Int. J. Nonlinear Anal. Appl. 15 (2024) 12, 25–36
ISSN: 2008-6822 (electronic)
http://dx.doi.org/10.22075/ijnaa.2023.30564.4432

Applying the health action process approach model (goodness) in explaining micro savings behavior

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(Communicated by Asadollah Aghajani)

Abstract

In this research, the fit of the model according to the GOF criterion shows a strong fit for this model. Also, based on the standardized root mean square residual index (SRMR), which has recently become more preferred, the acceptable fit of this model has been confirmed. The findings showed that firstly, there is a significant correlation between the constructs of the health action process approach model and micro-savings behavior among the study participants. Secondly, the constructs of action self-efficacy, outcome expectations and risk awareness were able to predict 62% of the variance of behavioral intention, and also, the intention with the mediation of planning together with maintenance self-efficacy and recovery self-efficacy, 59% of the behavior variance. They predicted small savings. Conclusion: In this study, we found that intention, action self-efficacy, planning and self-efficacy play a role as the most important determining factors in the adherence to savings in the target community. It was found that HAPA is useful in determining the predictors of adherence to savings among people. It is promising to design intervention programs to improve the level of adherence to savings by considering these factors. Macro policymakers and market leaders, especially financial businesses, should focus on the self-efficacy and planning of people in designing such interventions so that they can change the financial behavior of customers for the benefit of savings for themselves and their customers.

Keywords: savings, saving intention, health action process policy, micro savings, structural equation model
2020 MSC: 91B24

1 Introduction

Savings is an economic-social and individual (psychological-behavioral) concept, knowing its various aspects is necessary to achieve macroeconomic goals that are in the group of this concept. is a concept because it has semantic and thematic complexities and is not limited to specific material and measurable aspects, it is widespread in different levels of material, social and individual life and as a sub-system in the general framework of systems It has an economic-social impact.

Savings originates in different stages of production, distribution and consumption in an economic system and gets power to move that economic system. It has a social aspect because savings changes quantitatively and qualitatively

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Received: February 2023 *Accepted:* May 2023

under time and place conditions within the framework of social relations, customs, traditions, culture, social classes, etc. It has an individual aspect because in the field of private savings, it is these people who show different saving behaviors with diverse beliefs and tastes that are rooted in their mental and psychological processes [11].

Therefore, savings as an important economic component has a fundamental role in the lives of people with microeconomic concepts and a special place in the development of the national economy. Savings is considered as a main source for financing investment expenses and, as a result, production boom and higher economic growth in a country. Therefore, the investigation and identification of effective factors on the mobilization of savings resources has an important impact on the development of the concept of savings in the country.

Savings have an important impact on consumers' lives and life satisfaction, and savings "are of practical importance in determining the fate of the national economy" [12]. However, there is ample evidence that people do not save enough [22, 15, 5]. For example, in the United States, where credit scores continue to rise, it is reported that nearly 70% of Americans have less than $1,000 in a savings account [9]. Therefore, understanding the various factors that influence consumers' saving behaviors has been of interest to government agencies, financial services companies, and consumers themselves [24]. Recently, not only economists, but also psychologists and marketing researchers have sought to identify some of the factors that influence people's saving behaviors, including culture, gender ratio, stress, length of time period (for example, months versus years), sense of social power, and communication. perceived are between their current and future selves [3]. For example, in developing countries, lack of access to a safe method of saving can lead to insufficient savings. Insufficient savings and insufficient access to credit in the face of negative shocks make it difficult for a household to cope with negative shocks [16]. Understanding the determinants of behavior that leads to people's savings is of particular importance to ensure financial stability at both individual and national levels.

For individuals, saving is an important means of smoothing consumption because it acts as a buffer against income shocks and facilitates long-term planning [14]. In fact, previous studies considered savings as a means of protecting money [25, 10].

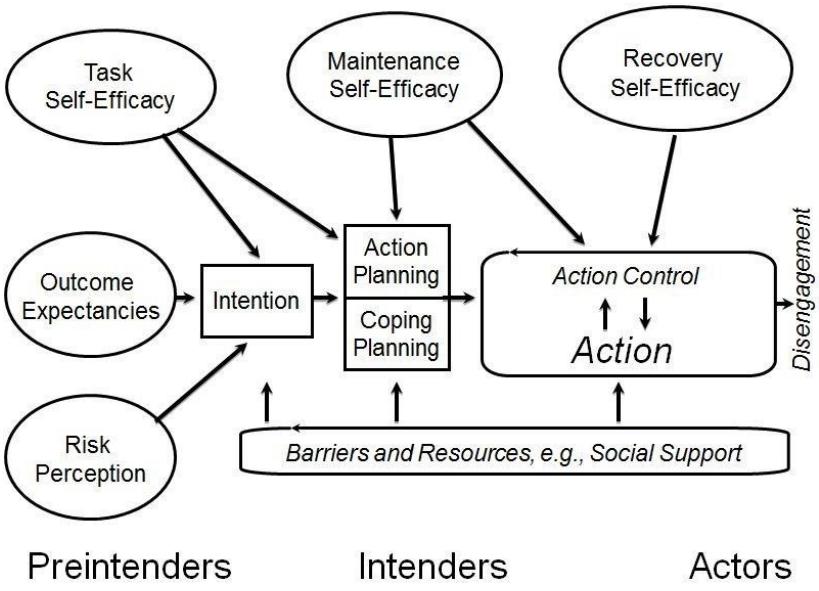
Therefore, it seems that examining the factors affecting saving behavior will lead to a better understanding of it in order to guide and plan it by individuals and macroeconomic policy makers. In the meantime, various studies have been conducted using different behavioral models in the field of behavioral and social sciences in order to know the factors affecting the realization or non-realization of a behavior, and one of these widely used models is the health action approach model (NIK). Bodi) that in this research, it is tried to apply and test this model in order to analyze saving behavior.

2 health action approach model (goodness)

Some behavioral models explaining behavior believe that the intention to change or act is the best predictor of behaviors such as adherence to diet. But recent researches believe that people do not act only based on their intentions. In this regard, Schwartz proposes the health action process approach derived from Bandura's social cognitive theory, which deals with filling the gap between intention and behavior [21, 2].

Accordingly, in order for a person to adopt a behavior, this model must go through two motivational and voluntary stages. In the motivational phase, it is assumed that the three factors of awareness of risk, expectations of the result and self-efficacy of the action lead to the creation of behavioral intention in the individual. When the behavioral intention is formed, the person has entered the voluntary stage where the self-regulation of the behavior leads to the transformation of the intention into behavior. At this stage, the initiation of behaviors such as following a healthy diet, in addition to behavioral intention, is also dependent on action planning and adaptation planning, which play a mediating role between intention and behavior. Also, when a person adopts a behavior, he needs to maintain that behavior, which can be achieved by overcoming obstacles. Recent successful studies in the field of lifestyle that have been conducted using the health action process approach on people in Iranian society show that the concepts of this model can be used as a conceptual framework in analyzing their behavior [18].

The health action process approach is a cognitive-social model and a psychological model in the field of health education, which has been used as the theoretical framework of this research [1]. This model includes three stages: pre-intention, intention and action. In the pre-intention stage, the person has no intention to perform the behavior, in the intention stage, the person intends to perform the behavior, but his intention has not yet turned into an action, and in the action stage, he performs the desired behavior. In this model, the process of changing health behavior includes a motivational phase and a voluntary phase. The motivational phase is a process in which a person intends to take an action or change a risky behavior. Voluntary phase is the process that includes the transformation of intention into actual behavior and includes three stages of initiation, maintenance and improvement. In the initial motivational



stage, a person intends to perform an action. In this phase, the awareness of risk is considered as a preliminary event, which alone is not enough to create the intention in the individual. In the motivational stage, when a person balances the advantages and disadvantages of certain behavioral results, the positive expectations of the result are important, in addition, the person needs to believe in his abilities, which is called action self-efficacy, in order to perform the action optimally. Once a person has developed a desire for a particular health behavior, the intention is transformed into detailed action instructions. Therefore, the post-intention stage should be broken down into action planning and recovery self-efficacy. When a preference for a particular behavior is formed, the intention must be transformed into the structural components of how to perform the action. For example, if a person intends to save or save, he should plan how to do it, for example, how much of the income and in what order, in what way to save, how to spend in the direction of Slow control savings. Therefore, a comprehensive intention can consist of a group of related intentions and action planning [1].

The Health Action Process Approach (HAPA) suggests that the adoption, initiation, and maintenance of health behaviors should be explicitly considered as a process consisting of at least one motivational stage and one voluntary stage. It is claimed that perceived self-efficacy plays an important role in all stages along with other cognitions. For example, awareness of risk acts mainly to set the stage for the thinking process early in the motivational stage, but does not extend beyond that. Similarly, outcome expectations are mainly important at the motivational stage, when people balance the pros and cons of specific consequences of behaviors, but lose their predictive power after a personal decision is made.

However, if a person does not believe in their ability to take a desired action, they will fail to adopt, initiate, and sustain it [20].

In this study, it was tried to apply the approach of the health action process in the field of saving behavior and to analyze and interpret the possibility of using the capacities of this model in predicting and changing the behavior of micro-savings. Therefore, in order to achieve this goal, the following hypotheses have been proposed and evaluated.

Previous studies have shown that action self-efficacy is the strongest predictor of intention. In fact, a person who does not believe in his abilities to perform the desired behavior will have difficulty in accepting that behavior and following it. Individuals with high levels of action self-efficacy envision success, anticipate the potential consequences associated with diverse strategies, and are more likely to initiate a new behavior. On the other hand, people with lower action self-efficacy focus more on failure and doubt their abilities and have a greater tendency to postpone behavior.

Perceived action self-efficacy refers to a person's confidence in their ability to initiate and perform a difficult or new behavior. It focuses on starting a periodic or permanent behavior (running two kilometers a day) or doing it once in a lifetime (jumping out of a plane with a parachute). In the context of savings, it means that people, taking into account the obstacles that exist or occur in saving behavior, nevertheless state how confident they are that they can intend to save, considering those obstacles [19].

On the other hand, action self-efficacy has an effect on maintenance self-efficacy, so the first and second hypotheses of this study aim to evaluate the impact and significance of the action self-efficacy variable on saving intention and

maintenance self-efficacy in the field of micro-savings behavior.

The first hypothesis: action self-efficacy has a positive and significant effect on micro-savings intention.

Second hypothesis: action self-efficacy has a positive and significant effect on maintenance self-efficacy.

The expectation of the result means the importance of evaluating the benefits and losses resulting from performing the desired behavior and its impact on the intention and consequently performing a behavior more strongly has been confirmed in many studies in the field of health. It seems that in the field of saving behavior, people evaluate the benefits of doing and not doing it, both from a material and mental point of view, and then decide to take action to save [19].

People's expectations of the result of doing or changing a behavior are the driving force for behavioral intention. A wide range of expectations of the result can be expressed, including they can be divided into social, physical, mental and emotional expectations. In addition, negative expectations can also be examined. However, it has been found that positive items are sufficient to predict goals. Probably, people think about the saving behavior, if they do the saving behavior well, what consequences and results it might have for them.

Therefore, the third hypothesis of this study aims to evaluate the direction of the significant effect and intensity of the outcome expectation variable on the intention to save in the context of micro-savings behavior.

The third hypothesis: Expectation of the result has a positive and significant effect on micro-savings intention.

Awareness of risk or perceived risk is an important motivational force for adopting health behaviors, people with high blood pressure are much more likely to face daily threats affecting their health than healthy people, and are more likely to be motivated to maintain their health. In the field of saving behavior, it is likely that people who imagine greater risks of not saving have a stronger intention to do so [19].

In fact, it measures people's awareness of the risk of not doing or changing a behavior. This is the driving variable for behavioral intention. People consider what risks and troubles they may face if they don't have savings.

Therefore, the fourth hypothesis of this study aims to evaluate the direction of the significant impact and intensity of the variable of risk awareness on the intention to save in the field of micro-savings behavior.

Fourth hypothesis: awareness of risk has a positive and significant effect on micro-savings intention.

The intention of people's desire to save in general and in the form of a regular program shows their intention, which has different intensities. Intentions are personal goals that can be self-solicited or other-solicited (i.e., imposed by another person). In many researches, especially studies based on the theory of rational behavior and planned behavior, intention has been introduced as the main driver of behavior. The fifth hypothesis of this study evaluates the impact and significance of the intention variable on planning and through it on behavior [19].

The fifth hypothesis: micro-savings intention has a positive and significant effect on planning.

Maintenance self-efficacy (responsibility self-efficacy): having a high level of action self-efficacy alone is not enough to carry out and continue the behavior of physical activities and should be strengthened by using different strategies of action self-efficacy, maintenance self-efficacy and recovery self-efficacy in people; Because the self-efficacy of maintenance or coping is the optimistic beliefs of a person in dealing with the obstacles that arise after the behavior begins [19].

Perceived maintenance self-efficacy refers to a person's level of self-confidence in the ability to continue difficult behavior and focuses on coping with the obstacles ahead. By analyzing this concept, we want to understand how much the audience has the necessary will and confidence to deal with problems and obstacles in the way of performing the desired behavior (saving).

Therefore, investigating the effect of maintenance self-efficacy on the programmer, recovery self-efficacy and small savings behavior can include insights for a better analysis of behavior, which we will evaluate this effect with the sixth to eighth hypotheses.

Sixth hypothesis: self-efficacy of maintenance has a positive and significant effect on small savings planning.

The seventh hypothesis: maintenance self-efficacy has a positive and significant effect on action.

The eighth hypothesis: maintenance self-efficacy has a positive and significant effect on recovery self-efficacy.

Perceived recovery self-efficacy refers to a person's self-confidence in having the ability to resume and continue a difficult behavior after a break. The focus of this index is on the state of abandoning the behavior and the degree of self-confidence gained after a behavior is abandoned, that people are confident that they can identify the factors that cause interruptions in the saving program and for that way. find a solution or resume the program in case of

interruption. Therefore, the ninth hypothesis of this study is to evaluate the effect of self-efficacy on saving action or behavior [19].

Ninth hypothesis: Recovery self-efficacy has a positive and significant effect on micro-savings action.

Action planning and control are considered as a close predictor of behavior and are related to the concept of self-regulatory feedback. Therefore, in order to return people to the cycle of regular behavior, it is necessary to emphasize self-regulation and planning strategies [19].

It measures the level of awareness and clarity of a person's plans and strategies regarding when and how to realize the desired behavior. Planning can be separated into two components, action planning and responsibility planning.

Planning is related to predicting the obstacles that may arise in the process of accepting and maintaining a behavior, and it is a degree of preparation and the use of appropriate strategies that a person uses to overcome such obstacles. The extent to which a person thinks about the possible obstacles in the way of realizing his desired behavior and the extent to which he is prepared after the initiation of that behavior to manage the obstacles and challenges in favor of continuing and strengthening the target behavior. In non-experimental research, the planning level of a person is evaluated subjectively and based on self-expression. The tenth hypothesis aims to evaluate the impact of planning on small savings behavior.

10th hypothesis: planning has a positive and significant effect on micro savings.

3 research method

This study is applied in terms of purpose, descriptive-survey in terms of nature, and cross-sectional in terms of time. Data collection was done by library and field methods including primary and secondary sources. The background of the research and the literature of the subject were used from secondary sources and the library method, and to collect data from primary sources, the field method and the questionnaire tool, the questions of the questionnaire were designed according to the conceptual model of the research and based on previous studies.

To measure the validity of the content quantitatively, the coefficient of content validity ratio (CVR) was used with the participation of 15 academic and professional experts in the financial field. including 24 questions (17 variable questions, 5 demographic questions and 2 self-reported questions about the incidence of saving behavior). The questionnaire was sent to 30 people from the statistical population for the reliability pre-test, and the results for each variable were obtained as described in the following table:

Variable	**Number of questions**	**Cronbach's alpha value**
Understanding risk	0.809	3
Outcome expectations	0.828	3
Action self-efficacy	0.909	3
Maintenance self-efficacy	0.810	3
Behavioral intention	0.896	3
Action planning	0.821	3
You can plan	0.819	3
Recovery self-efficacy	0.878	3
behavior (action)	0.752	4

Considering the value of Cronbach's alpha, which is greater than 0.7 for the items of all variables, the reliability of the questionnaire was evaluated as acceptable.

In order to conduct the research, the general public in Tehran was considered. Due to the synchronicity of data collection with the covid-19 epidemic and compliance with health protocols, the questionnaire was prepared electronically and sent to the available samples in different communication layers and social networks. According to the size of the population, 450 questionnaires were sent to people, of which 305 questionnaires were answered, and finally 200 questionnaires with complete answers were obtained for the purpose of analysis, which according to Hiro et al., 1995 in the multivariate regression analysis of the sample number ratio) independent variables should not be less than 5 and with a more conservative ratio by Halinsky and Feldt [4] and Miller and Kans [13], 10 observations for each independent variable, this research with 7 independent variables needs at least 70 samples, which in this respect, this study is sufficient The sample is enough for the analysis of the findings [7]. Due to the quantitative nature of the current research, descriptive statistics and SPSS software were used to analyze demographic data and inferential statistics, and SmartPLS software was used to test hypotheses.

4 findings

According to the results obtained in the descriptive statistics, the highest number of answers for the variable of gender, age, education, occupation and amount of savings, respectively, are women, between 36 and 40 years old, masters, housewives and more than one million Tomans. It includes the measure. The general demographic results of the research are presented in the table below.

Percent	Number	Variable	
61.5	123	Female	sex
38.5	77	Man	
1.5	3	20 years and less	Age
3.5	7	51 years and older	
6.0	12	Between 21 and 25 years	
11.0	22	Between 26 and 30 years	
29.5	59	Between 31 and 35 years	
30.5	61	Between 36 and 40 years	
11.5	23	Between 41 and 45 years	
6.5	13	Between 46 and 50 years	
11.5	23	PhD and above	Education
12.0	24	diploma	
36.0	72	Masters	
40.0	80	Masters	
0.5	1	Less than a diploma	
18.5	37	Unanswered	Job
25.0	50	Housewife	
4.0	8	Student	
1.0	2	The secretary	
5.0	10	Other	
1.5	3	Entrepreneur	
0.5	1	Manual worker	
18.0	36	Private employee	
21.0	42	Government employee	
5.5	11	Free business	
28.5	57	More than one million tomans	The amount of savings
26.0	52	Between 201 ande 500 thousand tomans	
25.0	50	Between 501 thousand and one million tomans	
20.5	41	Less than 200 thousand tomans	

For the purpose of inferential analysis and structural equations, it was first determined by using SPSS software and based on the calculation of skewness and kurtosis that the variables do not follow the normal distribution. Also, due to the smallness of the data, the Shapiro-Wilk test was also used to determine the normality of the data, and considering the significance level of less than 0.05 for all variables, the hypothesis H0 that the data is not normal was rejected, so the data distribution It is not normal.

Due to the non-normality of the data, Spearman's test was used to evaluate the correlation between the variables, and after removing outliers by drawing a scatter diagram, the number of samples was reduced to 184, which according to the significance level is less than 0.05. Rejection of hypothesis H0) and the value and sign of correlation and the value greater than 0.5 were determined that there is a positive and significant relationship between the independent and dependent variables in this research, the correlation coefficient and importance were calculated for all variables as described in the table below.

Corre lation										
Action	Planning	Recovery self-Efficacy	Maintenance self-efficacy	Behavioral intention	Task self-efficacy	Outcome expectancie	Risk perceptions			
.478**	.414**	.374**	.402**	.557**	.455**	.612**	1.000	Correlation Coefficient	Risk perceptions	**Spearman's rho**
0.000	0.000	0.000	0.000	0.000	0.000	0.000		Sig. (2-tailed)		
.519**	.412**	.430**	.466**	.645**	.488**	1.000	. 612**	Correlation Coefficient	Outcome expectancies	
0.000	0.000	0.000	0.000	0.000	0.000		0.000	Sig. (2-tailed)		
.623**	.600**	.484**	.604**	.607**	1.000	.488**	.455**	Correlation Coefficient	Task self-efficacy	
0.000	0.000	0.000	0.000	0.000		0.000	0.000	Sig. (2-tailed)		
.624**	.531**	.490**	.506**	1.000	.607**	.645**	.557**	Correlation Coefficient	Behavioral intention	
0.000	0.000	0.000	0.000		0.000	0.000	0.000	Sig. (2-tailed)		
.626**	.613**	.582**	1.000	.506**	.604**	.466**	.402**	Correlation Coefficient	Maintenance self-efficacy	
0.000	0.000	0.000		0.000	0.000	0.000	0.000	Sig. (2-tailed)		
.668**	.724**	1.000	.582**	490**	.484**	.430**	.374**	Correlation Coefficient	Recovery Self-Efficacy	
0.000	0.000		0.000	0.000	0.000	0.000	0.000	Sig. (2-tailed)		
.686**	1.000	.724**	.613**	.531**	.600**	.412**	.414**	Correlation Coefficient	Planning	
0.000		0.000	0.000	0.000	0.000	0.000	0.000	Sig. (2-tailed)		
184	184	184	184	184	184	184	184	N		
**. Correlation is significant at the 0.01 level (2-tailed).										

In order to evaluate the adequacy of the sample and the factorial structure of the data, the KMO index and Bartlett's significance level analysis were used, the values of which included 0.885 and less than 0.05, respectively, indicating the adequate adequacy of the data and the appropriateness of the factorial structure of the data. Also, in order to evaluate the degree of randomness of the data, the data randomness test was used, the result of which was estimated to be greater than 0.05 for all variables (confirmation of the hypothesis H0) and indicated the randomness of the data in this research.

In the following, the validity and reliability of the measurement model and the test of the path coefficient and adequacy of the model were discussed in order to measure the structural model of the research using SmartPLS software.

The reliability of the structure was measured with Cronbach's alpha and the composite coefficient, which Cronbach's alpha of all variables except outcome expectations (0.657) and risk perception (0.696) was more than 0.7, but the composite index, which is more superior than Cronbach's alpha, for all The variables were more than 0.7, so the internal correlation of the variables and the reliability of the model were also confirmed.

To measure validity, content validity and construct validity were used. First, the coefficient of content validity ratio was used quantitatively with the participation of 15 experts in the financial field, which according to the carcass table, the content validity ratio of the questions was more than 0.49. Also, the construct validity through Factor loadings, convergent validity index and divergent validity were measured. The factor loading of the questions was calculated, and questions Q5, Q27 were removed from the model due to the factor loading less than 0.7 to make the model fit better. Therefore, the factor loading of all questions was evaluated as more than 0.7, which confirmed the

construct validity of the model. Also, the significance of the factor load and its greater than +2.58 for all questions was confirmed at a significance level of 0.99. Convergent validity was obtained by using the average variance extracted AVE criterion to measure the internal validity of the reflective measurement model, and its value was greater than 0.5 for all variables, which means that the desired hidden variable is at least 50%. It explains the variance of its observables. Also, for all variables, the combined reliability value is higher than the AVE value.

Variable	Factor	Load Factor	T VALUE	AVE	CR	Cronbach's alpha
Risk perceptions	Q1	0.796	16.661	0.622	0.831	0.696
	Q2	0.72	11.651			
	Q3	0.844	31.18			
Outcome expectancies	Q4	0.851	30.052	0.744	0.853	0.657
	Q6	0.874	39.438			
Taskself-efficacy	Q7	0.812	26.526	0.653	0.849	0.734
	Q8	0.784	19.198			
	Q9	0.827	30.88			
Behavioral intention	Q10	0.827	28.906	0.634	0.839	0.712
	Q11	0.861	36.864			
	Q12	0.813	26.663			
Maintenanc eslf-efficacy	Q13	0.795	22.277	0.696	0.873	0.781
	Q14	0.771	18.954			
	Q15	0.822	32.517			
Recovery Self-Efficacy	Q16	0.79	26.755	0.731	0.891	0.817
	Q17	0.732	15.298			
	Q18	0.758	21.581			
Planning	Q19	0.785	19.682	0.567	0.887	0.847
	Q20	0.718	15.114			
	Q21	0.73	16.523			
	Q22	0.865	38.089			
	Q23	0.868	33.064			
	Q24	0.831	24.456			
Action	Q25	0.712	12.279	0.634	0.838	0.708
	Q26	0.833	30.852			
	Q28	0.837	27.833			

Divergent validity is one of the other criteria for examining the fit of measurement models, which covers two issues: a) comparing the correlation between the indicators of a construct with that construct versus the correlation of those indices with other constructs. b) Comparison of the correlation of a construct with its indicators in contrast to the correlation of that construct with other constructs. In this research, divergent validity was calculated using the Fornell and Larker method. Based on this criterion, a hidden variable should be scattered have more among its observables so that it can be said that it has high divergence validity. If the values of the main diameter or root of AVE for each hidden variable are higher than its correlation with other reflective variables in the model, the divergent validity of the reflective measurement model is confirmed at the construct level. According to the results of the table below, the model's divergent validity is confirmed in this research.

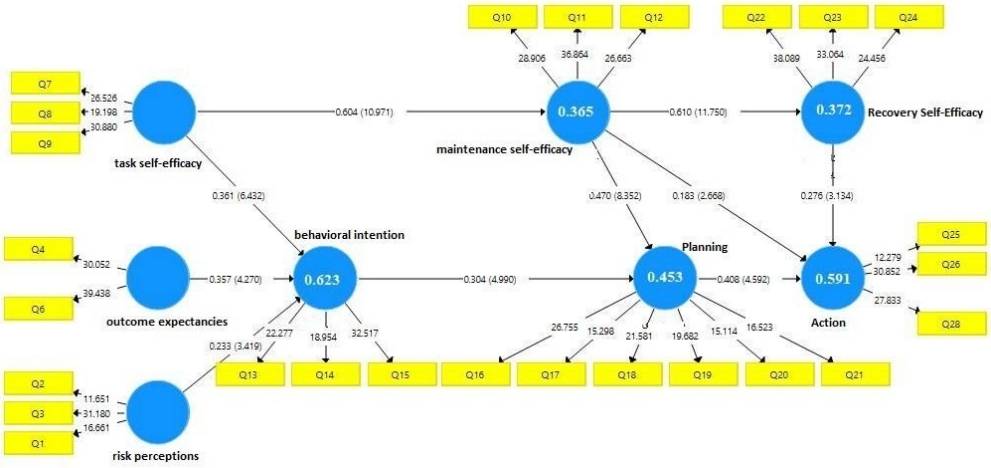
In order to measure the structural model of this research, the path coefficients were calculated as shown in the following figure.

Finally, the evaluation of the structural model and the testing of the hypotheses were extracted as described in the table below, and the results of all the research hypotheses were confirmed.

In order to test the quality of the measurement model (external) and the structural model (internal) of the research, the commonality index and the redundancy index have been used, respectively.

The most important fit index of the whole model in the partial least squares technique is the goodness of fit index.

	behavioral intention	risk perceptions	maintenance self-efficacy	Recovery Self-Efficacy	task self-efficacy	Planning	outcome expectancies	Action
Action								0.796
outcome expectancies							0.863	0.472
Planning						0.753	0.363	0.717
task self-efficacy					0.808	0.635	0.5	0.618
Recovery Self-Efficacy				0.855	0.471	0.708	0.373	0.677
maintenance self-efficacy			0.834	0.61	0.604	0.619	0.483	0.604
risk perceptions		0.789	0.355	0.29	0.438	0.385	0.645	0.44
behavioral intention	0.796	0.622	0.489	0.465	0.642	0.534	0.689	0.614



This index can be calculated using the geometric mean of the R2 index and the average of shared indices. The goodness of fit criterion was invented by Tenenhaus et al. [23] and is calculated according to the following relationship.

$$\text{GOF} = \sqrt{\text{average (Commonality)} \times \text{average (R2)}}$$

Since in partial least squares the value of Commonality is equal to AVE, Wetzles et al. [26] provided the following formula:

$$\text{GOF} = \sqrt{\text{average (AVE)} \times \text{average (R2)}}$$

Wetzles et al. [26] have considered three values to evaluate the goodness of fit index, weak greater than 0.1, moderate greater than 0.25, and greater than 0.36 strong. According to the value calculated in this research, 0.58, the model has a strong evaluation fit. Also, the standardized root mean square residual index (SRMR), which has recently found more preference than the GOF index, has also confirmed the good fit of this model. The value of this index less than 0.1 is acceptable and less than 0.8 is considered good [6, 8].

5 Discussion

According to the value of the determination coefficients and also the significance of the path coefficients in this study, it can be concluded that the health action process approach model has good predictive power in the field of saving behavior.

The results of the research showed that firstly, there is a significant correlation between the constructs of the health action process approach model and micro savings behavior among the study participants. Secondly, the constructs of action self-efficacy, outcome expectations and risk awareness were able to predict 62% of the variance of behavioral intention, and also, behavioral intention with the mediation of planning and maintenance self-efficacy together with recovery self-efficacy accounted for 59% of the variance of micro-savings behavior. They predicted In the health action process approach, in fact, all relationships and hypotheses related to the model of this study were confirmed, in this respect, it is in accordance with the results of many studies conducted with the aim of investigating the relationship between the psychological structures of the health action process approach model and the expected behavior. has it. The results of this study can be discussed in several parts: First, the strongest correlation coefficients were observed between the behavioral intention to perform regular saving behavior with the constructs of outcome

		Result	Load Direct path coefficient	Direct path coefficient
H1	Risk perceptions -> behavioral intention	Approved	3.419	0.233
H2	Outcome expectancies -> behavioral intention	Approved	4.27	0.357
H3	Task self-efficacy-> behavioral intention	Approved	6.432	0.361
H4	Behavioral intention -> Planning	Approved	4.99	0.304
H5	Task self-efficacy-> maintenance self-efficacy	Approved	10.971	0.604
H6	Maintenance self-efficacy -> Recovery Self-Efficacy	Approved	11.75	0.61
H7	Maintenance self-efficacy-> Planning	Approved	8.352	0.47
H8	Maintenance self-efficacy -> Action	Approved	2.668	0.183
H9	Recovery Self-Efficacy -> Action	Approved	3.134	0.276
H10	Planning -> Action	Approved	4.592	0.408

	R Square	CV RED	CV COM
Risk perceptions	–	–	0.264
Outcome expectancies	–	–	0.242
Task self-efficacy	–	–	0.309
Behavioral intention	0.623	0.371	0.279
Maintenance self-efficacy	0.365	0.24	0.377
Recovery self-efficacy	0.372	0.26	0.432
Planning	0.453	0.24	0.391
Action	0.591	0.357	0.287

expectations, action self-efficacy and risk awareness, which is in line with previous studies [27]. who showed that there is a significant correlation between intention and action self- efficacy, action planning and the psychological consequences of saving. Also, a significant correlation between self-efficacy, behavioral intention and planning was proved. Intention is strengthened and supported by self-efficacy and is influenced by barriers and facilitators such as social support. In other words, self-efficacy is a major influencing factor that refers to a specific perceived ability to perform a desired behavior. In fact, a person who does not believe in his abilities to perform the desired behavior will have difficulty in accepting that behavior and following it. Individuals with high levels of action self-efficacy envision success, anticipate the potential consequences associated with diverse strategies, and are more likely to initiate a new behavior. On the contrary, people with less action self-efficacy focus more on failure and doubt their abilities and tend to postpone behavior. However, only having a high level of action self-efficacy is not enough to carry out and continue saving behavior and it should be strengthened by using different strategies of action self-efficacy, retention self-efficacy and recovery self-efficacy in people; Because maintenance self-efficacy is a person's optimistic beliefs in dealing with the obstacles that arise after the behavior starts, and self-efficacy is the ability to recover a person's ability to return to the program and perform the behavior if it stops.

From the theoretical perspective in the health action process approach model, self-efficacy predicts action intention and maintenance self-efficacy predicts behavior. In this study, the effect of recovery self-efficacy on behavior was significant. In all people who have a high level of self-efficacy, this construct affects behavior both directly and indirectly through the planning construct. Action planning and control is considered as a close predictor of behavior. Therefore, in order to return people to the cycle of regular saving behavior, it is necessary to emphasize on self-regulation and planning strategies.

The effect of expectations of the result on behavioral intention was another finding of the present study, which is in accordance with the findings of other studies. The results obtained in this study emphasize the importance of evaluating the benefits and losses resulting from saving behavior in savers, and by clarifying more about the personal and social consequences related to saving and providing emotional and emotional reflections and strengthening interpersonal relationships, a stronger intention can be achieved. Arranged for saving behavior in savers.

The positive and significant path coefficient between risk awareness and intention was another finding of the current research, which was similar to the results of past research. Awareness of risk is an important motivating force for

Chi-Square	SRMR	GOF
908.286	0.074	0.5808

adopting behaviors, people with average income and no savings, compared to people with high income and adequate savings, face threats of sudden needs or demands that require a large amount of money, and are more likely to be motivated to They have savings.

The findings of the study supported the effectiveness of the health action process approach model and showed that 62% of the variance of saving intention is described by motivational phase factors and 59% of behavior variance is described by intentional/voluntary phase factors. Therefore, the results of the path analysis based on the obtained fit indices indicate the fit of the data with the default model of the health action process approach, which is consistent with the results of previous studies [17].

The standardized residual mean square (SRMR), which has recently been more preferred than the GOF index, also confirmed the good fit of this model. The value of this index less than 0.1 is acceptable and less than 0.8 is considered good [6, 8].

We identified various cognitive factors that influence savings adherence, especially types of self-efficacy based on the HAPA model. In this study, we found that intention, action self- efficacy, planning and self-efficacy play a role as the most important determining factors in the adherence to savings in the target community. It was found that HAPA is useful in determining the predictors of adherence to savings among people. It is promising to design intervention programs with the aim of improving the level of adherence to savings by considering these factors. Macro policymakers and market leaders, especially financial businesses, should focus on the self-efficacy and planning of people in designing such interventions so that they can change the financial behavior of customers for the benefit of savings for themselves and customers.

There were limitations in this research that can affect the results, including the economic conditions of the Iranian people at the time of conducting this research, who have experienced several years of severe inflation and lack of proportional income growth, which by its nature can also lead to the intention to save despite having the attitude, the norm. Mental and favorable behavioral control and also weaken saving behavior. Another limitation of this research is the lack of specific literature on saving behavior based on the planned behavior model. Also, due to the conditions resulting from the Covid-19 epidemic, access to more respondents was not achieved, and the absence of this limitation could have given more validity to the generalizability of the model.

In order to develop this research and obtain more accurate and comprehensive results, it is suggested that this model be studied in the audience of other cities with different cultural and ethnic characteristics in order to form a comparative study, commonalities and differences resulting from cultural differences and its effect on the intention and behavior of savings. be specified and make the validity of the research more important and comprehensive.

Application and testing of other intention-based models in the field of saving behavior in order to develop the model of saving behavior: In different behavioral models, different structures and of course different relationships are considered. Therefore, it cannot be expected that there is a comprehensive and complete model that has a significant advantage over other models under any conditions. Therefore, the investigation of other behavioral models will be of special importance. Therefore, it is suggested to use other behavioral models to study savings and the saving intention-behavior gap in future research.

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