

Mediating Effects of Decisional Balance in the Transtheoretical Model of Change for Customers who Mismanage their Money

by

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Abstract. This research introduces a Transtheoretical model of change for customer financial behaviour that focuses on approach-avoidance money management strategies. Approach strategies include processes for increasing savings while avoidance strategies involve processes for reducing spending. The mediating effects of decisional balance on the relationships between predictor variables (stages of change) and the outcome variables (strategies of change) are examined. The empirical study analyses consumers who mismanage their money and find themselves coping with this issue in early stages of change like precontemplation and contemplation. Regression analysis was used in order to examine the relationship between those early stages of change and approach-avoidance strategies and to test the mediating effects of decisional balance. Results indicate progression of approach-avoidance strategies by stages of change. Decisional balance between pros and cons to change seems to mediate the relationship between the characteristics of precontemplation and contemplation stages and approach-avoidance strategies. The outcomes of the study provided valuable information on how each predictor variable is connected to the adoption of approach-avoidance money management strategies of change. Previous studies have mainly delineated the relationships between stages of change and the other two constructs while mediating paths serve to clarify the psychological process that generates behaviour change. By understanding the mechanisms of behaviour change, professionals who are marketing financial services can develop effective financial education strategies that take into account the role of decisional balance while changing money management behaviour. Decisional balance can be used to measure the progress of customers in the behaviour change process.

Key words : approach-avoidance strategies, decisional balance, money management, transtheoretical model of change

JEL classification : G02

1 Introduction

Consumer problematic financial behaviour of spending, debt and saving concerned increasingly many actors. In a growing number of countries, the long-term implications of low levels of financial literacy among the majority of the population are prompting governments to take action. In this sphere, countries are developing and implementing national strategies to help consumers change their behaviour in order to reduce expenses and enhance savings. Financial mismanagement including uncontrolled spending, debt troubles and undersaving may have not only negative consequences on the long-term stability of financial and economic systems, but also on individuals and households' future financial well-being that could be financial (e.g., bankruptcy, poor credit), psychological (e.g., stress, guilt, anxiety), and social (e.g., strained relationships, divorce) (Haws and al, 2012).

Professionals often have limited empirical and theoretical grounding in their work with clients who are challenged with financial behaviour issues (Archuleta and Grable, 2010). In other words, traditional financial professionals may not have the tools necessary to provide a comprehensive and consistent way of working with their clients. They might work from a wide assortment of theoretically-informed approaches, but most lack the financial knowledge, education, and skills needed to help clients who exhibit poor financial behaviours. Literature has especially focused on two financial therapy models : (1) the Ford Financial Empowerment Model (Ford and al, 2011) and (2) the Transtheoretical Model Applied to Financial Behaviour Change (Xiao et al, 2004). The first model is useful for working with marginalized groups experiencing both financial and mental health difficulties while the second one can be applied to help people to better manage their finances. Of

course, changing problematic behaviour phenomena are not necessarily required for only excessive behaviour. Both models proposed that the key to fostering successful change is to know what stage a person is in and then to use appropriate strategies or processes to move forward. In using the Transtheoretical model, previous studies have mainly delineated the relationships between stages of change with associations between other constructs (processes of change, self-efficacy, and decisional balance) generally not being investigated (De Vries and al, 1998 ; Fahrenwald and Walker, 2003). Bennett (2000) contended that determining the mechanisms of how, why, and when individuals adopt or abstain from certain behaviour requires information regarding mediator variables to provide a clear picture of the process of behaviour change. Mediator variables are a third variable that modifies the relationship between two types of variables, that is the independent and dependent variable (Baron and Kenny, 1986). This study focused on individuals who are in the early stages of change of the Transtheoretical model including precontemplation and contemplation (Prochaska, and al, 2003). Precontemplation is characterized by resistance to recognizing or modifying a financial mismanagement ; in contemplation, people recognize that they recognize mismanage their finances but are deeply ambivalent to change. The outcome variables based on strategies of the Transtheoretical model of financial behaviour change was associated with approach-avoidance orientations which stands out as one of, if not the, most fundamental and basic motivation on behaviour (Gomez, 2009 ; Elliot, 2008). Approach strategies included positive strategies for increasing savings and the one of avoidance strategies involved negative strategies for reducing spending. The purpose of this study was to explore relationships between stages of change among people who mismanage their money (in precontemplation and contemplation stage) and their intention to adopt approach-avoidance financial strategies of change then to examine the mediating effects of decisional

balance on these last relationships. We also conducted an alternative cluster analysis to classify individuals into homogeneous groups as recommended in earlier research. This would provide a more precise description of the relationships among Transtheoretical model variables and also provide information in the development of effective intervention strategies for money management programs. Indeed, findings are useful for practitioners and educators who intend to promote behavior improvements through financial education programs aimed to help consumers better manage their money.

2 Conceptual framework

2.1 Research applying the Transtheoretical model to financial behaviour change

Few studies used the Transtheoretical model to understand consumers' motivations to change negative financial behaviour by increasing savings (Shockey and Seiling, 2004) and reducing debt (Xiao and al, 2004). These studies showed that the Transtheoretical model can be applied effectively to financial behavior change. This model posits five stages of change through which persons go as they move toward making the change permanent (Prochaska and al, 1994). The first stage called precontemplation is one in which the participants see no need to change. Contemplation, as its name implies, is the point at which participants are beginning to acknowledge having a problem and beginning to think about ways to solve it. Preparation is the stage at which the participant is serious about taking action. Action is the fourth stage, and it is the one in which the actual stopping of bad behaviour or starting of good behaviour begins. In maintenance stage, the new behaviour is adopted, maintained and integrated. Shockey and Seiling (2004) selected six targeted money management behaviours that facilitate saving money to assess change : setting financial goals, using a spending plan, tracking spending, reducing debt, setting aside money, and saving money. Participants were

assessed on their readiness for change for those six behaviours prior to the start of the financial education program and were classified in five stages of change according to their responses : Precontemplation : No, and I do not intend to in the next six months ; Contemplation : No, but I intend to in the next six months ; Preparation : No, but I intend to within the next 30 days ; Action : Yes, I have but for less than six months ; Maintenance : Yes, I have for more than six months. Results indicated that the pattern of the strategies of change increased throughout these stages. All six money management behavior means increased (moving to a higher level). The biggest change occurred in setting aside money for unplanned spending and the smallest in reducing debt. On average, participants were in action for reducing debt prior to beginning the classes, while they were in preparation for all other behaviours. Participants who advanced at least one stage are expected to double their chances of taking action on their new behavior. These increases in scores indicated that the financial education program could make a positive difference. However, no indicator of the change have been used to measure the progress of clients in the behavior change process such as decisional balance. Another study, Xiao and al. (2004) applied the framework Transtheoretical model to consumer debt behavior and confirmed the validity of the matching strategies embedded in this last model. In the early stages, people apply experiential processes relating to how people become aware of the interest of behavioral change to support their progress through the stages. In the later stages, people rely more on the behavioral processes corresponding to actions taken by individuals to help them become or remain active for progressing toward termination. Their study has been the first to include decisional balance, constructs of the Transtheoretical model in financial field. Decisional balance reflects an individual's relative weighing of the pros and cons of changing (Prochaska et al, 1996). They identified four pros and four cons for eliminating credit card debt. The four pros represent self-esteem, family security, stress,

and being an example for others and the four cons represent keeping up with neighbors, family tension, unhappy family members, and family activities. They limited to examine relationship of stage with associations between variables of the decisional balance including the pros and cons and expected the pros to increase across the stages, the cons to decrease and a cross-over to occur in either the contemplation or preparation stage. However, this has not the same meaning like testing the mediating effect of the decisional balance in the relationship between stages of change and processes of change. Thus, the mediator variable serves to clarify the nature of the relationship between the independent and dependent variables. In other words, mediating relationships occur when a third variable plays an important role in governing the relationship between the other two variables. Indeed, mediator specify how, why, and when individuals adopt or abstain from certain behaviour and describe the psychological process that occurs to generate behaviour change.

2.2 Model and hypothesis

The framework used in this study is the Transtheoretical model of change (Prochaska and DiClemente, 1982). While applying the Transtheoretical model and its components including strategies of change, stages (precontemplation and contemplation), decisional balance (pros and cons of changing), we also suggest a revision of this model by dichotomizing strategies of change according to the approach-avoidance motivational distinction (see Figure 1). According to the Transtheoretical model, the progression from one stage of change to another results from the use of 10 strategies of change identified from a synthesis of the major models of psychotherapy. These processes of change were divided into two higher order structures : experiential and behavioral. The experiential processes (1st explanatory note) comprised consciousness raising, dramatic relief, self-reevaluation, environmental reevaluation, and social liberation, while the behavioral processes (2nd

explanatory note) consisted of helping relationships, counter-conditioning, reinforcement management, stimulus control, and self-liberation (Prochaska and DiClemente, 1983). Some meta-analysis studies (Marshall and Biddle, 2001; Rosen, 2000) showed that dichotomization of strategies of change (experiential vs behavioral) given by the Transtheoretical model and the predominance of experiential strategies in the early stages and the behavioral strategies in later stages are not found systematically in all contexts. At the same time if we look at the theoretical definition of these strategies for change, we note that it is more appropriate to dichotomize the strategies of change according to the approach-avoidance perspective, which constitutes the basis of motivation to human functioning. In fact, people approach pleasure and avoid pain. At the strategic level, approach and avoidance motivations are about the means or process of moving towards desired end-states or moving away undesired end-states. Strategies reflect the general plans or means of goal pursuit (Elliot, 2008). So, strategic means are about whether one is approaching eagerly (moving towards the desired end-state by approaching the matches to it) or approaching vigilantly (moving towards the desired end-state by avoiding the mismatches to it). The stages of change theory suggest that people change their behaviour progressively, and that different interventions are appropriate at each stage. Developers of this model argue that there is a close relationship between stages and strategies of change and that the use of strategies varies throughout these stages. In this study, we focused on early stages including individuals in the precontemplation stage who are not thinking about or intending to change and therefore to not adopt approach-avoidance strategies and those in contemplation who become aware of a desire to change behaviour by adopting approach-avoidance strategies. Consequently, the first hypothesis is that ;

Hypothesis 1: The state of an individual (precontemplation, contemplation) influences its intention to adopt approach-avoidance strategies of change.

Decision making was conceptualized by Janis and Mann (1977) as a decisional "balance sheet" of comparative potential gains and losses. Based on empirical studies, Prochaska and colleagues (Prochaska, 1994 ; Prochaska and al, 1994) simplified the model of decisional balance and reduced it on two dimensions : costs and benefits that an individual can make of a decision. The pros and the cons, components of decisional balance, have become critical constructs in the Transtheoretical model. When an individual is in the precontemplation stage, the pros in favor of behavioral change are outweighed by the relative cons for change and in favor of maintaining the existing behavior. In the contemplation stage, the pros and cons tend to carry equal weight, leaving the individual ambivalent toward change. If the decisional balance is tipped however, such that the pros in favor of changing outweigh the cons for maintaining the unhealthy behavior, many individuals move to the preparation or even action stage. As individuals enter the maintenance stage, the pros in favor of maintaining the behavioral change should outweigh the cons of maintaining the change in order to decrease the risk of relapse. In sum, individuals in precontemplation and contemplation perceive significantly more costs than benefits. The main idea of the model of decisional balance is that they change their behavior when the pros they associate with this change outweigh the cons resulting. Therefore, the proposed hypothesis is ;

Hypothesis 2 : The pros and cons of decisional balance are mediators of the relationship between early stages (precontemplation or contemplation) and approach-avoidance strategies.

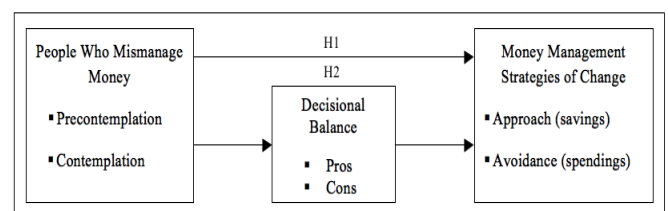


Figure 1. Conceptual model of research

3 Methodology

Data were collected by means of a questionnaire and the final sample included 368 respondents aged 19-33 (students and in-service training persons). Academic years are characterized by a host of major, life-changing experiences ; in particular, students typically experiences various difficulties associated with adjusting to living away from home (Tinto, 1988) because for the first time in their lives, many students find themselves required to manage money and to pay their own bills (Scanlon et al, 2007). Confirmatory factor analysis was then conducted in order to assess measurement.

3.1 Approach-avoidance strategies of change measurement

Churchill's (1979) paradigm was adopted to construct a scale that measures approach-avoidance strategies of change. The first step in the suggested procedure for developing better measures involves specifying the domain of the construct. So, the interrogation of a pool of experts including researchers and professionals has led to focus on four strategies out of the above mentioned ten because of their relevance in the financial context : (1) 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), (2) Stimulus control (*removing* reminders or cues to engage in the unhealthy behavior and *adding* cues or reminders to engage in the healthy behavior), (3) Self-liberation (making a firm commitment *approach* or *avoidance* to change) and (4) Reinforcement management (increasing the *rewards* for the positive behavior change and the *punishments* for the unhealthy behavior). A qualitative study allowed us first to verify the appropriateness of the choice to dichotomize these strategies based on the approach-avoidance distinction and then to become impregnated with the vocabulary used by students. The generation of measurement items was conducted from two sources : (1) our

interviews and (2) the measurement scale proposed by Xiao et al, (2004). Two factors were identified : the one of approach strategies involving four positive strategies and the one of avoidance strategies involving four negative strategies. The confirmatory analysis retained 5 items for approach strategies ($\rho = 0,83$), eg, "I intend to take the habit to save a certain amount of money every month" and 5 items for avoidance strategies ($\rho = 0,87$), eg "I would be more worried to think that I could not possibly keep my budget."

3.2 Precontemplation and contemplation measurement

Two methods of measuring stages of change are available in the literature. One is behavioral (using arbitrary time periods usually measured through the six month time frame (Littell and Girvin, 2002)) while the other is attitudinal and refers to characteristics specific on each stage. In this research, stages of change are measured using attitudinal method based on the University of Rhode Island Change Assessment (URICA) scale (Diclemente et al, 2004). Each question was measured with five ordinal questions that were scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Each question asked whether students were in the precontemplation or contemplation. Confirmatory analysis leads to retain 4 items for the precontemplation stage ($\rho = 0,76$), eg "I think that I manage my money so badly and don't need to change" and 4 items for the contemplation stage ($\rho = 0,91$), eg "I start to realize that I mismanage my money."

3.3 Decisional balance measurement

In order to measure the decisional balance we had to build an ad hoc scale as there is no such scale, to our knowledge, that is related to managing money. The confirmatory analysis drove us to retain 3 items for the pros ($\rho = 0,83$), eg "Better manage my money would allow me to avoid to be worried every end of the month" and 3 items for the cons ($\rho = 0,76$),

eg "Better manage my money could limit my outings and my small pleasures."

4 Procedure

Linear regressions were used to test links between the dimensions characterizing the precontemplation and contemplation stages and approach-avoidance strategies (H1). In order to test the hypothesis of mediation (H2), the procedure of Preacher and Hayers (2008)² has been applied.

5 Findings

This research presents the results of two methods. First, we used factor scores (principal components analysis) to verify the variation in approach-avoidance strategies according to the stages of change and the mediating role of decisional balance in this last relationship. Then, in accordance with previous research, we applied the second method using cluster analysis. The latter aims to confirm results of the first method. Using both methods helps deal with the cyclical process (spiral-shaped) that could vary from individual to individual (revised version of this model) (Sullivan, 1998). In the original version of the Transtheoretical model, components were organized in a linear fashion precontemplation following contemplation stage.

5.1 Regression analysis and mediation findings

The pattern of the approach-avoidance strategies across the stages. Linear regressions for testing the influence of precontemplation and contemplation on the approach-avoidance strategies are conform to correlations. More the individual is in precontemplation and less he intends to adopt the approach strategies ($\beta = -0.175$ ***). On the other hand, more the individual is in contemplation and more he intends to adopt the avoidance strategies ($\beta = 0.246$ ***). The hypothesis H1 is thus validated. *Consideration of indirect effects of perceived pros and cons.* First, we are studying the

mediating role (M1) of pros, then, the mediating role (M2) of cons on the relationship approach-avoidance strategies - stage of change. Precontemplation has a negative indirect effect on the intention to adopt approach strategies ($a1xb1 = -0,0608^{**}$) and on the intention to adopt avoidance strategies ($a2xb2 = -0,0523^{***}$) through a low assessment of the pros to manage its money (M1). In addition, precontemplation brings a low intention to adopt strategies of approach because the benefits associated to well-managed money are not considered, creating a direct negative path c1. Contemplation has a negative indirect effect on the intention to adopt approach strategies ($a1xb1 = -0,0229^{**}$) and the intention to adopt avoidance strategies ($a2xb2 = -0,0201^{**}$) through a low assessment of the benefits to manage personal finances (M1). However, the direct effect c2 is positive. By maintaining the same level of perceived benefits of well-managed money contemplation favors the strategies of avoidance.

Precontemplation has a negative indirect effect on the intention to adopt approach strategies ($a1xb1 = -0,1731^{***}$) and on the intention to adopt avoidance strategies ($a2xb2 = -0,2068^{***}$) through their strong evaluation of the cons to manage its money (M2). Precontemplation leads to a low intention to adopt approach-avoidance strategies, because there is more focus on the cons to change financial behavior, creating direct negative paths c1 and c2. Contemplation has a negative indirect effect on the intention to adopt approach strategies ($a1xb1 = -0,0644^{***}$). The direct effect c1 is also negative, highlighting the reluctance towards the strategies of approach due to a strong consideration of the costs to manage its money. The indirect effect on the intention to adopt avoidance strategies is not significant. However, the direct effect c2 is positive. This result emphasizes the fact that contemplation favors avoidance strategies despite perception of the cons to manage its money. These results validate the hypothesis H2.

5.2 Cluster analysis findings

Following the recommendations from previous research, a typology (Ward's method) based on the stages of change (precontemplation and contemplation) is designed to classify individuals into homogeneous groups (Brodeur, 2006). Two groups are identified and called "Reluctant" and "Ambivalent" based on their

profile (Figure 4). Indeed, the first group G1 "reluctant" seems more unwilling to change than the second group G2 "ambivalent" ($M_{PrecontemplationG1}=5,50 > M_{PrecontemplationG2}=2,12$; $F = 29,856$; $p < 0,01$). In order to assess the stability of clusters obtained, we performed a second cluster analysis using k-means algorithm.

Thereafter, the Rand index (3rd explanatory note) (Youness and Saporta, 2009) is calculated for each group: 0,91 for the first group and 0,95 for the second, which allowed us to validate this partition. Analyses of variance between the two identified groups for approach-avoidance strategies and decisional balance are conducted successively. Homogeneity tests of variances are not significant which fulfills ANOVA conditions. In order to verify the homogeneity of variance the Levene test was performed before each analysis

The analyses of variance show that results obtained using the paradigm of groups converge with results obtained using the dimensions of stages of change that include precontemplation and contemplation.

Reluctants use significantly less approach ($M_{ApproachstrategiesG1}=2,23 < M_{ApproachstrategiesG2}=4,41$; $F = 9,029$; $p < 0,01$) and avoidance

($M_{AvoidancestrategiesG1}=2,18 < M_{AvoidancestrategiesG2}=3,70$; $F = 4,064$; $p < 0,05$) strategies than Ambivalents. They focus less on benefits ($M_{ProsG1}=5,55 < M_{ProsG2}=6,06$; $F = 0,600$; n.s.) and more on costs ($M_{ConsG1}=3 > M_{ConsG2}=2,63$; $F = 0,202$; n.s.) compared to the second group. Indeed, precontemplators resist the idea of recognizing a behavior problem and the need of change, while contemplators are aware that they have a problem and they seriously think to solve it. Therefore, the first group is not definitely ready to engage in approach-avoidance strategies and focuses less on pros and more on cons of well-managed money than the second group.

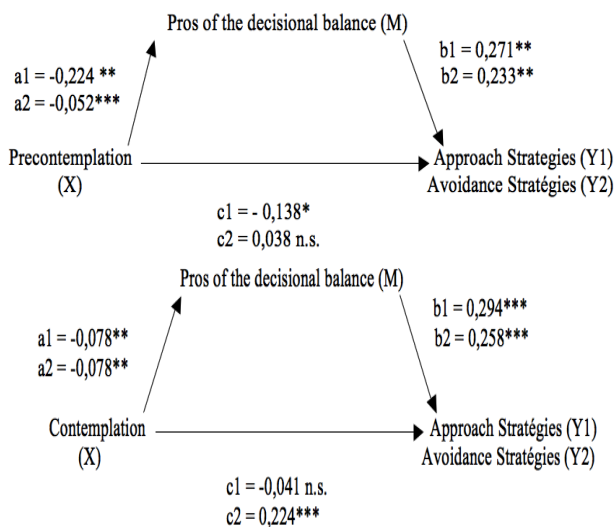


Figure 2: Mediating effect of the pros of decisional balance

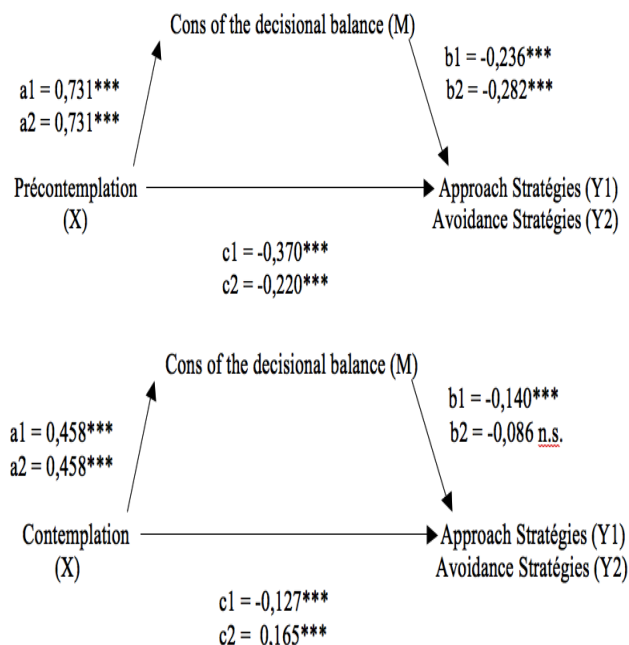


Figure 3. Mediating effect of the cons of decisional balance

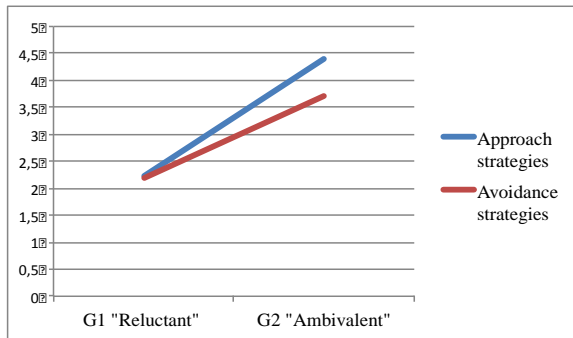


Figure 4. Approach-avoidance strategies by identified profiles

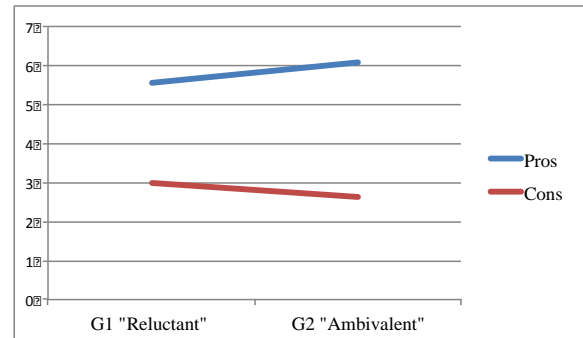


Figure 5. Decisional balance (Pros and Cons) by identified profiles

6 Discussion

This study was conducted to describe the general relationship between stages of change and approach-avoidance strategies of change and especially to define the mediating effects of decisional balance in the Transtheoretical model. Using factor scores allows to highlight changes when using strategies of change within the states of precontemplation and contemplation of the Transtheoretical model. They also helped validate dichotomization of approach-avoidance strategies that had not yet been verified empirically. The results differ depending on the two explanatory variables. First, precontemplation is characterized by resistance to the idea of recognizing a behavior problem to the need to change this behavior (Prochaska and al, 2003). Therefore, at this stage individuals do not have the intention to save money (to adopt approach strategies). Second, the situation of contemplation favors avoidance strategies more. At this stage, people recognize that they have a problem but are deeply ambivalent to change. This explains their reluctance to approach strategies (eg put money aside on a regular basis) and their penchant to adopt avoidance strategies (eg control impulse purchases). This approach-avoidance dichotomization is interesting because it allows to highlight progression in behavior change and hierarchisation in adopting financial behavior by individuals that are less motivated to change. When precontemplators become aware of their problem (so moving in contemplation) they start initially to limit their futile purchases. Those least motivated are not

ready to save money. Moreover, This study revealed the mediating effects of the decisional balance on the relationship between stages of change and approach-avoidance management money strategies. The current study found partial mediation of pros in the precontemplation stage and approach strategies also in the contemplation stage and avoidance strategies and partial mediation of cons in pecontemplation, contemplation stages and approach-avoidance strategies. The partial mediating effects of decisional balance indicate the operation of multiple mediating factors (Baron and Kenny, 1986). Results of mediation show that the evaluation of the pros and cons to manage personal finances by precontemplators and contemplators acts on their intention to adopt the approach-avoidance strategies. Thus, individuals in early stages of change consider the benefits of managing their personal finances less. The simple perception of the benefits of managing their money increases their intention to adopt the approach-avoidance strategies. Conversely, they focus more on the cons of managing their personal finances, which acts unfavorably on their intention to adopt the approach-avoidance strategies (except for the stage of contemplation-avoidance strategies). Following recommendations from existing research in the area, a typology (Ward's method) based on the analysed stages of change (precontemplation and contemplation) was conducted and two groups were identified (G1 : "Reluctant" and G2 : "Ambivalent"). Analyses of variance shows that the results obtained with cluster analysis converge with those based of factor scores. Indeed, the first group uses

significantly less approach-avoidance strategies and focuses less on the benefits and more on the costs to manage its money than the second group.

7 Conclusion

This research is perhaps among the first to use the Transtheoretical model in the field of managing daily finances. It tries to understand how people mismanaging their money can be determined to change behavior and better manage their finances. Theoretically, we suggest a revision of the Transtheoretical model through dichotomizing strategies according to the approach-avoidance distinction. Results show two level implementation hierarchy of these strategies: individuals seek first to employ avoidance strategies before thinking to use approach strategies. In fact, the need to limit impulsive purchases comes before the need to put money aside on a regular basis. Practitioners in financial counseling and planning can use the results to understand their clients' needs and to formulate effective strategies in advance. Counselors should show their clients that setting priorities among these needs is necessary. The results of this study can be used as reference points. This study identifies three pros and three cons for well-managing money. Counselors can use the information to help their clients to change their behavior by emphasizing the pros such as avoiding to be worried every end of the month, ruling out unpleasant surprise and being safe from unexpected and by diminishing the cons such as limiting outings and small pleasures, feeling deprived of "love at first-sight" purchase and missing some extras. Counselors can also identify what aspects of pros and of cons are more important to their clients based on their individual cases while discussing with them. Counselors can then underline the pros and minimize the cons in those aspects to help their clients move to a positive behaviour change. As a result, counselor can help consumers find alternative and less expensive ways to keep leisure activities at the same level while controlling expenses and increasing savings. Most of the

previous studies that used the Transtheoretical model to investigate financial behaviour change have explored the relationships between stages of change and other variables (Shockey and Seiling, 2004 ; Xiao and al, 2004). However, efforts to illuminate the mediating roles of decisional balance with approach-avoidance money management strategies of change have not been examined. In this study, the reluctance of persons in the early stages like precontemplation and contemplation to adopt approach strategies (saving money) essentially results from their high evaluation of cons to change behavior (eg : limit outings and small pleasures). They focus less on the benefits of managing their money as being safe from unexpected, which acts unfavorably on their motivation for savings (approach strategies) and on their efforts to reduce unnecessary expenditures (avoidance strategies). The use of stages of change and approach-avoidance strategies through enhanced decisional balance improves the adoption of beneficial behaviour with regard to finances and money. The study results provide valuable information regarding how each predictor variable is connected and path through adoption of approach-avoidance money management strategies of change. By understanding mechanisms of behavior change, professionals could develop effective financial education interventions with consideration of roles of decisional balance in the money management behavior change. Results enable professionals to understand how individuals mismanaging their money proceed to change behavior in order to assist them in their progression process. Therefore, the pros and cons can be used to measure the progress of clients in the behavior change process. The goal of educators is to help consumers identify pros they never thought of before and reduce cons perceived by consumers. The current study measured stages of change using the URICA scale. Measurement of the stages of change has presented significant challenges across various behaviors, and multiple measures have been used to classify individuals into stages including URICA. The URICA scale was able to divide the individuals into subgroups that are

consistent with the description of the stages of change (DiClemente et al, 2004). The method and measuring instruments developed here can be used in practice to classify individuals according to their position in the trajectory of behavior change, to offer them appropriate strategies, to make them aware of pros to well-manage money and above all to minimize their perception of the cons resulting, offering them alternatives for not to feel deprived of small pleasures. Our research does not consider all the strategies of change. It focuses only on four of them that are certainly the most relevant to the studied context. While this may be viewed as a limit to generalization it also constitutes an encouragement to extension and further research.

8 Explanatory notes

1. 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 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 (Prochaska, Redding, and Evers, 1996).
2. 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 ; Reinforcement 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 (Prochaska, Redding, and Evers, 1996).

3. The Rand index (1971) measures the similarity between two partitions of a set. It takes values in the interval [0;1] and is worth 1 in the case of identical scores :

$$R = \frac{2 \sum_u \sum_v n_{uv}^2 - \sum_u n_u^2 - \sum_v n_v^2 + n^2}{n^2}$$

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