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# Financial Distress Of Adults: A Survey In Eskişehir, Turkey\*

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### **ABSTRACT**

As financial well-being is considered to be one of the most important factors which may affect the level of financial satisfaction and consequently the level of life satisfaction, financial distress has emerged as an important subject of research. We measure the variables of financial distress, financial management behavior and money attitude for adults with a survey conducted on a sample of households living in Eskisehir, Turkey and attempt to model the interrelationships between these variables using Structural Equation Models. The results of the model reveal that High Level of Financial Distress is associated positively with Risky Financial Management Behavior and negatively with Investment Oriented Financial Management Behavior. Moreover, Money Oriented Financial Attitude and Investment Oriented Financial Management Behavior are positively correlated. According to the findings, married adults seem to be the most financially satisfied group, whereas single adults seem to be the least financially satisfied group. Yet, interestingly, they are the least financially distressed group as well. Divorced adults, on the other hand, seem to be the most financially distressed group. Middle aged adults seem to overview their financial position more often than young adults. Both young and middle aged women seem to overview their financial position more often than men. Women tend to save more on a regular basis compared to men. Similarly, young adults tend to save more on a regular basis.

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# Yetişkinlerde Finansal Sıkıntı: Türkiye, Eskişehir'de Bir Anket Uygulaması

## MAKALE BİLGİSİ

# ÖZ

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Anahtar Kelimeler: Finansal Sıkıntı, Finansal Yönetim Davranışı, Paraya Karşı Tutum, Yapısal Eşitlik Modelleri Finansal sağlık, finansal memnuniyeti ve ve bunun sonucunda yaşam memnuniyetini etkileyebilecek en önemli faktörlerden biri olarak kabul edildiğinden, finansal sıkıntı önemli bir arastırma konusu olarak ortaya çıkmıştır. Çalışmada, Türkiye'nin Eskişehir kentinde yaşayan hane halklarını temsil eden bir örneklem üzerinde anket uygulanarak; Finansal Sıkıntı, Finansal Yönetim Davranışı, Paraya Karşı Tutum değişkenleri ölçülmüş ve bu değişkenler arasındaki ilişkiler Yapısal Eşitlik Modelleri ile modellenmeye çalışılmıştır. Modelin sonuçlarına göre, yüksek derecedeki finansal sıkıntı, riskli finansal yönetim davranışı ile pozitif, yatırım odaklı finansal yönetim davranışı ile negatif ilişki göstermektedir. Ayrıca, para odaklı finansal tutum ve yatırım odaklı finansal yönetim davranışı birbirleriyle pozitif ilişki göstermektedir. Bulgulara göre, evli yetişkinler finansal yönden en yüksek memnuniyete sahipken, bekar yetişkinler finansal yönden en düşük memnuiyete sahip görünmektedir. Ancak, ilginç şekilde, bekar yetişkin grubu aynı zamanda en az finansal sıkıntı yaşayan gruptur. Öte yandan, boşanmış yetişkinler, en fazla finansal sıkıntı yaşayan gruptur. Orta yaşlı yetişkinler, gençlere göre finansal durumlarını daha fazla gözden geçirmektedir. Hem genç, hem orta yaşlı kadınlar, erkeklere göre finansal durumlarını daha fazla gözden geçirmektedir. Kadınlar, erkeklere göre daha fazla düzenli tasarruf yapma eğilimindedir. Benzer sekilde, genc vetiskinler daha fazla düzenli tasarruf vapma eğilimindedir.

# 1. Introduction

Starting from the 1990's and especially from 2000 and on, social scientists have started to be more interested in personal finance issues such as financial satisfaction and personal financial management. As long as individuals exhibit responsible financial behavior, they tend to feel more comfortable about their financial position and more satisfied with it. As a result, their life satisfaction tends to increase. In this regard, financial behavior and financial wellness has evolved as significant topics of research on the personal finance agenda.

As emphasized by various scholars, financial wellness is among the most important factors, which may influence financial satisfaction and accordingly life satisfaction (Xiao and others. 2014, p. 12; Shim and others, 2009, p.719, Porter and Garman 1993, p.160). Financial wellness of individuals and households depends mostly on the decisions taken in the fields of spending, saving, investment and borrowing (Xiao and others, 2009, p.66; Dowling and others, 2009, p.10; Joo and Grable, 2004, p.45). Individuals who are not able to manage their personal financial issues tend to be more vulnerable to financial problems and distress. In this respect, some studies provide evidence for the relationship between the level of personal debt and personal financial behavior (Santos and Abreu, 2013, p.26; Lusardi and Tufano 2009, p. 24).

The meaning people attach to money and their fundamental perceptions and beliefs about money determines their money attitude. Within the framework of Theory of Planned Behavior, money attitude is reflected on personal financial management behavior and habits (Xiao, 2008). Taking into consideration the effects of personal financial management decisions on financial distress, determinants of financial behavior have been explored by various studies. Money attitude has been suggested as one of the most important factors, which may impact how individuals behave in cash management, credit management, financial planning matters (Parrota and Johnson, 1998).

The purpose of the study is to measure the variables of financial distress, financial management behavior and attitude towards money (money attitude) for adults in Turkey and model the interrelationships between these variables and demographic variables using Structural Equation Models.

#### 2. Literature

Positive financial behaviors contribute to financial satisfaction and financial satisfaction in turn contributes to life satisfaction (Xiao et al., 2009). Financial well-being is also related to academic success, as well as psychological and physical health (Shim and others, 2009). Individuals who exhibit better financial behaviors tend to have lower levels of financial stress, and therefore, higher levels of financial satisfaction. (Joo and Grable, 2009, p.39).

According to Gutter et al. (2011) financial well-being is significantly related to budgeting, saving, risky credit card behaviors, and compulsive buying. Financial management practices, money attitudes, and financial problems are found to predict financial satisfaction (Dowling and others, 2009, p.10).

Financial attitude and financial knowledge significantly positive relate to financial management behaviors (Mien and Thao, 2015, p.12). Money attitudes and Financial Knowledge have a significant positive impact on the personal financial management behavior of young adults, and financial knowledge has a positive moderating impact on the relationship of money attitudes and personal financial management behavior (Qamar and others, 2015, p. 305). Likewise, according to JBR (2014, p. 78) the more positive financial attitudes the better the financial management practices and sound financial management practices adopted are related to higher satisfaction with financial status.

Money is perceived as a symbol of success and as one of the tools to gain power and respect in a myriad of cultures. Money has the power to affect the prosperity, financial wellness or financial distress by generating financial comfort or financial problems. Hence, money attitude is among the variables which may determine financial distress and financial satisfaction (Dowling and others, 2009, p.10; Tatzel 2002, p.122; Wilhelm and others, 1993; Godwin and Carroll, 1986). Considering the relationships identified in the literature between financial distress, financial behavior and money attitude we build a theoretical model as exhibited below to investigate how these latent variables are interrelated.

### 3. Methodology

SEM consists of two components, a measurement model and a structural model. The measurement model assesses latent (unobserved) variables as linear functions of indicators (observed variables). The structural model shows the direction and strengths of the relationships of the latent variables. A typical structural equations model is defined:

$$\eta = B \eta + \Gamma \xi + \zeta \tag{1}$$

where  $\eta$  is a column vector of m endogenous variables,  $\xi$  is a column vector of n exogenous variables, E is a matrix E is a matrix E is a matrix E is a matrix E is a matrix E is a matrix E is a matrix E is a matrix E is a column vector of error terms associated with endogenous variable on another endogenous variable, and E is a column vector of error terms associated with endogenous variables. E represents the covariance matrix E is a column vector of exogenous variable E is a column vector of error terms associated with endogenous variables. E is a column vector of exogenous variable E is a column vector of exogenous variable E is a column vector of exogenous variable E is a column vector of exogenous variable E is a column vector of exogenous variable E is a column vector of exogenous variable E is a column vector of E is a column vector of exogenous variable.

The measurement equations relating the latent variables to the measurement variables are

$$y = \Lambda_{v} \eta + \varepsilon \tag{2}$$

$$x = \Lambda_{x} \xi + \delta \tag{3}$$

 $y_{(p \times I)}$  and  $x_{(q \times I)}$  are the column vectors of p measured endogenous variables, and q measured exogenous variables, respectively.  $\Lambda_y$  and  $\Lambda_x$  are the corresponding factor loading( $\lambda_{ij}$ ) matrices.  $\epsilon$  and  $\delta$  are the error terms related to the measured variables and are uncorrelated. In the proposed model, there are three endogenous variables (m = 2) and two exogenous variables (n = 2).

In this study, Financial Distress, Financial Management Behavior and Money Attitude was measured by a questionnaire. Financial Distress was measured by items adapted from the Financial Wellness Scale developed by Prawitz et al. (2006). Financial Management Behavior was measured by items adapted from the Financial Management Behavior Scale developed by Parrotta and Johnson (1998). Money attitude was measured by items adapted from the Attitude Towards Money Scale developed by Lima and Teo (1997). The items utilized were translated into Turkish and modified by expert opinions before the pilot study.

The target population of the survey consists of female and male adults aged 18-69, from socio-economic groups of A, B, C1, C2, D ve E. The sampling method employed is random quota sampling. A pilot study was conducted with a sample of 100 people in 6 districts of Eskişehir in 2016, during which people were surveyed face to face. The sample was constructed according to predetermined quotas with respect to age, gender and socio-economic status (SES). After dropping a survey item related to financial management behavior, all items related to the measured variables provided a high level of reliability. (Cronbach Alpha of FD is 0.868; Cronbach Alpha of FB is 0.805; Cronbach Alpha of ATM is 0.985). Survey questions were revised after the pilot study and it was conducted to 700 people in 6 districts of Eskişehir face to face.

We measured the latent variables of financial distress, financial management behavior and money attitude for adults using survey data and attempted to model the interrelationships between these variables using Structural Equation Models (SEM). SEM is a widely used statistical methodology in social, behavioral, economic and other sciences to explore interrelationships among latent constructs, which are measured by a set of observed indicators. It is a multi-variable statistical technique which uses a linear approach in order to resolve complex theoretical structures containing intangible facts (Yılmaz & Çelik, 2009). SEM consists of two components, a measurement model and a structural model. The measurement model assesses latent (unobserved) variables as linear functions of indicators (observed variables). The structural model shows the direction and strengths of the relationships of the latent variables. We utilize Confirmatory Factor Analysis (CFA) in order to determine whether the measurement model containing each sub-dimension are significant. Maximum Likelihood method is used to predict the structural parameters. We employ Lisrel 9.1 to conduct factor analysis and to build Structural Equation Models.

# 4. Findings

The sample size of the study can be considered "good" based on the KMO value (KMO=0.712). 50.4 per cent of the participants in the survey were female while 49.6 per cent were male. Age frequencies and SES frequencies are shown in the tables below.

Age Frequency % 18-24 116 16.6 25-34 142 20.3 35-44 19.0 133 45-54 123 17.6 55-64 90 13.0 65 and over 95 13.6 **Total** 100.0

Table 1. Age Frequencies

Table 2. SES Frequencies

SES	Frequency	%
A	24	3.4
В	48	6.9
C1	166	23.7
C2	226	32.3
D	154	22.0
E	82	11,7
Total	700	100.0

Data analysis included 615 questionnaires, since 85 questionnaires were excluded due to incorrect or missing information. As a result of the factor rotations, we constructed 4 factors, which explained 66.054 per cent of the variations.

Factor B2 (High Level of Financial Distress) was measured by the following items:

- B.4: How often do you worry about affording your normal monthly expenses?
- B.6: How often do you have difficulty making ends meet?

Factor D (Money Oriented Financial Attitude) was measured by the following items:

- D.2: Money earns the respect of people to you.
- D.4: Easy earned money is spent unconsciously.
- D.5: Money is the most important thing in my life.

Factor C2 (Risky Financial Management Behavior) was measured by the following items:

- C.1: I make a monthly expense budget. (This item was reverse coded)
- C.3: I calculate my income and expenditures. (This item was reverse coded)
- C.4: I overview my spending habits. (This item was reverse coded)
- C.5: Sometimes I pay interest on my credit card debt as I pay my debt late.
- C.8: I often spend more money than I have.
- C.9: I usually pay a portion of my credit debt rather than all of it.

Factor C3 (Investment Oriented Financial Management Behavior) was measured by the following items:

- C.16: I overview my financial position on a regular basis.
- C.17: I make savings on a regular basis.
- C.18: I make investments on a regular basis.

Factors B2, C2, VE C3 were measured by a 5-point Likert Scale of 1. Never/ 5. Always whereas Factor D was measured by 5-point Likert Scale of 1. I definitely disagree /5. I definitely agree).

Proposed research model is represented in the figure below. In the proposed model, latent variables B2 corresponds to High FD, D corresponds to Money Oriented Financial Attitude and C2 corresponds to Risky FMB while C3 corresponds to Investment Oriented FMB.

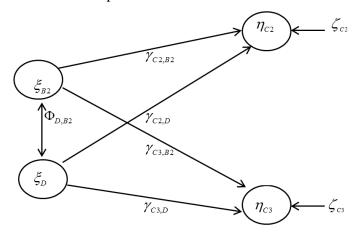


Figure 1. Proposed research model

The symbols in Fig. 1 are defined below.

 $\xi_{R2}$ : High Level of Financial Distress,

 $\xi_{D}$ : Money Oriented Financial Attitude,

 $\eta_{C2}$ : Risky Financial Management Behavior,

 $\eta_{C3}$ : Investment Oriented Financial Management Behavior,

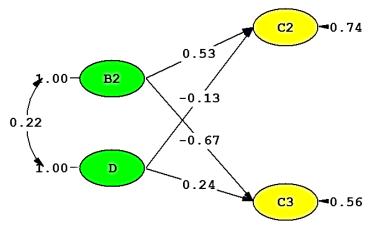
 $\Phi_{D,B2}$ : Correlation between Financial Distress and Money-Oriented Financial Attitude,

 $\gamma_{C2,B2}$ : The direct impact of High Level of Financial Distress on Risky Financial Management Behavior.

 $\gamma_{C^{3,B^2}}$ : The direct impact of High Level of Financial Distress on Investment Oriented Financial Management Behavior,

 $\gamma_{C2,D}$ : The direct impact of Money-Oriented Financial Attitude on Risky Financial Management Behavior,

 $\gamma_{C3,D}$ : The direct impact of Money-Oriented Financial Attitude on Investment Oriented Financial Management Behavior,



Chi-Square=340.19, df=72, P-value=0.00000, RMSEA=0.078

Figure 2. Research Model

The results of the model reveal that as the High Level of Financial Distress increases by 1 unit, Risky Financial Management Behavior tends to increase by 0.53 units. On the other hand, as the High Level of Financial Distress increases by 1 unit, Investment Oriented Financial Management Behavior tends to decrease by 0.67 units. As the Money-Oriented Financial Attitude increases by 1 unit, Investment Oriented Financial Management Behavior tends to increase by 0.24 units. Further, one can say that there is a positive relation between Money Oriented Financial Attitude and High Level of Financial Distress, as the correlation coefficient between these factors are 0.22.

Specified SEM can be laid out in the form of matrices as shown below, based on Equations 4 and 5.

$$\begin{bmatrix} \eta_{B2} \\ \eta_D \end{bmatrix} = \begin{bmatrix} \gamma_{C2,B2} & \gamma_{C2,D} \\ \gamma_{C3,B2} & \gamma_{C3,D} \end{bmatrix} \begin{bmatrix} \xi_{B2} \\ \xi_D \end{bmatrix} + \begin{bmatrix} \zeta_{C2} \\ \zeta_{C3} \end{bmatrix}$$

$$(4)$$

$$\eta_{C2} = \gamma_{C2,B2} \xi_{B2} + \gamma_{C2,D} \xi_{D} + \zeta_{C2} = 0.53^{**} \xi_{B2} - 0.13^{*} \xi_{D} + 0.74 \qquad ; R^{2} = 0.26$$

$$\eta_{C3} = \gamma_{C3,B2} \xi_{B2} + \gamma_{C3,D} \xi_{D} + \zeta_{C3} = -0.67^{***} \xi_{B2} + 0.24^{***} \xi_{D} + 0.56 \qquad ; R^{2} = 0.44$$

\*: Not significant; \*\* p<0.05; p<0.01

(5)

Fit measures of the model are calculated as RMSEA=0.078 (Root-mean-square error approximation), Root Mean Square Residual (RMR) = 0.045, Standardized RMR = 0.066, CFI=0.94 (Comparative Fit Index), GFI= 0.96 and Adjusted Goodness of Fit Index (AGFI) = 0.95 (Goodness-of-fit). RMSEA, RMR and SRMR value equal to 0.05 or less reflects a perfect fit, values under 0.10 indicate an acceptable fit, while those above 0.10 indicate a bad fit. Other fitness criteria are between 0 and 1 and this means that closeness to 1 shows a better fit of the model (Jöreskog and Sörbom, 2001). When all fitness criteria are considered, it is evident that our proposed model is valid.

Regarding, financial distress, 35 per cent of married respondents indicated that they are financially satisfied whereas only 17 percent of single respondents indicated that they are financially satisfied. The chi square test (p < 0.05) implies that there is a significant relationship between B.2 and gender.

Regarding money attitude, men tend to associate money with respect more than women as 44 percent of the male respondents indicated that they agree with the statement "money earns the respect of people to you", while 39 percent of the male respondents indicated that they agree with that statement. The chi square test (p < 0.05) implies that there is a significant relationship between D.2 and gender.

Regarding financial management behavior, 69 per cent of divorced respondents indicated that they often or always pay interest on their credit card debt as they pay their debt late, whereas only 26 percent of the married respondents indicated that they often or always pay interest on their credit card debt as they pay their debt late. The chi square test (p < 0.05) implies that there is a significant relationship between C.5 and gender. Moreover, 64 per cent of women overview their financial position often or always whereas 55 percent of men overview their financial often or always. The chi square test (p < 0.05) implies that there is a significant relationship between C.16 and gender. Last but not least, 74 per cent of women save on a regular basis whereas 63 percent of men save on a regular basis. The chi square test (p < 0.05) implies that there is a significant relationship between C.17 and gender. Cross Tabulation table of "I overview my financial position." (C.16) according to age and gender as well as Cross Tabulation table of "I save on a regular basis" (C.17) according to age and gender is shown in the tables below.

Table 3. Cross Tabulation of "I overview my financial position." (C.16) according to age and gender

					C.16			- Total
Age			Never	Seldom	Sometimes	Often	Always	Total
18-24	Gender	Female	0	2	12	29	6	49
		Male	1	4	10	20	4	39
	Total		1	6	22	49	10	88
25-34	Gender	Female		7	17	27	13	64
		Male		10	15	32	8	65
	Toplam			17	32	59	21	129
35-44	Gender	Female	0	5	13	18	7	43
		Male	2	12	20	38	5	77
	Total		2	17	33	56	12	120
45-54	Gender	Female		8	21	25	6	60
		Male		11	22	21	3	57
	Total			19	43	46	9	117
55-64	Gender	Female		4	10	21	13	48
		Male		5	11	17	2	35
	Total			9	21	38	15	83
65 and over	Gender	Female		4	6	25	6	41
		Male		6	10	17	4	37
	Total			10	16	42	10	78
Total	Gender	Female	0	30	79	145	51	305
		Male	3	48	88	145	26	310
	Total		3	78	167	290	77	615

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Around 20 per cent of women aged 25-34 always overview their financial position while only 12 per cent of men in the same age group always overview their financial position. Around 51 per cent of women aged 45-54 always overview their financial position while only 42 per cent of men in he same age group always overview their financial position.

Table 4. Cross Tabulation of "I save on a regular basis" (C.17) according to age and gender

		C.17				T-4-1		
Age			Never	Seldom	Sometimes	Often	Always	- Total
18-24	Gender	Female		3	8	30	8	49
	Gender	Male		3	11	2	5	39
	Total			6	19	050	13	88
	Gender	Female	1	3	6	43	11	64
25-34	Gender	Male	0	4	16	36	9	65
	Total			7	22	79	20	129
	Gender	Female	1	3	10	22	7	43
35-44	Gender	Male	0	6	21	43	7	77
T	Total			9	31	65	14	120
	Gender	Female		5	16	32	7	60
45-54	Gender	Male		7	19	26	5	57
	Total			12	35	58	12	117
55-64	Gender	Female		3	10	20	15	48
		Male		3	8	20	4	35
	Total			6	18	40	19	83
65 and over	Gender	Female		1	8	24	8	41
		Male		2	13	15	7	37
	Total			3	21	39	15	78
	Gender	Female	2	18	58	171	56	305
Γotal		Male	0	25	88	160	37	310
	Total			43	146	331	93	615

Around 84 per cent of women aged 25-34 often or always save on a regular basis while 69 percent of men in the same age group always or often save on a regular basis. Around 65 per cent of women aged 45-54 always or often save on a regular basis while 54 per cent of men in the same age group always overview their financial position.

#### 5. Conclusion

In this study, we measure the variables of financial distress, financial management behavior and money attitude for adults and model the interrelationships between these variables and demographic variables using Structural Equation Models based on a survey which was conducted on a sample of households living in Eskişehir, Turkey.

The results of the model reveal that High Level of Financial Distress is associated positively with Risky Financial Management Behavior and negatively with Investment Oriented Financial Management Behavior. According to the findings of the study, married adults seem to be the most financially satisfied group, whereas single adults seem to be the least financially satisfied group. Yet, interestingly, they are the least financially distressed group as well. Divorced adults, on the other hand, seem to be the most financially distressed group. However, divorced adults are the group of adults who set themselves financial goals and make plans to achieve these goals. The findings also reveal that men tend to associate money with respect more than women, as 44 percent of the male respondents indicated that they agree with the statement "money earns the respect of people to you", while 39 percent of the female respondents indicated that they agree with that statement.

Regarding financial management behavior habits, middle aged adults and women tend to exhibit more responsible behavior. Middle aged adults seem to overview their financial position more often

than young adults. Both young and middle aged women seem to overview their financial position more often than men. Women tend to save more on a regular basis compared to men. Similarly, young adults tend to save more on a regular basis.

As the SEM model implies, decreasing financial distress of adults in general can induce less risky and more investment oriented financial management behavior. Providing adults with more financial education help diminish financial distress. Considering that divorced adults seem to be more vulnerable to financial distress and the tendency of this group to exhibit risky behavior when it comes to personal financial management (69 per cent of divorced respondents indicated that they often or always pay interest on their credit card debt as they pay their debt late), they should be given special attention. The tendency of this group to set financial goals and to make plans imply that their responsible financial behavior can be improved, and financial distress can be decreased by providing financial counselling. Moreover, considering more responsible behavior of young female adults (overviewing financial position and saving on a regular basis), this group of adults should be encouraged to channel their savings into investments. The results imply that as Money-Oriented Financial Attitude increases, Investment Oriented Financial Management Behavior tends to increase. Focusing more on young female adults to strengthen money oriented attitude by offering them financial education at early stages of life can empower them with the motivation and skills to save and invest more.

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