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## Development of Attitude to University Students Family Communication Scale: Validity and Reliability Studies of Scale

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### Abstract

This study aims to develop a measurement tool that evaluates the attitude of university students family communication and also to conduct the validity and reliability of this measurement tool. Study group comprised of 355 students, 144 (40.56%) of whom were females with a mean age of 20.58 and 211 were males (59.44%) with a mean age of 20.26. Exploratory Factor Analyses were used in order to test the validity of the scale developed for this study. In addition, internal consistency analysis were used in order to evaluate the reliability of the scale. As a result of the factor analysis study, the Attitude to University Students Family Communication Scale consisted of 28 items and 3 factors. Study findings revealed that this measurement tool can be used for Turkish university students as valid one.

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*Keywords:* Attitude to University Students Family Communication Scale; university students; validity

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### 1. Introduction

In the social circle of a child, the most important people are his/ her parents or his caregivers. In other words, his family is of the most important role. At the age of two, the child prioritizes his/ her needs and desires and their fulfillment. However, at the same time, s/he is well aware of the effect of the behaviors of the others on him/ her. As the child grows up and understands human relations, s/he experiences self-awareness (Graham and Crow, 1973).

Sociologically, adolescence is the transformation of childhood dependence into adulthood self-efficacy. The adolescent is out of the family through mutual solidarity (not independence but mutual solidarity) within the three areas no matter what the level of previous parental protection was. These areas are 1) Peers, 2) Elders, 3) Youngers

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(Konopka, 1973).

The process of leaving this dependence creates tensions and emotional conflicts. As it can be understood the descriptions above, family is of a significant place in the life of an individual. Therefore, the purpose of this study is to develop an assessment tool which determines the in- family communication of university students. It is considered that conducting studies concerning the validity of this tool will contribute to the field.

## 2. Method

### 2.1 Participants

In the first phase of this study, 6 students aged 20-24 studying at Kırıkkale University Faculty of Education during the Fall Term of 2013-2014 Academic Year were asked to write an essay so as to obtain some clues about their factors' attitude to university students family communication as Tezbaşaran (1996) proposed. In the second phase, three psychological guidance and counselling experts were consulted regarding their opinions about Attitude to University Students Family Communication Scale trial form and then a 55-item scale was developed. In the third phase, the trial form was implemented on the second study group in order to carry out factor analysis. In the third phase, the trial form was implemented on the second study group in order to carry out factor analysis. The study group consisted of a total of 100 students aged 18-26 studying at Kırıkkale University Faculty of Arts and Science, Faculty of Engineering, Faculty of Economics and Administrative Sciences, Faculty of Law and Faculty of Health Sciences during the Fall Term of 2013-2014 Academic Year. Following the results of the analysis, the scale was finalized as a 54-item scale and it was implemented on a total of 355 students aged 17-26 (mean age 20.3915), of whom are 144 females (40.56%) (mean age 20.58) and 211 males (59.44%) (mean age 20.26) studying at Adıyaman University Faculty of Arts and Science, Afyon Kocatepe University Faculty of Arts and Science, Faculty of Economics and Administrative Sciences, Faculty of Engineering, Bayburt University Faculty of Economics and Administrative Sciences, Celal Bayar University Faculty of Engineering, Faculty of Arts and Science, Faculty of Economics and Administrative Sciences, Istanbul Technical University Faculty of Engineering, Faculty of Architecture, Kırıkkale University Faculty of Engineering, Faculty of Arts and Science, Faculty of Law, Faculty of Health Sciences and Faculty of Economics and Administrative Sciences.

### 2.2 Research Instrument

*The Development of Attitude to University Students Family Communication Scale (AUSFCS):* 55 items were written down in order to measure the three factors which had been determined earlier. All the statements included in AUSFCS are flat statements covering attitude to university students' family communication. The scale was developed in order for individuals to reveal information about themselves basing on Likert-type scale (Tezbaşaran, 1996). The answers are designed as a five-item Likert-type scale, being "Totally Agree" (5 points), "Strongly Agree" (4 points), "Undecided" (3 points), "Strongly Disagree" (2 points), "Totally Disagree" (1 point).

### 2.3 Procedure

AUSFCS draft was implemented on students in a classroom environment as a group. Prior to the implementation, the students were informed of the aim of the study and they were assured that their responses would be kept secret.

### 2.4 The Analysis of the Data

Data analysis was carried out through SPSS 18.0 package programmes. The upper limit of the margin error was determined as 0.05. Content Analysis was conducted in order to form the themes of AUSFCS. In the frame of construct validity, Exploratory Factor Analysis (EFA) was carried out for the data gathered from the study group in order to determine to what extent the items are included in the three factors (Büyüköztürk, 2003; Sümer, 2000).

### 3. Results (Findings)

This section covers the findings regarding the validity of AUSFCS.

#### 3.1 Findings regarding the Validity of AUSFCS

Exploratory Factor Analysis (EFA) and Principal Component Analysis (PCA) as a factoring technique were conducted in order to examine the factorial structure of AUSFCS (Kline, 1994). While the factorial structure was being examined there was no limitation to the number of factors and the minimum eigen value was determined as 1.00 in the first analyses. Prior to the factor analysis, Kaiser-Meyer-Olkin (KMO) coefficient and Barlett Sphericity were carried out in order to determine the appropriateness of the data. KMO value was found as 0.909 and the result of Barlett test ( $\chi^2$ : 6660.303;  $p$ :0.00) was meaningful. After that, Exploratory Factor Analysis (EFA) was conducted through using Varimax Rotation and Principal Component Analysis. The results revealed that 28 out of 54 items of AUSFCS were grouped under three factors and the explanation of variance regarding the scale was found 35.037 %. The factor loadings of the subscale items gathered from the factor analysis are given in Table 1.

Table 1 Factor Loadings of Attitude to University Students Family Communicaiton Scale

Items	Factors		
	Factor I	Factor II	Factor III
1.	0.599		
7.	0.517		
9.	0.577		
11.	0.422		
14.	0.632		
15.	0.658		
16.	0.765		
24.	0.573		
31.	0.546		
18.		0.432	
25.		0.392	
27.		0.446	
32.		0.386	
33.		0.560	
39.		0.451	
40.		0.727	
41.		0.668	
42.		0.650	
46.		0.649	
47.		0.537	
2.			0.493
3.			0.544
4.			0.674
5.			0.739
6.			0.497
26.			0.383

51.			0.388
52.			0.428
Percentages of Variance Explanation	25.039	5.961	4.037
Total Percentages	25.039	31.000	35.037

As a result of the Exploratory Factor Analysis, the Attitude to University Students Family Communication Scale consisted of 28 items and 3 factors. The Exploratory Factor Analysis revealed that factor loadings explained 35.037 % of the variance of the scale. The factor loadings of factor I consisting of 9 items varied between 0.422-0.765 and explained 25.039 % of the variance. The factor loadings of factor II consisting of 11 items varied between 0.386-0.727 and explained 5.961% of the variance. And, the factor loadings of factor III consisting of 8 items varied between 0.383-0.739 and explained 4.037 % of the variance. If the measurement of the factor loading is 0.45 or over it means it is a good measurement, however, this value limit can be decreased to 0.30 since there are few items in the analysis (Büyüköztürk 2005). Moreover, this tool is a valid one peculiar to a sample group bearing the characteristics of Turkish culture.

### 3.2 The Findings regarding the Reliability of AUSFCS

#### 3.2.1 Internal Consistency

The reliability of the scale was calculated by utilizing the data gathered from the 28 items proved valid according to the factor analysis procedure. Cronbach Alpha related to subscales of AUSFCS was calculated according to the results of the implementation carried out on the study group consisting of a total of 355 students. Cronbach alpha coefficients related to the subscales of AUSFCS were found 0.844 for factor I, 0.853 for factor II and 0.801 for factor III. Item-total correlations and Cronbach alpha internal consistency coefficients are given in Table 2.

Table 2 Item-total Correlations and Cronbach Alpha Internal Consistency Coefficients regarding the Subscales of AUSFCS

Items	Item-total Correlations	Cronbach Alfa
Factor I	0.465-0.696	0.844
Factor II	0.375- 0.678	0.853
Factor III	0.435-0.591	0.801

## 4. Results and Discussion

In this study, the factor analysis and construct validity were carried out for the Attitude to University Students Family Communication Scale, which is developed so as to assess students' attitude to family communication in terms of factors. It can be argued that the scale is a valid assessment tool when the findings of this study are considered.

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