ASSESSMENT OF KNOWLEDGE, ATTITUDE OF MEDICAL STUDENTS IN A MEDICAL SCHOOL TOWARDS GENDER ROLES

Bir tıp fakültesi öğrencilerinin toplumsal cinsiyet rollerine yönelik bilgi ve tutumları

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Abstract

The purpose of this study was to determine the attitudes of medical students towards gender roles. A cross-sectional study was conducted. The study enrolled voluntary medical students from the 1st and 6th grades of school in University. Out of the 764 students in the study population, results for 518 could be analyzed. Beyond socio-demographic characteristics, students' awareness of gender roles was measured using the 38-item Gender Roles Attitude Scale (GRAS). The mean age of the students was 21.68±3.04 years. The mean GRAS score of the students were 113.45±7.36. The highest mean score in the GRAS subscales belonged to the "egalitarian gender roles" (33.74±5.78), and the lowest score to the "male gender roles" (12.26±4.51). Females had significantly higher mean total GRAS scores than males. On the other hand, the mean GRAS scores of first-grade students were statistically higher than those of the grade six students The GRAS score was significantly correlated with age (r –0.23, p<0.001). Multiple linear regression was done to investigate the effects of age, female sex, and being first grade on the GRAS scores, where age (t=-1.895; p=0.059) and female sex (t=6.170; p<0.001) revealed significant. Gender role perceptions and attitudes of the society can be changed in a positive way with parent education. Among the subjects of undergraduate medical education, the concept of gender needs to be emphasized more. Raising conscious graduates in terms of gender perceptions can contribute to reducing health inequalities caused by gender.

Keywords: Gender, medical students, education.

Özet

Bu çalışmanın amacı, tıp öğrencilerinin toplumsal cinsiyet rollerine yönelik tutumlarını belirlemektir. Kesitsel bir çalışma yapılmıştır. Araştırmaya Erzurum Atatürk Üniversitesi Tıp Fakültesi 1'inci ve 6'ıncı sınıflarından tıp öğrencileri alınmıştır. Çalışma 764 öğrenciden 518'i ile yapılmıştır. Katılımcılara, sosyo-demografik veri formu ,öğrencilerin cinsiyet rollerine ilişkin farkındalıklarını değerlendirmek için 38 maddelik Toplumsal Cinsiyet Rolleri Tutum Ölçeği (TCRTÖ) yapılmıştır. Öğrencilerin yaş ortalaması 21,68±3,04 yıl idi. Öğrencilerin TCRTÖ puan ortalaması 113,45±7.36 şeklindeydi. TCRTÖ alt ölçeklerinden en yüksek ortalama puan "eşitlikçi cinsiyet rolleri"ne (33,74±5,78), en düşük puan ise "erkek cinsiyet rollerine" (12,26±4,51) aitti. Kadınların toplam TCRTÖ puan ortalamaları erkeklerden önemli ölçüde daha yüksekti. Birinci sınıf öğrencilerinin ortalama TCRTÖ puanları, altıncı sınıf öğrencilerinden istatistiksel olarak daha yüksekti. TCRTÖ puanı, yaşla anlamlı düzeyde ilişkiliydi (r= –0,23, p<0,001). Yaş, kadın cinsiyet ve birinci sınıf olmanın TCRTÖ puanları üzerindeki etkilerini araştırmak için çoklu doğrusal regresyon analizi yapıldı; burada yaş (t=-1,895; p=0,059) ve kadın cinsiyet (t=6,170 ; p<0,001) anlamlı bulundu. Ebeveyn eğitimi ile toplumun cinsiyet rolü algı ve tutumları olumlu yönde değiştirilebilir. Mezuniyet öncesi tıp eğimi konuları arasında toplumsal cinsiyet kavramının üzerinde daha fazla durulması gerekmektedir. Toplumsal cinsiyet algıları açısından bilinçli mezunlar yetiştirilmesi, toplumsal cinsiyetin neden olduğu sağlık eşitsizliklerini azaltmaya katkı sağlayabilir.

Anahtar kelimeler: Toplumsal cinsiyet, tıp öğrencileri, eğitim.

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Introduction

Gender refers to the socially constructed characteristics of the two sexes – such as norms, roles, and relationships (1). Gender varies from society to society and can be modified (1, 2). Although most people are born either male or female, they are taught various norms and behaviors–including how they should interact with others of the same or opposite sex within households, communities, and workplaces (1).

According to the United Nations Statistics Division, gender norms refer to, "the accepted attributes and characteristics of being a woman or a man at a particular point in time for a specific society or community. They are internalized early in life through the process of gender socialization, are used as standards and expectations to which women and men should conform, and result in gender stereotypes" (3). Gender norms lead to inequality if they reinforce mistreatment of one group or sex over the other or differences in power and opportunities. When individuals or groups do not "fit" into established gender norms, they often face stigma, discriminatory practices, or social exclusion – all with potential adverse effects on health (4, 5).

There are different ways in which gender norms, roles, and relations affect women and men's exposure to risk factors. For example, it is normative for men in many cultures to drink alcohol excessively (6) avoid certain healthy food options (7) or avoid health-care (8). Each of these behaviors has implications for the overall health of men. Similarly, for women, gender norms may have effects such as lessening decision-making power over family planning behaviors (9) or limiting physical activity out of a concern for appearing less feminine (10).

The roles of men and women according to gender are classified as "traditional" and "egalitarian" roles. Characteristics attributed to women in traditional roles consist of non-egalitarian accountabilities such as being responsible for domestic affairs and not being active in professional life. Characteristics attributed to men in traditional roles consist of accountabilities such as being the head of the house and being responsible for breadwinning. Egalitarian roles, however, are equal sharing of accountabilities in the family, professional, social, and educational life (11-13).

To pioneer and guide policies preventing gender inequality and discrimination, it is first and most necessary to measure gender perception in educational institutions and to determine the attitudes of young people towards gender roles, values, and behaviors (12). Assessing attitudes towards gender roles in university students is essential for making arrangements in adopting egalitarian roles. Therefore, university students' attitudes should first be determined in order to change this traditional view of gender and to achieve a more egalitarian view. Studies conducted among university students in Turkey on attitudes to gender roles are mostly confined to the students of the faculty of health sciences data published on medical students is scarce (14, 15).

Objectives

The purpose of this study was to determine the attitudes of medical students towards gender roles and investigate the affecting factors.

Material-Method

Study design: The study was conducted in a descriptive, cross-sectional plan, between June and July 2018. Study reporting was done per the STROBE guidelines (16) The study protocol was approved by the Ethics Committee of Clinical Researches, Faculty of Medicine, Ataturk University (IRB number 2-26, Date 15.02.2018). Each participant signed an informed consent form following the Declaration of Helsinki.

Setting and participants: Atatürk University Faculty of Medicine was established in 1962 in Eastern Turkey. There are two programs in the Faculty of Medicine providing instructions in Turkish and English. As in other medical schools in the country, the educational period is 6 years. In addition to the Turkish citizens, some foreign nationals are present in the school, who are mainly from neighboring countries. There are approximately 2300 students in both programs.

The research enrolled voluntary students from the 1st and 6th grades, which had a population of 764 students during the study period. An attempt was made to include all except the international students. Students were visited in their classrooms or internship settings and invited to answer study questions in an empty and silent room. Out of the contacted, 83 rejected to join, and 29 were excluded due to insufficient or unreliable data. Results for 518 patients were analyzed. Results for 518 patients were analyzed (Figure 1).

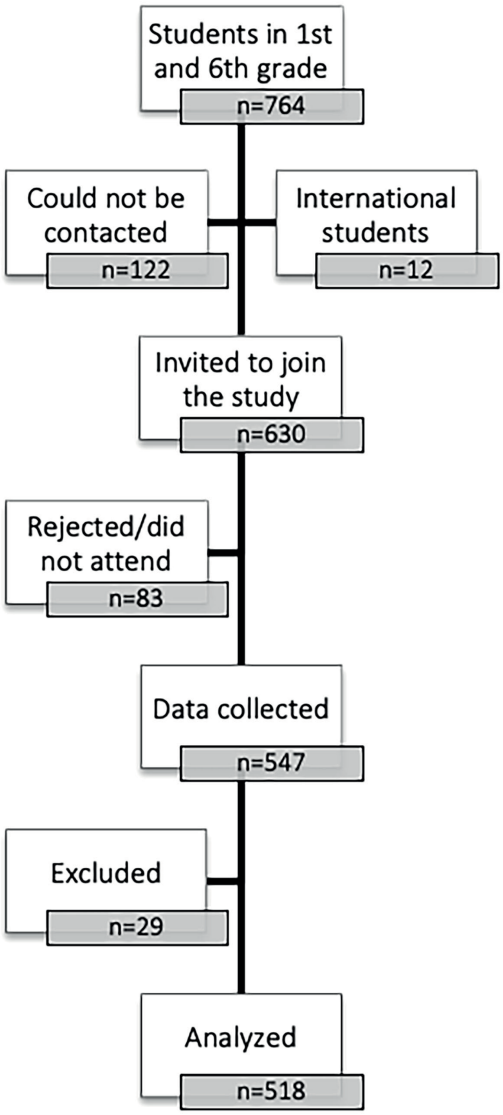

Figure 1: Study flow diagram.

Variables: The data collection tool consisted of two parts. The first part included questions on the respondent's socio-demographic characteristics and possible factors concerning the attitudes of students towards gender roles, while the second part contained the Gender Roles Attitude Scale (GRAS) (13) The main outcome variable of the study was GRAS. Independent study variables were age (years), gender (male/female), grade (1st/6th), instruction language (English/Turkish), place mostly lived (village-town/district/city/metropolis), place of residence (at home with family-relative/at home with friend/dormitory/other), family type (nuclear/extended/single-parent), parents education (illiterate/literate/primary school/junior high school/high school/university), parents occupation (officer/worker/self-employed/housewife/retired) and number of children in the family. Data were collected via self-administered questionnaires. Both the scale and the data collection sheet were applied during school days in an empty and silent classroom or in a comfortable place in the clerkship environment.

Bias: In the questionnaire, there was brief information about the research to ensure that the research data were obtained correctly, and participants were asked not to put their identities on the data collection form.

Study size: The required sample size was calculated based on previously reported (13) 152.48±20.89 mean expected values of GRAS. Given a finite population of 764 students, an expected standard deviation of 20, and a margin of error of 1, a sample size of 512 cases is required to estimate the mean GRAS scores in the given population with a confidence interval of 95%.

Quantitative variables: Developed and validated for Turkish by Zeyneloğlu and Terzioğlu (13), the GRAS uses five-point Likert type questions to collect data on 38 items organized under five dimensions.

There are eight items in each of the 'egalitarian gender roles (Women and men sharing roles and responsibilities equally in daily life)', 'female gender roles (The roles and responsibilities of women assigned by the society)', 'marriage gender roles (The roles and responsibilities of women and men by marriage),' 'traditional gender roles (The roles and responsibilities of women and men in the daily life)' subscales, and six items in the 'male gender roles (The roles and responsibilities of the society assigned to men).' subscale. The instrument's total Cronbach alpha internal consistency coefficient was reported as 0.92. Items in the scale are rated as 1=absolutely disagree, 2=disagree, 3=undecided, 4=agree and 5=completely agree. Higher scores obtained indicate a more egalitarian attitude toward gender roles, while lower scores suggest that the participant's attitudes are more traditional.

Statistical methods: Data was entered into the computer and analyzed using the SPSS 25.0 software (SPSS Inc., Chicago, IL, USA). Descriptive statistics were used to present students' sociodemographic information, by summarizing in percentages for categorical variables and as mean±standard deviations (SD) for continuous variables. Comparison of data within each group was made using the independent samples t-test and one-way ANOVA followed by Tukey post-hoc test to evaluate the effect of students' sociodemographic characteristics on the GRAS total scores. Linear correlations between the GRAS scores and age were assessed by the Spearman's test. A backward stepwise multiple regression analysis was performed to identify the independent effects of age, female sex, and being grade one to the GRAS scores. Test reliability was estimated by Cronbach α. A p value of <0.05 was considered as statistically significant.

Results

Participants

The study comprised 518 students. The mean (±SD) age of the students was 21.68±3.04 years. The sex distribution of the participants was almost equal with a slight female dominance. Sociodemographic variables of the students are given in Table 1.

Table 1: Sociodemographic characteristics of the students.

Variable	n	%
Gender		
Female	264	51.0
Male	254	49.0
Grade		
1st grade	303	58.5
6th grade	215	41.5
Marital status		
Single	479	92.5
Engaged	19	3.7
Married/divorced	20	3.8
Place most of life spent		
Village/town	41	7.9
District	74	14.3
City	153	29.5
Metropolis	250	48.3
Residency place		
At home with family / relative	158	30.5
At home with friend/s	103	19.9
Dormitory	216	41.7
Other	41	7.9

The majority of the participants had nuclear family structures. Fathers of the participants were more educated compared to the mothers, and most of the mothers were housewives. Sociodemographic characteristics of the students' family aregiven in Table 2.

Table 2: Sociodemographic characteristics of the students' family.

Variable	n	%
Family type		
Nuclear	448	86.7
Extended	53	10.3
Single-parent	16	3.0
Mother's education		
Illiterate	19	3.7
Literate	34	6.6
Primary school	147	28.4

Junior high school	49	9.5
High school	127	24.5
University	252	48.7
Mother's occupation		
Officer	86	16.7
Worker	8	1.5
Self-employed	23	4.4
Housewife	365	70.5
Retired	36	6.9
Father's occupation		
Officer	176	34.0
Worker	68	13.1
Self-employed	148	28.6
Retired	126	24.3
Perceived economic status of the family		
Very good	16	3.1
Good	243	46.9
Moderate	238	45.9
Poor/very poor	21	4.1
Number of children in the family		
1-3	375	72.4
>3	143	27.6

Descriptive data: Cronbach alpha internal consistency coefficient was calculated as 0.85 for all the GRAS items. The mean (±SD) total GRAS scores of the students were 113.45±7.36. The highest mean score in the GRAS subscales belonged to the "egalitarian gender roles" (33.74±5.78), and the lowest score to the "male gender roles" (12.26±4.51).

Outcome data: Females had significantly higher mean total GRAS scores than males. On the other hand, the mean GRAS scores of first-grade students were statistically higher than those of the grade six students.

Also, there was a statistically significant difference between the place most lived and the mean GRAS scores (Table 3). As to the post hoc Tukey test, GRAS scores of participants who lived most of their lives in a village/town (109.8±6.8) were significantly lower than those who lived in the district (114.1±6.7) (p=0.017) and those who lived in a metropolis (114.4±7.2) (p=0.001). There was no statistically significant difference in the mean GRAS scores concerning instructional language, marital status, place of residence, and the type of high school graduated (p>0.05) (Table 3).

Table 3: Comparison of the total GRAS scores regarding sociodemographic characteristics.

Variables	Total score Mean	SD	t/F	p
Gender				
Female	115.5	6.3	6.63	***<0.001***
Male	111.4	7.8		
Grade				
1st grade	114.4	7.0	3.49	***0.001***
6th grade	112.1	7.6		

Marital status				
Single	113.6	7.3		
Engaged	113.3	7.2	2.74	0.066
Married/divorced	109.7	8.3		
Place where most lived				
Village/town	109.8	6.8		
District	114.1	6.7	5.83	**0.001**
City	112.5	7.7		
Metropolis	114.4	7.2		
Place of residence				
At home with family/relative	114.0	7.7		
At home with friend/s	112.4	6.0	2.33	0.073
Dormitory	113.9	7.6		
Other	111.4	7.1		

SD: Standard Deviation

There was a statistically significant difference in the mean GRAS scores concerning mothers' education (Table 4). A post hoc Tukey test revealed that the mean scores of the illiterate mothers were significantly lower than that of the primary school (p=0.047), junior high school (p=0.011), high school (p=0.001) and university graduates (p=0.001). A similar trend was evident for fathers' education. However, the only significance in the mean GRAS scores was between the illiterate and university graduates (p=0.047).

Families with three or fewer children had higher GRAS scores compared to families with more than three children. There was no significant difference in the GRAS scores concerning the family type, parental occupation, and economic status of the family (Table 4).

Table 4: Comparison of total the GRAS score of the students' family sociodemographic characteristics.

Variables	**Total score**		**t/F**	**p**
	Mean	SD		
Family type				
Nuclear	113.7	7.4		
Extended	111.8	6.5	2.68	0.069
Single Parent	110.9	7.9		
Mother's education				
Illiterate	107.4	6.5		
Literate	112.1	8.4		
Primary school	112.5	7.7	4.62	**<0.001**
Junior high school	113.7	7.6		
High school	114.5	5.7		
University	114.6	7.5		
Father's education				
Illiterate	106.6	5.8		
Literate	109.5	9.9		
Primary school	111.5	7.9	3.76	**0.002**
Junior high school	113.2	6.8		
High school	114.0	6.7		
University	114.2	7.3		

Mother's occupation				
Officer	114.9	5.7	1.15	0.330
Worker	113.9	6.8		
Self-employment	111.9	6.1		
Housewife	113.2	7.6		
Retired	113.2	9.3		
Father's occupation				
Officer	114.1	7.5	2.30	0.076
Worker	111.5	8.4		
Self-employment	113.2	6.3		
Retired	113.8	7.6		
Perceived economic status of the family				
Very good	113.1	9.0	1.29	0.278
Good	114.1	6.6		
Moderate	112.9	7.7		
Poor	112.0	10.4		
Number of children in the family				
1-3	114.0	7.3	2.93	**0.003**
>3	111.9	7.3		

SD: Standard Deviation

The GRAS score was significantly correlated with age (years) (r=–0.23, p<0.001). Multiple linear regression with stepwise method was carried out to investigate the effects of age (years), female gender, and being first-grade on the GRAS scores. As shown in Table 5, in the stepwise multiple regression analysis the GRAS score variability was significantly predicted by age (years) and female gender. In the multiple regression analysis made in the model, a negative correlation was found between age and GRAS scores. In the model analysis, 10% of the students' high GRAS score can be explained by increasing age and gender.

Table 5: Stepwise multiple regression analysis: Age (years), female gender and first-grade student predict GRAS score (R^2 = 0.10).

Model	Unstandardized Coefficients		t	p	95.0% CI for B	
	B	Std. Error			Lower Bound	Upper Bound
1 (Constant)	119.794	3.063	39.112	<0.001	113.776	125.811
Age (year)	-0.379	0.200	-1.895	0.059	-0.772	0.014
Female	3.841	0.623	6.170	<0.001	2.618	5.065
Grade	-0.061	1.223	-0.050	0.960	-2.463	2.341
2 (Constant)	119.895	2.294	52.274	<0.001	115.389	124.401
Age (year)	-0.388	0.102	-3.795	<0.001	-0.588	-0.187
Female	3.838	0.619	6.202	<0.001	2.622	5.054

Discussion

Key results: This study demonstrated that medical students have an egalitarian attitude regarding gender roles. However, there were differences in the sub-dimensions; they have more traditional views regarding gender roles in marriage and male gender roles. Females, younger students, and students with fewer children in the family had higher GRAS scores; in other words, these groups have higher egalitarian gender attitudes. On the other hand, students originating from a village/town, or having any illiterate parent had lower GRAS scores; that is, they had lower egalitarian gender attitudes.

Limitations: Some limitations of this study can be mentioned as follows. First, students were asked to self-rate their attitudes towards gender roles, and considering that university life and education could affect gender attitudes, only the first and sixth-grade medical students were included in the study. The results of this survey represent first and 6th-grade medical students, and cannot be generalized. Besides, some potential confounders such as the ethnic origin of the participants were not queried. Also, the data collection method bears the limitations of questionnaire studies.

Interpretation: These results show in general that students have an egalitarian attitude towards gender roles. However, females had a more egalitarian view regarding gender roles compared to males. These findings are similar to other reports from Turkey. Other studies have confirmed that female students had a more egalitarian view regarding gender roles than male students (13, 14, 17, 18) . In a study to improve the scale of gender awareness among students of medical faculties in the Netherlands, it has been shown that male students have more traditional stereotypic ideas about gender than female students (19).

Researchers have evaluated the gender attitudes of a mixed group of students in the same province in 2011 using a different instrument (20). They reported "medium-level" positive gender attitudes in the study group and found significant differences concerning the sex of the participants and the program they were enrolled. In 2014, a study from a western Turkish city (15) found high-level gender awareness in class 1 medical students.

Dutch scientists developed a gender awareness scale consisting of 32 items (19). The scale differs from GRAS regarding its content and construct. The authors proposed three components of gender awareness interpreted as gender sensitivity, gender role ideology towards patients, and gender role ideology towards doctors. They suggested a connection between patient-centeredness and gender stereotyping.

In our study, the first-grade students' GRAS score was high than the sixth grade in univariate analysis. However, this significance did not continue in the multiple linear regression. Direk and Irmak (14) reported no difference between the 1st and 6th class medical students concerning GRAS scores. In contrast, Karasu et al. (21) found significant differences in the attitudes of university students towards gender roles, but they found no difference between the age groups, which may demonstrate a different perspective between medical school students and students of other programs.

We saw higher GRAS scores among students from families with fewer children. There is a clear relationship between the level of education and reproductive behaviors (22). Thus, the relationship of the family size and gender attitudes might be related to the interaction of education and family size. However, in the dissertation of Zeyneloğlu (23), aiming to determine the views of female students in the first year of nursing education, students with three or more siblings had higher GRAS scores.

This study demonstrated lower GRAS in students with illiterate parents. However, Zeyneloğlu (23) showed that the scores of the students with low educational status

were similar to the other groups. This difference may be related to geographical and cultural variations. Zeyneloğlu's study was conducted in Ankara, a capital city, and the educational level of the families in their sample was higher compared to ours; we had 1.5% illiterate fathers in our sample.

The curriculum of the studied medical faculty does not contain any courses on gender issues. However, a gender-sensitive medical education would seek positive discrimination for women in health care delivery, try to close inequities, and cover biological-gender processes, situations, and treatments (24). Determining gender roles is an essential step in developing gender-sensitive education models (25). Although the gender sensitivity of our medical students is not at the worst niveau, there is still space to improve. Hence, we suggest including courses on gender-sensitivity in the medical school.

Conclusion

Gender awareness is a necessary prerequisite for gender-specific health care. Although egalitarian gender awareness was relatively high among medical students, this study has determined that there is an area for improvement in some areas concerning the gender role attitudes of medical students.

Gender equality is a multi-factorial process, affected by many variables. Thus, it is necessary to identify structural ecosystems guiding people in this difficult path. For medical students, it seems inevitable to make gender-sensitive curriculum arrangements. Studies measuring all possible gender awareness determinants should be conducted to monitor the effects of the policy changes.

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