

STATISTICAL ANALYSIS OF THE INTERACTION BETWEEN GENDER ATTITUDE AND PERCEPTION OF HAPPINESS: AN APPLICATION ON UNIVERSITY STUDENTS¹

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ABSTRACT

Gender attitude is the concept defines the roles and behaviors that society and cultural structure expect from women and men throughout their lives. Gender equality emphasizes that women and men should have equal rights and opportunities and should not be gender-dependent. On the other hand, gender inequality can be defined as inequality in accessing resources and opportunities by sex. The effects of gender inequality can be observed in couples' relationships and social events in daily life. It is not possible to deny the role of gender inequality on people's and society's happiness level since it is one of the most important dynamics of social life. In this study, the relationship between gender attitudes and happiness perceptions of individuals were analyzed by using micro data. Within the scope of the study "Attitude Scale Regarding Gender Roles", which is validated and reliable in the literature, was applied to a randomly selected sample. The sample was designed using both multistage sampling and stratified sampling techniques together. Stratification was planned on the basis of faculties. The prepared questionnaire was applied to a random sample of 3403 university students. The data collected were analyzed by homogeneity analysis and two-step cluster analysis, which are some of the Optimal Scaled Multivariate Analysis techniques. According to the results, it was observed that individuals whose gender attitude is relatively egalitarian are moderately happy and also, are the happiest with themselves. In addition, it is remarkable that the categories of success and love are closely located.

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Individuals with relatively more traditional attitude describe themselves as very happy. Additively it was determined that their source of happiness is their families, while the concept that makes them most happy is "health". The findings are corroborated with the two-step cluster analysis results.

Keywords: *Happiness, Homogeneity Analysis, Gender Attitude*

JEL Codes: *C38, C3*

1. INTRODUCTION

A gender, defining a biological structure is a demographic variant that classifies individuals as men and women. Unlike gender biologically defined, gender is a concept that defines the roles and behaviors that society and cultural society perceive to be appropriate for women or men and that they expect to exhibit throughout life. Gender is not biological but social (Dökmen, 2014). The roles that society imposes on individuals as men and women are called gender roles. Gender roles are gained by learning. Mainly gender equality emphasizes that women and men have equal rights and opportunities and those rights and opportunities should not be dependent on gender. Gender inequality can be defined as inequality in access to resources and opportunities (Kimmel, 2011). The number of studies on gender has been increasing day by day, and the issue has been examined in detail from various aspects. It is possible to say that almost all social scientists have become the focus of attention.

Happiness, on the other hand, is a concept that has been explored from the before common era to the present, but it cannot be defined easily. It is possible to define happiness basically as an emotion felt, or a situation during this feeling (Graham, 2004). According to Turkish Dictionary of the Turkish Language Association happiness is "feeling proud to be able to reach all the aspirations completely and continuously". The definition of happiness on an individual basis, on the other hand, is generally impressed from the concept, person or situation that individual consubstantiated happiness or what affects their level of happiness. While seeking an answer to the question "How happy are you when you think of your life?", philosophical, sociological, psychological, medical aspects of assessment are required. For these reasons, research on happiness continues to attract the attention of thinkers, artists, behavioral scientists, political scientists, businessmen and economists.

The concept of gender inequality is affected by social and cultural changes. The perspective of individuals on gender inequality is affected by the impact of these changes. In developed and open societies, the negative perspective on the value of women in society leaves its place to a more egalitarian environment. This is possible only by raising individuals with a great consciousness. It is a common understanding that university education today is a status indicator. The viewpoint and thoughts of university youth on gender inequality are important both as they are educated individuals who form a certain part of the society in the future and because they will play an important role in the upbringing of new generations. For this reason, in this study, especially university students were studied and firstly, the gender perspective of the next generations was examined by using the "Attitude Scale Regarding Gender Roles".

It can be thought that gender attitudes, which shape the point of view of the individuals, may be related to happiness levels and perceptions of happiness. For this reason, in the second part of the study, the perceptions of happiness of both relatively traditional and relatively egalitarian individuals on gender attitude are examined. Homogeneity analysis, one of the optimal scaled data analysis methods, was applied and the results were evaluated. Two-stage cluster analysis, a second multivariate technique, was used to control the findings.

2. PERCEPTION OF HAPPINESS AND GENDER ATTITUDE

Happiness means something different for each individual. That is why, happiness is subjected to many studies. When those studies examined, it is found that the most decisive factors of happiness are sociodemographic indicators (age, gender, marital status, education etc.). Among all of the sociodemographic indicators, the relationship between gender and happiness is the most remarkable one. Most of the studies about gender and happiness defends there is high correlation between them. In the study of Hori and Kamo (2017), gender differences, which is one the factors that determine the happiness of individuals, in China, Japan, South Korea and Taiwan is discussed. East Asia Social Research Health Module 2010 data were used. For this purpose, it was investigated whether gender difference, marriage, traditional gender roles (employment, parenting) and social support had an impact on happiness. According to the results of Regression Analysis, gender differences is one of the determinants of happiness in East Asian countries.

In their study, Stavrova et al. (2012) examined gender differences intended to living together, in which countries gender differences were similar, and the relationship of this difference to gender equality in social structures. The results from the two-stage hierarchical models show that the egalitarian approach makes a positive influence to the happiness of women living together. However, this situation is not same for the men. It was also concluded that women's contribution to the economy gives them more independence in their marriage.

On the other hand, some of the studies suggested that there is no relation between perception of happiness and gender. Mahon et al. (2005) examined the relationship between happiness and gender differences with some kinds of health variables, such as perceived health status and clinical health for early adolescents. For this purpose, a questionnaire was applied to 151 students in 7th and 8th grade. According to the results, gender had no significant effect on happiness between boys and girls. However, it is found that there was a positive correlation between health-related variables and happiness.

Similarly, in the study of Holahan et al. (2008) it is found that gender does not have a significant effect on happiness. They applied hierarchical linear modeling in their study in order to determine 20-year happiness of 717 people between the ages of 66-86. Against time, the relationship between age and sex with happiness was examined. For people in this age group, In addition, age was found to be a more effective factor on happiness, and it was observed that the level of happiness decreased over the 20-year period.

On the other hand, studies showing the effect of other factors are also frequently encountered. From another point of view; Mencarini and Sironi (2012) evaluate the effect of unequal labor division of households between women and their spouses on women's own subjective well-being. The data, from European Social Survey of 26 European countries were used, and the determinants of the different levels of happiness among women were investigated. It was found that there is a negative relationship between gender inequality and women's happiness in European countries. In addition, unequal labor division of households affects women negatively.

Naturally, religious issues and feeling free about them have a direct effect on happiness. In their study, Mookerjee and Beron (2005) investigated the effects of religious fragmentation, gender and quality of life, in determining happiness levels of 60 countries. For this purpose, Human Development Index, Gastil Civil Freedom Index, Economic Freedom Index, Gini Coefficient, Corruption Index, Religious Fragmentation Index and percentage of women in parliament were used as variables. According to the results of the Regression Analysis, both the degree of religious fragmentation and the gender, which is represented by the percentage of women in parliament, had significant effects on the degree of happiness. It also reveals that

higher levels of religious fragmentation reduce happiness, while greater representation of women in parliament significantly increases happiness.

About religious perspective of happiness, Nordenmark (2017) analyzed Social Survey Program (2012) data. People live in different sex regimes are examined according to their job satisfaction and family happiness. Results showed that conservative sex regimes make women unhappy. Men are not as uneasy as women.

There is no doubt that there are many other determinants of happiness. However, as seen on, most of the studies included gender as one of the determinants of happiness, even the main determinants were found something different. In literatures reviewed, one of the most conspicuous decisive elements of happiness is job satisfaction and working conditions according to genders. Rudolf and Cho (2011) used panel data derived from the Korean Labor and Income Panel Study (KLIPS) from 1998 to 2008 to analyze the relationship between working hours and family happiness in Korea. In this study, time, work and life satisfactions of men and women were analyzed separately with Sequential Logit model. According to the results, reducing working hours increases family happiness in Korea. It was also found that the highest satisfaction among women controlling household income was come, when they were not working, or working 31 to 40 hours per week. Both part-time and overtime working have been found to reduce women's happiness. In contrast, men have the highest satisfaction level when they work full-time with working hours between 31 and 50 hours per week. The results showed that the traditional gender roles in Korea are strong, and that the working hours should be reduced and policies supporting equal chances should be developed in order to increase women's labor force participation and family happiness.

Together with the globalization, cosmopolitan societies appeared. That bring along cultural difference in people's social life. Ye et al. (2015) proves the effect of cultural difference on people's happiness. In addition to this, they found that Gender Equality Index is also important for cultural difference. According to the results of the Regression Analysis, gender equality variable was detected as an important determinant of happiness.

Unfortunately, even in today's world, women inequality subjects to the studies about life satisfaction. According to Gökdemir and Tahsin (2014) handle job satisfaction in terms of earnings, gender, and happiness together. Sequential Logistic Regression Analysis is applied to the data obtained from the survey results of 510 women living in the big cities of Northern Cyprus. The results show that health, higher education, savings, high household income variables have positive effects on life satisfaction, while domestic violence, being a full-time housewife, unemployment and social reference income have negative effects on life satisfaction.

When examining the Turkish literature on happiness, sociodemographic characteristics (age, job, marital status) and economic aspects such as earnings have always attracted attention in the majority of studies of happiness or life satisfaction, as it is expected. For example, Bülbül and Giray (2011) examined the relationship between sociodemographic characteristics and perception of happiness in various aspects. The dependent variables of this research composes from three questions about the general happiness of the individuals, who made them happy and what makes them happy. The independent variables, on the other hand, are; income, place, gender, age, marital status, job status and educational background of the responders. According to the results of Nonlinear Canonical Correlation Analysis, women who are married, housewife or young were found to have middle to high level of happiness. It was observed that men living in the city, working, having low educational degree and relatively in low income group have middle-upper level of happiness, and the ones who made them most happy were their families.

Moreover, the happiness level of primary school graduates and middle-aged pensioners is the middle-upper level and health is the concept that makes them most happy.

On the other hand, in the study of Dumludağ et al. (2016), the relationship between income satisfaction with life satisfaction, and happiness level is investigated according to the data derived from Turkish Statistical Institute's Life Satisfaction Survey, in 2011. The results of Sequential Logit Model shows that being housewife, being retired, having higher household income, and living in the rural parts of Turkey have positive effect on happiness. On the other hand, living alone, divorce, being married and living in the urban area of Turkey have negative effect on happiness.

Although most of the studies on happiness in the literature focus on the effect of demographic variables – generally gender - it is also possible to find studies examining the relationship between “gender attitude” and “happiness” and some dimensions of happiness.

In the study conducted in 2013, attitudes of 324 university students regarding to gender roles and its relationship with life values are examined. After reliability analysis and descriptive statistics are given, t test is applied to data. Significant differences were found between gender attitudes on the basis of gender. In addition, it was observed that there is a positive and significant relationship between the life values dimension of students and the egalitarian gender role and the gender role in marriage, which are sub-dimensions of gender perception. (Aytaç & Öngen, 2013).

In the study conducted by Karaca and Aksu in 2020, it was aimed to determine the relationship between health care students' attitudes towards gender roles and their psychological well-being, which is one of the indicators of happiness. In this context, the questionnaire applied to 143 university students was analyzed with multivariate statistical techniques. As a result, a weak positive correlation was found as a result of the correlation analysis conducted to evaluate the relationship between students' gender role attitude and psychological well-being. (Palas Karaca & Çubukçu Aksu, 2020).

Another study examining the relationship between university students 'perception of gender roles and their “psychological well-being” is concluded that students whose attitudes towards gender roles are less traditional have higher psychological well-being levels. According to ANOVA results, students' gender attitude is affected by mother's and father's educational level while the geography where the born is not effective on students' gender attitude. Due to the prevalence of traditional value judgments and perspectives, it is observed that the level of perception of gender roles as egalitarian decreases as the age of individuals increases. (Arıcı, 2011).

Dökmen (2000) conducted a study on 175 people between the ages of 17-61, including university students, to examine the relationship between perception regarding people of their own sex and other gender, gender roles, and depression, the opposite feeling of happiness. In the study, it was stated that although the participants perceived people of their own gender more positively than those of the other gender, women's negative perceptions of men were higher than men's negative perceptions of women. In addition, it was concluded that as the masculinity score increased in females, the depression score decreased, and there was no significant relationship between gender roles and depression in males (Dökmen, 2000).

All in all, according to literatures reviewed from Turkey and other countries, sociodemographic indicators are almost adequate for explaining happiness and life satisfaction. In most of the studies, it is found that gender equation is important not only for happier people, but also, it improves the economy with women's labor participation. However, almost all studies about happiness examined the effect of gender on happiness directly or indirectly. Even

gender attitude and happiness topic is not processed enough, based on the available data, it can be said that there is a relationship between these two variables. This study will contribute the literature with its findings and suggestions.

The Objective and Scope of the Study

In this study, the relation between gender attitudes of individuals and perceptions of happiness will be analyzed using microdata. Within the scope of the study, "Attitude Scale Related to Gender Roles", which has proven its validity and reliability in the literature, has been used. Considering that gender attitude is gained through learning, university students, who are seen as the youngest educated part of the society, are the sampling units of the research. A questionnaire was applied to Marmara University students in terms of both hosting students from all regions of the society and the number and variety of students.

For this purpose, the relevant questionnaire was applied to a random sample of 3403 students designed with Multilevel and Stratified Sampling technique. Stratification is done according to the faculties. Proportional Distribution is used when sub-sample volumes are determined. The number of students required to be interviewed from other faculties, including 30 students from the faculty who have the lowest number of students in education term, has been determined and a total of 3403 students have been reached.

In the first part of the questionnaire, there are questions about age, gender, faculty, family type, the number of siblings, geographical region, the level of education of parents, the working status of parents and socioeconomic level which are considered to be related to gender roles. When the relevant variables were determined, literature review carried out within the scope of the study was taken into consideration. In the second part of the questionnaire, there are 38 questions "Gender Roles Attitude Scale" developed by Zeyneloglu (2008) and aimed at measuring students' perception of social stereotypes, and 3 basic questions about happiness perception from Turkish Statistical Institute Life Satisfaction Questionnaire. Questions and categories about perception of happiness are given in Table 1. The prepared questionnaire has been prepared both in written and online form and has been applied to the students on a campus, in writing and online in the social media communication groups.

Table 1. Questions About Happiness and Their Levels

Questions About the Perception of Happiness	Levels
How happy are you when you think about your life as a whole?	Very Unhappy, Unhappy, Medium, Happy, Very Happy
Who makes you most happy in life?	Myself, Children, Parents, Friends, Nephews, Partner - Spouse, Whole family
What makes you happy in life?	Power, Success, Work, Health, Love, Money

The socio-demographic information about the students and their families in the data set is given below. Since a social concept is examined in the study, information about the families and lives of individuals are given in detail. IBM SPSS Statistics 21 program was used for the application of analysis techniques.

Table 2. Demographic Features of Students

VARIABLE	FREQUENCIES	%
AGE		
18	229	6,7
19	416	12,2
20	737	21,7
21	729	21,4
22	514	15,1
23	338	9,9
24+	440	13,0
Class		
Preparatory	104	3,1
1.Class	786	23,1
2.Class	947	27,8
3.Class	781	23,0
4. Class	648	19,0
5.Class	79	2,3
6. Class	58	1,7
EDUCATION		
Daytime Education	2767	81,3
Evening Education	636	18,7
MARITAL STATUS		
Single	3310	97,3
Married	93	2,7
TYPE OF HIGH SCHOOL		
Anatolian High School	1488	43,7
Science High School	170	5,0
Regular High School	812	23,9
Anatolian Teacher High School	315	9,3
Anatolian Vocational High School	111	3,3
Anatolian Religious High School	107	3,1
Collage	104	3,1

According to table, the average age of the students is 21, while the mode age is 20. Consequently, the majority of the students are 2nd grade students, followed by 1st and 3rd grade students. 81.3% of the students are daytime education and 18.7% are registered to evening education program. Single students are in the minority among all students with 2.7% share. Finally in this table, approximately half of the students are graduated from Anatolian High School (43,7%) and followed by students who are graduated from regular high school.

Table 3. The Hometown and Accommodation Units of Students

HOMETOWN	FREQUENCY	%
İstanbul	1519	44,6
Others	1884	55,4

ACCOMODATION UNIT	FREQUENCY	%
Center	2020	59,4
District	391	11,4
Village	992	29,2

Nearly half of the students (55.4%) completed their secondary education in cities outside Istanbul. At the same time, 59.4% of the students lived in the center of the citys', while 11.4% lived in the districts and 29.2% lived in the villages.

Table 4. Students' Place of Residence

PLACE OF RESIDENCE	FREQUENCY	%
Government Dorms	348	10,2
Private Dormitory	453	13,3
Guesthouse	18	0,5
Home - with spouse / partner	126	3,7
Home - alone	201	5,9
Home – with one of the family members	338	9,9
Home – with parents	1082	31,8
Home – with friends	721	21,2
Home – Relative's house	98	2,9
Others	17	0,5

The majority (31.8%) of the students who live in the household live with their parents at home, 21.2% with their friends at home, 13.3% in private and 10.2% in state.

Table 5. Education Level, Profession and Family Income Level of Students' Parents'

MOTHER EDUCATION STATUS	FREQUENCY	%
Not literate	168	4,9
Literate	201	5,9
Primary School Graduate	1200	35,3
Secondary School Graduate	377	11,1
High School Graduate	854	25,1
Collage Graduate	137	4,0
Bachelor's Degree	429	12,6
Masters/ PhD Degree	37	1,1
FATHER EDUCATION STATUS		
Not literate	19	0,6
Literate	82	2,4
Primary School Graduate	811	23,8
Secondary School Graduate	485	14,3
High School Graduate	982	28,9
Collage Graduate	204	6,0
Bachelor's Degree	742	21,8
Masters/ PhD Degree	78	2,3
MOTHER'S PROFESSION		
Housewife	2219	65,2
Officer	274	8,1
Employee	463	13,6
Retired	355	10,4
Other	92	2,7
FATHER'S PROFESSION		
Not Working	138	4,1
Officer	554	16,3
Employee	1167	34,3
Retired	1092	32,1
Other	452	13,3
FAMILY INCOME LEVEL		
0-949 TL	151	4,4
950-1427 TL	643	18,9
1428-2500 TL	956	28,1
2501-3500 TL	804	23,6
3501 + TL	849	24,9

35.3% of the students' mothers are in primary school graduation (mod), 28.9% students' fathers are high school graduates (mod). The majority (65.2%) of the students' mothers are housewives, 34.3% of the students' fathers are workers, and 32.1% are retired. For student's families, it is seen that monthly average income of 28.1% is between 1428-2500 TL and 23.6% of them is between 2501-3500 TL. The income level of 18.9% of the families is between 950-1427 TL.

When the frequency tables are analyzed, it is observed that the diversity of the sample studied in the study is appropriate in terms of representation.

3. METHODOLOGY

In the case of a large number of variables in statistical studies, multivariate analysis techniques are used to analyze them collectively. These techniques, in which quantitative data are used, are known as Linear or Classical Multivariate Analysis Techniques. Surveys are

frequently used to obtain data especially in studies conducted in the field of social sciences. The attitude and behavior data collected by the questionnaire are mostly categorical. In the case of categorical data, the assumptions required in most of the multivariate analysis techniques are not provided. In this case, multivariate analysis techniques that do not require assumption are needed. With Optimal Scaling Multivariate Analysis techniques, categorical data can be included in the functioning of the analyses with nonlinear transformations. Multivariate analysis techniques using categorical data are called 'Nonlinear Multivariate Analysis Techniques' (or techniques developed according to the Gifi system). In the Gifi System, categorical variables are scaled by wavelet least squares (An Alternating Least Squares (ALS)) algorithm. Homogeneity Analysis is accepted as the basis of Optimal Scaling Multivariate Analysis techniques called GIF techniques (Gifi, 1996).

Homogeneity Analysis

Multiple Homogeneity Analysis; is also known as; Multiple Correspondence Analysis, Optimal Scoring and Appropriate Scoring Methods, Digitization Method, Dual Scaling, Multiple Correspondence Analysis, and Scalogram Analysis in literature. "HOM" in the abbreviation of HOMALS comes from the word homogeneity, and "ALS" comes from the Alternating Least Squares technique (Başçı, 2016).

The purpose of HOMALS is to map objects and categories together in a low dimensional Euclidean space. In order to draw this map, the lowest dimension possible is required. In order to interpret the maps conveniently, two dimensional maps are generally in use.

After non-linear transformations, quantization is performed. That is, the categorical variable has now become a variable in the quantitative structure. The basic concept in HOMALS is the minimization of a loss function under the certain constraints. To summarize, the basic concept in HOMALS is the minimization of a loss function under certain constraints. The iterative approach continues until the value of the lost function is minimized. Thus, in the analysis, object scores and category digitization's are calculated to minimize the loss function. Relations between the mapping of these values and the categories emerge (Gifi, 1996; Van de Geer, 1993).

4. EMPIRICAL RESULTS

For the data set, Reliability Analysis was first applied and then descriptive statistics were calculated. Information about the relationship between reliability analysis and questions on the scale is obtained. Cronbach Alpha coefficient is widely used in reliability analysis applications. This coefficient indicates the similarity or closeness of the questions. With this analysis, an answer is sought in the question "Does the question in the scale express a whole that shows a homogeneous structure?". For a total of 38 items of the scale, the reliability coefficient was calculated as 0,935. According to these results, the scale is highly reliable.

The median values of the respondents' answers to 38 questions of type 5 likert are given in Table 6. Here, the coding process is completed by considering the structure of the items. For some cases, items are coded reversely. For the coding process, the students were asked for egalitarian attitude sentences regarding gender roles; "5" points if it fully agrees, "4" points if it agrees, "3" points if it is unstable, "2" points if it does not agree, and "1" points if it does not agree. The traditional attitude sentences regarding gender roles graded contrary to the above-mentioned scoring, students are scored as "1" points if they fully agree, "2" points if they agree, "3" points if undecided, "4" points if they do not agree, and "5" points if they do not agree (Zeyneloğlu, 2008).

Table 6. Likert Scale Descriptives

Variable	Median	Point
Girls should live separately from their families when they gain their economic independence.	4	I agree
Everything that is said by men should be done at home	5	I absolutely disagree
The professions that women will take and the professions that men will take must be separate.	4	I do not agree
Spouses should make a decision together to have children in marriage.	5	I absolutely agree
When a young girl chooses the person to marry, the last decision must be made by father.	5	I absolutely disagree
Giving a birth to a son increases women's value.	5	I absolutely disagree
Men should be preferred on job applications due to the fertility characteristic of the woman.	5	I absolutely disagree
Household work in the family should be shared equally among the spouses.	5	I absolutely agree
husband must make decisions about the woman's life.	5	I absolutely disagree
Women should be silent instead of arguing about the topics that they can not agree on.	5	I absolutely disagree
A young girl should obey her father until she gets married.	4	I disagree
Girls and boys should benefit equally from the financial possibilities of the family.	5	I absolutely agree
Women and men should be paid equally in their working life.	5	I absolutely agree
It should be normal for a man to deceive his wife	5	I absolutely disagree
If a woman is not able to give a birth, her husband should get married	5	I absolutely agree
The main task of the woman is motherhood.	4	I disagree
The husband is the breadwinner	5	I absolutely disagree
Widowed woman should live alone like a widow.	5	I absolutely agree
The family should let her daughter flirt.	4	I agree
The spouses must make decisions together in the family.	5	I absolutely agree
A woman should be able to go out alone in the evenings.	4	I agree
When the spouses get divorced, the goods must be shared equally.	5	I absolutely agree
Girls should be dressed in pink and boys in blue.	4	I agree
The most important task of the man is to look after his family	3	Neither I agree nor disagree
If the man has enough financial power , the woman should not work.	4	I do not agree
When she does not want women should refuse sexual intercourse in marriage	5	I absolutely agree
Equal opportunities for should be given to women and men for professional development.	5	I absolutely agree
The education level of a man should be higher than that of a woman in marriage.	4	I do not agree
A woman should have sexual intercourse after she is married	3	Neither I agree nor disagree
Priority should be given to the education of the male child in the family.	5	I absolutely disagree
The woman with whom a man marry must be a virgin	3	Neither I agree nor disagree
Men should deal with out-of-home jobs such as paying bills and shopping	4	I do not agree
Men should work in professions with high status.	4	I do not agree
The man should decide how to use the income in the family.	5	I absolutely disagree
A man should beat his wife when it is necessary.	5	I absolutely disagree
It is only the woman's responsibility to protect herself from pregnancy in marriage.	5	I absolutely disagree
When a woman goes to the hospital, she should be examined by a male doctor	5	I absolutely disagree
Man should be older than women in marriage	4	I do not agree

According to the Tukey Aggregation Test, the sum of scale items were used. The gender role attitude scale was obtained by summing the scores of the judges in the total score variable score. The score obtained was converted to a categorical variable for the next analysis. Since the highest value that can be taken from the scale is 190, it is accepted that individuals with a score value lower than 95 have a relative traditional and those with a higher value than 95 have a relative egalitarian attitude.

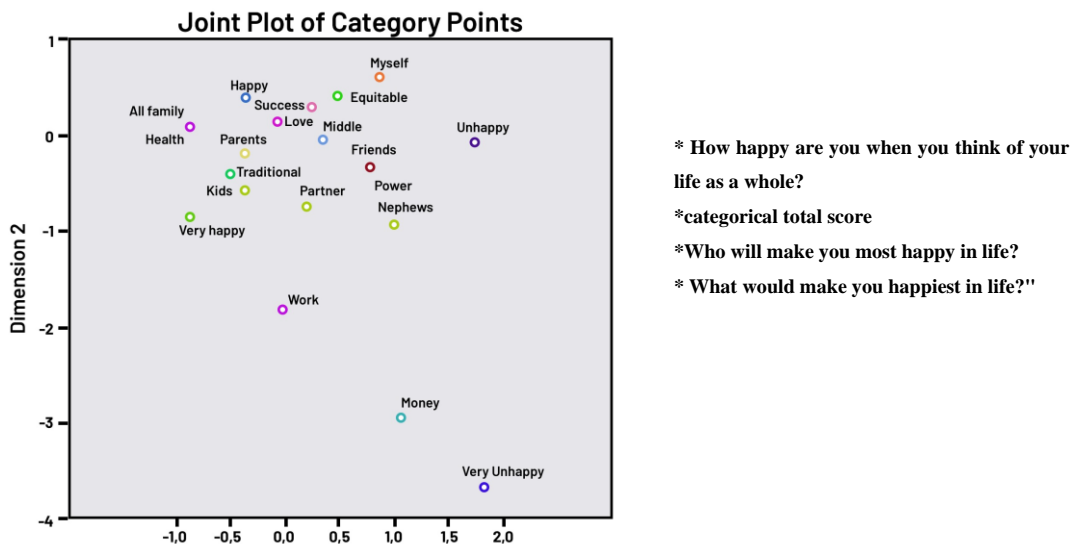
Apart from the Gender Roles Attitude Scale, the mode values of the ordinal scaled questions about happiness and the median values of metric scaled questions about happiness are calculated. The median value of the question "How happy are you when you think of your life as a whole?" is calculated as 4 over 5. It is possible to say that the participants are happy when they think of their lives as a whole. Moreover, the mode value of the question "Who will make you most happy in life?" is found as "Whole Family". For the question "What would make you happiest in life?", the mode answer was observed as "Love".

4.1 Homogeneity Analysis Findings

To examine the relations between the categories of variables; all variables without discriminating between dependent and independent variables were examined by homogeneity analysis. The objective here is to examine the positions of the variable categories in the analysis about the cause-effect relationship without any assumptions. The categorical hash map showing the relationships between the categories is given below.

It is determined that the most contributing variable to the Homogeneity Analysis is the variable "To which extent are you happy when you evaluate your life as a whole?" according to discrimination measures. In addition, the map of object scores is also examined and noticed that there is no observation that can be described as contradictory observation within the scope of the analysis.¹

Figure 1. Graphic of Homogeneity Analysis



When Figure 1 is examined, it is possible to see the categories' of variables that are located around the "relatively egalitarian" and "relatively traditional" categories of the attitude. Here, it is seen that individuals whose gender attitude is relatively egalitarian see themselves as moderately happy and are mostly happy with themselves. In addition, it is noteworthy that the categories of success and love are closely located for individuals who have a relatively egalitarian attitude. The source of happiness for these people is both success and love.

Individuals with a relatively traditional attitude, on the other hand, express themselves as very happy. It is seen that their children and families make them the happiest. For individuals with a relative traditional attitude, the source of happiness is health. When the categories are examined, it is seen that the “money” and “I’m very unhappy” categories are located further away from other categories. It can be interpreted that individuals with both gender attitudes do not see money as a source of happiness in their lives. Although the concept of business is not stay away as money, it is also not as prominent as the concepts of health, love, power and success according to the answers of the participants. Considering that the individuals participating in the survey are university students, it can be said that the results obtained are consistent.

4.2 Two-Step Cluster Analysis for Robustness Check

Two-step clustering analysis was applied to the data set using relevant variables. The purpose of the two-step clustering analysis is to reveal natural groups that are not visible in the data set. This analysis is generally used in data sets where the number of observations is high and both quantitative and qualitative variables are included (Yılmaz, 2012). It is an important feature of this method that it is possible to re-extract observations that are inappropriate to the generated clusters and automatically determine the optimal number of clusters according to AIC or BIC criteria (Hair et al., 1995; Sharma 1996; Alpar, 2013).²

According to the findings, university students are divided into 6 groups in terms of gender attitudes and perceptions of happiness. Clustering success is "medium". Appropriate descriptive statistics of variables for each cluster were calculated and summarized in the Table 7.

Table 7. Two Step Cluster Analysis Results

Cluster	Number of participants	Happiness (average)	What? (Mod)	Who? (Mod)	Gender attitude (average)
1	711	3+	love	myself	161+
2	485	3,47	love	myself	156
3	512	3,52+	love	friend	159+
4	671	3,80+	health	the whole family	151+
5	628	4+	love	the whole family	159+
6	396	4+	success	the whole family	154

With the help of descriptive statistics, cluster profiles can be plotted as follows:

Cluster 1, composed of people most egalitarians to gender attitude, often stated that they are happy in the middle and that they are the ones who make happy themselves, and that the concept that make themselves happiest is love. The two clusters following Cluster 1 based on egalitarians are Cluster 3 and Cluster 5. They often described themselves as happy, expressing happiness in the concept of love, and in person, friends and family. This set of happiness averages is one of the two highest. In the other cluster with the highest happiness average, happiness is observed to be the success and the whole family (Cluster 6). It can be said that this cluster is more conventional than Cluster 1. The majority of those in Cluster 4, which is the cluster of the most rituals, have described themselves as happy and have expressed their happiness in health and whole family.

The findings of the analysis are basically consistent with the findings of Homogeneity Analysis. Relatively most egalitarians seek happiness on themselves and on the concept of love, and their level of happiness is intermediate 3. Relatively the most traditionally seeking

happiness is in all their families and in the concept of health, and the level of happiness they have stated is higher than that of relative modernity (3,8 = happy).

5. CONCLUSION

In this study, it was tried to determine whether the attitudes of university students towards gender roles are traditional or equitable and whether there is an interaction with the perceptions of happiness of these attitudes. In the scope of the study, questionnaire data were collected and evaluated through the sample designed with Stratified Sampling (n = 3403).

Firstly, the median values of the materials used in the study are calculated and interpreted. Within the scope of the study, the reliability of gender attitude scores has been proven and then the collectability has been examined. Scores were collected in the direction of the results and the obtained variable was transformed into two sets with median help. With the help of gender scoring in the literature survey, it was seen that the individuals were described as 'egalitarian' and 'traditional', at this stage median value was used as the cutting point.

Homogeneity analysis, also known as nonparametric multivariate analysis technique, was then applied. The objective of using Homogeneity Analysis is the interpretation of relations between the categories of variables.

It is desired to support these findings with an alternative technique. For this reason, a two-stage clustering analysis was applied to the data set and it was determined that university students could be divided into 6 clusters. Profiles of these clusters were drawn with descriptive statistics and it was seen that the findings were compared with the findings of Homogeneity Analysis.

The two-step clustering summary data in parallel with the Homogeneity Analysis findings are as follows:

Relatively most egalitarians seek happiness in themselves and in the concept of love. Their happiness levels are average (3). Relatively the most traditional ones are seeking happiness in all its families and health concept. Relatively happiness levels were higher than equalitarian (3.8 = happy). However, since happiness is a kind of cultural issue, those results may differ from different cultures.

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NOTES

¹ Homogeneity Analysis does not include test in its content. For this reason, it has been determined that there are meaningful dependencies among variables by applying Chi-Square Independence Test. According to the findings, as the level of relative egalitarianism increases, happiness is sought firstly in the person himself / herself. This can be explained by individualization. Happiness is sought primarily in parents as the relative traditionality increases.

² Only the total score variable is included in the numerical analysis. In this way cluster profiles can be interpreted in more detail.