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The development and psychometric analysis of Uskudar family perception and attitudes scale

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ABSTRACT

Today, the increasing use of digital media transforms relationships, family perceptions and attitudes. This situation poses a risk to the family institution and children. In this context, measurement tools aimed at determining family perceptions and attitudes should be reconsidered in current studies. The aim of this study was to develop a valid and reliable measurement tool that can measure family perceptions and attitudes dimensionally. The sample of the research consisted of 495 participants in Turkey. As a result of the study, 3-dimensional (Family concept, Fears affecting relationships, Individualization and freedom) and 20-item Uskudar Family Perception and Attitudes Scale (USFPAS) was developed. The scale explained 51.18% of the total variance. The Cronbach Alpha value of the scale was found to be .75. In the modeling and confirmatory factor analysis study, goodness of fit values was found to be in acceptable range. According to the results of psychometric analysis: (1) Women have higher fears that affect family relationships than men, (2) As daily social media use increases, the level of individualization and freedom increases, and family perception and attitude levels decrease, (3) Those who have children have higher fears that affect relationships than those who do not, and their perceptions of individualization and freedom are lower. The valid and reliable scale developed in this research will provide concrete data to the literature.

Keywords: family; family perception; family attitudes; individuality; scale development; validity and reliability

1. Introduction

Marriage is a form of unity that keeps societies alive and provides strength. It varies between cultures. Interaction with different cultural contexts always exists as a result of the socialization of individuals during their developmental processes. This interaction is also discussed in the *Ecological Approach Theory*, which consists of layers and contexts[1,2]. Accordingly, a wide range of contexts and layers, from primary level relationships with which the individual is in close contact, to cultural values, belief systems and socio-

economic situations, are positioned within a systematic model. The individual, who is at the center of this model, affects or transforms the system.

From a theoretical perspective, family is considered as a socially constructed structure in the sub-fields of various branches of science and is defined as the smallest institution that forms the basis of society[3]. It is the closest system with which the individual interacts. Family influences the development of individuals throughout life, and the importance of this influence continues undiminished[4]. Thus, the impact of the family on the individual's life is an issue that is emphasized as it will affect other areas. However, for the sustainability of the family, individuals need to improve themselves by gaining knowledge on subjects such as men and women psychology, communication between spouses, child and adolescent psychology. Marriage is an institution that has its own social and psychological boundaries. When these boundaries are well learned, marriage works well. Thus, in order to understand the nature of marriage, it is necessary to know its biological, psychological, social and cultural foundations[5].

The impact of the family on the development of individuals throughout life can also be discussed according to the attachment theory. Accordingly, the bond between children and their caregivers affects children's cognitive, social and emotional development[6,7]. Another theory is the self theory. According to the Autonomous-Relational Self Model, family is a mediating system located in the middle society and socialization[8,9]. Broadly, social-cultural patterns and norms filter through the family and influence the child's self-development through specific parenting practices. In other words, it can be said that different parenting styles affect many cross-cultural development processes and create various psychological effects[10-15].

On the other hand, it is stated that individuals gain the ability to cope with difficulties with the bond and sense of belonging between family members[16]. Accordingly, studies show that the sense of belonging is related to both the psychological and social functionality of individuals and that a high sense of belonging increases the functionality of the individual[17,18]. Belonging is also considered for emotional support[19]. Emotional support is defined as meeting needs such as love, compassion, value, care, empathy, trust and belonging. Further, it is considered as showing that the individual is accepted and valued by society, family, circle of friends and other social environments. In connection with this, social support emphasizes the feeling of belonging to the social structure and connecting to the social network that provides help to the individual or where individuals feel safe, loved and protected[20]. While social support has an indirect effect on coping with depression and stress, it is stated that the sense of belonging has a direct effect on the individual[21]. Thus, the family's function of providing emotional and social support activates individuals' physical, psychological and social support processes[22-26].

According to materialist thought, the emphasis on material goals causes people to think about themselves and try to make only themselves happy. While this situation causes social problems in general, it also fundamentally shakes the family institution. Since the capitalist system drags the family institution into a field of struggle based on the conflict between male dominance and female dominance, freedom and

individualization are seen as important factors that threaten the family institution[5]. In such cases, communication between spouses becomes important. According to Tarhan, the way spouses communicate, understand each other and share roles are shaped in the first years of marriage. Additionally, when one spouse in the family wants to communicate, the other spouse acts insensitively, causes a crisis within the family. As a problem-solving strategy, it is recommended that spouses communicate with an effective communication language.

According to Tarhan[27], there are some values that keep the family together and strengthen it. These values are conferring, equality, autonomy, justifying, love, respect, trust, sharing, secular upbringings and religious upbringings. Conferring means solving problems through mutual consultations and participation. In terms of equality, everyone should be treated equally in responsibilities and occupations such as the use of time, money, education, in terms of complying with domestic rules, in the distribution of freedom and responsibility, and in the use of opportunities. According to autonomy, every individual should feel like they belong to the family and at the same time feel free. For justifying, there should be a distribution in which everyone can feel themselves in a fair environment in the use of rights. There should be clear limits regarding the rights of parents and children. Warm relationships created by love are the most valuable bond of the family, and this feeling nourishes compassion, sacrifice and empathy. In terms of respect, family members must be able to respect each other's personal rights. In order for a sense of trust and loyalty to arise, family members must be sure that they will not be harmed by each other. Sharing can be explained as family members having an ethical understanding that allows them to give up some of their rights in favor of each other. Secular upbringings contribute to the values that hold together the family's gains such as wealth, fame, status and power. Spiritual upbringings, on the other hand, are the family's perspective on life, events, death, creation, divine power, being patient, being humble, and staying together, especially in times of crisis, adding meaningful contribution and consolation power[27].

Incorporating these values in the family will strengthen the relationship between spouses and is important for the children who will take this relationship as an example and carry it into their life. While most of the characteristics of family members constitute some permanent parts of the children's personality, the children's relationships with their father, mother and siblings are important for their development[28]. Children develop and acquire their first skills and abilities within the family, with the elements they support and reject. They learn from the family system what clothes are appropriate and how to dress, what language it is appropriate to use when dealing with people, what style to speak to adults and peers[29].

It is important that all family members are at peace and happy with themselves and can add meaning to their lives. The existence of life meanings and purposes in the family system also shapes individuals' self-construction and lives by affecting their perceived life satisfaction[30-34]. Thus, families that can meet their internal and external demands, fulfill their basic and developmental duties, and ensure family balance are seen as healthy and functional families[35,36].

Family perception and attitudes stand out as the main factors affecting family functionality and all areas of life of individuals. Because family structure and order are important factors that strongly affect the behavior of family members[37], and this can only be achieved with a strong family awareness[27]. Determining whether this awareness has occurred or not brings to the fore the need for a measurement tool that can measure individuals' family perceptions and attitudes. When the literature is examined, some developed or adapted scales in various concepts within the scope of family studies are encountered.

It can be seen that these scales focus on various topics such as family sense of belonging[16], family climate[4,38], family life satisfaction[30,39,40], family protective factors[41,42], family functionality[43], attitudinal familism[44-46], family assessment[35,47], family support[48-50], sense of belonging[51-53], self[54]. In one study, it was found that a family relations scale was developed for children[55].

This study aimed to develop a valid and reliable up-to-date family perception and attitudes scale and to conduct psychometric examinations with initial scores. It is important to address the perception of the family concept, the fears that psychologically affect this perception, and the relationship between individualization and freedom and the family concept and fears. In this context, it was aimed to develop a dimensional, modellable, valid and reliable current scale. It is thought that this scale will meet the need for an up-to-date scale that can be used in studies to examine whether the individualism and liberation brought by the modern age have transformed the family perception and attitude. By examining the scales in the literature that are close to these issues, it was decided to develop an updated scale in this study.

In line with the in-depth literature investigation, it was observed that, it is important to determine what is understood from the concept of family and the fears affecting relationships. It was decided to include items covering these issues in the scale to be developed. However, determining how the concepts of freedom and individualization are perceived by individuals is very important today in understanding family members' perspectives on family unity. The ability to be both an individual and a family member is an important factor affecting relationships, family perceptions and attitudes. Developing a valid and reliable scale structure within the framework of these issues will contribute to family-oriented studies that include the family concept, family values, fears affecting relationships, individualization and freedom.

2. Materials and methods

In this study, quantitative research method design was used and statistical analysis were performed to conduct validity and reliability studies.

2.1. Participants

The sample of this study consists of 495 participants. 380 (76.8%) of the participants were women and 115 (23.2%) were men. The ages of the participants ranged from 18 to 74, and the mean age was 38.6 (Sd:11,24). 51.2% of the participants are at university level, 16.2% are at high school, 15.2% are at postgraduate level, 9.5% are at college level, and 7.5% are at primary school level. When marital status was examined, 67.5% (n=334) were married, 25.9% (n=128) were single, 6.7% (n=33) were widowed or divorced.

68.3% stated that they had children, 31.7% did not have children. The highest rate about the number of children found to be 'having 2 children' (30.9%) followed by 'having 3 children' (18.6%), and 'having 1 child' (13.3%). Those who stated that they have 4 children are 4.6%. 31.5% do not have children.

2.2. Data collection tools

The data collection tool is a survey including demographic questions and the items of the scale developed in the study. This study received ethical approval from the Uskudar University Non-Interventional Research Ethics Committee report number of 61351342/November 2023-15 (30 November 2023) was performed according to the principles set out by the Declaration of Helsinki for the use of humans in experimental research. In addition, the scale named "Family Sense of Belonging Scale" was included in the study during the criterion validity phase of the scale development process.

2.2.1. Demographic information form

Participants were asked about gender, age, education level, marital status, number of children, daily social media usage time and social media platform preferences in the demographic information form.

2.2.2. Family sense of belonging scale

The Family Sense of Belonging Scale was chosen for criterion validity phase in this study. It is a valid and reliable scale developed by Mavili, Kesen and Daşbaş[16]. The scale was developed with 1579 participants to measure individuals' family belonging levels. It consists of 17 items. The scale consists of 2 dimensions: Family sense of belonging and sense of self-belonging. 13 of the items were written positively and 4 were written negatively. It is a 5-point Likert type scale. Individuals are asked to express their opinion on five levels: 'Completely agree (5), Agree (4), Undecided (3), Disagree (2), Completely disagree (1)'. Items 5, 7, 9 and 12 are negative items and reverse scored. Questions 1, 3, 4, 6, 7, 10, 11, 12, 13, 14, 15 and 17 measure the sub-dimension of self-belonging; questions 2, 5, 8, 9 and 16 measure the sub-dimension of family belonging. However, the sum of the two gives the family belonging total score. As the score increases, the family belonging also increases. The explained variance rate of the scale was calculated as 60%, and the internal consistency coefficient (Cronbach Alpha) was calculated as 0,94.

2.2.3. Uskudar Family Perception and Attitudes Scale (USFPAS)

The process of validity and reliability stages was carried out for the Uskudar Family Perception and Attitudes Scale (USFPAS), which was aimed to be developed in this study. Accordingly, the confirmatory factor analysis phase including content validity, construct validity, discriminant validity, internal consistency reliability and modeling study, were followed. The necessary analyzes were carried out at each phase. First of all, an in-depth literature review was conducted and items were created accordingly. A review inventory containing draft scale items was used to present them for expert opinion. In this inventory, evaluations can be made for each item with the options 'It is appropriate for the item to remain in the scale', 'The item can remain in the scale but it is unnecessary' and 'It is not appropriate for the item to remain in the scale'. In order to make

a multidisciplinary evaluation, an expert group consisting of various fields made the evaluation. The inventory was sent to the experts via e-mail. After the evaluation, the compliance rates of the items were calculated with the help of the formula suggested by Miles and Huberman[56].

In content validity studies, data from the expert evaluation inventory were used. Compliance rates were calculated in line with the scores between '0' and '1' in the inventory, and .80 was accepted as the criterion. Thus, items below this value will be eliminated from the draft scale. The USFPAS draft scale form, which was initially prepared as 31 items, was graded on a 5-point scale (Strongly Disagree, Slightly Agree, Moderately Agree, Very Agree, Completely Agree) without eliminating any item. Then, the data collection phase began.

Exploratory factor analysis (EFA) technique is applied during the construct validity phase of the scale development study. Before EFA calculation, the suitability of the data set is tested with two analysis techniques called Bartlett test and Kaiser-Meyer-Olkin (KMO)[57]. Factor analysis suitability is decided by taking into account the value obtained as a result of the KMO test (>.90 'excellent'; >.80<.89 'very good'; >.70<.79 'good'; >.60<.69 'fair'; >.50<.59 'poor'; <50 'unacceptable'). Again, the Bartlett Sphericity test result is expected to be statistically significant ($p<0.05$). When factor analysis is performed, the number of factors is determined by using the eigenvalue statistics (if Eigenvalue>=1, 'factor exists')[58, 59]. The explained variance ratio, which is another factor analysis result, is expected to be within the appropriate range. In social sciences, a ratio ranging between 40% and 60% is considered ideal[57].

In order to test the measurability of the scale, the 27% upper group and 27% lower group are formed by ranking the sum of the scores obtained from the scale and compared with an independent group t-test in the discriminant validity phase. In this study, the difference between the upper group of 133 people and the lower group of 133 people in the data obtained from 495 participants was examined. Next, in the criterion validity phase, data is collected with the developed scale and another scale whose subject is included in the recent scientific literature. Correlation (r) is calculated and a relationship is expected between them (r<.30 'weak'; r>.30<.70 'medium'; r>.70 'high'). In the reliability stage, internal consistency analysis is calculated according to the item variance of the scale. As a result, the Cronbach Alpha coefficient is obtained. This coefficient is evaluated in terms of the total scale and dimensionally, if any.

After factor analysis, the structure is verified in the confirmatory factor analysis (CFA) phase. For this, a model with factors is drawn in special programs such as AMOS and this model is expected to be verified. This verification is achieved by ensuring that the goodness of fit values resulting from running the model are within the ranges accepted in the scientific literature.

2.3. Criteria for inclusion/exclusion

Participants aged 18 and over were included in the study group. People under the age of 18 were considered as exclusion criteria.

2.4. Procedures

First of all, in order to obtain the English form of the USFPAS, the items in the original scale were first

translated into English by an expert who was proficient in Turkish and English. Then, the sentences were checked by two field experts who knew both languages well to ensure that the sentences were understandable. Subsequently, since validity and reliability studies would be conducted with Turkish students, it was decided to administer the scale in Turkish.

Pilot Application: The online survey created for data collection in the research was first applied to 15 people for trial purposes and the understandability of the questions was checked. The pilot application is a trial application and no problems were encountered at this stage.

Field Application: The online survey, which included the Demographic Information Form and USFPAS, was applied digitally in accordance with the principle of volunteering for 2 weeks between 15 December 2023 and 30 December 2023, after the Ethics Committee approval dated 30 November 2023.

2.5. Data processing and statistical analysis

Factor analysis (EFA), Pearson product of moments and correlation coefficient, independent group t-test, Cronbach Alpha coefficient analysis were applied in USFPAS's validity and reliability studies. Goodness of fit values *(X^2/df, RMSEA, NFI, NNFI, CFI, GFI, AGFI)* were calculated with the structural equation model on the data set of 400 people at the confirmatory factor analysis phase. Normality test was applied to the data for comparisons regarding the differentiation of the dependent variable according to some independent variables. Based on the normal distribution, the differentiation of independent variables according to the dependent variable was examined with parametric tests (independent group t- test, one-way analysis of variance). SPSS 26.0 statistical programs were used for all validity and reliability analyzes and comparison tests. AMOS was used in confirmatory factor analysis.

3. Results

Statistical analyzes such as content validity, construct validity, discriminant validity, criterion validity, internal consistency reliability and confirmatory factor analysis conducted for the validity and reliability studies and psychometric analysis of the *Uskudar Family Perception and Attitudes Scale (USFPAS)* are included in this section.

3.1. USFPAS's linguistic equivalence study

The consistency between the English and Turkish forms of the USFPAS was determined by Pearson correlation after applications to university students with sufficient levels of English and Turkish. The coefficient was found by calculation. According to Özgüven (1994), the time interval between two tests should be four weeks, and according to Ergin (1995), it should be three to six weeks. USFPAS was administered three weeks apart to a group of 30 students studying in Turkey. The students, who were determined by the researcher and participated in the application on a voluntary basis, first answered the original scale in Turkish, followed by the English translation one month later. Pearson correlation between two applications coefficients were calculated.

Between Turkish and English applications, Pearson correlation coefficients ranged between .45 and .82 for all

items, and positive and significant values were reached at the .05 level. The correlation coefficient between the total scores of the Turkish and English forms is also positive and was found significant [r:.72; p<0.001] Additionally, based on the dependent group t test results [t:.44; df:25; p>0.05] and it was determined that there was no significant difference between the two applications. The obtained results were interpreted as indicating that the consistency between the two applications of the scale was at an acceptable level and that language equivalence was achieved in the forms. Subsequently, the validity study was started and field application was carried out with the Turkish form.

3.2. Content validity

The item pool of USFPAS was initially created with 31 items. At this stage, the draft scale was presented to experts with a review inventory to get their opinions. Item fit indices were calculated based on the feedback received. Compliance rate of items was between .80 and 1. Then, it was decided to apply the 31-item draft scale. Construct validity phase was started on the data set obtained from USFPAS, which was applied to 495 people.

3.3. Construct validity

Kaiser Meyer Olkin (KMO) sampling coefficient and Bartlett's sphericity test were used to measure the suitability of the data for factor analysis. As a result of the analysis, KMO coefficient value was found to be .88. The Bartlett Test of Sphericity result was found to be significant (X^2=3721.551; df=190; p<.05). Thus, the data set of the 31-item draft scale was found suitable for factor analysis. During EFA, it was observed that a large number of factors were formed when the Eigenvalue value was greater than 1. As it was understood from the examinations that a structure suitable for the item concepts was not formed and a dispersed structure emerged, the analysis was repeated by setting the Eigenvalue to 1.5. By eliminating overlapping (being included in more than one factor) and low factor loading (<.50) items, a suitable 3-factor structure was reached (**Table 1**).

Table 1. USFPAS factor structure and explained variance ratio.

USFPAS	Eigenvalue	Variance	Cumulative Variance
Factor 1	5.80	29.02	29.02
Factor 2	2.47	12.36	41.38
Factor 3	1.96	9.80	51.18

As seen in Table 1, the highest eigenvalue of the factors is 5.80 and the lowest is 1.96. The variance rate explained in the total scale was found to be 51.18%. During the formation of the 3-factor structure, the eigenvalue lower cut-off point was accepted as 1.5 and the lower cut-off point of the factor loading of each item was accepted as .50. Thus, 11 items with low or overlapping factor loadings were removed from the scale. Factor loading values of the items are seen in **Table 2**.

Table 2. USFPAS item factor loads, item total correlations and Cronbach alpha values.

Factor	New Item Nu.	Items	Factor Load	Item Total Correlation	Cronbach Alpha
F1	1	Q25: Children follow their parents' footsteps, not their words. I am aware that I need to be a good example for family attachment.	.85	.78	
	2	Q12: If people come home lovingly and willingly, it means that family warmth has been established.	.85	.75	
	3	Q24: Marriage is about being "us" while remaining "me". It is not an environment where everyone lives as they wish; they should have common dreams and rules.	.83	.73	
	4	Q7: Family relationships are not a race, but a long journey. Everyone should be able to complement each other.	.82	.78	
	5	Q10: A family is like a boat with all its members. If the spouses do not row together, the boat will overturn and those who cannot swim, mostly children, drown.	.79	.64	.90
	6	Q14: In family communication, "Some words make you happy, some words make you old" rule applies. It is necessary to pay attention to what is said.	.74	.62	
	7	Q9: Family is the building block of society. If the family falls apart, society falls apart.	.73	.70	
	8	Q23: If my spouse is unfaithful, I question the marriage.	.64	.61	
	9	Q1: The roles of spouse, parent, and employee should be lived separately at home.	.55	.62	
	10	Q2: Children should also take responsibility for the family's needs.	.54	.63	
F2	11	Q26: My spouse and children must be perfect; mistakes do not suit us.	.76	.63	
	12	Q30: As a family, we have to make society say that we are a "successful family".	.75	.68	
	13	Q27: We cannot manage the future if we do not control everything.	.69	.58	.72
	14	Q31: I am constantly worried about negative life events such as death and illness. These issues affect my family relationships.	.60	.58	
	15	Q29: I am extremely self-sacrificing towards my spouse and children. I worry that they will not love me.	.59	.63	
F3	16	Q17: People over the age of 18 are free and should be separated from their families. Family ties restrict them.	.69	.68	
	17	Q8: Family is an outdated institution; sexual freedom is more important.	.65	.74	
	18	Q4: There is no need for family because we can learn about life easily through new media.	.61	.72	.60
	19	Q5: The individual is sacred, not the family.	.60	.74	
	20	Q13: Family is not indispensable. A solo life or a single-parent family is sufficient for security and happiness.	.56	.68	
Total					.75

Explanation: As a result of the EFA, the USFPAS scale form, consisting of 20 items and 3 factors, was rated on a 5-point Likert type as 'Strongly Disagree', 'Slightly Agree', 'Moderately Agree', 'Very Agree', 'Strongly Agree'. A minimum of '1' and a maximum of '5' points can be obtained from each item. All items of Factor 2 and Factor 3 should be reverse coded.

As seen in Table 2, the factor structure of USFPAS and the distribution of items to factors were revealed through EFA studies. Each item was renumbered and renamed. Then, the factors to which the items belong were given names. Accordingly, Factor 1 (Items 1-10) is named as '*Family Concept*'; Factor 2 (Items 11-15)

is named as '*Fears Affecting Relationships*'; Factor 3 (Items 16-20) is named as '*Individualization and Freedom*'. In the ongoing process, the relationship between the emerging factors is calculated with the Pearson Correlation Coefficient. It is given in **Table 3**.

Table 3. Relationship between USFPAS and factors.

Subscale/Scale	F1	F2	F3
F1	1		
F2	.39	1	
F3	.36	.34	1
USFPAS	**.85**	**.37**	**.49**

According to **Table 3**, the factors were found to be moderately strongly related to each other (r>.30<.70). When the relationship between the factors and the USFPAS was examined. It was revealed that Factor 1 had a fairly strong correlation (r>.70) and the other two factors had a moderate correlation. The relationships were found significant (p<0.05).

3.4. Discriminant validity

For the discriminant validity study, 27% of the data set of 495 participants was taken and the number 133 was obtained. Two different groups were formed, consisting of 133 people who got the highest score and 133 people who got the lowest score from USFPAS and the factors. Thus, an independent group t-test was performed for the difference between groups. The result was found to be significant (**Table 4**).

Table 4. Discriminant validity of USFPAS.

Scale/Dimensions	Group	N	X	SS	Sd	t	p
F1	Upper Group	133	4.91	.08	264	22.83	.00
	Lower Group	133	3.04	.94			
F2	Upper Group	133	4.92	.10	264	37.69	.00
	Lower Group	133	3.02	.57			
F3	Upper Group	133	5.00	.00	264	22.15	.00
	Lower Group	133	4.00	.52			
USFPAS	Upper Group	133	4.77	.11	264	34.84	.00
	Lower Group	133	3.65	.35			

3.5. Criterion validity

Criterion validity study was conducted with USFPAS and the Family Sense of Belonging Scale. Both scales were applied to 30 people. The relationship between them was calculated with Pearson Correlation Coefficient (r). A relationship was found between the scales as expected. This relationship appears to be of medium strength and significant (r=.64) (**Table 5**).

<div align="center">**Table 5.** Pearson correlation value of scales.</div>

Scales	N	X	r	p
USFPAS &	30	3.14		
Family Sense of Belonging Scale	30	2.94	.64	.00

3.6. Confirmatory factor analysis

Once the factors emerged in construct validity stage, a scale model was drawn using the AMOS program with the data set created from 400 participants. The model was run by creating covariance between the factors in the model. Goodness of fit values were found to be within acceptable ranges according to the scientific literature and thus the model was confirmed (X^2/sd=2.94<3; RMSEA=.07<.08; NFI=.91>.90; NNFI=.96>.95; CFI=.96>.95; GFI=.92>.90; AGFI=.86>.85).
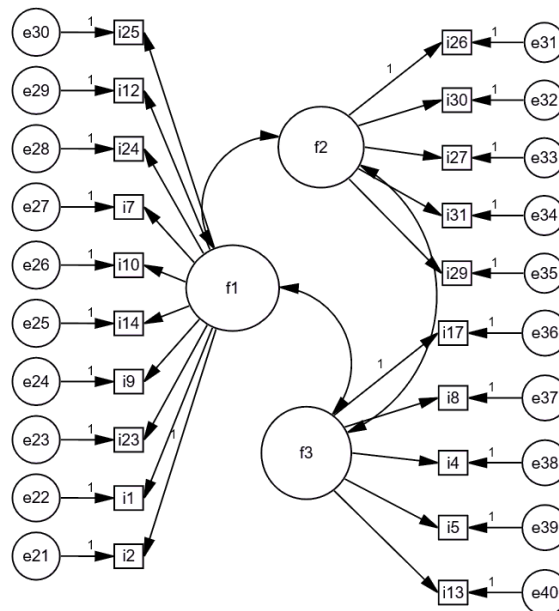

<div align="center">**Figure 1.** USFPAS path diagram model.</div>

The first average score of the USFPAS is 85.8. This result obtained from a sample of 495 people and it indicates 'High Family Perception and Attitude' (See Appendix A). Then, psychometric examinations were carried out by focusing on intergroup differences. First, analyzes were made to determine whether there was a difference according to gender. As a result of the independent group t-test, as can be seen in **Table 6**, a significant difference was found according to gender in only one factor of the USFPAS ($p<0.05$). The effect size level of this difference was calculated with Cohen (d) effect size analysis.

Table 6. Average USFPAS scale scores of groups.

Groups	X	SS	d
USFPAS – Female (n=380)	4.28	.47	
USFPAS – Male (n=115)	4.32	.44	-
Total (n=495)	4.29	.46	
Significant Factor			
USFPAS: F2 – Female (n=380)	4.18	.72	0.40[ab]
USFPAS: F2 – Male (n=115)	3.84	.94	

The range is between 1-5.
[a]Reference group was calculated as USFPAS: F2 female total X_1-X_2/SD_{Female}
[b]Reference group was calculated as USFPAS: F2 male total X_1-X_2/SD_{Male}

According to the analysis results, there was no difference in the USFPAS mean scores according to gender ($p>0.05$). As a result of comparing the factors with the independent group t-test, a difference was found according to gender only in the F2 dimension called *'Fears Affecting Relationships'* (t=4.06; $p<0.05$). Accordingly, the average score of women (X=4.18) was found to be significantly higher than the score of men (X=3.54). In other words, the level of fear affecting women's relationships is higher than men. When the effect size of this difference between men and women was calculated by Cohen (d) analysis, it was understood that there was a medium strength effect (d=0.40; >0.2<0.5). In the total scale, no difference was observed between men and women.
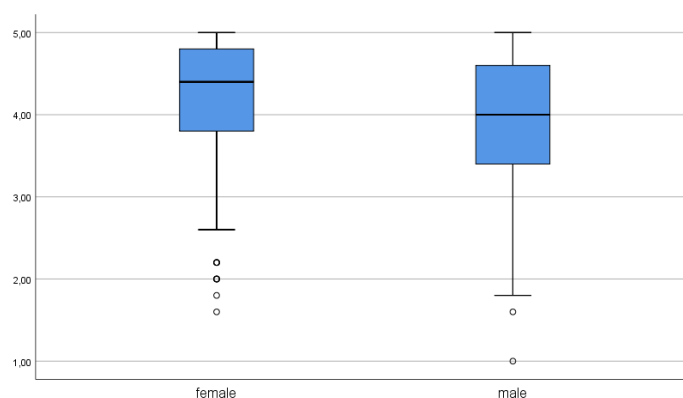

Figure 2. USFPAS: Factor 2 scores of the groups (cutoff point 2.5 was accepted as the middle value.)

Another group comparison of USFPAS scores was made based on daily social media usage time. Accordingly, the differences in the total score of the USFPAS and the scores of the sub-dimensions according to the daily social media usage time were tested with an independent group t-test. Although there was no difference in the total scale and the two factors, there was a difference in F3 named '*Individualization and Freedom'*, and Table 7 shows this difference and the effect size created by this difference.

Table 7. Average F3 scores of daily social media usage groups.

Groups of Daily Use of Social Media	X	SS	d
Group 1: USFPAS: F3 – Less than 1 hour (n=106)	4.71	.50	
Group 2: USFPAS: F3 – 1-3 hours (n=294)	4.66	.46	0.43[ac]
			0.10[ab]
Group 3: USFPAS: F3 – More than 4 hours (n=95)	4.48	.56	0.35[bc]
Total (n=495)	4.64	.49	

The range is between 1-5.

[a]Reference group1 was calculated as USFPAS: F3 – less than 1 hour of daily use X_1-X_2/SD$_{Less than 1 hour}$

[b]Reference group2 was calculated as USFPAS: F3 – 1-3 hours of daily use X_1-X_2/SD$_{1-3 hours}$

[c]Reference group3 was calculated as USFPAS: F3 – more than 4 hours of daily use X_1-X_2/SD$_{More than 4 hours}$

Table 7 shows that daily social media usage times were divided into 3 groups ('less than 1 hour', '1-3 hours', 'more than 4 hours'). The scores obtained from the F3 named '*Individualization and Freedom'* of the USFPAS were compared among the 3 groups. Accordingly, those who use social media for 4 hours or more a day have high perceptions of individualization and freedom and low family perceptions and attitudes (X=4.48). Those who use social media for less than 1 hour a day have low levels of individualization and freedom perception, and high family perceptions and attitudes (X=4.71). In other words, as the daily social media usage time increases, the level of individualization and freedom perception also increases, and the level of family perception and attitude decreases. According to the Cohen (d) effect size analysis, the effect strength of the difference between those who use social media less than 1 hour a day and those who use social media more than 4 hours a day is at a medium level (d=0.43;>0.2<0.5). Again, the effect strength of the difference between those who used it for 1-3 hours and those who used it for more than 4 hours was calculated at a medium level (d=0.35;>0.2<0.5).
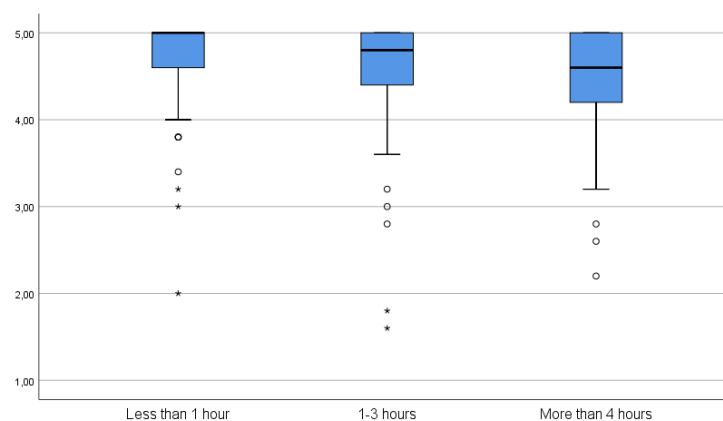

Figure 3. USFPAS: Factor 3 scores of the groups (cutoff point 2.5 was accepted as the middle value.)

Another psychometric analysis conducted with USFPAS scores is structured according to the number of children. An independent group t-test was conducted to divide into groups those who answered yes and those who answered no to the question of 'Do you have children?'. As a result, it was observed that USFPAS score

comparisons created a significant difference (p<0.05) in two sub-scales. No differentiation was observed in the total scale.

Table 8. Having children average F2 & F3 scores of groups.

Groups	X	SS	d
USFPAS: F2 – Yes, I have (n=338)	4.15	.76	
USFPAS: F2 – No, I don't have (n=157)	3.98	.84	0.21[ab]
USFPAS: F3 – Yes, I have (n=338)	4.73	.38	
USFPAS: F3 – No, I don't have (n=157)	4.44	.64	0.55[cd]

The range is between 1-5.

[a]Reference group was calculated as USFPAS: F2 – Yes, I have total X_1-X_2/SD_{Yes}

[b]Reference group was calculated as USFPAS: F2 – No, I don't have total X_1-X_2/SD_{No}

[c]Reference group was calculated as USFPAS: F3 – Yes, I have total X_1-X_2/SD_{Yes}

[d]Reference group was calculated as USFPAS: F3 – No, I don't have total X_1-X_2/SD_{No}

As can be seen in **Table 8**, the scores of those who have children were found to be high in the F2 named as '*Fears Affecting Relationships*'. Fears affecting relationships among those who have children (X=4.15) were found to be higher than those who do not have children (X=3.98). The effect size strength of the difference in question is at a medium level (d=0.21;>0.2<0.5).

When the scores of the F3 named '*Individualization and Freedom*' are compared according to having children, those who have children have high scores. It means their individualization and freedom levels are low, and their family perceptions and attitudes are high (X=4.73). For those who do not have children, the level of individualization and liberation was found to be high, but their family perception and attitudes were low (X=4.44). The effect size strength of the differentiation between groups was observed slightly above the medium level, that is, close to the high level (d=0.55;>0.5).
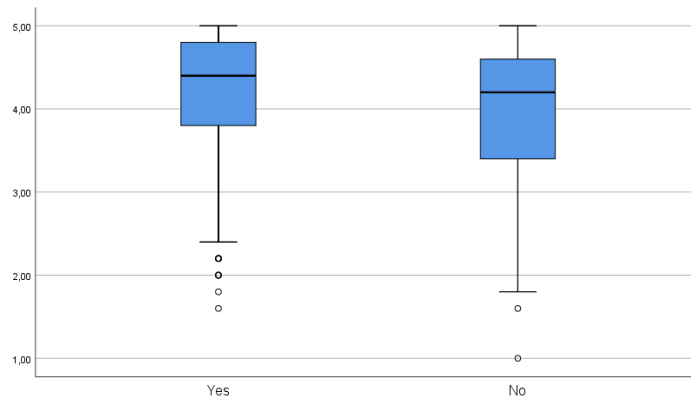

Figure 4. USFPAS: Factor 2 scores of the groups (cutoff point 2.5 was accepted as the middle value.)
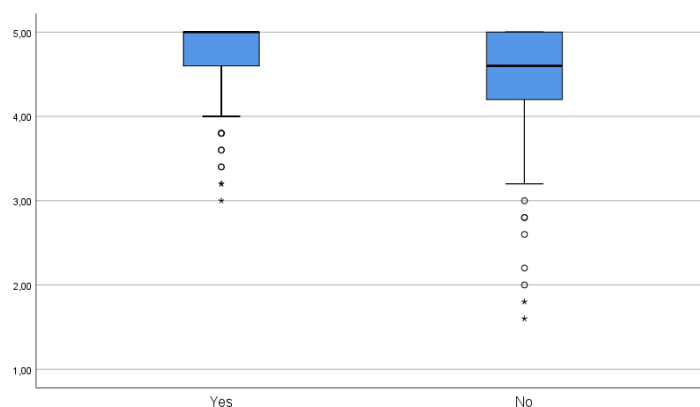
Figure 5. USFPAS: Factor 3 scores of the groups (cutoff point 2.5 was accepted as the middle value.)

4. Conclusion and discussion

As modernization spreads globally, perceptions about the family institution also differ from culture to culture. Changing family perceptions and attitudes create various effects in individuals' home environments through digital media. Therefore, traditional value judgments, which are unique to societies and are passed down from generation to generation, are deformed with individualization and freedom. This affects the family institution the most.

Due to the importance of this situation, the need for an up-to-date measurement tool comes to the fore. Many scale studies in the literature should be reconsidered within the context of current problems. Thus, it is important that new scale structures can be formed with current issues that need to be measured. In this study, valid and reliable scales around the world on family were examined. The aim of the study was to develop a new scale that can measure the effects of the modernization problems on the family perception and attitudes. As a result of the validity and reliability studies, a 3-dimensional 20-item scale structure emerged. The dimensional structure of the scale was confirmed by the structural equation model created and the appropriate goodness of fit values obtained.

Thus, with the scale emerged as Uskudar Family Perception and Attitudes Scale (USFPAS), family perception and attitude can be measured within the scope of three factors called 'Family concept', 'Fears affecting relationships' and 'Individualization and freedom'. The Cronbach Alpha internal consistency reliability coefficient of the scale was found to be .75. When the scores obtained by applying the scale to 495 people were analyzed, a difference was observed according to gender in one sub-dimension. Accordingly, women's fears affecting relationships were found to be higher than men. According to this result, married women's fears are increasing in today's conditions and these fears affect their relationships, family perceptions and attitudes.

On the other hand, as stated in the literature, the increasing use of social media today affects the family institution with the comfort it provides in terms of individualization and freedom [60-64]. As a result of the analysis made according to the scale scores, it was found to be quite remarkable that as daily social media use increased, individualization and freedom increased, and family perception and attitude decreased. Especially those who use social media for 4 hours or more a day have low perceptions and attitudes towards the family institution. The reasons may be questioned in future research on what activities are done during social media

use and what factors affect the family institution.

In the fear affecting relationships factor, 'My spouse and children must be perfect, mistakes do not suit us.', 'As a family, we have to make society say that we are a "successful family', 'We cannot manage the future if we do not control everything.', 'I am constantly worried about negative life events such as death and illness. These issues affect my family relationships.', 'I am extremely self-sacrificing towards my spouse and children. I worry that they will not love me.' The high frequency of participation in these statements among women supported the psychosocial differences between men and women. In a study aiming to examine women's post-divorce lives from a psycho-social perspective, divorced women's decision-making, anxiety and hopelessness levels were determined. Melbourne Decision Making Scale, Spielberger State and Trait Anxiety Scale and Beck Hopelessness Scale were administered verbally to 10 divorced women who participated in the study. As a result of the research, in line with the data obtained; despite the negative factors such as the education level of the participants being limited to primary school and secondary school, the majority of them not being able to work due to the obligation to take care of their children, most of them having low-income levels and renting the house they live in, their decision-making levels were high, while their state and trait anxiety levels and hopelessness levels were low[65]. Considering the results of this research and the results of our research, a connection can be made with women's fears of divorce while their family relationships continue.

In addition, in the studies conducted on the number of children, those who have children have high fears in family relations, their perception of individualization and freedom is lower, and their family perception and attitudes are higher. Of course, when making this evaluation, the daily social media usage time variable should be excluded. Because the number of children may not be an effective factor in people with high social media usage time and the same result may not be achieved. In light of all these results, it may be recommended to make multiple comparisons in new studies. It is thought that the scale developed in the research can also be used in clinical studies.

Author contributions

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Ethical approval

This study received ethical approval from the Uskudar University Non-Interventional Research Ethics Committee report number of 61351342/November 2023-15 (30 November 2023). This study was performed

according to the principles set out by the Declaration of Helsinki for the use of humans in experimental research.

Conflict of interest

The authors declare no conflict of interest.

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Appendix A: Uskudar Family Perception and Attitudes Scale (USFPAS)

Item No		Strongly disagree	Slightly agree	Moderately agree	Very agree	Strongly agree
1	Children follow their parents' footsteps, not their words. I am aware that I need to be a good example for family attachment.					
2	If people come home lovingly and willingly, it means that family warmth has been established.					
3	Marriage is about being "us" while remaining "me". It is not an environment where everyone lives as they wish; they should have common dreams and rules.					
4	Family relationships are not a race, but a long journey. Everyone should be able to complement each other.					
5	A family is like a boat with all its members. If the spouses do not row together, the boat will overturn and those who cannot swim, mostly children, drown.					
6	In family communication, "Some words make you happy, some words make you old" rule applies. It is necessary to pay attention to what is said.					
7	Family is the building block of society. If the family falls apart, society falls apart.					
8	If my spouse is unfaithful, I question the marriage.					
9	The roles of spouse, parent, and employee should be lived separately at home.					
10	Children should also take responsibility for the family's needs.					
11	My spouse and children must be perfect, mistakes do not suit us.					
12	As a family, we have to make society say that we are a "successful family".					
13	We cannot manage the future if we do not control everything.					
14	I am constantly worried about negative life events such as death and illness. These issues affect my family relationships.					
15	I am extremely self-sacrificing towards my spouse and children. I worry that they will not love me.					
16	People over the age of 18 are free and should be separated from their families. Family ties restrict them.					
17	Family is an outdated institution; sexual freedom is more important.					
18	There is no need for family because we can learn about life easily through new media.					
19	The individual is sacred, not the family.					
20	Family is not indispensable. A solo life or a single-parent family is sufficient for security and happiness.					

Explanation: Uskudar Family Perception and Attitudes Scale (USFPAS) consists of 20 items and 3 factors. Each item is scored between 1 and 5. A minimum of 20 points and a maximum of 100 points can be obtained from USFPAS. Factor 1 (Items 1-10) is 'Family Concept'; Factor 2 (Items 11-15) 'Fears Affecting Relationships'; Factor 3 (Items 16-20) 'Individualization and Freedom'. All items of Factor 2 and Factor 3 should be reverse coded.

Evaluation: You can evaluate based on the total score of the scale. If you get an average score, you should divide the rating ranges by the number of items.

Score ranges: 20-39: 'Weak Family Perception and Attitude'; 40-59: 'Low Family Perception and Attitude'; 60-79: 'Medium Family Perception and Attitude'; 80-100: 'High Family Perception and Attitude'.

Factor score ranges: For *Family Concept*: 10-19: 'Perception and attitude to the family concept is weak'; 20-29: 'Perception and attitude to the family concept is low'; 30-39: 'Perception and attitude to the family concept is medium'; 40-50: 'Perception and attitude to the family concept is high' For *Fears Affecting Relationships,* and *Individualization and Freedom* factors: 5-9: 'Weak'; 10-14: 'Low'; 15-19: 'Medium'; 20-25: 'High'.