RESEARCH ON EDUCATION AND PSYCHOLOGY (REP)

Received: November 11, 2019
Accepted: January 15, 2020
http://dergipark.org.tr/rep

e-ISSN: 2602-3733

June 2020 ◆ 4(1) ◆ 1-19

Research Article

The Effect of Nursing Students' General Self-Efficacy on Gender Roles

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Abstract

Gender roles define the features and behaviors traditionally attributed to the both sex. This study was therefore designed to determine the relationship between the general self-efficacy and gender roles of students studying in a faculty of nursing and the factors affecting their gender roles. The study universe consists of nursing students studying in the 2018-2019 school year in the Faculty of Nursing of a university. No sample was chosen in the study. The personal data form, gender roles attitude scale and general self-efficacy scale were used to collect data by researchers. The analyses of the data obtained in the study were conducted using SPSS 20 statistical analysis program. As a result of the study, students' general self-efficacy was found to be at midlevel, while they adopt the traditional attitude related to gender roles; besides, factors affecting students' gender roles attitude were found as sex, grade, and mother's educational status; furthermore, no relationship was found between the general self-efficacy and gender roles attitude. In order to create awareness about gender roles, it may be suggested that gender equality courses should be taught in all departments of universities.

Key Words

Gender roles • General self-efficacy • Nursing

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Citation: Aygör, H., & Çayır, A. (2020). The effect of nursing students' general self-efficacy on gender roles. *Research on Education and Psychology (REP), 4*(1), 1-19.

Gender is the personality characteristics and behaviors ascribed to women and men by society (Dökmen, 2012). It includes the expectations of society and culture, the gender-specific meanings and psychological characteristics. It determines the aspects of gender differences in social context (Orhan & Yücel, 2017). It contains many concepts such as gender and gender roles.

Gender roles define the features and behaviors traditionally attributed to the both sex. As a result of gender roles, the individual is expected to playing the specific man or woman role which is dictating by society. Society demands from women and men to stay loyal to these roles dictated (Cornell, 2016; Dökmen, 2012). Gender roles are affected by many factors. Studies conducted reveal that these factors are sex, financial condition, educational status, family type, and employment status (Can, Erenoğlu, & Tambağ, 2018; Güzel, 2016; Seven, 2019).

Self-efficacy refers to "an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments" (Bandura, 1977). A strong self-efficacy ensures success and well-being, and most importantly, personal development and diversity of skills. On the other hand, the attitude towards life also influences the views and roles (Bandura, 2012). Self-efficacy makes a difference in way of thinking, feeling and behavioral pattern of individuals (Abdel Khalek & Lester, 2017). There is a limited number of studies in the literature on gender and self-efficacy, besides, several studies state that individuals with a high self-efficacy level have a higher level of gender perception (Özpulat, 2016), or some others argue that there is no relationship between gender perception and self-efficacy (Özpulat & Varış, 2018).

No studies were found in the literature examining the effect of self-efficacy on gender roles. This study was therefore designed to determine the relationship between the general self-efficacy and gender roles of students studying in a faculty of nursing and the factors affecting their gender roles.

Method

Research Model

This research is a descriptive type.

Study Universe and Group

The study universe consists of nursing students studying in the Department of Nursing in the 2018-2019 school year in the Faculty of Nursing of a university located in Konya. A total of 503 students studying in the Department of Nursing at 1st, 2nd, 3rd, and 4th grades during the spring term. No sampling method was used in the study, besides, the study was completed with 406 students meeting the inclusion criteria (students studying in the Department of Nursing at 1st, 2nd, 3rd, and 4th grades, being volunteered to participate in the study and completed the questionnaire completely).

According to the post hoc power analysis performed by G*Power (3.1.9.2) program based on R2: .29 value obtained with regression analysis, which determined that three independent variables were effective on the total score of the Gender Roles Attitude Scale of the students and considered to be the primary outcome of this study, the effect size was found as f2: .41 (major effect) and power were 1.00 (%100); furthermore, the number of samples in the study was found to be sufficient (Karagöz, 2014).

Data Collection and Data Collection Tools

The Personal Data Form, Gender Roles Attitude Scale and General Self-Efficacy Scale were used to collect data by researchers.

Personal Data Form. It was prepared by the researchers as a result of related literature review (Altıparmak, 2018; Can et.al., 2018; Köken Durgun & Cambaz Ulaş, 2019; Türkmenoğlu Zöhre & Vefikuluçay, 2018). It consists of 13 questions such as age, gender, marital status, class, the place of residence and region, residence in Konya, income assessment, types of family, educational and employment status of mother and father.

The Gender Roles Attitude Scale (GRAS). This scale was developed by Zeyneloğlu and Terzioğlu (2011), to determine the attitudes of individuals towards gender roles. This 38-item scale consists of five subscales (egalitarian gender roles, female gender roles, marriage gender roles, traditional gender roles and male gender roles), and is a 5-point likert type scale (egalitarian attitude responses to gender roles; 5 points for "completely agree", 4 points for "agree", 3 points for "undecided", 2 points for "disagree", and 1 point for "absolutely disagree"). The highest possible score from the scale was 190 and the lowest was 38 according to this scoring scale. If the total score mean from all items on the scale was 95 and above, it is stated that the sample adopts an egalitarian attitude. If the total score mean was below 95, the sample was stated to adopt a traditional attitude. The Cronbach's Alpha coefficient of the scale was reported as 0.92 (Zeyneloğlu & Terzioğlu, 2011). In this study, the Cronbach's Alpha coefficient of GRAS was found as follow: .95 for all scale; among the subscales, .92 for egalitarian gender roles; .73 for female gender roles; .94 for marriage gender roles; .81 for traditional gender roles, and .82 for male gender roles.

General Self-Efficacy (GSE) Scale. It was developed by Schwarzer and Jarusalem in 1979 to determine general self-efficacy perceptions. The Turkish validity and reliability study was performed by Aypay in 2010. It is a 10-item scale and in 4-point likert type (1 point for "not at all true", 2 points for "hardly true", 3 points for "moderately true", and 4 points for "exactly true"). The points range from 1 to 4 for each item of the scale. The highest possible score from the scale was 40 and the lowest was 10 according to this scoring scale. It is concluded that as the points taken from the General Self-Efficacy Scale increase, the perception of general self-efficacy increase, too. The internal consistency coefficient of Cronbach's Alpha was .86 (Aypay, 2010). The GSE Scale Cronbach Alpha coefficient was found as .87 in this study. Data were collected by self-report method.

Data Analysis

The analyses of the data obtained in the study were conducted using SPSS 20 statistical analysis program (Chicago, IL, USA). For data analysis, number, percentage, mean and standard deviation were given in the descriptive statistics. The compatibility of numerical variables with normal distribution was evaluated with Skewness and Kurtosis, and it was found to have a normal distribution according to Skewness (between .12 and 1.35) and Kurtosis (between -.24 and 1.69) values. In the comparison of the mean total scores of GRAS and subscales according to the independent variants (descriptive characteristics of students and their parents); t-test and Mann Whitney U test were used in independent groups according to the number of samples in two-group variables, while one-way analysis of variance (further Tukey HSD analysis) and Kruskal Wallis analysis (further Mann Whitney U test with Bonferroni correction) were used for the independent groups by sample size in

variables with three or more groups. The relation between GSE Scale scores and GRAS scores was examined by Pearson correlation analysis. Independent variables having an effect on GRAS scores in primary analyzes were evaluated by multiple linear regression (backward method) analysis. The significance level was accepted as $p<.05$.

Ethical Approval.

Ethics committee approval was obtained from the Noninvasive Clinic Ethical Committee of the Medical Faculty at Necmettin Erbakan University (Decision no. 2019/88). Institution approval of the study was obtained from the institution in which the study is conducted and verbal consent was obtained from the students.

Findings

Among the students participated in the study, those following results were determined: their average age 20.12±1.41; 80.3% of them female; almost all of them (96.6%) single; 83.0% of them, with nuclear family; 58.9% of them stay in student's dormitories; half of them (50.2%) live in the Central Anatolia Region. Most of the students stated that they have a balanced income-expense level (%67.0, Table 1).

Table 1

Descriptive Characteristics of Students (n: 406)

Socio-demographic characteristics	**Min.– Max.**	**$\overline{x}$ ±SS**
Age	17-26	20.12±1.41
	n	**%**
Gender		
Female	326	80.3
Male	80	19.7
Marital Status		
Single	392	96.6
Married	14	3.4
Class		
1. Class	92	22.7
2. Class	106	26.1
3. Class	99	24.4
4. Class	109	26.8
Family Type		
Nucleus family	337	83.0
Extended family	58	14.3
Fragmented family	11	2.7
Locations of family		
Village	52	12.8
Town	100	24.6
City	254	62.6
Types of accomodation		
With family/relative	96	23.6
In dormitory	239	58.9
In house	71	17.5
Region of settlement		
Central Anatolia Region	204	50.2
Black Sea Region	25	6.2
Mediterranean Region	83	20.4
Aegean Region	18	4.4
Eastern Anatolia Region	18	4.4
Southeastern Anatolia Region	34	8.4

Marmara Region	13	3.2
Abroad Region	11	2.7
Income assessment		
Income less than expense	109	26.8
Income balanced to expense	272	67.0
Income is more than expense	25	6.2

Most of the mothers (67.7%) and half of the fathers (52.7%) of the students participated in the study were literate/primary/secondary school graduate. 10.8% of the mothers and 74.1% of the fathers have a job (Table 2).

Table 2

Descriptive Characteristics of Students' Parents (n: 406)

Characteristics of Students' Parents	**n**	**%**
Mothers' educational status		
İlliterate	35	8.6
Literate/primary/secondary school	275	67.7
High School and above	96	23.6
Mothers' employment status		
Employed	44	10.8
Unemployed	362	89.2
Fathers' educational status		
İlliterate	8	2.0
Literate/primary/secondary school	214	52.7
High School and above	184	45.3
Fathers' employment status		
Employed	301	74.1
Unemployed	105	25.9

GSE Scale total score 27.19±5.53 (Table 3) and the result of our study revealed that the students participated in the study have a mid-level of self-efficacy. The total score mean from GRAS taken by the study group was found as 83.26±30.53 and as a result of our research, it was determined that the students participating in the study adopted the traditional attitude towards gender roles (Table 3).

Table 3

Students' Scores Concerning GSE Scale and GRAS (n: 406)

Scale and subscales		**Min.-Max**	$\overline{\mathbf{X}}$ **±SS**
GSE total score		12-40	27.19±5.53
GRAS total score		38-190	83.26±30.53
GRAS subscales	**Egalitarian gender roles**	8-40	15.08±8.37
	Female gender roles	8-40	21.74±6.49
	Marriage gender roles	8-40	14.06±8.38
	Traditional gender roles	8-40	19.87±7.00
	Male gender roles	6-30	12.51±5.79

When the students' GRAS scores by gender were examined, it was found that the total score mean of GRAS of male students was higher than that of female students; the difference between the groups was found to be

very significant (p<.001) in terms of total score, female gender roles, traditional gender roles and male gender roles sub-dimensions; and marriage gender roles was found to be highly significant (p <.01) (Table 4).

When the GRAS scores of the students were examined according to grade level, it was determined that there was a significant difference between the total and five sub-dimension scores of the groups (p<.001, Table 3). In further analysis to determine which groups have a difference, it was determined that the total and all sub-dimension score means of the second-grade students were significantly higher than the other grades (p<.05) (Table 4).

When the students' GRAS scores by their family type were examined, the total score, and subscales of female gender roles and male gender roles were found to be highly significant (p<.01); besides, it was identified that there was a significant difference in the subscales of egalitarian gender roles, marriage gender roles, and traditional gender roles (p<.05, Table 4). In the further analysis, it was found that the mean score of students with extended families was significantly higher (p<.05) in the egalitarian gender subscale than those with fragmented families; in terms of total score and other four subscales, on the other hand, the mean score of students with nuclear and extended families was found to be significantly higher (p<.05) than those with fragmented families (Table 4).

When the students' GRAS scores by the regions they live were examined, no significant difference was found in the total score mean of egalitarian gender role subscale (p>05); very highly significant difference was found in the total scores and the subscales of female gender roles and traditional gender roles (p<.001); on the other hand, highly significant difference was found in the subscales of marriage gender roles and male gender roles (Table 4). In the further analysis, these following results were found respectively;

- in terms of the total score and subscales of marriage gender roles and male gender roles; the mean scores of the students living in the regions with a coastline and in abroad was significantly lower than those who live in the Central Anatolia and in the continental climate (Eastern and Southeastern Anatolia) (p<.05),

- in terms of female gender roles; the mean scores of the students living in the regions with coastline and in abroad and in the Central Anatolia was significantly lower than those who live in the continental climate (Eastern and Southeastern Anatolia) (p<.05),

- in terms of traditional gender roles; the mean scores of the students living in the regions with coastline and in abroad was significantly lower than those who live in the Central Anatolia and in the continental climate (Eastern and Southeastern Anatolia) (p<.05); however, the mean scores of the students living in the Central Anatolia was significantly lower than those who live in the continental climate (Eastern and Southeastern Anatolia) (p<.05).

Table 4 I

The comparison of GRAS Mean Scores by the Students' Descriptive Characteristics I (n: 406)

Characteristics	**n**	**GRAS Total** $\overline{X}$ ±SS	**Egalitarian gender roles** $\overline{X}$ ±SS	**Female gender roles** $\overline{X}$ ±SS	**Subscales Marriage gender roles** $\overline{X}$ ±SS	**Traditional gender roles** $\overline{X}$ ±SS	**Male gender roles** $\overline{X}$ ±SS
Gender							
Female	326	79.48±31.06	14.78±8.78	20.63±6.07	13.46±8.59	18.63±6.61	11.98±5.79
Male	80	98.65±22.57	16.31±6.35	26.24±6.24	16.51±7.04	24.90±6.29	14.69±5.31
t / p		*5.193 / **.000***	*1.782 / .077*	*7.357 / **.000***	*2.948 / **.003***	*7.667 / **.000***	*3.811 / **.000***
Marital Status							
Single	392	83.11±30.84	15.07±8.45	21.68±6.50	14.06±8.49	19.81±7.08	12.50±5.85
Married	14	87.43±19.87	15.36±6.12	23.43±6.28	14.14±4.50	21.57±4.13	12.93±3.89
U / p		*2143.5 / .164*	*2375.5 / .390*	*2369.0 / .384*	*2149.0 / .164*	*2126.5 / .152*	*2309.5 / .312*
Class							
1. Class	92	77.66±19.37	13.93±6.48	21.88±5.80	11.88±4.17	19.11±5.94	10.86±3.77
2. Class	106	106.92±41.34	20.89±11.62	24.81±6.38	20.87±12.72	23.66±8.45	16.69±7.70
3. Class	99	76.02±21.67	13.14±6.18	20.65±6.76	12.06±4.05	18.68±6.04	11.49±4.62
4. Class	109	71.54±18.10	12.17±3.90	19.61±5.82	11.09±3.84	17.90±5.64	10.77±3.66
F / p		*37.406 / **.000***	*28.613 / **.000***	*13.965 / **.000***	*41.280 / **.000***	*16.180 / **.000***	*30.718 / **.000***
difference		*(2 > 1, 3, 4)*	*(2 > 1, 3, 4)*	*(2 > 1, 3, 4)*	*(2 > 1, 3, 4)*	*(2 > 1, 3, 4)*	*(2 > 1, 3, 4)*
Family Type							
Nucleus family [a]	337	82.98±30.42	14.95±8.28	21.74±6.41	14.02±8.42	19.81±6.94	12.46±5.75
Extended family [b]	58	88.93±31.76	16.31±8.71	22.74±6.95	15.12±8.71	21.16±7.38	13.60±6.15
Fragmented family [c]	11	61.73±13.67	12.55±9.23	16.45±4.06	9.73±2.49	14.73±4.63	8.27±1.90
KW / p		*10.635 / **.005***	*6.393 / **.041***	*10.386 / **.006***	*8.267 / **.016***	*7.527 / **.023***	*10.655 / **.005***
difference		*(a, b > c)*	*(b > c)*	*(a, b > c)*	*(a, b > c)*	*(a, b > c)*	*(a, b > c)*

t: t-test in the independent groups, degrees of freedom (df): 404

U: Mann Whitney U test

F: Variance analysis in independent groups, intergroup / intragroup / total df: 3/402/405 (post hoc analysis Tukey HSD) KW: The Kruskal Wallis test, df: 2 (Post hoc analysis: Mann Whitney U test with Bonferroni correction

Table 4 II

The Comparison of GRAS Mean Scores by the Students' Descriptive Characteristics II (n: 406)

Characteristics	**n**	**GRAS Total** $\overline{X}$ ±SS	**Egalitarian gender roles** $\overline{X}$ ±SS	**Female gender roles** $\overline{X}$ ±SS	**Subscales Marriage gender roles** $\overline{X}$ ±SS	**Traditional gender roles** $\overline{X}$ ±SS	**Male gender roles** $\overline{X}$ ±SS
Locations of family							
Village	52	84.33±27.81	14.62±6.91	22.08±5.42	14.62±8.37	20.38±6.44	12.63±5.29
Town	100	80.57±31.99	14.87±8.63	21.36±6.91	13.30±8.45	19.40±7.68	11.64±5.59
City	254	84.09±30.52	15.26±8.56	21.81±6.54	14.24±8.38	19.94±6.85	12.83±5.95
F / p		*.514 / .599*	*.169 / .844*	*.257 / .773*	*.585 / .558*	*.379 / .685*	*1.534 / .217*
Types of accomodation							
With famil/relative	96	88.77±31.35	16.25±8.64	22.63±6.08	15.66±8.89	20.97±6.74	13.27±6.21
In dormitory	239	82.23±31.23	15.01±8.55	21.42±6.37	13.80±8.57	19.48±7.22	12.51±5.86
In house	71	79.25±26.06	13.73±7.18	21.59±7.39	12.76±6.67	19.69±6.55	11.48±4.82
F / p		*2.327 / .099*	*1.874 / .155*	*1.196 / .303*	*2.727 / .067*	*1.585 / .206*	*1.963 / .142*
Region of settlement							
Coastline and abroad [a]	150	76.67±27.32	14.00±7.96	20.54±6.46	12.46±7.14	18.25±6.31	11.42±5.17
Central Anatolia Region[b]	204	85.01±31.55	15.42±8.61	21.78±6.27	14.75±8.87	20.13±6.85	12.93±5.99
Continental Climate [c]	52	95.35±31.11	16.87±8.28	25.02±6.42	15.94±9.09	23.50±8.07	14.02±6.24
F / p		*8.186 / **.000***	*2.622 / .074*	*9.581 / **.000***	*4.831 / **.008***	*11.704 / **.000***	*5.061 / **.007***
difference		*a < b, c*		*a, b < c*	*a < b, c*	*a < b < c*	*a < b, c*

F: Variance analysis in independent groups, intergroup/intragroup/ total degrees of freedom: 2/403/405. (post hoc analysis Tukey HSD)
a : Coastline (Mediterranean, Black Sea, Marmara, Aegean) and abroad
c: Continental Climate (Eastern and Southeastern Anatolia)

No significant difference was found between the GRAS scores of the students by their mother's employment status, father's employment status and income level of the family and five subscales (egalitarian gender roles, female gender roles, marriage gender roles, traditional gender roles, and male gender roles) ($p>.05$, Table 5).

When the GRAS scores of the students by their mother's educational level is examined, total and five subscale mean scores of the students whose mother is primary school graduate and uneducated were found to be higher than those whose mother is high school and university graduate; the difference between the groups was highly significant in terms of total scores and subscales of egalitarian gender roles, female gender roles, and traditional gender roles ($p<.01$), however, it was found to be significant in terms of subscales of marriage gender roles and male gender roles ($p<.05$) (Table 5).

When the GRAS scores of the students by their father's educational level is examined, there was no significant difference between the groups in terms of total score and the subscales of egalitarian gender roles, marriage gender roles and male gender roles ($p>.05$). However, in terms of the subscales of female gender roles and traditional gender roles, total mean scores of the students whose father is primary school graduate and uneducated were found to be higher than those whose father is high school and university graduate ($p<.05$, Table 5).

Table 5

The comparison of GRAS Mean Scores by Descriptive Characteristics of Students' Parents (n: 406)

Characteristics	**n**	**GRAS Total** $\overline{X}$ ±SS	**Egalitarian gender roles** $\overline{X}$ ±SS	**Female gender roles** $\overline{X}$ ±SS	**Subscales Marriage gender roles** $\overline{X}$ ±SS	**Traditional gender roles** $\overline{X}$ ±SS	**Egalitarian gender roles** $\overline{X}$ ±SS
Mothers' educational status							
≤ primary	*310*	85.99±30.92	15.69±8.61	22.34±6.44	14.58±8.67	20.51±7.11	12.87±5.89
≥ High School	*96*	74.43±27.56	13.13±7.23	19.79±6.33	12.39±7.18	17.78±6.25	11.34±5.33
t / p		*3.282 / **.001***	*2.640 / **.009***	*3.401 / **.001***	*2.483 / **.014***	*3.382 / **.001***	*2.274 / **.023***
Mothers' employment status							
Employed	44	78.43±30.88	14.73±9.23	20.39±6.17	13.02±7.77	18.64±6.74	11.66±5.95
Unemployed	362	83.84±30.47	15.12±8.27	21.90±6.52	14.19±8.46	20.02±7.03	12.62±5.77
t / p		1.111 / .267	.297 / .767	1.462 / .144	.868 / .386	1.235 / .218	1.035 / .301
Fathers' educational status							
≤ Primary	222	85.74±31.40	15.52±8.58	22.36±6.34	14.52±8.81	20.62±7.31	12.73±5.99
≥ High School	184	80.26±29.24	14.55±8.11	20.98±6.62	13.51±7.83	18.96±6.52	12.26±5.55
t / p		*1.808 / .071*	*1.167 / .244*	*2.135 / **.033***	*1.212 / .226*	*2.384 / **.018***	*.813 / .417*
Fathers' employment status							
Employed	301	84.35±31.29	15.17±8.50	22.05±6.49	14.42±8.79	19.97±7.10	12.74±6.01
Unemployed	105	80.12±28.13	14.84±8.01	20.83±6.47	13.03±7.04	19.58±6.75	11.85±5.10
t / p		1.222 / .222	.345 / .730	1.667 / .096	1.629 / .105	.486 / .628	1.479 / .140
Income assessment							
Income less than expense	109	84.45±35.18	15.79±9.18	22.06±7.15	14.59±9.39	19.44±8.02	12.58±6.56
Income balanced to expense	272	83.41±29.46	15.12±8.27	21.47±6.25	14.20±8.24	20.06±6.64	12.56±5.63
Income is more than expense	25	76.36±17.23	11.56±4.00	23.20±6.08	10.24±2.52	19.64±6.31	11.72±3.70
KW / p		.442 / .802	4.710 / .095	2.241 / .326	5.608 / .061	1.934 / .380	.539 / .764

t: t test in Independent Groups, df: 404

KW: Kruskal Wallis test, df: 2

There was a weak, negative and significant relationship between the Students' GSE Scale Score and GRAS in terms of the subscale of egalitarian gender roles ($p<.05$). As the Students' GSE Scale Score increases, their scores in egalitarian gender roles decrease. No significant relationship between the students' GSE Scale Scores and total score of GRAS and other four subscales (female gender roles, marriage gender roles, traditional gender roles, and male gender roles) ($p>.05$, Table 6).

Table 6

The Relationship Between GSE Scale and GRAS Scores of Students

Scale and subscales		**GSE score**	
		r	**p**
GRAS total score		-.02	.739
GRAS subscales	**Egalitarian gender roles**	-.12	**.020**
	Female gender roles	-.01	.881
	Marriage gender roles	-.01	.803
	Traditional gender roles	.02	.649
	Male gender roles	.08	.112

r: Pearson correlation analysis

In order to evaluate the effect of independent variables determined to have an impact on the GRAS total and five subscale scores of the students in the primary analysis, a multiple regression analysis (backward method) was performed. Among the independent variables included in the regression model, no autocorrelation was found according to correlation analysis and Collinearity statistics (Table 7).

In the multiple regression analysis conducted to evaluate the effect of five independent variables that were found to have an effect on the GRAS total score of the students in the primary analysis; two independent variables, the place of residence and type of family, were excluded from the regression model, respectively, since they did not have sufficient effect ($p>.05$). Three independent variables determined to have an effect on the GRAS total score of the students were ranked from the most important to the least important according to the β coefficient: grade level, sex ($p<.001$) and their mother's educational level ($p<.01$). Three independent variables explain the variance of GRAS total score by 29% (Table 5). Students' GRAS total score of those in the second grade increases 31.51 points compared to the other grades (1^{st}, 3^{rd}, and 4^{th} grades), the scores of male students increase by 18.84 points compared to female students, and the scores of the students whose mother's educational level is at high school and university level decrease by -9.32 compared to those whose mother is primary school graduate and uneducated.

Table 7

The Effect of Independent Variables on GRAS Total and Subscale Scores of Students: Multiple Regression Analysis Results (n: 406)

Independent variants	B	S. Error	β	t	p	B to 95% Confidence Range		Collinearity statistic	
								Tolerance	VIF
Total Score									
(Constant)	32.50	6.80		4.782	.000	19.14	45.86		
Class	31.51	2.92	.45	10.799	.000	25.77	37.24	.997	1.003
Gender	18.84	3.22	.25	5.853	.000	12.51	25.16	.999	1.001
Mothers' educational	-9.32	3.02	-.13	3.090	.002	-15.26	-3.39	.996	1.004
R: .54 Adjusted R^2: .29	F: 55.21	p: .000	Durbin Watson:		Effect size: .41				
Egalitarian gender roles									
(Constant)	13.44	2.45		5.484	.000	8.62	18.25		
Class	7.82	.85	.41	9.192	.000	6.15	9.49	.996	1.004
GSE Scale	-.20	.07	-.13	2.973	.003	-.33	-.07	.998	1.002
Mothers' educational	-2.23	.88	-.11	2.529	.012	-3.95	-.50	.996	1.004
R: .45 Adjusted R^2: .19	F: 33.44	p: .000	Durbin Watson:		Effect size: .23				
Female gender roles									
(Constant)	4.56	3.68		1.241	.215	-2.67	11.80		
Gender	5.45	.72	.33	7.616	.000	4.05	6.86	.997	1.003
Class	3.94	.65	.27	6.055	.000	2.66	5.21	.993	1.007
Mothers' educational	-2.22	.67	-.15	3.311	.001	-3.54	-.90	.996	1.004
Family Type	4.27	1.76	.11	2.429	.016	.81	7.73	.993	1.007
R: .48 Adjusted R^2: .22/.22 model 2	F: 29.75	p: .000	Durbin Watson:		Effect size: .28				
Marriage gender roles									
(Constant)	-1.19	1.54		.775	.439	-4.22	1.83		
Class	9.21	.82	.48	11.230	.000	7.60	10.82	1.000	1.000

Gender	3.04	.91	.14	3.356	.001	1.26	4.82	1.000	1.000
R: .50 Adjusted R^2: .25 /.26 model2	F: 68.75	p: .000	Durbin Watson:	Effect size: .33					
Traditional gender roles									
(Constant)	7.47	1.71		4.364	.000	4.10	10.83		
Gender	5.80	.77	.33	7.508	.000	4.28	7.32	.956	1.046
Class	4.80	.69	.30	6.961	.000	3.45	6.16	.983	1.018
Mothers' educational	-2.11	.71	-.13	2.968	.003	-3.51	-.71	.986	1.014
Region of settlement	1.15	.47	.11	2.441	.015	.22	2.07	.931	1.074
R: .51 Adjusted R^2: .25 /.26 model2	F: 35.38	p: .000	Durbin Watson:	Effect size: .33					
Male gender roles									
(Constant)	-2.36	3.27		.722	.471	-8.79	4.07		
Class	5.51	.58	.42	9.537	.000	4.38	6.65	.993	1.007
Gender	2.61	.64	.18	4.094	.000	1.35	3.86	.997	1.003
Family Type	3.18	1.56	.09	2.032	.043	.10	6.25	.993	1.007
Mothers' educational	-1.18	.60	-.09	1.983	.048	-2.36	-1.01	.996	1.004
R: .48 Adjusted R^2: .23	F: 30.56	p: .000	Durbin Watson:	Effect size: .30					

In the multiple regression analysis conducted to evaluate the effect of four independent variables that were found to have an effect on the students' GRAS egalitarian gender roles subscale score in the primary analysis; the variable of family type was excluded from the regression model since it did not have sufficient effect ($p>.05$). Three independent variables determined to have an effect on the students' GRAS egalitarian gender roles subscale score were ranked from the most important to the least important: grade level, general self-efficacy level ($p<.01$) and their mother's educational level ($p<.05$). Three independent variables explain the variance of the students' GRAS egalitarian gender roles subscale score by 19%. GRAS egalitarian gender roles subscale score of the students in the second grade increases 7.82 points compared the other grades (1st, 3rd, and 4th grades), and the scores of the students whose mother's educational level is at high school and university level decrease by -2.23 compared to those whose mother is primary school graduate and uneducated. One-unit increase in students' GSE Scale score leads to a -.20 points decrease in the egalitarian gender roles subscale score (Table 7).

In the multiple regression analysis conducted to evaluate the effect of six independent variables that were found to have an effect on the students' GRAS female gender roles subscale score in the primary analysis; the variables of father's educational level and the place of resident were excluded from the regression model since they did not have sufficient effect ($p>.05$). Four independent variables determined to have an effect on the students' GRAS female

gender roles subscale score were ranked from the most important to the least important: sex, grade level ($p<.001$), their mother's educational level ($p<.01$), and type of family ($p<.05$). Four independent variables explain the variance of the students' GRAS female gender roles subscale score by 22%. GRAS female gender roles subscale score of the students of the male students increases by 5.45 points compared the female students; the scores of the students in the second grade increase by 3.94 points compared to the other grades (1^{st}, 3^{rd}, and 4^{th} grades), the score of the students with nuclear and extended families increase by 4.27 compared to those with fragmented families, and the scores of the students whose mother's educational level is at high school and university level decrease by -2.22 compared to those whose mother is primary school graduate and uneducated (Table 7).

In the multiple regression analysis conducted to evaluate the effect of five independent variables that were found to have an effect on the students' GRAS marriage gender roles subscale score in the primary analysis; the variables of family type, mother's educational level and the place of resident were excluded from the regression model since they did not have sufficient effect ($p>.05$). Five independent variables determined to have an effect on the students' GRAS female gender roles subscale score were ranked from the most important to the least important as grade ($p<.001$) and sex ($p<.01$). Two independent variables explain the variance of the students' GRAS marriage gender roles subscale score by 25%.

GRAS marriage gender roles subscale scores of the students in the second grade increase by 9.21 points compared to the other grades (1^{st}, 3^{rd}, and 4^{th} grades), the scores of the male students increase by 3.04 points compared to the female students (Table 7).

In the multiple regression analysis conducted to evaluate the effect of six independent variables that were found to have an effect on the students' GRAS traditional gender roles subscale score in the primary analysis; the variables of father's educational level and family type were excluded from the regression model since they did not have sufficient effect ($p>.05$). Four independent variables determined to have an effect on the students' GRAS traditional gender roles subscale score were ranked from the most important to the least important: sex, grade level ($p<.001$), their mother's educational level ($p<.01$), and the place of resident ($p<.05$). Four independent variables explain the variance of the students' GRAS traditional gender roles subscale score by 25%.

GRAS traditional gender roles subscale score of the male students increases by 5.80 points compared the female students; the scores of the students in the second grade increase by 4.80 points compared to the other grades (1^{st}, 3^{rd}, and 4^{th} grades), the scores of the students whose mother's educational level is at high school and university level decrease by -2.11 compared to those whose mother is primary school graduate and uneducated. The subscale score of traditional gender roles of the students living in the coastline regions/abroad increase by 1.15 (Table 7).

In the multiple regression analysis conducted to evaluate the effect of five independent variables that were found to have an effect on the students' GRAS male gender roles subscale score in the primary analysis; the variable of the place of resident was excluded from the regression model since they did not have sufficient effect ($p>.05$). Four independent variables determined to have an effect on the students' GRAS traditional gender roles subscale score were ranked from the most important to the least important according to the β coefficient: grade level, sex ($p<.001$), family type and their mother's educational level ($p<.05$). Four independent variables explain the variance of the

students' GRAS male gender roles subscale score by 23% (Table 7). GRAS male gender roles subscale the scores of the students in the second grade increase by 5.51 points compared to the other grades (1st, 3rd, and 4th grades); the scores of the male students increases by 2.61 points compared the female students; the scores of those with a nuclear and extended family increase by 3.18 compared to those with fragmented family; and the scores of the students whose mother's educational level is at high school and university level decrease by -1.18 compared to those whose mother is primary school graduate and uneducated.

Discussion

Determining the views of university students on gender roles is very important to shape the views of the next generation on gender roles in an egalitarian way. This study has determined the relationship between general self-efficacy and gender role attitudes of students and other variables affecting their attitude to gender roles.

In the study, self-efficacy of the nursing students was found to be at mid-level (Table 1). Similar to the study findings, Kassem, Elsayed, and Elsayed (2015) also found the general self-efficacy of the students to be at mid-level. However, unlike the study findings, in their study, Bilgiç, Temel, and Çelikkalp (2017) found that the general self-efficacy of the students was above the mid-level. According to these results, it is thought that self-efficacy varies according to sociocultural differences and upbringing method of the family and there are many parameters affecting self-efficacy.

Our research results show that the students participating in the research adopted the traditional attitude towards gender roles. Similar to the study findings, Seven (2019) stated that students adopted traditional attitudes towards gender roles. Contrary to the findings of the study, there are also other studies suggesting that the students adopted egalitarian attitudes towards gender roles attitude (Can et al., 2018; Karasu, Göllüce, Güvenç, & Çelik, 2017; Köken Durgun & Cambaz Ulaş, 2019; Türkmenoğlu Zöhre & Vefikuluçay, 2018). Gender roles are the roles that society attributes to individuals and expects them to show these roles. People adopt the attitude towards gender roles of the society in which they grow up. These differences in the studies are thought to be due to sample differences and it is thought that these studies should be conducted in the different societies with the same culture and thus a comparison should be done. Factors affecting students' gender roles attitude were found as sex, grade and mother's educational level.

The following results were reached in our research: sex is related to gender roles attitude; female and male students have different attitudes towards gender roles; the egalitarian view of gender roles of male students is greater than that of female students. Similar to the study findings, in the studies carried out by Karasu, Göllüce, Güvenç and Çelik (2017) and Türkmenoğlu et al. (2018), it was determined that male students had more egalitarian attitudes than female students. Contrary to the findings of the study, in some other studies, it was stated that the egalitarian view of gender roles of female students is higher than male students (Can et al., 2018; Güzel, 2016; Özpulat & Varış, 2018). In his study, Alptekin (2014) examined the sexism tendencies of students and found that male students got higher scores than female students in both total scale score and hostile sexism subscale score, while female students got higher scores than male students in terms of protective sexism subscale score. In another study, it was stated that preservice teachers adopted traditional role expressions, while both sexes had affirmative expressions about their

gender, they used negative expressions towards the opposite sex (Aslan, 2015). In our research, determining that male students have an egalitarian attitude towards gender roles is a pleasing finding that attitudes towards gender roles differ.

In the study, it was found that the grade level was associated with gender roles attitudes and the students in the second grade had more egalitarian attitudes than the other grade students ($p<.05$). Similarly, in their study, Özpulat and Özvarış (2018) found that Gender Roles Attitude Scale scores of the second grade students were higher than the other grades. Unlike the study findings, in their study, Dinç and Çalışkan (2016) determined that the grade level had no effect on the attitudes towards gender roles. In some studies, it was found that the mean score of the 4th grade students concerning the gender attitude scores was higher (Köken Durgun & Cambaz Ulaş, 2019; Öngen & Aytaç, 2019).

In the study, it was found that the Gender Roles Attitude of the students whose mother is primary school graduate and uneducated was higher than those whose mother is high school and university graduate. Similarly, in their study, Özpulat and Özvarış (2018) found that the Gender Perception Scale mean scores of the students whose mother is secondary school graduate was 103.35±15.24; gender perceptions of students vary according to mothers' education level (<0.05); and the difference was caused by illiterate mothers (>0.05). Çetinkaya (2013) stated that the students whose mother is primary and high school graduate have more egalitarian attitudes regarding gender roles. Unlike the study findings, in some studies, it was found that the educational level of the students' mothers did not affect attitudes towards gender roles (Aydın et al., 2016; Dinç & Çalışkan, 2016). This situation is thought to be due to the fact that women with primary education and uneducated women experience gender related problems more; thus, women are considered as an example to their children in the family by adopting a more egalitarian attitude towards gender roles.

In the study, no correlation was found between the GSE Scale scores of the students and the total and four other subscales (female gender roles, marriage gender roles, traditional gender roles, and male gender roles) of the gender roles attitude scale ($p>.05$, Table 4). Similarly, in the study of Özpulat and Varış (2018), no significant relationship was found between students' self-efficacy and gender perceptions ($r=.035$, $p: .503$). Unlike this result, in the study of Özpulat (2016), it was revealed that there was a relationship between students' self-efficacy levels and their gender perceptions, and that the students with higher self-efficacy level had higher gender perceptions.

As a result of the study, students' general self-efficacy was found to be at midlevel, while they adopt the traditional attitude related to gender roles; besides, factors affecting students' gender roles attitude were found as sex, grade, and mother's educational status; furthermore, no relationship was found between the general self-efficacy and gender roles Attitude. In line with these results, it is possible to suggest that;

Further studies on gender and self-efficacy should be conducted in different sample groups,

The issue should be discussed also by students at student congresses to be held about gender,

Peer education should be provided to create an egalitarian gender perception and university students should transfer this information to their friends studying in different departments,

Based on the fact that gender roles are experienced in the family, to determine the views and attitudes related to gender roles, studies involving parents should be carried out and trainings should be organized,

In order to raise awareness of gender roles, egalitarian gender roles courses should be taught in all departments of universities.

References

Abdel Khalek, A.M., & Lester, D. (2017). The association between religiosity, generalized self-efficacy, mental health, and happiness in Arab college students. *Personality and Individual Differences*, doi:10.1016/j.paid.2016.12.010

Alptekin, D. (2014). Inquiry of gender discrimination ın contrast emotions: a study on perception of gender of youth unıversity. *Selcuk University Journal of Institute of Social Sciences*, *32*, 203-211.

Altıparmak, İ. B. (2018). A socıologıcal research on gender: resources and suggestıons for struggle area. *Turkish Stadies Social Sciences*, *13*, 179-194.

Aslan, G. (2015). A metaphoric analysis regarding gender perceptions of preservice teachers. *Education and Science*, *40*, 363-84.

Aypay, A. (2010). The adaptation study of general self-efficacy (GSE) scale to Turkish. *Inonu Unıversıty Journal of The Faculty of Educatıon, 11*(2), 113-131.

Bandura, A. (1977). Self-efficacy toward a unifying theory of behavioral change. *Psychological Review, 84* (2), 191-215. doi:10.1037/0033-295X.84.2.191

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management, 38*, 9-44.

Bilgiç, Ş., Temel, M., & Çelikkalp, Ü. (2017). Assesment of learned resourcefulness, self-efficacy and hope levels of nursing students: a case study Tekirdağ. *Journal of health and nursing Management*, *3*(4), 117-126. doi:10.5222/SHYD.2017.117

Can, R., Erenoğlu, R., & Tambağ, H. (2018). Views of nursing students on gender equality. *Journal of the Human and Social Science Researches, 7*(4), 3039-3058.

Cornell, R.W. (2016). *Toplumsal cinsiyet ve iktidar* [Gender and Power] (C. Soydemir, Trans.). İstanbul, Turkey: Ayrıntı Yayınları.

Dinç, A., & Çalışkan, C. (2016). The perspectives of university students on gender roles. *Journal of Human Sciences, 13*(3), 3671-3683. doi:10.14687/jhs.v13i3.3801

Dökmen, Z. Y (2012). *Toplumsal cinsiyet: sosyal psikolojik açıklamalar* [Gender: Social psychological explanations]. İstanbul, Turkey: Remzi Kitabevi.

Güzel, A. (2016).Gender roles attitudes of university students and related factors. *Gümüşhane University Journal of Health Sciences, 5*(4), 1222-1232.

Karagöz, Y (2014). *SPSS 21.1 uygulamalı biyoistatistik* [SPSS 21.1 applied biostatistics]. Ankara: Nobel Yayınları.

Karasu, F., Göllüce, A., Güvenç, E., & Çelik, S. (2017). The attitudes of the university students' regarding the gender roles. *SDÜ Journal of Institute of Health Sciences, 8*(1), 21-27. doi: 10.22312/sdusbed.303098

Kassem, A.H., Elsayed, R.S., & Elsayed, W.A. (2015). Bullying behaviors and self efficacy among nursing students at clinical settings: Comparative study. *Journal of Education and Practice, 6*(35), 25-36.

Köken Durgun, S., & Cambaz Ulaş, S. (2019). Determination of attıtudes of midwifery/nursing students towards socıal gender roles**.** *Medical Sciences (NWSAMS), 14*(2), 93-103.

Orhan, B., & Yücel, Ö.R. (2017). Gender perspective to health services in Turkey, *Marmara University Journal of Women and Gender Studies, 1*, 53-59.

Öngen, B., & Aytaç, S. (2013). Attitudes of university students regarding to gender roles and relationship with life values. *Journal of Economy Culture and Society*, *48*(2), 1-18.

Özpulat, F., & Bahar Özvarış, Ş. (2018). The determination of the self-efficacy levels and gender perception among the students of the Akşehir school of health. *Sted*, *28*(2), 98-107. doi: 10.17942/sted.43101

Özpulat, F. (2016). The relationship between self-efficacy level and gender perception of university students: Beyşehir example. *International Journal of Human Sciences, 13*(1), 1222-1232. doi:10.14687/ijhs.v13i1.3570

Seven, N. (2019). The attitudes of university students on social gender roles. *Pesa International Journal of Social Studies, 5*(2),134-149. doi:10.25272/j.2149-8385.2019.5.2.08

Türkmenoğlu Zöhre, D.M., & Vefikuluçay, Y. (2018). Attıtudes of determıne fırst and final class of nursıng Students' regardıng to gender roles. *The Journal of Social Science*, *5*(20), 123-136.

Zeyneloğlu, S., Terzioğlu, F. (2011). Development and psychometric properties gender roles attitude scale. *H. U. Journal of Education*, *40*, 409-420.