defined as the ability to change or overcome the desires and regulate individual behavior, thoughts and emotions (De Ridder and Lensvelt-Mulders , 2018,).

Step 4 . “DO” preparing financial budget

At the step of doing or action , the therapist guides the group members through creating budget and making changes in financial habits. The group members prepare their budgets based on the prioritization of expenses and the difference between wants and needs and try to buy and spend on budget. This step allowed the group members to closely monitor the changes they were creating and give them the opportunity to regularly evaluate their decisions along with the expected emotions, in addition , provide them the opportunity to talk to other members of the group and get feedback and support from them. The five- step financial therapy model assumes that the budget is a personal plan constantly changing with new priorities, living conditions and mistakes. Therefore, each budget represents the wants and needs of the group members.

In general, budgeting is a process used to separate and keep track the allocation and use of funds against various accounts with implicit or explicit constraints of expenditure or "budget" (Galperti, 2016).

Budget can play an important role in the personal financial management of a person or family, both for short-term and long-term financial planning. Although there is little evidence of a systematic review about household budgeting, but what we know about household budgeting is related to our understanding of mental accounting behavior and how funds are separated by individual . Principles of mental accounting can operate through informal or implicit budgets, therefore likely influence how people choose to spend money even when they do not maintain formal or explicit budgets (Tversky and Kahneman, 1981). Mental budgeting is also the process of labeling money in different categories of income and spending . Individuals label their resources and create different mental budgets to allocate their resources (Thaler, 1999).

Step 5. “PLAN” training to develop a financial plan to confront different financial situations

The final step is planning. To maintain a new financial lifestyle, group members need financial planning to confront different financial situations. After preparing for change in lifestyle and modifying financial beliefs and opinions and determining needs and review current financial performance and preparing budget and getting used to spending on budget , financial planning is needed.

The activities used in this step apply specific situations such as the management of expenditure and debts and investing and increasing income, insurance and saving. The final step helped the group members to leave the group with acquired motivation to keep the developments achieved. Today more than ever economic situation highlights the need of culturalizing financial planning for families (Palmer et al., 2009).

While financial planning and personal financial management are difficult to achieve,but careful financial planning allows people to set up the right mental account to control costs and ultimately put them on the economic prosperity path. (Sui et al, 2020).

In the research process, after collecting data, the next step includes data analysis. The information obtained from the questionnaires is analyzed by 25 SPSS software. Descriptive statistics and inferential statistics methods are used to analyze the collected data.

Table 1, training the content of commitment and acceptance financial therapy

First session	Establishing a therapeutic relationship ; introducing individual to the research topic of explaining anger, depression, anxiety, signs and symptoms, pharmacological and non-pharmacological treatments; assessing the person's willingness to change, answering the questionnaires and concluding a treatment contract.
Second session	Detecting and examining patients' treatment methods and scoring them; evaluating the effectiveness of treatment methods; treatments using examples ; receiving feedback and assigning homework; discussing monetary beliefs; developing long-term and short-term financial goals .
Third session	Helping clients to identify the control of personal events , thoughts and memories, recognizing dysfunctional control strategies and identifying their futility; accepting painful personal events without conflict with them and lack of control them using allegory and receiving feedback and assigning homework; creating motivation to change and modify financial beliefs; discuss needs and wants ; Familiarity with personal accounting and expressing the importance of personal accounting ,how to record expenses and classifying expenses manually and training the personal financial management application.
Fourth session	Applying cognitive defusion techniques; intervening with the performance of problematic chains of language and metaphors; minimize wasting time with thoughts and emotions and receiving feedback and assigning homework, drawing the family's financial genogram , training how to manage spending and debts (good and bad debts) ; familiarity with the concept of the compulsive buying, talking about financial habits (wrong) and assigning homework.
Fifth session	Considering oneself as a context; weakening of self conceptualization and self-expression as observer ; demonstrating separation between self, inner experiences, and behavior using allegory of relaxation training; receiving feedback and training the ways to increase income; advertising through virtual networks and assigning homework. Familiarity with the concept of mental accounting, identification of mental errors, providing techniques to strengthen the positive aspects and reduce the power of negative aspects of mental accounting, familiarity with the concepts related to mental accounting (forced purchase, small meal, purchase value, exchange value, vision theory Utility function, sunken or burned cost, compound loss profit, multiple loss and profit), and assignment presentation
Sixth session	Applying mental techniques; modeling out of the mind; training to see inner experiences as a process; awareness of different sensory perceptions and separation from senses that are part of mental content in these exercises, participants learn to focus on their activities (such as breathing, walking, etc.) and to always be aware of their condition and no judgment when processing emotions, feelings, and cognitions. When participants find that the mind is lost in thoughts, memories or dreams, possibly regardless of their content and nature turn their attention to the present. Therefore, they learn to pay attention to their thoughts and feelings and no stick to their content.
Seventh session	Explaining the concept of values and express the difference between values, goals and needs; clarifying values of clients; creating motivation to change and empower clients for a better life, practice and focus (focus on breathing, walking, eating, environmental sounds…); receiving feedback ; Training how to collect financial documents as a financial mirror that reflects the financial performance and the current condition of the individual; training to prepare financial statements (balance sheet, profit and loss statement, cashes) and assigning homework.
Eighth session	Training commitment to action ; teaching about commitment to action; identifying behavioral plans according to the values and making a commitment to act on them; training to prepare personal budget weekly and monthly; training to prepare financial ratios and analyzing them which can be an alarm for the person and assigning homework.
Ninth session	Measuring risk-taking of participants through questionnaires; familiarity with different types of insurances and retirement plans; training investment techniques in financial markets and assigning homework.

Tenth session	At the beginning of the session, continuing to train investment techniques in financial markets; developing a financial plan; reviewing assignments and summarizing meetings with the clients, performing post-test.

6. Results

Table(2) presents the mean and standard deviation of the personal financial management, financial literacy and mental accounting scores in the experimental and control group in different step of the research. Table(2) shows that the mean and standard deviation of financial literacy, mental accounting and personal financial management of the participants in the experimental and control groups in the pre-test step had a little different. While the mean financial literacy scores during the post-test step increased by 14.75 compared to the mean pre-test scores, respectively and the mental accounting scores increased by 13 compared to the mean pre-test scores, and the personal financial management scores did not change significantly compared to the mean pre-test scores. While the scores of the control group did not change significantly during the post-test step .

Table 2: Mean and standard deviation of personal financial management, financial literacy and mental accounting scores in the experimental and control groups at the pre-test and post-test stage

Variable	Level	Experimental group		Control group	
		Mean	Standard deviation	Mean	Standard deviation
personal financial management	Pre-test	05.11	17.3	80.11	70.2
	Post-test	85.11	63.2	55.11	83.1
financial literacy	Pre-test	55.24	82.6	50.27	24.6
	Post-test	30.39	34.4	55.27	88.5
mental accounting	Pre-test	25.41	22.10	95.41	85.8
	Post-test	25.54	81.5	10.41	01.8

The results of comparing the mean pre-test and the post-test scores of personal financial management, financial literacy and mental accounting are presented in table (3) using multivariable analysis of covariance. Applying covariance analysis requires compliance with the preconditions examined in this study. The results of box test are obtained as one of these conditions as 0.05, F = 1.78 and p = 0.051, which because the significance level of the box test was greater than 0.05, it was concluded that the variance-covariance matrix is homogeneous. The results of Levin test as a condition for homogeneity of variances in the post-test step was calculated for personal financial management p =. / 161 and F = 2.04), financial literacy (p =. / 140, F = 2.27) and mental accounting (P = 0.057 and F = 3.24) because the significance level observed for all three variables was greater than 0.01 Therefore, it was concluded that the condition of homogeneity of variances is established. The condition of homogeneity of regression slopes was calculated for financial stress scores as P = 0/315 and F = 1/03 and for money management as P = 0/037 and F = 4.66 . Because the level of significance observed greater than 0.01 for both variables. Therefore, it was concluded that the condition of homogeneity of variances is established. The condition of homogeneity of regression slopes is also for personal financial management scores as (F = 0.056 and P = 0.932) and for financial literacy scores as (P = 0.169 and F = 0.512) and for mental accounting as (P =. / 061 and F = 2.45) was not significant at P <0.001 which indicates that the condition of homogeneity of regression slopes is established . According to the fulfillment of the relevant hypothesizes , it was allowed applying the multivariable analysis of covariance .

Table 3: Summary results of multivariable analysis of variance related to the mean scores of personal financial management, financial literacy and mental accounting after the pre-test control

Source	Variables	Sum of Squares	Degree of Freedom	Mean Square	F	Significance Level	Effect
Pre-test	personal financial management	5.62	1	5.62	0.621	0.436	___
	financial literacy	87.02	1	87.02	2.03	0.162	___
	mental accounting	4.90	1	4.90	0.054	0.818	___
Post-test	personal financial management	1.36	1	1.36	0.482	0.492	0.014
	financial literacy	1683.84	1	1683.84	171.74	0.001	0.539
	mental accounting	1757.59	1	1757.59	98.46	0.001	0.449

The summary results of the analysis of covariance in table (3) show that after entering the mean pre-test scores as a control variable between the mean personal financial management scores (F =. / 482 and P = 0.492, financial literacy = 74.171 and F and 001 P = 0.0), mental accounting F = 46.98 and P = 0.001, there is a significant difference between the experimental and control groups. Thus the hypothesis (1) of the research is not confirmed. The effect size or ETA coefficient is equal to 0.014 which indicates that the introduction of the independent variable of the research, was acceptance and commitment financial therapy. hypothesis (2) of the research is confirmed. The effect size or ETA coefficient is equal to 0.539, which indicates that more than 54% increase in the mean financial literacy scores in the experimental group was related to introducing independent variable of research, i.e. acceptance and commitment financial therapy.

hypothesis (3) of the research is also confirmed. The effect size or ETA coefficient is equal to 449.0 which indicates that more than 45% of the increase in the mean mental accounting scores of the experimental group was related to introducing the independent variable of research,that is, the acceptance and commitment financial therapy.

7. Discussion and conclusion

The results showed that the presentation of a combined five-step commitment and acceptance financial therapy model is effective in increasing the mean financial literacy scores obtained according to the ETA coefficient, it was found that more than 54% of changes caused by combined five-step commitment and acceptance financial therapy model. The results also showed that the presentation of combined model based on commitment and acceptance has not been effective in improving the mean personal financial management scores.

The results also showed that the presentation of a five-step combined model based on commitment and acceptance has been effective in improving the mean mental accounting scores and according to obtained ETA coefficient, it was found that 45% of changes caused by presenting this model.

Explaining these findings, it can be said that in acceptance and commitment therapy, behavioral commitment exercises with defusion and acceptance techniques, as well as detailed discussions about values and financial goals of the individual and the need to specify values, lead to and change Financial behaviors The main purpose of this method is to create psychological flexibility. It means to create the ability to make practical choices between different options that are more appropriate, rather than just doing something to avoid disturbing thoughts, feelings, memories, or desires are imposed (Haizu et al., 2011)

According to the results of this study, it can be said that using this combined financial therapy model helped participants to move through steps of behavior change faster. This approach can help many people who consider themselves lack of financial knowledge and confidence to be able to take the necessary steps to achieve financial health in service of their values and goals. Although some of the behavioral consequences of mental accounting may be interpreted irrational from point of view of economic theory, but it seems that people use its principles to prevent shocking expenses , keep track of financial activities and facilitate personal financial management. The extent of using mental accounting as a tool for self-control varies. "Mental accounting" seems to be important, but not for everyone in the same way (Thaler, 1999). Most studies deal with the irrational and negative consequences of the mental accounting process.

Therefore, the positive effects of mental accounting, such as the function of self-control in money management, savings and spending and its effects on financial well-being should be discussed (Zhang and Sussman, 2018). This study tries to strengthen the positive effects of mental accounting on personal financial management and financial literacy using commitment and acceptance financial therapy.

Acceptance and commitment therapy train the individual in the first place, to change relationships with their inner experiences, reduce experiential avoidance, increase flexibility and take more action in valuable paths. Changing relationships with inner experiences involves expanding and clarifying inner awareness and leading to behavior change. This behavior change helps the individual to prepare for change in his lifestyle and also helps them to maintain a new lifestyle (Hayes et al., 2011). Behavior based on acceptance and commitment emphasizes increasing valuable action, individuals choose the behavioral goals that are most important or valuable to them and adjust their financial behaviours to their values. This treatment shows the personal importance of a particular action to an individual, rather than to be a kind of moral judgment. These values can include improving individual's financial situation, education and job, self-care and marital relationships. The goal is to engage the individual in activities that are important to him but he or she avoids them. An important component of this goal includes identifying and clarifying important issues for clients , bringing awareness to the current moments that occurs based on these values and taking action to implement these values (Baradaran et al., 2016)..

On the other hand, this treatment gives the individual the opportunity to consider, explain and describe his emotional states and abilities without a judgmental view and focus of therapist is more on guiding the client and accepting responsibility , toward full consciousness to recognize and accept his abilities and prepare the person for changing lifestyle before training financial literacy. The therapist encourages individuals to fully experience thoughts and emotions related to a thought, financial feeling, relationship, and behavior without suppressing them and making value judgments about them and experiencing secondary emotions such as shame, guilt, distrust, blame and humiliation after experiencing this behavior, thought and feeling.

The main goal of financial therapy is not only financial well-being but also ultimately improving the quality of daily life. Since emotions play an important role in mental accounting when making the right decisions, financial therapy helps to control and identify these emotions and generally , it can be concluded that the commitment and acceptance financial therapy is effective in increasing financial literacy and improving mental accounting..

7.1. Limitations

This research was accompanied by limitations. The present research is conducted on Shahrekord merchants. Therefore, caution must be observed in generalizing to the other cities merchants. Another limitation of this research is the small size of sample and the use of self-reporting tools in the present study.

7.2. Suggestions

According to the results of this study, it is suggested in future research, the follow-up step be also included in order to accurately determine the effects of commitment and acceptance financial therapy, its results be compared with the results of this research . It is suggested to increase the number of subjects and participants in treatment in order to obtain more complete results and therefore , the possibility of more exact generalization of the findings in future researches. It is suggested that researches compare the effectiveness of acceptance and commitment therapy with other therapy approaches in other areas to provide a more clear picture of the efficiency of this treatment according to the cultural context of our country and also it is suggested that financial therapists use this therapy approach in couples therapy and family therapy to reduce financial problems and improve financial health. One of the special features of this research is that so far , any research has not been conducted in the field of acceptance and commitment financial therapy as an intervention in Iran, while the results of the study show that this treatment method has a significant effect on increasing financial literacy and improving mental accounting. It is suggested that more research be conduct in this area.

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