Conceptual Analysis of Behavioral Theories/Models: Application to Financial Behavior

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Abstract

Choosing how to best financial behavior for achieving financial goals is one of the most important decisions an individual can make. Unfortunately, this can be an especially challenging task given the current financial information and behavioral change analysis. The article focuses on: (i) psychological theories/models; (ii) sociological theories/models; (iii) economic theories/models to be most commonly used in explaining of behavioral change analysis. It explores that origin of these behavioral theories or models and their application to financial behavior change.

Keywords: Behavioral Theories, Behavior Change Models, Financial Behavior

1. Introduction

The purpose of financial behavior change is to build capability for financial management process among people and provide attitudes that will enable an individual or family to achieve their life goals. Financial management is a complex set of behaviors and decisions that vary in their importance and ease of implementation according to an individual's or family's needs, priorities, and skills. Individuals and families are ready and able to change different behaviors at different times and different reasons (Prochaska-Cue, 1993; Shockey and Seiling, 2004).

Why do some people make successful behavior changes and others don't? Human behavior is very complex. Researchers concerned with behavior change have long been interested in questions of how people seek, use and process information. Behavior theories attempt to explain why people act as they do (Clarke, 2008).

These theoretical models fundamentally guide both our current and future understanding of financial behavior. As a metaphor, each model or theory provides a different roadmap of the financial behavior territory (Redding, Rossi, Velicer, and Prochaska, 2000).

This paper reviews most commonly used theories or models of individual behavior change. First, some behavior change theories and models in psychology, sociology and economy have been explained with interdisciplinary approach and application of these theories for financial behavior. With insights these theories and models, a new financial behavior change model can be established. This model could be informative for practitioners and educators in financial counseling to better help their clients and for researchers to improve future research design to behavioral process of change financial experiences. Theories of human behavior from psychology, sociology and economy have helped motivate much recent research on behavior of financial management. The following review explores and considers some of the major theories of behavior and behavior change that may be pertinent to the development of effective interventions in financial behavior, including theories and concepts from mainstream psychology, sociology and economy, and the associated sub-disciplines of health, leisure, recreation, physical activity and others.

2. Behavior Change Theories/Models: Conceptual Analysis

Roots of behavior change theories/models based on commonly psychology. But there is a wide range of theories that focus on individual behavior change which for the most part have been borrowed from other disciplines including social and behavioral psychology, sociology, communication and economy including social marketing, consumer information process and game theory (Schiller, 1998).

For many years conceptual models of behavior change, such as Prochaska and DiClemente's Transtheoretical Model of Change that it includes stages of changes model (1982), Janz and Becker's Health Belief Model (1984), Azjen and Fishbein's (1980) Theory of Reasoned Action and Risk Reduction Model, Bandura's Social Cognitive/Learning Theory (1989) have been applied across a wide variety of disciplines, including financial behavior.

This paper reviews some of the theories/models listed below. In this paper most commonly used theories/models will be grouped in three areas psycholocigal, sociological and economic:

I. Most commonly used psychological theories/models
   1. Transtheoretical Model of Change/ Stages of Change (TTM)
   2. Health Belief Model (HBM)
   3. The Theory of Reasoned Action/ Planned Behavior (TRA)
   4. Risk Reduction Model (RRM)
   5. Social Cognitive/Learning Theory (SCT)
   6. Relapse Prevention Model (RPM)

II. Most commonly used sociological theories/models
   1. Role Theory (RT)
   2. Socialization Theory (ST)
   3. Community Organization Theory (COT)

III. Most commonly used economic theories/models
   1. Game Theory (GT)
   2. Social Marketing Theory (SMT)
   3. Consumer Information Processing Theory (CIP)

2.1. Most Commonly Used Psychological Theories/Models

1. The Transtheoretical Model of Behavior Change/ Stages of Change (TTM)

The Transtheoretical Model is a theory- based approach for conceptualizing behavioral change (Tillis, Stach, Cross-Poline, Annan, Astrohand, and Wolfe, 2003). The Transtheoretical Model of Change (TTM) is commonly used in the health arena to help people stop unhealthy behaviors and/ or develop healthy behaviors. The model was first applied to the cessation of smoking and then to a variety of other health related behaviors, including alcohol abuse, drug abuse, condom use, high fat diet and weight control, psychological distress (Redding et al, 2000). 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 (Xiao, O'Neill, Prochaska, Bristow, Brennan and Kerbel, 2001).

The key constructs of TTM include stages of change, process of change, decisional balance, and self-efficacy. Also, it has five stages of change. The first of these stages is termed *precontemplation*. In this stage, there is no intent on the part of the individual to change his or her behavior in the foreseeable future. The second stage is called *contemplation,* where people are aware that a problem exists and are seriously considering taking some action to address the problem. However, at this stage, they have not made a commitment to undertake action. The third stage is described as *preparation*, and involves both intention to change and some behavior, usually minor, and often meeting with limited success. *Action* is fourth stage where individuals actually modify their behavior, experiences, or environment in order to overcome their problems or to meet their goals. The fifth and final stage, *maintenance*, is where people work to prevent relapse and considalite the gains attained in the action stage. The stabilization of behavior change and the avoidance of relapse are characteristic of the maintenance stage as last stage (Prochaska, 1994; Prochaska and Velicer, 1997; Xiao et al, 2001; Shockey and Seiling, 2004; Xiao and Wu, 2006).

In early stages, people apply experiential processes, such as consciousness rising about risks and behavioral conditions, reevaluation, and dramatic relief, which are cognitive, affective, and evaluate to support their progress through the stages. In the later stages, people rely more on the behavioral processes of counter conditioning, reinforcement management, stimulus control, and helping relationships for progressing toward termination. 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 (Prochaska, 1994; Prochaska and Velicer, 1997).

Application to Financial Behavior: The Transtheoretical Model of Behavior Change or Stage of Change Theory of Prochaska and DiClemente (1982) is one tool that evaluating and changing financial behavior, since it has been applied successfully to many other behaviors that people have attempt to change (Shockey and Seiling, 2004). The TTM have been applied to financial behavior change by Xiao and his friends (2001, 2004) and, Shockey and Seiling (2004) in 2000s. These researches show that TTM can be applied to financial behavior change effectively. Xiao, O' Neill, Prochaska, Bristow, Brennan and Kerbel (2001) discussed how to use TTM in a consumer education program to change financial behavior. Also Xiao, Newman, Prochaska, Leon, Bassett, and Johnson (2004) applied to TTM provided the framework for developing a measure to assess readiness to get out of credit card debt with consumers who are having credit card debt troubles. They use as key constructs of TTM include stages of change, decisional balance, self efficacy, and processes of change. Also Xiao and Wu (2006) have applied to TTM to credit counseling with stages by process of change. Osteen, Muske, and Jones (2007) Suggested that financial education applying with TTM leads to improved financial literacy and financial security for families.

The focus of the model is to help people intentionally financial behavior change (Xiao et al, 2001). Application of TTM to financial behavior change is a process that involving five integrated stages of: (i) awareness of the problem and a need to financial behavior change, (ii) motivation to make a change in financial behavior, (iii) skill development to prepare for the financial behavior change, (iv) initial adoption of the new financial activity or behavior, and (v) maintenance of the new financial activity and integration into the lifestyle (Tillis et al, 2003).

2. Health Belief Model (HBM)

The Health Belief Model (HBM) is a psychological model that attempts to explain and predict health behaviors by focusing on the attitudes and beliefs of individuals. The HBM was developed in the 1950s as part of an effort by social psychologists in the United States Public Health Service to explain the lack of public participation in health screening and prevention programs (Redding et al, 2000).

The Health Belief Model attempts to explain health-behavior in terms of individual decision-making, and proposes that the likelihood of a person adopting a given health- related behavior is a function of that individual's perception of a threat to their personal health, and their belief that the recommended behavior will reduce this threat (Janz and Becker, 1984).

The HBM consists of 7 major conceptual components. *Perceived susceptibility* refers to a person's subjective perception of the risk of developing a health condition. *Perceived severity* refers to feelings concerning the seriousness of contracting an illness or of leaving it untreated. *Perceived benefits* are the believed effectiveness of strategies designed to reduce the threat of illness. *Perceived* *barriers* are the potential negative consequences that may result from taking particular health actions, including physical, psychological, and financial demands. Additionally the model states that *internal and external cues* such as, body states and environmental factors, may also promote or inhibit health enhancing behavior. Finally *self-efficacy* which is defined as the confidence that one can successfully practice the behavior required to produce the outcome and health motivation, the desire to maintain good health status (Rosenstock, Strecher, and Becker, 1988; Harrison, Mullen, and Green, 1992).

The HBM addresses the importance of designing educational programs that affect the learner's perceptions. People understand the seriousness of many health conditions, but they often do not perceive themselves as susceptible. Overcoming this perception is a prerequisite to healthy lifestyles. The HBM can be used to help develop health messages that persuade people to make healthy decisions (Clarke, 2008).

Application to Financial Behavior: The key variables of the HBM which can be applied financial behavior change are as follows:

Perceived Threat**:**	Consists of two parts: perceived susceptibility and perceived severity of a financial condition.
Perceived Susceptibility**:**	One's subjective perception of the risk of contracting a financial condition,
Perceived Severity**:**	Feelings concerning the seriousness of contracting a financial risk (including evaluations of both economic consequences and possible social consequences).
Perceived Benefits**:**	The believed effectiveness of strategies designed to reduce the financial risk.
Perceived Barriers**:**	Particular financial actions may result potential negative consequences, including financial demands.
Cues to Action:	Events, either individual, families or environmental that motivate people to take financial action.

The HBM can be used to help develop financial messages that persuade people to make correct financial decisions. For example, the HBM can be used to design effective financial management messages concerning financial risks, borrowing and credit use. Before a person can accept her/his negative financial condition and manage the financial risks, s/he must believe s/he has the financial risks. The HBM addresses the importance of designing educational programs that affect the learner's perceptions. People understand the seriousness of many financial conditions, but they often do not perceive themselves as susceptible. Overcoming this perception is a prerequisite to true financial management process.

3. The Theory of Reasoned Action/Planned Behavior (TRA)

The Theory of Reasoned Action (TRA) is a widely used behavioral prediction theory which represents a social-psychological approach to understanding and predicting the determinants of health-behavior. Over the years, TRA has been applied to many diverse health-related behaviors including: weight loss, smoking, alcohol abuse, HIV risk behaviors, and mammography screening. The theory of reasoned action states that the intention to perform a particular behavior is strongly related to the actual performance of that behavior. Two basic assumptions that underlie the TRA are: (i) behavior is under volitional control, and (ii) people are rational beings. From the perspective of TRA, we behave in a certain way because we choose to do so and we use a rational decision-making process in choosing and planning our actions. The TRA was designed to predict behavior from intention, and proposes quasi-mathematical relationships between beliefs, attitudes, intentions, and behavior. A modified version of TRA includes the addition of perceived control over the behavior and is referred to as the Theory of Planned Behavior (TPB) (Redding et al. 2000). The theory of planned behavior adds to the theory of reasoned action the concept of perceived control over the opportunities, resources, and skills necessary to perform a behavior. The concept of perceived behavioral control is similar to the concept of self efficacy -person's perception of his or her ability to perform the behavior. Perceived behavioral control over opportunities, resources, and skills necessary to perform a behavior is believed to be a critical aspect of behavior change processes (Jemmot and Jemmot, 1991).

Predicting behavior is the ultimate goal of the TRA. According to the TRA, behavior is influenced by the intention to perform the behavior. Intention is influenced by three major variables: (i) subjective norms, (ii) attitudes, (iii) self-efficacy. Subjective norms involve an individual's perception of what significant others believe about his or her ability to perform the behavior. Attitudes can be conceptualized in terms of values. That is, an individual develops particular values about behaviors. Two of the variables that influence intention, subjective norms, and attitudes are in turn influenced by beliefs. Two general types of beliefs are considered in TRA: *normative* and *behavioral* beliefs. Normative beliefs are situational based social expectations which are considered the rule. Normative beliefs influence subjective norms while beliefs about the behavior influence attitudes. An individual's attitudes toward a behavior are determined by his/her expectations about the outcome of performing the behavior, and the extent to which s/he values the outcome. Thus, from a TRA perspective, the likelihood that an individual will engage in health risk reduction depends upon how much s/he is convinced that healthy behaviors will prevent risk, and the degree to which s/he perceives the benefits will outweigh the costs. The majority of TRA research has focused on the prediction of behavioral intention rather than on the behavior itself (Ashing-Giwa, 1999; Redding at al, 2000; Family Health International, 2008).

Application to Financial Behavior: The Theory of Reasoned Action (TRA) can be applied to financial behavioral prediction to understanding and predicting the determinants of financial-behavior. TRA includes concept of perceived control over the opportunities, resources, and skills necessary to perform a financial behavior. The concept of perceived behavioral control is similar to the concept of self efficacy -person’s perception of his or her ability to perform the financial behavior. Also normative beliefs and behavioral beliefs in TRA can be used to help develop financial messages that persuade people to make correct financial decisions. Normative beliefs influence subjective norms while beliefs about the financial behavior influence attitudes. Norms are a person's perception of other people's opinions regarding the defined financial behavior. An individual's attitudes toward a financial behavior are determined by his/her expectations about the outcome of performing the behavior, and the extent to which s/he values the outcome. On the other hand, behavioral beliefs are a combination of a person's beliefs regarding the outcomes of a defined financial behavior and the person's evaluation of potential outcomes. Therefore behavioral beliefs can be used to help people’s financial behavior change.

4. Risk Reduction Model (RRM)

Risk Reduction Model (RRM), introduced in 1990, provides a framework for explaining and predicting the behavior change efforts of individuals specifically in relationship to the sexual transmission of HIV/AIDS. Therefore this model called to AIDS Risk Reduction Model. A three-stage model, the RRM incorporates several variables from other behavior change theories, including the Health Belief Model, "efficacy" theory, emotional influences, and interpersonal processes. Risk reduction model focuses on social and psychological factors hypothesized to influence (i) labeling of high risk behaviors as problematic, (ii) making a commitment to changing high risk behaviors, and (iii) seeking and enacting solutions directed at reducing high risk activities (Catania, Kegeles, and Coates, 1990). These hypothesized factors that influence the successful completion of each stage:

I. Labeling of high risk behaviors as problematic: (i) knowledge of risk activities associated with HIV transmission, (ii) believing that one is personally susceptible to contracting HIV, (iii) believing that having AIDS is undesirable, (iv) social norms and networking
II. Making a commitment to changing high risk behaviors: (i) cost and benefits, (ii) enjoyment, (iii) response efficacy, (iv) self-efficacy, (v) knowledge of the health utility and enjoyability of a sexual practice, as well as social factors (group norms and social support), are believed to influence an individual’s cost and benefit and self-efficacy beliefs.
III. Seeking and enacting solutions directed at reducing high risk activities: (i) social networks and problem-solving choices (self-help, informal and formal help), (ii) prior experiences with

problems and solutions (iii) level of self-esteem, (iv) resource requirements of acquiring help, (v) ability to communicate verbally with sexual partner, (vi) sexual partner's beliefs and behaviors Last stage is related to taking action. Taking action includes information seeking obtaining remedies and enacting solutions (Catania, Kegeles, and Coates, 1990; Boyer and Kegeles, 1991; Bertrand et al, 1992)

Application to Financial Behavior: RRM can be used to explain and predict the behavior change efforts of individuals specifically in financial management process. This model can be focused: (i) labeling of high financial risk behaviors as problematic, (ii) making a commitment to changing high financial risk behaviors, and (iii) seeking and enacting solutions directed at reducing high financial risk activities. These are social and psychological factors hypothesized to influence financial behavior. These factors include determination of high risk financial behavior and knowledge of risk activities in financial management process, believing that having financial risks are undesirable, believing that one is personally susceptible to behave risk financially, assumption of cost and benefits, seeking social networks and problem-solving choices about financial conditions. Especially, last factor is related to taking action. Taking action includes information seeking obtaining remedies and enacting solutions about financial behavior.

RRM identified other internal and external factors that may motivate individual movement across stages. For instance, aversive emotional states may facilitate or hinder the labeling of one's behaviors. External motivators, such as public education campaigns, an image of a person suffering from credit cards, or informal support groups, may also cause people to examine and potentially change their financial activities (Family Health International 2008).

5. Social Cognitive/Learning Theory (SCT)

Social learning theory, later renamed social cognitive theory, proposes that behavior change is affected by environmental influences, personal factors, and attributes of the behavior itself. Each may affect or be affected by either of the other two. A central tenet of social cognitive theory is the concept of self-efficacy. A person must believe in his or her capability to perform the behavior (i.e., the person must possess self-efficacy) and must perceive an incentive to do so (i.e., the person's positive expectations from performing the behavior must outweigh the negative expectations). Additionally, a person must value the outcomes or consequences that s/he believes will occur as a result of performing a specific behavior or action. Outcomes may be classified as having immediate benefits or long-term benefits. But because these expected out-comes are filtered through a person's expectations or perceptions of being able to perform the behavior in the first place, self-efficacy is believed to be the single most important characteristic that determines a person's behavior change. Self-efficacy can be increased in several ways, among them by providing clear instructions, providing the opportunity for skill development or training, and modeling the desired behavior. To be effective, models must evoke trust, admiration, and respect from the observer; models must not, however, appear to represent a level of behavior that the observer is unable to visualize attaining (Redding et al, 2000).

This theory goes well beyond individual factors in behavior change to include environmental and social factors. In fact, this theory may be the most comprehensive model of human behavior yet proposed. SCT emphasizes what people think and its effect on their behavior. SCT proposes that behavior can be explained in terms of *triadic reciprocity* between three key concepts which operate as determinants of each other. Reciprocal determinism forms the basic organizing principle of SCT. This important concept states that there is a continuous, dynamic interaction between the individual, the environment, and behavior. Thus, a change in one of these factors impacts on the other two. SCT involves numerous key concepts, which have been associated with each of the three main constructs for the purpose of describing the SCT (Redding et al, 2000). Bandura conceptualized influences on behavior that involved the concept of *person* in terms of basic human capacities that are cognitive in nature. Key concepts associated with the person include: personal characteristics (demographics factors such as gender, race, education; personality, cognitive factors such as thoughts, attitudes, beliefs, knowledge), emotional arousal/coping (an individual's ability to respond to emotional stimuli with various techniques, strategies and activities that help one to deal with arousing situations), behavioral capacity (an individual's possession of both the knowledge and skills necessary to perform a behavior), self-efficacy(an individual's confidence in his or her ability to perform a behavior in various situations), expectations (they are beliefs associated with the outcome of a behavior), expectancies (They are value an individual attributes to the anticipated outcome of performing a behavior), self-regulation (an individual's ability to manage or control behavior), observational/experiential learning (the acquisition of a behavior through observation and experience), and reinforcement (the consequences that affect the probability a behavior will be tried again) (Bandura, 1989).

Application to Financial Behavior: SCT can be applied to financial behavior change in terms of self –efficacy. Self-efficacy refers to the confidence an individual has in his or her own ability to successfully carry out a behavior. The importance of self-efficacy for behavior change has been widely recognized across multiple behaviors relevant to financial risk reduction (Redding, et al. 2000). Additionally, a person must value the outcomes or consequences that s/he believes will occur as a result of performing a financial behavior or action. Self-efficacy refers to one's confidence in the ability to take financial action and persist in action according to SCT. Bandura (1989) has seen this theory as perhaps the single most important factor in promoting changes in behavior. Therefore it can be used to help people in promoting financial behavior change. Self-efficacy is one of the key concepts SCT have also been identified as key determinants of movement through the stages of behavior change (Oldenburg, 1999). Behavior change can depend on self-efficacy in SCT includes some important determinants such as (i) the choice of activities in which people engage in terms of financial behavior, (ii) how much energy they will expend on such activities and (iii) the degree of persistence they demonstrate in the face of failure and/or adversity.

SCT helps explain the environmental influences people have had over the years shaping them into who they are today. For example, the financial attitudes and values of individual- especially in childhood and youth period- have about money come from their home environment. As young learn over the years through social interaction, they begin to understand and form their values, knowledge, and attitudes about finances. Family, friends, community, nation, school, church and media all shape youngs' knowledge and attitudes over time (Bubolz and Sontag, 1993). Especially, parents and peers have great influences they have on youngs' financial knowledge, attitudes, and behaviors. Parents tend to have a greater influence on students at a younger age. while peer influence increases as the student becomes older and especially after becoming a college student. Parents and peer have effect on individuals' financial knowledge, attitudes and behaviors as environmental factors (Jorgensen, 2007).

6. Relapse Prevention Model (RP)

Marlatt's RP model is based on social-cognitive psychology and incorporates both a conceptual model of relapse and a set of cognitive and behavioral strategies to prevent or limit relapse episodes. A central aspect of the model is the detailed classification of factors or situations that can precipitate or contribute to relapse episodes. In general, the RP model posits that those factors fill into two categories: immediate determinants (e.g., high-risk situations, a person's coping skills, outcome expectancies, and the abstinence violation effect) and covert antecedents (e.g., lifestyle imbalances and urges and cravings) (Larimer, 1999).

Treatment approaches based on the RP model begin with an assessment of the environmental and emotional characteristics of situations that are potentially associated with relapse (i.e., high-risk situations). Some researchers have used concepts of relapse prevention to help new exercisers anticipate problems with adherence. Factors that contribute to relapse include negative emotional states, limited coping skills, social pressure, interpersonal conflict, limited social support, low motivation, high-risk situations, and stress. Principles of relapse prevention include identifying high-risk situations for relapse and developing appropriate solutions (Stephens, Roffman, and Simpson, 1994).

Relapse prevention is a treatment intervention designed to teach individual a wide range of cognitive and behavioral coping skills to avoid or deal with a brief return to substance use (lapse), or a protracted return to previous levels of use (relapse), following a period of moderation or abstinence. Relapse as a process that takes place over time instead of an isolated event. There are several high-risk situations that can alert people to potential problems, and the key is to recognize these situations and do something about them. High-risk situations involve certain people, places, emotions and thoughts that lead towards a lapse/relapse. In addition, there are several factors occurring outside of high-risk situations that influence a person's chances of success. These include destructive thinking patterns, lifestyle imbalance and a lack of planning. These combined factors can weaken a person's resolve even before he or she faces a high-risk situation. An individual can respond to high-risk situations in two different ways: effective coping responses lead to increased confidence and a decreased chance of a lapse/relapse, while ineffective coping responses lead to decreased confidence combined with positive expectations when considering the initial use of the substance. This can all lead to a lapse, which can in turn lead to feelings of guilt, shame and failure. These feelings, along with positive expectations about the substance, can increase the chances of relapse (Martlatt, 2005).

Application to Financial Behavior: RP model can be applied to help people prevent or limit their high- risks financial behavior. This model can suggest new exercisers anticipate financial problems with adherence. RP model contributes financial behavior change by developing skills training, cognitive reframing and lifestyle rebalancing. Also, these factors contribute to relapse include negative emotional states, limited coping skills, social pressure, interpersonal conflict, limited social support, low motivation, high-risk situations, and stress. Principles of relapse prevention include identifying high-risk situations for relapse and developing appropriate solutions. These principles are valid to financial behavior change. Especially determining of high-risk financial behavior and preventing of the negative financial behavior. In this process, people who behaving high-risk in financial management should be believed their skills and cognitive abilities for financial behavior change (Stephens, Roffman, and Simpson, 1994).

II. Most Commonly Used Sociological Theories/Models

1. Role Theory (RT)

Role Theory posits that human behavior is guided by expectations held both by the individual and by other people. Individuals generally have and manage many roles. Roles consist of a set of rules or norms that function as plans or blueprints to guide behavior. Roles specify what goals should be pursued, what tasks must be accomplished, and what performances are required in a given scenario or situation. Role theory is, in fact, predictive. It implies that if we have information about the role expectations for a specified position (e.g., sister, mother or father), a significant portion of the behavior of the persons occupying that position can be predicted.

Role theory also argues that in order to change behavior it is necessary to change roles; roles correspond to behaviors and vice versa. In addition to heavily influencing behavior, roles influence beliefs and attitudes; individuals will change their beliefs, attitudes and behaviors to correspond with their roles (Deacon and Firebaugh, 1988; Goldsmith, 2000).

RT is closely related to gender roles. Gender roles are "socially and culturally defined prescriptions and beliefs about the behavior and emotions of men and women" (Anselmi and Law, 1998). Many theorists believe that perceived gender roles form the bases for the development of gender identity. Gender roles are closely linked with gender stereotypes. Stereotypes are "overgeneralized beliefs about people based on their membership in one of many social categories" (Anselmi and Law, 1998). Gender stereotypes vary on four dimensions: traits, role behaviors, physical characteristics, and occupations (Deaux, 1985). For example, whereas men are more likely to be perceived as aggressive and competitive, women are more likely to be viewed as passive and cooperative. Traditionally, men have been viewed as financial providers, whereas women have been viewed as caretakers. Physical characteristics and occupations have also been considered consistent or inconsistent with masculine or feminine roles. Gender roles and stereotypes affect couple and family interaction (Pleck, 1985). Often, for example, the division of household labor is based on gender. Traditionally, women remained at home and completed most of the domestic labor, while their male partners worked outside the home to provide the family income. Although women have increasingly joined the workforce over the past thirty years, they continue to do the majority of the household labor. Gender roles often become more differentiated when men and women become parents. Overall, women provide more direct care for and spend more time with children. This care includes taking responsibility for the mental work of gathering and processing information about infant care, delegating the tasks related to infant care, and worrying about infant health and well-being. The unequal division of both household labor and childcare, with women doing the bulk of the work, is thought to contribute to the reported lower marital satisfaction for women (Voydanoff, 1987).

Application to Financial Behavior: Application of RT to financial behavior change includes financial learning process. Gender differences in financial knowledge are documented in the literature. Women generally show lesser financial knowledge, have more financial concerns, and are less confident about their financial situation as traditionally gender roles (Hira and Mugenda, 2000). Recently it is stated that self-directed financial learning might prefer to financial management process. Women learn financial information self-directly can own benefit more than men because of the supposedly larger knowledge gap. Loibl and Hira (2006) determined that women may feel more comfortable than men contacting family, friends, or co-workers about the topic of personal finances and may, therefore be more motivated to start learning about personal finance.

Gender roles are a social phenomen, a dichotomy that exists in all societies. As a social dimension affecting consumer behavior, gender and RT have been understudied and sometimes misunderstood. Studies have shown that there are differences in the determinants of perceived financial situation, and expectation of financial condition for men and women because of they have adopted to different gender roles. Hira and Mugenda (2000) found that women are far more likely than men to purchase unplanned items, women are far more likely than to buy without need or buy things they know they don’t need, on the other hand women are more likely than men to be satisfied with their level of savings. Application of RT to financial behavior change include changing beliefs and attitudes about financial behavior, bridging financial behavior and social structure, functionalist approach to perform low-risk financial behavior.

2. Socialization Theory (ST)

The concept of socialization covers the acquisition of the knowledge, skills and values that make it possible for an individual to live and interact with others in the social system. Socialization is often viewed as a social process by which norms, attitudes, motivations, and behaviors are transmitted from specific sources to the learner. Agents affecting socialization processes have been classified into four categories on the basis of the formality of the type of the agent and the role of the learner: formal agents, family or school, and informal agents, mass media or peers (Hira, 1997).

Also socialization theory emphasizes the transmission of societal norms during childhood and adolescence within society's these major socializing agencies. The norms thus transmitted may be prosocial or deviant, with prosocial norms more likely to be transmitted through strong bonds to healthy families or schools (Nurco and Lerner, 1999). Alice Eagly (2001) offers an explanation of individual development that is based on socialization. Eagly's theory suggests that the sexual division of labor and societal expectations based on stereotypes produce gender roles. Eagly (2001) distinguishes between the communal and agentic dimensions of gender-stereotyped characteristics. The communal role is characterized by attributes, such as nurturance and emotional expressiveness, commonly associated with domestic activities, and thus, with women. The agentic role is characterized by attributes such as assertiveness and independence, commonly associated with public activities, and thus, with men. Behavior is strongly influenced by gender roles when cultures endorse gender stereotypes and form firm expectations based on those stereotypes (Eagly, 2001).

Socialization theory suggests that perceived gender role orientations are primarily dependent upon the social roles we fulfill. Previous research has shown that social roles related to sex-typed divisions of labor, both inside and outside the home, have a strong influence upon perceived gender role orientations (Etaugh and Poertner, 1992). Thus, people who fulfill stereotypically feminine roles are more likely to be perceived as having feminine gender role orientations. Likewise, people who fulfill stereotypically masculine roles are more likely to be perceived as having masculine gender role orientations (Harrison and Lynch, 2005).

Socialization theory is most commonly used in financial behavior research. But yet literature about the financial socialization of children or the transfer of financial attitudes, values, standards, or behaviors within the context of the family is scarce. Much of the research that does exist comes out of the consumer socialization literature. The conceptual definition which is referred to most often is that of Ward (1974) which is the "process by which young people acquire skills, knowledge, and attitudes relevant to their effective functioning as consumers in the marketplace". Some researchers have extended that definition to include acquiring and developing values, attitudes, norms, skills, behaviors, motives and knowledge which are related to consumption and family financial management. However, financial socialization is much more inclusive than learning to effectively function in the marketplace. It is the process of acquiring and developing values, attitudes, standards, norms, knowledge, and behaviors that contribute to the financial viability and well-being of the individual. Socialization is the process by which individuals acquire the knowledge, skills, and value dispositions that enable them to participate as more or less effective members of groups and society socialization begins in childhood and continues, to some extent, throughout life (Danes and Hira, 1987; Danes, 1994).

Application to Financial Behavior: Socialization is a financial learning process. According to Danes (1994), financial socialization is: much more inclusive than learning to effectively function in the marketplace. It is the process of acquiring and developing values, attitudes, standards, norms, knowledge, and behaviors that contribute to the financial viability and well-being of the individual." Children learn about finances through observations, positive reinforcement, practice and participation, and deliberate instruction by parents. Direct influences such as family discussions and keeping track of allowance could consist of an increase in knowledge and formation of attitudes, values, and behaviors (Moschis and Churchill, 1978). It is stated that older siblings also played a role in consumer socialization and that consumer learning took place more frequently when the financial tasks were considered the responsibility of the entire family (Jorgensen, 2007).

It has been assumed in social sciences that gender differences in financial management are a product of differential socialization. Yet, there is some empirical support for this assumption. Though this literature is slim, there has been complete agreement that, whatever the dimensions of their different financial management process because of differential gender socialization. Strong gender-based risk preferences have even been observed in financial decisions concerning business practices and investments, with males consistently willing to take greater risks (Miller and Stark, 2002). But The biological argument supposes that because of women's greater biological responsibility for reproduction, evolution has led women to be less willing to take risks than men. On the other hand, Feminist scholarship has emphasized the importance of gender as a social construct and has been influential in making the argument that gender differences are more important than biological differences when it comes to understanding differences in the behavior of women and men. And, From a policy perspective, interventions focused on changing socialization processes can still positively impact the well-being of women by influencing their financial decision-making and choices (Bajtelsmit and Bernasek, 1996).

Economists and policy-makers have observed gender differences in a number of different domains, including consumption, investment and, perhaps of most concern, in the financial management. It is often hypothesized that these differences are caused by preference differences between the genders. Croson and Gneezy (2008) found that women are indeed more risk-averse than men. Atkinson, Baird and Frye (2003) compared the performance and investment behavior of male and female fixed-income mutual fund managers. They find that the way male and female managed funds do not differ significantly in terms of performance, risk, and other fund characteristics. Their results suggest that differences in investment behavior often attributed to gender may be related to investment knowledge and wealth constraints. Hira and Loibl (2006) identified a number of significant environmental and personal factors that influence investment behavior, particularly with respect to high income female investors. These women had a strong desire to learn about personal finances and maximize their financial future through investing. Despite their interest, many of these women reported having little experience with managing investments, lacking confidence when it comes to investing, and having a low tolerance for risk, much of which seemed to be a product of early experiences with finances. In addition, they seemed to prefer learning with an expert and in concert with other women (Hira and Loibl, 2006). It is clear that women and men do think and behave differently in many aspects of life, including those related to money and finance because of differential socialization process. When it comes to money matters, women have financial circumstances and needs that differ from those of men (Secor, 2008).

3. Community Organization Theory (COT)

Community Organization Theory (COT) has its roots in theories of social net- works and support. This theory emphasizes the role of community participation in solving problem behavior. Many education organizations use coalition structures for activating and involving community members, including the target audience, to identify common behavior problems or goals, mobilize resources, and develop and implement strategies for reaching goals. This is a useful tool for reaching underserved populations. The process of empowerment is intended to stimulate problem solving and activate community members. Community competence is an approximate community-level equivalent of self-efficacy plus behavioral capability, thus, the confidence and skills to solve problems effectively. Participation and relevance go together. They both involve citizen activation and a collective sense of readiness for change. Issue selection concerns identifying "winnable battles" as a focus for action, and critical consciousness stresses the active search for root causes of problems. Because of the creative and strategic nature of COT, it can lead to major advances in public support, funding and policies (Clarke, 2008).

Application to Financial Behavior: COT includes a network of human interactions, where all behavior could be understood by looking at cause and effect. Therefore, it can be applied to financial behavior change. It creates overconformity and rigidity, thus squelching creativity, individual growth, and motivation for finacial behavior change. COT displayes genuine concern for human needs. Human needs are met by coordinating consciously activities proposed one of the first modern theories of organization by defining organization in a system. In this empowerment process, individuals can solve their financial problems by taking true information from activate community members.

Also COT based on community participation in solving problem behavior. People can solve their financial problems and can change their high-risky financial behavior by participating many education organizations use coalition structures for activating and involving community members, including the target audience, to identify common behavior problems or goals, mobilize resources, and develop and implement strategies for reaching goals. Because Gozdz (2000) believes that education organizations are centered around the concept of community. "An organization acting as a community is a collective lifelong learner, responsive to change, receptive to challenge, and conscious of an increasingly complex array of alternatives." Communities provide safe havens for its members and foster an environment conducive to growth. Gozdz describes the community as group of people who have a strong commitment to "ever-deepening levels of communication." COT (i) give individuals and communities tools and responsibilities for making financial decisions that affect them (ii) work with community to identify financial problems, create consensus and reach goals (iii) help community set goals within the context of pre-existing goals, and encourage active participation (iv) assist community in examining how they can communicate the concerns and whether success is likely (v) guide consideration of financial concerns in broad perspective of social problems. In this point COT can help people to financial behavior change by stimulating problem solving and activating community members.

III. Most Commonly Used Economic Theories/Models

1. Game Theory (GT)

Game theory is a branch of applied mathematics that is used in the social sciences. Game theory attempts to mathematically capture behavior in *strategic situations*, in which an individual's success in making choices depends on the choices of others. While initially developed to analyze competitions in which one individual does better at another's expense. It has been expanded to treat a wide class of interactions, which are classified according to several criteria (Meier, 2008). According to Smith (1995) game theory is a tool that can help explain and address social problems. Since games often reflect or share characteristics with real situations -- especially competitive or cooperative situations -- they can suggest strategies for dealing with such circumstances. Game theory provides analytical tools for examining strategic interactions among two or more participants. By using simple, often numerical models to study complex social relations, game theory can illustrate the potential for, and risks associated with, cooperative behavior among distrustful participants. Turocy and Stengel (2001) explain that game theory is the formal study of conflict and cooperation. Game theory is the formal study of decision making where several players must make choices that potentially affect to interests of the other players (Turocy and Stengel, 2001). Most research in game theory focuses on how groups of people interact. Game theory has three other main branches: *decision theory, general equilibrium theory and mechanism design theory.*

Decision theory can be viewed as a theory of one person games, or a game of a single player against nature. The focus is on preferences and the formation of beliefs and behaviors. The most widely used form of decision theory argues that preferences among risky alternatives can be described by the maximization the expected value of a numerical utility function. Decision theory is often used in the form of decision analysis, which shows how best to acquire information before making a decision.

General equilibrium theory can be viewed as a specialized branch of game theory that deals with trade and production, and typically with a relatively large number of individual consumers and producers. It is widely used in the macroeconomic analysis of broad based economic policies such as monetary or tax policy, in finance to analyze stock markets, to study interest and exchange rates and other prices.

Mechanism design theory differs from game theory in that game theory takes the rules of the game as given, while mechanism design theory asks about the consequences of different types of rules. Naturally this relies heavily on game theory. Questions addressed by mechanism design theory include the design of compensation and wage agreements that effectively spread risk while maintaining incentives, and the design of auctions to maximize revenue, or achieve other goals (Meier, 2008).

In economics experiments, It is found that women are significantly more cooperative than men in games. Females, however, are significantly more cooperative in the mixed-sex groups than in all-female groups (cooperating 65% of the time and 50% of the time respectively). Again, women are more sensitive to the context of the experiment than are men. Economists have spent more energy investigating continuous versions of dilemma games in the field of public goods provision. A series of experiments investigates gender differences in the voluntary contribution mechanism (VCM). In this game, introduced by Marwell and Ames (1981), individuals have resources they can allocate toward their private consumption or the group's public consumption. Tokens are worth more to the individual when privately consumed, but generate more social value when used to provide public goods. Equilibrium contributions toward the public good in these settings are zero and deviations from that benchmark are considered altruistic. (Gachter, 2008).

Application to Financial Behavior: These models can provide insight into the strategic options and likely outcomes available to participants in financial situations. Game theory can be a tool that can help explain and address financial problems. Since games often reflect or share characteristics with real situations, they can suggest strategies for dealing with financial circumstance. Just as we may be able to understand the strategy of players in a particular game, we may also be able to predict how people will behave in a given financial situation. Games used to simulate real-life situations typically include five elements: (i) *players*, or decision makers, (ii) *strategies* available to each player (iii) *rules* governing players' behavior, (iv) *outcomes*, each of which is a result of particular choices made by players at a given point in the game; and (v) *payoffs* accrued by each player as a result of each possible outcome. From this insight, decision-makers can better assess the potential effects of their financial actions, and can make decisions that will more likely produce the desired financial goals and avoid risks. Real life is full of financial situations in which people -- intentionally or unintentionally -- pursue their own financial attitudes at the expense of others, leading to risks. Games used to illustrate these relationships often place the interests of two players in direct opposition: the greater the payoff for one player, the less for the other. In order to achieve a mutually productive outcome, the players must coordinate their strategies, because if each player pursues his or her greatest potential payoffs, the shared outcome is unproductive. For example; game theory in financial behavior show that how individual and collective behaviors influence market prices. People in general and investors in particular, are not totally "rational" in their decisions. They are sometimes "under influence."

2. Social Marketing Theory (SMT)

Another approach that has been used to bring about behavior change is that of social marketing. The concept of social marketing is based on marketing principles and focuses on four key elements, including: (i) development of a product, (ii) the promotion of the product, (iii) the place, (iv) the price; as such, this approach is not so much a theory of behavior change but a proposed framework, which situates people as "consumer" who will potentially "buy into" a certain idea or argument, given the appropriate selling techniques are applied. It is then assumed that the "buying in" to that idea by individuals will result in behavior change. Social marketing is a management system based on the concept that people will change behavior in exchange for benefits. Program managers must identify the benefits for the specific audience and the precise behaviors in order for this exchange to take place. This system will fail if the community and/or individuals do not have determined the benefits and behaviors that are most important and establish the link between them (Smith, 1995).

Social Marketing Theory is a management system based on the concept that people will change behavior in exchange for benefits. In order to reach success in this system, benefits and behaviors of individual must be determined. People do not always do what they know they should do. Behavioral science can help people close that gap. Specific factors can that keep this gap from closing are often called determinants of behavior by behavioral scientist. Attitudes, spatial barriers, knowledge, and/or consequences all fall into this determinant behavior classification. Social Marketing Theory has organized a subset of determinants into two domains. The first domain of determinants are the integral/cognitive factors (for example: knowledge, attitudes and beliefs) and the second are external/structural factors (for example: access to services, cost, policy and prejudices) (Kotler and Zaltman, 1971).

Application to Financial Behavior: Social marketing is a promising framework for planning and implementing behavior change, thus social change. The theory is the systematic application of marketing along with other concepts and techniques to achieve specific behavioral goals for a social good. Social marketing can be applied to promote, for example, merit goods, make the society avoid demerit goods and thus to promote that considers society's well being as a whole. The primary aims of 'social marketing' is 'social good'. Social marketing relies on commercial marketing's conceptual framework to guide program development and implementation. This framework places consumers at the center of an exchange process in which they act primarily out of self-interest—attempting to maximize the ability to satisfy wants and needs and minimize the cost to do so. Social marketing identifies consumer wants and needs and then develops ways to satisfy them. Marketing's framework, or the marketing mix, includes five components involved in the exchange process: (i) the product (in social marketing, the product is the health behavior or service being promoted); (ii) its competition (the risk behavior currently practiced); (iii) the price (social, emotional, and monetary costs exchanged for the product's benefits); (iv) place (where the exchange takes place, or the target behavior is practiced); and (v) promotion (activities used to facilitate the exchange). According to the social marketing theory people must make a choice between protective or healthful behaviors and risky alternatives in terms of financial behavior. The social marketing approach seeks ways to design services and develop behavioral recommendations that are compatible with consumers' values and beliefs. In contrast to top-down, expert-driven approaches, social marketing attempts to create interventions that enable the target audience to solve problems and realize the dreams that people consider important. Social marketers believe that the behaviors being promoted should contribute to the consumers' and society's well-being.

4. Consumer Information Processing Theory (CIP)

Information is necessary people to adapt healthful behaviors. Central assumptions of CIP are that: (i) Individuals are limited in how much information they can process, (ii) In order to increase the usability of information, they combine bits of information into "chunks" and create decision rules to make choices fast- er and more easily. People will use information if it is available, seen as useful and new, and for- mat- friendly. CIP concepts apply to formative evaluations to determine if the target audience finds the program materials attractive, interesting and easy to use. The theory includes some process as following: (i) *Information Processing Capacity***:** Individuals' limitations in the amount of information they can acquire, use and remember, (ii) *Information Search*: Processing of acquiring and evaluating information; affected by motivation, attention and perception, (iii) D*ecision Rules***:** Rules of thumb are developed and used to help consumers select among alternatives, (iv) *Consumption Learning***:** Internal feedback based on out-come of choices, and use in future decisions, (v) *Information Environment***:** Amount, location, format, read-ability, and possibility of relevant information (Bettman, 1970; Clarke, 2008).

Application to Financial Behavior: Consumer Information Processing Theory (CIP) can be applied to help people for providing the most important and useful information to financial behavior change. Application include five steps as following: (i) information processing capacity: Choose the most important and useful points to communicate, whether orally or in print materials for financial situations, (ii) information search: Provide financial information so it takes little effort to obtain, draws consumer's attention, and is clear, (iii) decision rules/heuristics: Learn key ways to synthesize financial information in ways that have meaning and appeal for your audience (iv) consumption and learning: Keep in mind that people have probably made related financial choices in the past, and are not 'empty vessels' (v) information environment: Design financial information tailored to the audience; place it conveniently for use (National Institutes of Health, 2008) (Appendix 1).

Conclusion

This study has explained the potential of applying the most commonly used theories or models of individual behavior change in psychology, sociology and economy to financial behavior. We can say that this is the first study to apply most commonly used theories or models in psychology, sociology and economy to people's financial behavior or more specifically, to avoid undesirable debt or using credit card and to develop healthy saving behavior or spending behavior.

The focus and key concepts of each of the theories have been described in the paper. Application to financial behavior can be used to help in choosing multiple theories to help understand and address specific financial issues. These theories can be used for designing needs assessments, diagnosing educational delivery problems, and shaping the design of the intervention. Applying the most commonly used theories or models of individual behavior change to financial behavior are tools for the financial educators both in formal and informal education systems to use in planning financial education programs to prevent from poverty. By using a combination of theories, a comprehensive approach can be used to impact financial behavior of a community as well as the individual.

This study indicated that it is fruitful to offer theory- based financial behavior change. It also shows that individuals' financial behavior has been affected by theory- based financial education programs, especially using the experiential change processes such as consciousness raising, self-reevaluation, experiences rising, social support. In future program designs and educators can use the theories and results of evaluation studies, and develop more effective programs that could have greater impact on the behavior change.

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Appendix 1: Most Commonly used Theories/Models to Behavior Change and Application to Financial Behavior

Theory/ Model	Key Concepts	Application to financial behavior
I. Psychological theories/models		
1.Transtheoretical Model	Precontemplation Contemplation Preparation Action Maintenance	*Increase awareness of need for financial behavior change, personalize information about financial risks and benefits *Motivate and encourage to make specific plans *Assist in developing concrete action plans, setting gradual financial goals/short-term financial goals *Assist with feedback, problem solving, social support and reinforcement *Assist in coping, reminders, finding alternatives, avoiding slips and relapses *Self motivated by positive, habitual behavior
2.Health Belief model	Perceived susceptibility Perceived severity Perceived benefits Perceived barriers Cues to action Self-efficacy	*Define population at financial risk, risk levels; personalized risk based on a person's self assessment of financial behavior, heighten perceived susceptibility if too low *Specify consequences of the financial risk and condition *Define action to take- how, where,, when; clarify the positive effects to be expected- why *Identify and reduce barriers through reassurance, incentives and assistance *Provide how- to information, promote awareness, use reminders *Provide skill training and guidance in performing action in small steps
3.The Theory of Reasoned Action/Theory of planned behavior	Attitude toward the behavior • Outcome expectations • Value of outcome expectations Subjective norm • Beliefs of others • Motives to comply with others Perceived behavioral control	*Assist in understanding and predicting the determinants of financial behavior *Assist in determining of other people's opinions regarding the defined financial behavior *Assist in perceiving control over the opportunities, resources and skills necessary to perform a financial behavior
4.Risk Reduction Model	• Recognition and labeling of one's behavior as high risk • Making a commitment to reduce high risk contacts and to increase low-risk activities • Taking action o Information seeking o Obtaining remedies o Enacting solutions	*Assist in explaining and predicting the financial behavior change efforts at individuals in financial management process *Seeking and enacting solutions directed at reducing high financial risk activities
5.Social Cognitive Theory	Reciprocal determinism Behavioral capability Self-efficacy Outcome expectations Observational learning	*Involve the individual and relevant others; work to change the environment, if warranted *Provide information and training about the action *Incorporate information about likely results of action in advice *Point out strengths; use persuasion and encouragement; approach behavior change in small steps *Point out others' experience, physical changes; identify role models to emulate

	Reinforcement Shaping	*Provide incentives, rewards, praise; encourage self reward; decrease possibility of negative responses that deter positive changes
6.Relapse prevention	Skills training Cognitive reframing Lifestyle rebalancing	*Assist in suggesting of new exercisers anticipate financial problems *Assist in developing of financial skills, cognitive reframing and lifestyle rebalancing
II. Sociological theories/models		
	Changing beliefs and attitudes	*Assist in changing of financial beliefs and attitudes
1.Role Theory	Bridging behavior and social structure Functionalist approach-perform Prosocial norms	*Assist in developing of functionalist approach to perform low risk financial behavior
2.Socialization Theory	Transmition of values, norms and beliefs Empowerment Community competence	*Assist in Transmition of correct financial values, norms and beliefs both women and men *Assist in developing financial learning process *Give individuals and communities tools and responsibilities for making decisions that affect them *Work with community to identify problems, create consensus and reach goals
3.Community Organization Theory	Participation and relevance Issue selection Critical Consciousness	*Help community set goals within the context of pre-existing goals, and encourage active participation *Assist community in examining how they can communicate the concerns and whether success is likely *Guide consideration of financial concerns in broad perspective of social problems
III. Economic theories/models		
1.Game Theory	Marketing principles Human behavior related to buying Environmental constraints	*Assist in developing of strategies for dealing with high risk financial behavior *Produce the desired financial goals and avoid risks *Illustrate relationship between individuals and collective behaviors as decision makers
2.Consumer Information Processing Theory	Information processing Information search Decision rules Consumption and learning Information environment	*Choose the most important and useful points to communicate, whether orally or in print material *Provide information so it takes little effort to obtain, draws consumer's attention and is clear *Learn key ways to synthesize information in ways that have meaning and appeal for the audience *Keep in mind that people have probably made related choices in the past and are not "empty vessels" *Design information tailored to the audience; place it conveniently for use