DEVELOPMENT OF MONEY ATTITUDES SCALE[1]

Seçil DURAN
M.S Student
Iğdır University
Faculty of Economics
Iğdır, Turkey,
secilyuksel55@hotmail.com,
ORCID ID: 0000-0003-1135-0762

Serkan KÜNÜ
Assoc. Prof.
Iğdır University
Faculty of Economics
Iğdır, Turkey,
serkunu@gmail.com,
ORCID ID: 0000-0002-8641-5850

Volkan DURAN
Asst. Prof.
Iğdır University
Faculty of Art and Science
Iğdır, Turkey,
volkan.duran8@gmail.com.
ORCID ID: 0000-0003-0692-0265

ABSTRACT

To develop a scale for money attitudes are of having significance to get an idea regarding many fields ranging from financial literacy skills to economic and demographic characteristics. Therefore, in this study, Money Attitude Scale was developed in Turkish. As for population, 360 individuals (160 male, 200 female) participated for the explanatory analysis in the study. Additionally 200 individuals participated for the confirmatory analysis in the study. The population consists of the students from various departments ranging from Economic to Mathematics to Education in Iğdır University and Ondokuz Mayıs University. As fort he explanatory factor analysis, a scale having 22 items and three factors was created. It was found that the Cronbach Alpha constant was .874. As for the confirmatory factor analysis, $\chi2$ /sd is found to be 1.467, CFI is found to be .960, GFI is found to be .935, IFI is found to be .961, TLI value is found to be .955, RMSEA value is found to be .048 and RMR is found to be .129 indicating that that the structure is at an acceptable level. Neural network analysis show that the most important items for this model are the items belonging factor 3 "Money as a concrete medium" and Factor 2 ("Money as a tool for relationships") altough they have less items compared to first factor. At the end of the analysis it was concluded that factor 1 should be entitled as "Money as a tool for reaching ideal", factor 2 was entitled as "Money as a tool for relationships" and factor 3 was entitled as "Money as a concrete medium". It should be pointed out that these two dimensions are similar to the constructs of Furnham.

Keywords: *Money attitude, financial literacy, monetary beliefs*

[1] The compliance of the relevant study with ethical rules has been declared.

PARA TUTUMU ÖLÇEĞİNİN GELİŞTİRİLMESİ

Seçil DURAN
Yüksek Lisans Öğrencisi
Iğdır Üniversitesi
İktisadi ve İdari Bilimler Fakültesi
Iğdır, Türkiye,
secilyuksel55@hotmail.com
ORCID ID: 0000-0003-1135-0762

Serkan KÜNÜ
Doç. Dr.,
Iğdır Üniversitesi
İktisadi ve İdari Bilimler Fakültesi
Iğdır, Türkiye,
e-posta serkunu@gmail.com
ORCID ID: 0000-0002-8641-5850

Volkan DURAN
Dr. Öğretim Üyesi
Iğdır Üniversitesi
Fen Edebiyat Fakültesi
Iğdır, Türkiye,
volkan.duran8@gmail.com
ORCID ID: 0000-0003-0692-0265

ABSTRACT | Para tutumlarına dönük bir ölçek geliştirmek, finansal okuryazarlık becerilerinden ekonomik ve demografik özelliklere kadar birçok alanda fikir sahibi olmayı sağlar. Bu nedenle bu çalışmada Türkçe'de Para Tutum Ölçeği geliştirilmiştir. Örneklemle ile ilgili olarak, araştırmaya açıklayıcı analize 360 kişi (160 erkek, 200 kadın) katılmıştır. Ayrıca 200 kişi çalışmadaki doğrulayıcı analiz için örneklem oluşturmuştur. Örneklem, Iğdır Üniversitesi ve Ondokuz Mayıs Üniversitesi'nde İktisat alanından ve Matematiğe Eğitimden çeşitli bölümlerden öğrencilerden oluşmaktadır. Açıklayıcı faktör analizi için 22 maddeden ve üç faktörden oluşan bir ölçek oluşturulmuştur. Bu ölçeğin Cronbach Alpha sabitinin .874 olduğu bulunmuştur. Doğrulayıcı faktör analizi için $\chi 2 / sd$ 1.467, CFI .960, GFI .935, IFI .961, TLI değeri .955, RMSEA değeri .048, RMR değerinin .129 olduğu ve yapının kabul edilebilir düzeyde olduğunu göstermektedir. Yapay sinir ağı analizi, bu model için en önemli boyutun, birinci faktöre kıyasla daha az maddeye sahip olmalarına rağmen, faktör 3 "Somut bir araç olarak para" ve Faktör 2 ("ilişkiler için bir araç olarak para") kalemleri olduğunu göstermektedir. Analiz sonucunda 1. faktörün "ideale ulaşmak için bir araç olarak para", 2. faktörün "İlişkiler için bir araç olarak para", 3. faktörün "Somut bir araç olarak para" olduğu sonucuna varılmıştır. Bu iki boyutun Furnham (2014) yapılarına benzer olduğuna bu bağlamda belirtilmelidir.

Anahtar Kelimeler: *Para tutumu, finansal okuryazarlık, para inançları*

Jel kodu: M00, M50, M59

Alan: *İktisat*
Tür: *Araştırma*

1.INTRODUCTION

Money management can be regarded as one of the habits and skills that people should learn in their life. This promotes the idea of financial literacy, which in recent years has acquired legitimacy. Financial literacy enables citizens to truly consider and appreciate the environment and community in which they work allows people to be more vigilant and mindful of the shortcomings and benefits of financial policies (Gerek& Kurt 2011, p. 61). Many of the definitions related to financial literacy include information about financial concepts, ability to communicate, personal finance management skills, ability to make appropriate financial decisions and planning behavior for future financial needs (Remund, 2010, p. 279). For example, the characteristics of individuals with high financial literacy levels can be listed as follows (Hogarth & Hilgert, 2002, p.1):

- Financial literate people have financial information.

- They have the information about financial consumption and investment.

- They have the knowledge of the basic concepts of financial and capital management.

- The individual plans for the future within the framework of financial literacy knowledge and realizes his plans.

- Financial literate people are expected to fulfill financial information, attitudes and behaviors.

In this respect it is important to learn the attitudes of individuals regarding financial issues as well as their financial knowledge and expertise. Attitudes are evaluations of people, objects, or ideas. Attitudes have three dimensions as *cognitive component* which are the thoughts and beliefs that people form about the attitude object, the *affective component*, which are people's emotional reactions toward the attitude object, and the *behavioral component* which are how people act toward the attitude object (Aronson, Wilson & Akert, 2013, p. 166). In this respect, attitudes are relatively permanent, that is, they persist across time and situations – a momentary feeling is not an attitude; they are limited to socially significant events or objects; they are also generalisable and at least somewhat abstract (Hogg and Vaughan, 2010, p. 94). A variety of forces and factors can influence the attitudes, beliefs and actions of a individual with regard to money. Different measures of money have been established over the past three decades (Furnham, 2014; Lay & Furnham, 2018).

2. THEORETICAL BACKGROUND

The role of money in today's materialistic world is not only a means of trade but a means of achieving our happiness and well-being (Taneja, 2012).

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Freud (1908) implied that certain people subconsciously associate money with feces. Fenichel (1938) claimed that money reflects limitless influence and appreciation, while Murray (1938), and McClelland and Winters (1971) suggested a strong relationship between money and personal achievement and recognition. Adler (1964) indicates that personality and attitude that contributes to wealth accumulation are the result of unalterable feelings of fear and inferiority (Hayes, 2006, p. 21). A person is important to understand the attitude of money because his or her financial performance can be determined based on his/her money attitude (Syafitri & Santi, 2017). Gasiorowska (2015) indicates a person's perception of wealth goals influenced by personal monetary attitudes. However, every individual has different attitudes towards money (Zahriyan, 2016). Money attitudes have an impact not only on our spending habits but on our political ideology, charity, and environmental attitudes in all aspects of our lives are some important areas in which attitudes to money play a part. Although money attitudes play a central role in our lives, the factors shaping those attitudes are little known (Roberts & Sepulveda, 1999). There is a connection between generations of income. The relationship may be positive, if the same behavior is passed from the elderly to children and if children do the opposite of what their parents do. The detrimental link is beneficial because kids benefit from errors or shortcomings in the control of their parents (Solheim et al . 2011; Taneja, 2014). The definition of a multidimensional monetary mindset which has been explored in specific socio-economic and cultural contexts. The multidimensionalities of money was apparent from various influences and components found by different scholars, who analyzed different definitions of money, exposed the different values of money by individuals, and entrusted money with a number of things (Taneja, 2012). In this respect, developing scales or measurement tools to determine the financial attitudes is of having significance. When the literature was examined, it was seen that several studieshave been made to develop a scale to measure money attitudes (Furnham, 1984; Forman, 1987, Tang, 1992, Yamauchi & Templer, 1982). In the Turkish literature, there are scales for Money attitudes such as Adolescent Attitude Scale developed by Beutler and Gudmunson (2012) was translated and adapted into Turkish by (Akın, Karaman, 2015) and the scale of Yamauchi &Templer (1982) translated and adapted by Yayar, Eker Karaca (2018).

The above studies demonstrated that attitudes toward money are multi-dimensional. In aother words, evidence supports Furnham 's argument that money behaviors are clearly not standardized and span various dimensions. Evaluating such attitudes creates well specified buildings which can be affected by external stimuli. Some research support the claim that money roles were taught, initially

established by parental training and witnessing family money behaviors, and gradually perfected through socialization and experience (Hayes, 2006). Therefore in the present study a new scale was created and validated in Turkish and presented as a model for the evaluation of contemporary attitudes towards Money.

3. METHODOLOGY

3.1. Ethical permissions for the research

In this study, all rules stated to be followed within the scope of "Higher Education Institutions Scientific Research and Publication Ethics Directive" were followed. None of the actions stated under the title "Actions Against Scientific Research and Publication Ethics", which is the second part of the directive, were not taken.

Ethics committee permission information

Name of the board conducting the ethical review = Iğdır University Personnel Department

Date of ethics review decision = 26/06/2020

Ethics assessment document issue number = 44738881-200-E22

Some items are taken from the Financial Literacy Scale developed by Ağaç (2020) and A New Money Attitudes Questionnaire developed by Lay & Furnham (2018).

3.2. Method

While developing the scale, firstly the purpose of the scale was determined. In this step, firstly, a literature study was conducted on the scales which are similar to the scale. In addition, the items are defined and explained based on the literature review. Secondly, the dimensions of the scale were examined and defined in the context of the literature. Some items are taken from the Financial Literacy Scale developed by Ağaç (2020) and A New Money Attitudes Questionnaire developed by Lay % Furnham (2018). In addition, expert opinion was consulted in the context of the relationship of dimensions to the intended purpose. In third phase, items were written and item pool were created. At this stage, sufficient number of item statements were written in appropriate format in order to reveal the properties determined for the dimensions to be measured. The deficiencies and inaccuracies of the items were revised. In the review of the items, items have been examined in terms of language and their suitability in terms of item writing techniques. Pre-Trial form has been prepared for the preliminary trial study. Then, a preliminary trial study has been carried out. Scoring and item analysis were made accordingly. At the final stage after the data were collected,

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KMO and Barlett tests were performed to determine whether the data set is suitable for factoring. After factor and item analyzes, it was decided which dimensions or basic factors the scale would consist of. Finally the test statistics were calculated. Especially, cronbach alpha coefficient was calculated in the reliability studies of the scale. The reliability coefficient is between 0 and 1 and is expected to be close to 1. The evaluation criterion used in the evaluation of Cronbach's Alpha Coefficient is as follows;

If $0.00 \leq \alpha < 0.40$, the scale is unreliable.

If $0.40 \leq \alpha < 0.60$, the scale is low reliability.

If $0.60 \leq \alpha < 0.80$, the scale is very reliable.

If $0.80 \leq \alpha < 1.00$, the scale is a highly reliable scale.

The dimensions of the scale and the factor loads of each dimension were calculated by looking at the explanatory factor analysis of the items in the trial form. Factor loads were analyzed by valuing 0.35 and above (Karagöz & Dönmez, 2014; Korkmaz, 2010). In the second part Confirmatory factor analysis was performed in order to evaluate the quality and scale structure of the emerging factors. First of all, the factor structures which were determined in the explanatory factor analysis stage were designed in the form of a measurement model by using the path diagram with the help of the AMOS program. For this purpose, with the help of the AMOS program, the observed variables of each factor were matched with one-way arrows, and each factor was paired with the two-way arrows, which expressed correlation among themselves. Model fit indexes should be checked after parameter estimations for model fit. For this reason, many researchers have developed various fit indexes. Some of these are taken into consideration especially in scale development studies (Kaya, 2011). Finally neural network analysis were performed to better understand the structure of the scale through independent variable importance of each items.

3.3. Population

As for population, 360 individuals (160 male, 200 female) participated for the explanatory analysis in the study. Additionally 200 individuals participated for the confirmatory analysis in the study. The population consists of the students from various departments ranging from Economic to Mathematics to Education in Iğdır University and Ondokuz Mayıs University.

4. FINDINGS

6-point Likert-type scale was used in the scale development. The lowest score that a student can get in the scale is 74 when he gives 1 point to any question and 444 points when he gives 5 points to all questions. The expressions in the

scale were scored as respectively, as "I Disagree", "I Disagree", "I am Undecided", "I Partially Agree", "I Agree" and "I totally Agree" from 6 to 1.

Tablo 4.1. Criteria for evaluating scale expressions

Score range	Scale Evaluation
5-6	Very high
4-5	High
3-4	Average
2-3	Low
1-2	Very Low

The criteria in Table 4.1 were taken as the basis for the evaluation of the scale expressions. The criteria for evaluating scale expressions are given in Table 4.1. Accordingly, 1.00 - 2.00 is classified as very low, 2.00 - 3.00 is regarded as low, 3.00 - 4.00 is classified as average 4.00 - 5.00 is classified as high, 5.00 - 6.00 is classified as very high.

Before conducting confirmatory factor analysis, data screening were executed for determining the dublicate cases. It was found that there are 19 dublicated cases hence they are excluded from the scale. Four cases were also excluded because half of the items were not filled out. No abnormal data was found in the anomaly test.

Table 4.2. The results for the dublicate cases

		Frequency	Percent	Valid Percent	Cumulative Percent
	Indicator of each last matching case as Primary				
Valid	Duplicate Case	19	5,3	5,3	5,3
	Primary Case	341	94,7	94,7	100,0
	Total	360	100,0	100,0	

Missing data analysis was done also. In the EM missing value analysis, it was decided that assignment of missing data can be made since the result is p = 491. Accordingly, assignment to missing data was made according to the serial average.

In the test for the normality of the total score, the data were found to be normally distributed.

Table 4.3. Tests for normality

	Tests of Normality					
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
toplam	,029	337	,200[*]	,995	337	,428

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Before analyzing the factor, the pearson and spearman correlation of each test item with the total score of the test was examined. Since total score values were not normally distributed, all items except item 9, item 10, item 17, item 20, item 46, item 51, item 58 were found to be correlated with the total score. In the second stage, the upper and lower groups of 337 people were formed by determining the lower and upper groups of 27% of the scale through the total scores of the scale. The number of individuals both in upper and lower groups are 91 individuals. Then, the difference between the averages for each item was tested with the t test and Mann-Whitney-U test for independent groups. It is seen that there is a significant differences for all items for the groups except variable 9, variable 10, variable 17, variable 20, variable 46, variable 51, variable 58 which is compatible with the correlation analysis in terms of Mann-Whitney-U test. Therefore, these variables are decided to be exluded from the scale and the scale having 67 items were used for the factor analysis.

KMO coefficient of fitness and to the Bartlett test, the chi-square value was examined whether at the level, and the measuring tool was found to be separated into factor structures. KMO shows that the value found is perfect as it approaches 1, and below 0.50 it cannot be accepted. KMO produces values from 0 to 1. A thumb rule for statistical interpretation: KMO values of 0.8 to 1 indicate the adequacy of the survey. KMO values below 0.6 are suggestive of inadequate sampling and corrective steps should be taken. Also, in factor analysis, whether the distribution in the population has the normal distribution or not was tested with Bartlett's test. In this context, in order to determine the factor structure of the scale, firstly, principal components analysis, then analysis using Direct Oblimin rotation to facilitate interpretation and interpretation of the determined factors. In this method, the factors are interrelated. The purpose of the oblique oblique rotation method is to obtain a simple structure in which the factors are interrelated. The rotation of Direct Oblim is mostly chosen because it is a method

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used in social sciences where the factors are more interrelated (Karaman, 2015).

The KMO sample conformity coefficient of significance in factor analyzes was above 0.60 (KMO =, 879) for factor analyzes, the suitability of the sample size and the measure of Bartlett was measured as 9741,584; p < 0.001 indicating that the scale might decay into factor structures.

Table 4.4. KMO and Bartlett's Test fort he first exploratory factor analyis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,879
Bartlett's Test of Sphericity	Approx. Chi-Square	9741,584
	df	2211
	Sig.	,000

As a result of first factor analysis 17 sub-factors having 63.070% of the total variance related to the scale. It is sufficient that the variance explained in single-factor structures is 30% or more (Çokluk et al., 2012, p. 197). However 17 sub-factors was too much value for the scale as indicated by the scree plot as well.

Table 4.5. Total variance explained by the first factor analysis

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	13,305	19,858	19,858	13,305	19,858	19,858	7,327
2	5,873	8,765	28,623	5,873	8,765	28,623	4,874
3	2,766	4,129	32,752	2,766	4,129	32,752	3,596
4	2,413	3,601	36,353	2,413	3,601	36,353	3,661
5	2,107	3,145	39,498	2,107	3,145	39,498	5,308
6	1,873	2,795	42,293	1,873	2,795	42,293	1,759
7	1,620	2,417	44,710	1,620	2,417	44,710	4,652
8	1,534	2,290	47,001	1,534	2,290	47,001	3,978
9	1,422	2,123	49,123	1,422	2,123	49,123	2,656
10	1,368	2,041	51,165	1,368	2,041	51,165	3,307
11	1,310	1,955	53,119	1,310	1,955	53,119	3,214

12	1,208	1,802	54,922	1,208	1,802	54,922	2,793
13	1,192	1,779	56,700	1,192	1,779	56,700	5,219
14	1,114	1,663	58,363	1,114	1,663	58,363	3,569
15	1,087	1,623	59,986	1,087	1,623	59,986	1,865
16	1,057	1,578	61,564	1,057	1,578	61,564	3,540
17	1,010	1,507	63,070	1,010	1,507	63,070	3,749

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

As seen in Figure 4.1, the slope makes a plateau from the fourth point. In this case, it can be said that the scale consists of a three factor.
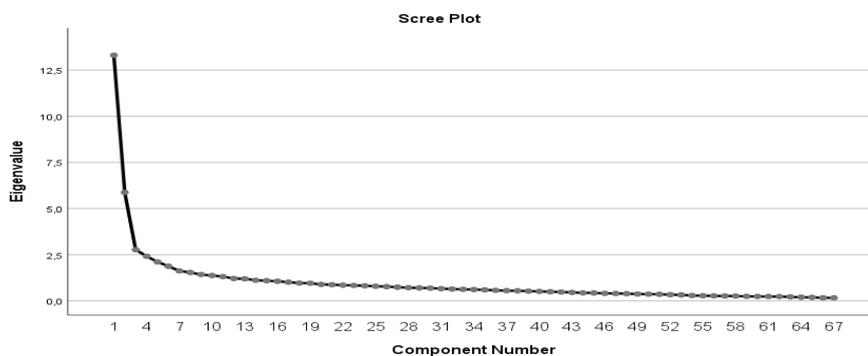

Figure 4.1: Scree plot fort he first factor analysis

When the component matrix was investigated it was seen that items 4, 5, 14, 15, 16, 18, 22, 25, 34, 35, 36, 40, 41, 50, 59, 66, 67 have two or three factor loads in the component matrix, therefore they are excluded from the analysis and new factor analysis was done. The KMO value of this analysis was found to be .898 which still holds 1033ort he factor analysis

Table 4.6. KMO and Bartlett's Test fort he second factor analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,898
Bartlett's Test of Sphericity	Approx. Chi-Square	6486,810
	df	1225
	Sig.	,000

It was found that there are 12 sub-factors having 59.160 % of the total variance related to the scale, however it is also for a high number fort he scree plot as well which is similar to previous one.

Table 4.7. Total Variance Explained 1034ort he second factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	11,547	23,093	23,093	11,547	23,093	23,093	7,187
2	4,437	8,875	31,968	4,437	8,875	31,968	3,968
3	2,022	4,044	36,012	2,022	4,044	36,012	3,552
4	1,869	3,737	39,749	1,869	3,737	39,749	3,909
5	1,535	3,071	42,820	1,535	3,071	42,820	4,117
6	1,401	2,802	45,622	1,401	2,802	45,622	1,621
7	1,251	2,502	48,124	1,251	2,502	48,124	5,074
8	1,207	2,415	50,539	1,207	2,415	50,539	3,581
9	1,155	2,310	52,849	1,155	2,310	52,849	3,936
10	1,096	2,193	55,042	1,096	2,193	55,042	2,526
11	1,058	2,116	57,158	1,058	2,116	57,158	4,030
12	1,001	2,001	59,160	1,001	2,001	59,160	1,335

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

When the pattern matrix was investigated it was seen that items 62, 7, 11 have two or three factor loads in the matrix, therefore they are excluded from the analysis and new factor analysis was done. The KMO value of this analysis was found to be .901 which still holds 1034ort he factor analysis. It was found that there are 10 sub-factors having 59.160 % of the total variance related to the scale, however it is also for a high number fort he scree plot as well which is similar to previous one.

Table 4.8. Total Variance Explained for the third factor analysis

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	11,395	24,244	24,244	11,395	24,244	24,244	7,445
2	4,082	8,686	32,930	4,082	8,686	32,930	3,923
3	1,989	4,233	37,163	1,989	4,233	37,163	3,430
4	1,794	3,817	40,979	1,794	3,817	40,979	2,061
5	1,499	3,189	44,168	1,499	3,189	44,168	5,878
6	1,361	2,897	47,065	1,361	2,897	47,065	3,428
7	1,219	2,594	49,659	1,219	2,594	49,659	5,453
8	1,179	2,510	52,169	1,179	2,510	52,169	3,586
9	1,131	2,405	54,574	1,131	2,405	54,574	1,945
10	1,068	2,272	56,847	1,068	2,272	56,847	3,002

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

When the pattern matrix was investigated in subsequent factor analysis it was seen that items 1,3, 9, 24, 28, 30,32, 37, 38, 39, 42, 43, 49, 55, 56, 64, 68, 69, 70, 72, 74 have two or three factor loads in the matrix and variable 08, 21, 31 is the only ınder factor in the matrix therefore they are excluded from the analysis and new factor analysis was done. After the fifth factor analysis, the final KMO value of this analysis was found to be .899 which still holds for the factor analysis.

Table 4.9. KMO and Bartlett's Test for the final factor analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,899
Bartlett's Test of Sphericity	Approx. Chi-Square	2467,479
	df	253
	Sig.	,000

It was found that there are 3 sub-factors having 45.908 % of the total

variance related to the scale, however it is compatible for the scree plot.

Table 4.10. Total Variance Explained for the last factor analysis

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6,594	28,669	28,669	6,594	28,669	28,669	6,320
2	2,612	11,355	40,023	2,612	11,355	40,023	3,023
3	1,353	5,884	45,908	1,353	5,884	45,908	2,586
4	,993	4,318	50,226				
5	,959	4,168	54,394				
6	,893	3,882	58,276				
7	,846	3,680	61,956				
8	,795	3,455	65,411				
9	,734	3,189	68,600				
10	,715	3,109	71,710				
11	,708	3,078	74,787				
12	,659	2,867	77,654				
13	,645	2,806	80,460				
14	,619	2,690	83,150				
15	,592	2,573	85,723				
16	,526	2,285	88,008				
17	,502	2,183	90,191				
18	,465	2,020	92,211				
19	,418	1,816	94,027				
20	,397	1,727	95,754				
21	,354	1,541	97,294				
22	,336	1,460	98,755				
23	,286	1,245	100,000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

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When the pattern matrix was examined it was concluded that no variable have two or more factor loads in the matrix, therefore it seems that this structure is well suited for the factor analysis.

Table 4.11. Pattern matrix fort he second factor analysis

Pattern Matrix[a]			
	Component		
	1	2	3
SMEAN(VAR00057)	,788		
SMEAN(VAR00063)	,711		
SMEAN(VAR00023)	,698		
SMEAN(VAR00029)	,683		
SMEAN(VAR00048)	,676		
SMEAN(VAR00052)	,672		
SMEAN(VAR00053)	,646		
SMEAN(VAR00061)	,643		
SMEAN(VAR00071)	,628		
SMEAN(VAR00060)	,618		
SMEAN(VAR00026)	,532		
SMEAN(VAR00047)	,506		
SMEAN(VAR00073)	,490		
SMEAN(VAR00054)	,473		
SMEAN(VAR00002)	,432		
SMEAN(VAR00013)		,849	
SMEAN(VAR00012)		,781	
SMEAN(VAR00065)		,724	
SMEAN(VAR00006)		,659	
SMEAN(VAR00027)			
SMEAN(VAR00045)			,799
SMEAN(VAR00044)			,704
SMEAN(VAR00033)			,471

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 5 iterations.

This should be inferred that the structure is calculated reasonably for a scale with factor loads of 0.30-0.60. For an object with factor loads higher than 0.60, the structure is strongly rated (Kline, 1994). It was found that the Cronbach Alpha constant was .874.

As for the confirmatory factor analysis which was apllied to 200 university students at the second stage, after the elimination of items 33, 54, 73, 47, 60, 52, 2, 61, 26, 53 step by step and modification between item 13-12 and item 16-17 was made following structure was left at the end in Figure 4.2.
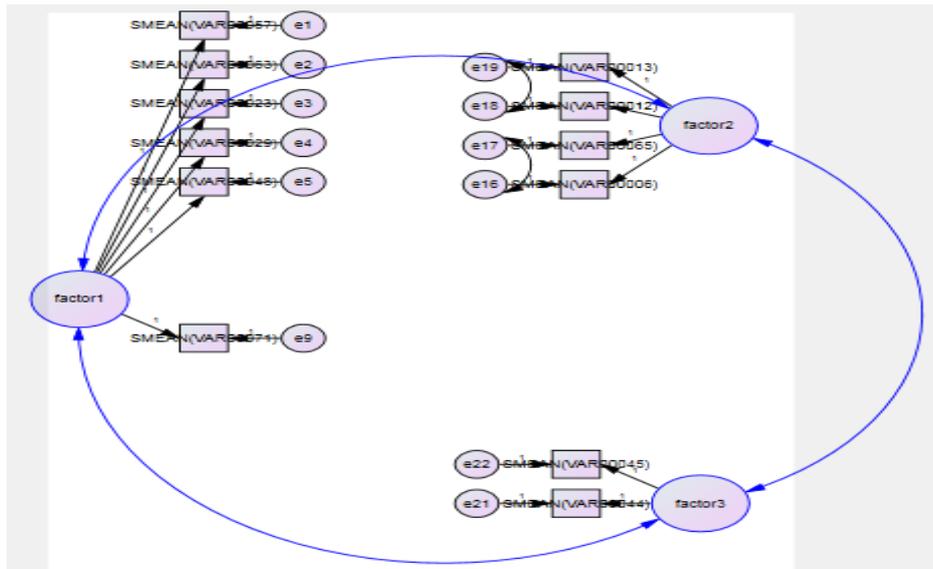

Figure 4.2. Final structure at the end of the confirmatory factor analysis

According to the results, most of the values fit the expected levels of tha parameters. In particular, X2 / df, GFI, TLI, CFI, RMSEA, RMR and IFI values reveal that the structure is at an acceptable level.

Table 4.12. Results of the Second Confirmatory Factor Analysis (Arbuckle
2003; Byrne, 2001; Buğday, 2015; Meydan and Şeşen, 2015).

Parameter	Value	Explanation	Compatibility
χ2 /sd	1.467	A value of 2 or less indicates that model fit is acceptable.	+
CFI	.960	It means that the model fit is acceptable if it is greater than 0.95.	+
GFI	.935	If GFI exceeds 0.90, this indicates that model fit is acceptable.	+
IFI	.961	Being between 90 and 0.95 indicates that model fit is acceptable.	+
TLI	.955	A value between 0.90 and 0.95 indicates that model fit is acceptable.	+
RMSEA	.048	If it is below 08, it indicates that the model fit is acceptable.	+
RMR	.129	Value above 0.50 indicates acceptable model-data fit	+

When covariance structures are analyzed, p value <0.05 indicates a statistically significant relationship between factor 1 and factor 2 dimensions. Correlation between factor 1 and factor 2 is found to be .014, correlation between factor 2 and factor 3 is found to be .084 and the correlation between factor 1 and factor 3 is found to be .605.

Table 4.13. Covariances between dimensions.

			Estimate	S.E.	C.R.	P
factor1	<-->	factor2	,011	,064	,166	,868
factor1	<-->	factor3	,563	,106	5,322	***
factor2	<-->	factor3	,066	,082	,798	,425

In this context, as a result of last confirmatory factor analysis, the standardized regression weights of the items are given in Table 4.14. The standardized regression weights vary from .608 to .741.

Table 4.14. Standardized regression weights

			Estimate	
VAR00057_1	<---	factor1	,694	Factor 1
VAR00063_1	<---	factor1	,654	
VAR00023_1	<---	factor1	,635	
VAR00029_1	<---	factor1	,661	
VAR00048_1	<---	factor1	,655	
VAR00071_1	<---	factor1	,711	
VAR00006_1	<---	factor2	,741	Factor 2
VAR00065_1	<---	factor2	,700	
VAR00012_1	<---	factor2	,589	
VAR00013_1	<---	factor2	,648	
VAR00044_1	<---	factor3	,608	Factor 3
VAR00045_1	<---	factor3	,618	

Finally when the neural network analysis for each items for the structure having three dimension was executed following model was reached in given Figure 4.3.
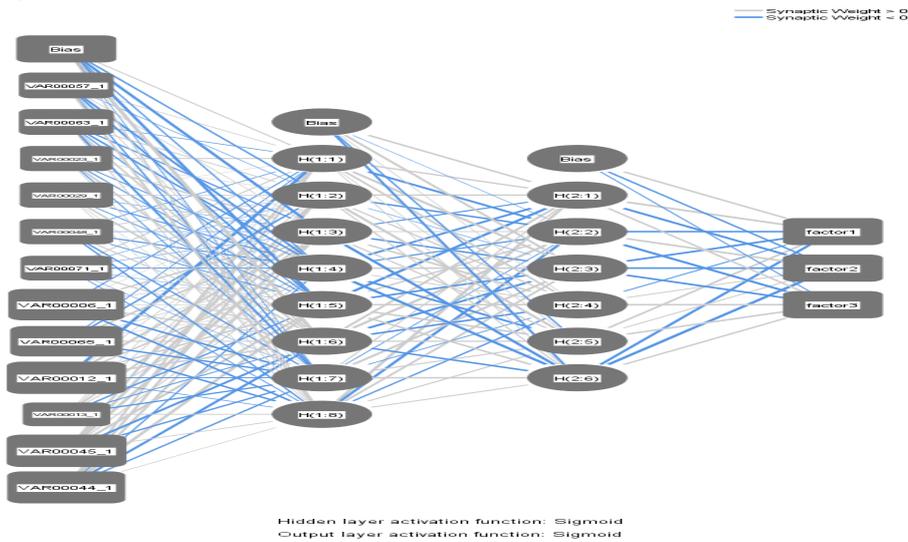

Figure 4.3. Neural network model for each items

Independent variable importance was given in Table 4.15. According to this, the most significant item is the item 045 in this scale. Secon one ise the item 12 and then item 44. The item having the least significance is the item 071 in this respect.

Table 4.15. Independent variable importance according to neural network analysis

Independent Variable Importance		
	Importance	Normalized Importance
SMEAN(VAR00057)	,054	36,6%
SMEAN(VAR00063)	,054	36,8%
SMEAN(VAR00023)	,045	30,9%
SMEAN(VAR00029)	,049	33,4%
SMEAN(VAR00048)	,049	33,6%
SMEAN(VAR00071)	,041	28,0%
SMEAN(VAR00006)	,132	90,4%
SMEAN(VAR00065)	,119	81,4%
SMEAN(VAR00012)	,144	98,6%
SMEAN(VAR00013)	,027	18,5%
SMEAN(VAR00045)	,146	100,0%
SMEAN(VAR00044)	,140	95,9%

Interestingly the most important items for this model are the items belonging factor 3 and Factor 2 as given Figure 4.4.
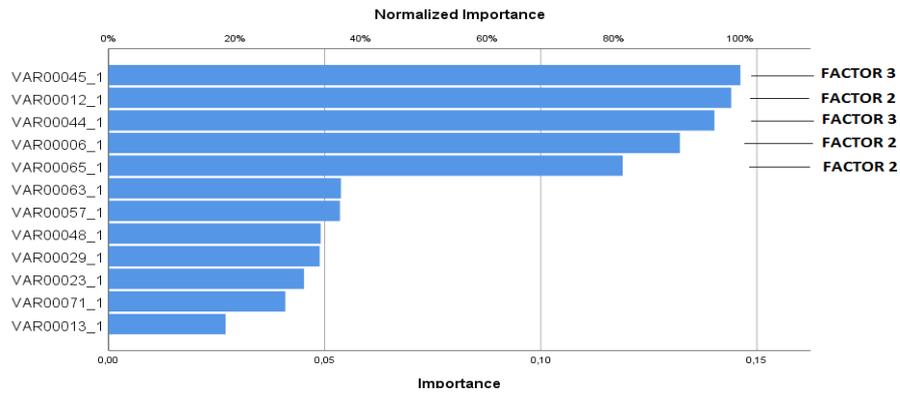
Figure 4.4. Independent variable importance according to neural network analysis

When the content of the items belonging to each factors were exemined, it was concluded that factor 1 should be entitled as "Money as a tool for reaching ideal", factor 2 was entitled as "Money a tool for relationships" and factor 3 was entitled as "Money as a concrete medium".

Table 4.16. Naming fort he factors

SMEAN(VAR00057)	Money is a tool for my hopes.	Money as a tool for reaching ideals
SMEAN(VAR00063)	The way to a good education depends on how Money you have.	
SMEAN(VAR00023)	One of the important conditions of happiness is having money.	
SMEAN(VAR00029)	The way to reach my dreams is through money.	
SMEAN(VAR00048)	Having a lot of money means having a lot of opportunities.	
SMEAN(VAR00071)	Improving people's monetary situation allows many problems to be solved.	
VAR00006_1	It is unnecessary to spend money on books.	Money as a tool for relationships
VAR00065_1	When choosing my friends, I consider their monetary status.	
VAR00012_1	I enjoy buying expensive products to impress others.	
VAR00013_1	I like to show people how much money I have.	
VAR00044_1	The most valuable money is gold.	Money as a concrete medium
VAR00045_1	The most valuable money is dollar.	

5. CONCLUSION

To develop a scale for money attitudes are of having significance to get an idea regarding many fields ranging from financial literacy skills to economic and

demographic characteristics. Therefore, in this study, Money Attitude Scale was developed in Turkish. As fort he explanatory factor analysis, a scale having 22 items and three factors was created. It was found that the Cronbach Alpha constant was .874. As for the confirmatory factor analysis, $\chi 2$ /sd is found to be 1.467, CFI is found to be .960, GFI is found to be .935, IFI is found to be .961, TLI value is found to be .955, RMSEA value is found to be .048 and RMR is found to be .129 indicating that that the structure is at an acceptable level. Neural network analysis show that the most important items for this model are the items belonging factor 3 "Money as a concrete medium" and Factor 2 ("Money as a tool for relationships") altough they have less items compared to first factor.

At the end of the analysis it was concluded that factor 1 should be entitled as "Money as a tool for reaching ideal", factor 2 was entitled as "Money as a tool for relationships" and factor 3 was entitled as "Money as a concrete medium". Money as a tool for reaching ideal is related to achievement and success. According to this, the belief that money is an evident and equivalent symbol of accomplishment and success. "Money as a tool for relationships" is related to power and status. Money, if and when they attain it, is what many people are searching for, and proud to show off. Money is a significant source of social standing and of financial influence and wealth (Furnham, 2014; Lay and Furnham, 2018).
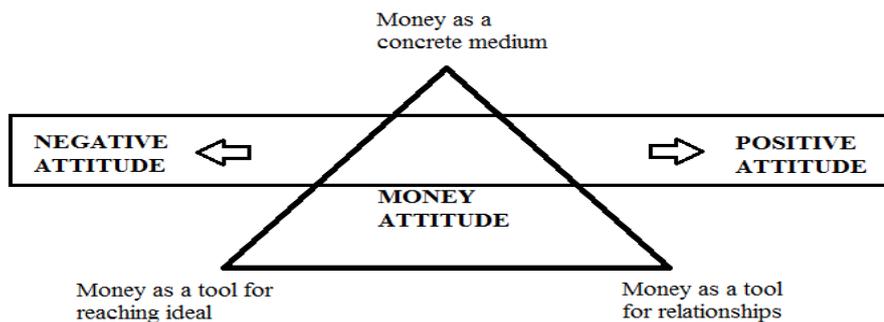

Figure 5.1: Dimensions of money attitude scale

It should be pointed out that these two dimensions are similar to the constructs of Furnham (2014). Final factor can be regarded as a dimension viewing money as concrete medium indicating that money viewing as a some concrete valuable medium compared based on a valuable money or item. Monetary attitudes, based on whether the individual uses money through his or her transaction, are categorized into two ways, one is positive and another is negative. Those with positive financial attitudes have rationally invested their

resources with a sense of time management and market responsiveness. At the other side, individuals with a pessimistic outlook about money become more reckless and violent while they shop. Prestige, perceptive and fear are part of theories with a destructive monetary mindset (Saleh, 2015). Therefore higher and lower points of the scale we have developed can be interpreted in this positive and negative direction. It should be recommended that time dimension or related items for time timension in the context of monetary beliefs could be added for future research for developing this scale.

6. CONFLICT OF INTEREST STATEMENT

There is no conflict of interest between the authors.

7. FINANCIAL SUPPORT

The author(s) received no specific funding or support for this work.

8. AUTHOR CONTRİBUTIONS

V.D: Idea

S.K.: Design

S.K: Check

S.D: Collection and / or processing of resources;

S.D and V.D: Analysis and / or interpretation;

S.D: Literature review;

S.D and V.D: Writer;

S.K: Crtical evaluation

9. ETHICS COMMITTEE STATEMENT AND INTELLECTUAL PROPERTY COPYRIGHTS

Ethics committee principles were complied with in the study and necessary permissions were obtained in accordance with the intellectual property and copyright principles. This study was carried out with the necessary ethical permission with the decision of Iğdır University Personnel Department with the number 44738881-200-E22.

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