INTRODUCTION

The United Nations Development Program report (2016) stated that the Gender Equality Index for many undeveloped countries showed that inequality between the genders had increased. As a result, women were less educated, more exposed to violence, had less access to healthcare, and were poorer. According to this report, the gender equality is low in Sub-Saharan Africa.\(^1,2\) In research conducted by the World Economic Forum, gender inequality continues to grow even more. In this report, Turkey was ranked 131 among 140 countries in 2017.\(^3,4\)

Gender equality refers to men and women having equal access to available resources, opportunities and power in areas including social institutions, family life, working life, legal regulations, education, politics, religion, and health; gender inequality refers to a situation in which one gender has more power and resources.\(^5\) Culture is also an important factor in the formation of a gender equality.\(^6\) In recent years, much research has been carried out on this topic. These studies have shown that inequality directed against women is common worldwide. Factors such as family structures, education, the economy, religion, and social position affect how inequality emerges and is experienced.\(^7\)
Nursing students are expected to develop an egalitarian attitude towards gender and to help shape the societies in which they are providing care. This study thus aimed to determine the attitudes towards gender equality of nursing students studying at a private university, the sociodemographic factors affecting gender equality, and the difference in perspectives towards gender between Turkish and foreign students.

METHODS

This cross-sectional study was carried out in the Faculty of Nursing at Near East University in March and April 2019. Third-year students in the Turkish and English programs in the Faculty of Nursing were included in the study. There were 204 students in the Turkish program and 102 (Nigerian=44; Zimbabwean=58) students in the English program. All third-year students in both programs were invited to participate in the study and 306 students took part. The reason third-year students were chosen is that they took a course on Women’s Health and Sexual Health in the first semester. This included the topics of gender equality, violence against women, and honor killing. As the students were due to graduate as nurses the following year later they would be using this information while they provided care. Ethical approval was obtained from the institution where the study was carried out (YDU/2019/66-752, dated 02.28.19). The data were collected using two forms.

Sociodemographic Information: The researchers created a sociodemographic characteristics questionnaire with 16 questions. The participants were asked directly about their gender, age, nationality, the educational level of mother and father, economic status, employment status, marital status, family type and whether there was a family history of violence.

Turkish and English Gender Equality Men (GEM) Scale: The GEM scale was originally developed in low income settings in Brazil and used as a tool to measure changes in gender-related interventions. The GEM scale consists of items related to gender, domestic chores, violence, sexual relationships, masculinity, and sexual and reproductive behaviors. Each item is scored on a three-point Likert scale (“agree” =3, “somewhat agree” =2, “disagree” =1). The questionnaire has seven negative items that are reverse-scored and the total score obtainable ranges from 24 to 72. A higher score for the questionnaire means that the attitude of the individual towards gender equality is more positive and that the student is more inclined to support gender equality. The GEM scale includes two subscales: equitable gender norms and inequitable gender norms. The inequitable gender norms subscale has 17 items. For items one through 17, the score for each item is based on three-point Likert scale (“agree” =3, “somewhat agree” =2, “disagree” =1). The minimum score obtainable from this subscale is 17 and the maximum score is 51. The equitable gender norms subscale has seven items. The minimum score obtainable from this subscale is 7 and the maximum score is 21.

Analysis: For continuous data, the Mann-Whitney U test was applied for comparisons between two independent groups. The Kruskal-Wallis test was applied to compare continuous data among multiple groups. The LSD post hoc test (ANOVA) was used to provide information about which tools were significantly different from each other. The Cronbach’s alpha of the GEM scale was found to be 0.82 and the error rate was 5%. The significance level for all the studies was accepted as 0.05. Statistical evaluation of the data was performed using the SPSS 16.0 software.

RESULTS

The mean age of the participants was 21.11±3.88. 76.1% of the students were female and 33.3 students were foreigners 44.8% of the students' fathers had primary school degrees, 49.5% of the mothers had the primary school degree. 18.6% of the students defined their families as traditional. 58.8% of the students said that they can’t talk about a sexual issue with their family. Turkish students’ 77.5%, foreign students’ 73.5% were female. 6.9% of Turkish students stated that there was violence in their families. This rate was 8.2% for foreign students. 38.2% of Turkish students and 47.1% of foreign students said that they could talk to their families about sexual matters.

When Turkish and foreign students’ GEM scale scores and subscale scores were compared in Table I, total scale score and Inequitable Gender Norms were found to be significantly different (p<0.05). GEM scale total score (P=0.001) and the
subscale score of foreign students were lower than Turkish students \((P=0.001)\).

It was determined that there was a statistically significant correlation between the total GEM score averages of the foreign students and their age, fathers’ working condition, presence of domestic violence and state of talking about sexuality with their parents \((p<0.05)\). (Table-II).

**Table-I: The Comparison of Students’ Gender Equitable Men (GEM) Scale Score Points by Country \((n=306)\).**

| Country                | GEM Scale Total Score | Inequitable Gender Norms | Equitable Gender Norms |
|------------------------|-----------------------|--------------------------|------------------------|
|                        | M±SD                  | Min-Max                  | M±SD                   | Min-Max                  | M±SD                   | Min-Max                  |
| Turkish Students \((n=204)\) | 54.35±8.715           | 30 - 72                  | 45.07±6.955            | 19 - 51                  | 9.28±3.707             | 7 - 21                   |
| Foreign Students \((n=102)\) | 51.11±4.629           | 41 - 66                  | 42.13±4.88            | 29 - 51                  | 8.98±3.707             | 7 - 21                   |
| *U                     | 6336.00               | 0.001                    | 6273.000              | 0.001                    | 10088.500              | 0.652                    |

*Mann-whitney test.

It was determined that there was a statistically significant correlation between the total GEM score averages of the foreign students and their age, fathers’ working condition, presence of domestic violence and state of talking about sexuality with their parents \((p<0.05)\). (Table-II).

**Table-II: The Comparison of Foreign Students’ GEM Score and Subscore Points by Some Demographic Factor \((n=102)\).**

| Foreign Students \ / Caracterstic | GEM Total Score | Inequitable Norm | Equitable Norm |
|----------------------------------|-----------------|-----------------|----------------|
| Age                              | M±SD            | P               | M±SD           | P              | M±SD           | P               |
| 20 yrs & below \((n=19)\)        | 49.32±3.59      | *0.023          | 39.63±4.78     | *0.005         | 9.68±3.32      | 0.344          |
| 21 yrs & above \((n=83)\)        | 51.53±4.76      | 42.71±4.75      | 8.82±2.77      |                |                |                |
| Gender                           |                |                 |                |                |                |                |
| Female \((n=75)\)                | 51.53±4.47      | 0.188           | 42.28±4.67     | 0.613          | 9.23±3.07      | 0.020          |
| Male \((n=27)\)                  | 49.96±4.96      | 41.74±5.51      | 8.22±2.14      |                |                |                |
| Mother Work                      |                |                 |                |                |                |                |
| Yes \((n=74)\)                   | 51.54±4.65      | 0.352           | 43.08±4.59     | *0.001         | 10.36±3.26     | *0.000         |
| No \((n=28)\)                    | 50.00±4.46      | 39.64±4.82      | 7.21±2.56      |                |                |                |
| Father Work                      |                |                 |                |                |                |                |
| Yes \((n=68)\)                   | 50.38±4.86      | *0.028          | 41.96±5.18     | 0.762          | 8.43±2.21      | 0.003          |
| No \((n=34)\)                    | 52.59±3.79      | 42.50±4.27      | 10.08±3.68     |                |                |                |
| Family Type                      |                |                 |                |                |                |                |
| Traditional \((n=28)\)           | 49.82±3.63      | 0.086           | 41.54±3.99     | 0.520          | 8.29±1.86      | 0.304          |
| Modern \((n=74)\)                | 51.61±4.89      | 42.36±5.19      | 9.24±3.15      |                |                |                |
| Job Status                        |                |                 |                |                |                |                |
| Yes \((n=6)\)                    | 52.83±4.75      | 0.462           | 44.67±5.09     | 0.234          | 8.17±0.75      | 0.322          |
| No \((n=96)\)                    | 51.01±4.63      | 41.97±4.85      | 9.03±2.95      |                |                |                |
| Violence in the family            |                |                 |                |                |                |                |
| Yes \((n=29)\)                   | 51.93±7.22      | *0.023          | 43.72±8.55     | 0.209          | 8.21±1.66      | 0.189          |
| No \((n=175)\)                   | 54.76±7.74      | 45.29±6.66      | 9.46±3.92      |                |                |                |
| Talking with parents about sexuality |                |                 |                |                |                |                |
| Yes \((n=78)\)                   | 55.26±8.49      | *0.002          | 45.44±7.86     | *0.002         | 8.92±3.99      | *0.043         |
| No \((n=126)\)                   | 53.80±7.18      | 44.85±6.36      | 8.95±3.49      |                |                |                |
| Mother’s Education               |                |                 |                |                |                |                |
| University Education \((n=75)\)   | 49.86±5.67      | 39.65±4.85      | 8.33±0.58      |                |                |                |
| Secondary Education \((n=23)\)    | 51.32±4.23      | 42.65±4.65      | 8.64±2.32      |                |                |                |
| Father’s Education               |                |                 |                |                |                |                |
| University Education \((n=68)\)   | 51.07±4.38      | 42.51±5.04      | 14.00±3.74     |                |                |                |
| Illiterate \((n=6)\)             | 50.17±3.87      | 37.13±3.87      | 7.50±0.55      |                |                |                |
| Primary education \((n=8)\)      | 51.13±2.95      | 42.67±3.61      | 8.56±2.16      |                |                |                |
| Secondary Education \((n=20)\)    | 51.55±4.79      | 42.74±4.07      | 8.85±3.23      |                |                |                |
| University Education \((n=68)\)   | 51.07±4.38      | 42.51±5.04      | 14.00±3.74     |                |                |                |
| Economic Status                  |                |                 |                |                |                |                |
| Poor \((n=6)\)                   | 51.83±3.31      | 43.83±2.48      | 8.00±0.89      |                |                |                |
| Middle \((n=61)\)                | 51.34±4.71      | 41.67±5.02      | 9.67±3.39      |                |                |                |
| Good \((n=35)\)                  | 50.60±4.73      | 42.66±4.92      | 7.94±1.45      |                |                |                |

*Mann-Whitney test, **Kolmogorov smirnov test.
gender inequality subscale scores of the foreign students; the scores of the students who were under 20 years of age, were not able to talk about sexual issues with their parents and whose mother did not work and parents had primary school degree, were found to be lower than the scores of the students who were over 20 years of age, were able to talk about sexual issues with their parents and whose mother worked and parents had an educational degree higher than primary school. It was determined that there was no statistically significant correlation between the total GEM scale and subscale score averages and family type, working condition (p>0.05) (Table-II).

It was determined that there was a statistically significant correlation between the total GEM score averages of the Turkish students and their age, gender, fathers’ working condition, family type, working condition, presence of domestic violence, state of talking about sexuality with their parents and educational level of father (p<0.05). It was found that mother’s working condition, educational level of mother and the students’ economic condition had no impact on the total GEM score.

Table-III: The Comparison of Turkish Students’ GEM Score and Subscore Points by Some Demographic Factor (n=204).

| Turkish Students | GEM Total Score | Inequitable Norm | Equitable Norm |
|------------------|-----------------|-----------------|----------------|
| characteristic    | M±SD            | P               | M±SD           | P               | M±SD          | P               |
| Age 20yrs & below (n=19) | 57.29±9.16 | 0.003 | 46.29±6.11 | 0.076 | 11±4.86 | *0.001 |
| Age 21yrs & above (n=83) | 53.43±6.98 |         | 44.69±7.18 |          | 8.74±3.09 |         |
| Gender Female (n=75) | 56.53±6.34 | 0.000 | 47.03±5.29 | *0.0001 | 9.50±4.07 | 0.864 |
| Gender Male (n=27) | 46.89±7.40 |         | 38.35±7.79 |          | 8.54±2.09 |         |
| Mother Work Yes (n=77) | 55.79±8.93 | 0.379 | 45.52±6.58 | 0.931 | 10.27±4.97 | 0.020 |
| Mother Work No (n=127) | 53.49±6.76 |         | 44.80±7.18 |          | 8.69±2.51 |         |
| Father Work Yes (n=160) | 55.33±7.73 | *0.0001 | 45.71±6.68 | *0.004 | 9.61±4.06 | 0.104 |
| Father Work No (n=44) | 50.84±6.62 |         | 42.75±7.51 |          | 8.09±1.39 |         |
| Family Type Traditional (n=29) | 51.93±7.22 | *0.023 | 43.72±8.55 | 0.209 | 7.82±0.67 | 0.299 |
| Family Type Modern (n=175) | 54.76±7.74 |         | 45.29±6.66 |          | 9.46±3.92 |         |
| Job Status Yes (n=34) | 51.41±7.48 | *0.009 | 43.59±7.49 | *0.034 | 7.82±0.67 | 0.95±3.99 | 0.189 |
| Job Status No (n=170) | 54.95±7.65 |         | 43.72±8.55 |          | 9.46±3.92 |         |
| Violence in the family Yes (n=14) | 46.21±7.94 | *0.0001 | 36.79±9.03 | *0.0001 | 9.43±2.56 | 0.320 |
| Violence in the family No (n=190) | 54.96±7.37 |         | 45.68±6.39 |          | 9.27±3.78 |         |
| Talking with parents about sexuality Yes (n=78) | 55.26±8.49 | *0.002 | 45.44±7.86 | *0.022 | 9.82±3.99 | *0.043 |
| Talking with parents about sexuality No (n=126) | 53.80±7.18 |         | 44.85±6.36 |          | 8.95±3.49 |         |
| Mother’s Education Illiterate (n=14) | 53.92±9.71 |         | 45.57±4.73 |          | 8.43±2.28 |         |
| Mother’s Education Primary education (n=106) | 54.00±4.49 |         | 45.62±6.33 |          | 8.88±3.13 |         |
| Mother’s Education Secondary education (n=58) | 54.50±6.93 | **0.851 | 44.64±8.19 | **0.207 | 9.74±4.51 | **0.169 |
| Mother’s Education University Education (n=26) | 54.38±8.79 |         | 43.54±7.47 |          | 10.38±4.31 |         |
| Father’s Education Illiterate (n=2) | 40.00±5.66 |         | 32.50±4.95 |          | 7.50±0.71 |         |
| Father’s Education Primary Education (n=121) | 52.29±8.05 |         | 41.94±7.77 |          | 8.67±3.04 |         |
| Father’s Education Secondary education (n=47) | 54.00±10.89 | **0.030 | 43.83±8.90 | **0.001 | 10.17±4.86 | **0.028 |
| Father’s Education University Education (n=34) | 55.31±5.62 |         | 46.64±5.12 |          | 10.35±3.76 |         |
| Economic Status Poor (n=38) | 55.58±7.88 | **0.217 | 45.89±7.32 | **0.012 | 9.68±4.64 | **0.0001 |
| Economic Status Middle (n=126) | 54.32±6.29 |         | 45.73±6.10 |          | 8.59±2.83 |         |
| Economic Status Good (n=40) | 53.33±11.02 |         | 42.23±8.43 |          | 11.10±4.49 |         |

*Mann-Whitney test, **Kolmogorov smirnov test.
scores (p>0.05) (Table-III). Assessing the inequality norm subscale scores of the Turkish students; the scores were found to be lower in students who were male, employed, suffered from domestic violence, were not able to talk about sexual issues with their parents, had a good economic condition and whose father was unemployed and illiterate (Table-III).

**DISCUSSION**

In the present study, the total GEM score averages of the foreign students were found to be significantly lower than the Turkish students (p<0.05). Some socio-demographic features affecting the GEM scores of the Turkish and foreign students were different. The total GEM score averages were found to be significantly lower in the foreign students who were under 20 years of age and low in the Turkish students who were over 20 years of age. Also the total GEM score averages were found to be low in the Turkish students whose father was unemployed and significantly lower in the foreign students whose father was employed. In different studies it has been found that factors affecting gender equality attitudes, vary from society to society.

In a study assessing gender attitudes of Latins and whites; it has been determined that Latins adopt a more traditional family structure, which considerably affects their gender role perception, sexual identity and power balance throughout their lives.

Besides different reasons affecting the students’ GEM scores; gender, presence of domestic violence, being able to talk about sexual issues with parents and educational level of father decreased the total and / or subscale GEM score averages of all the students. In our study it was found that the equalitarian norm subscale score averages of the foreign male students were lower than the female students and the total GEM and inequality norm subscale score averages of the Turkish students were lower than the female students. The studies conducted in Turkey and Africa to determine gender roles of university students, have demonstrated that female students have a higher level of positive thinking regarding gender equality compared to male students. In another study conducted with medical students in Pakistan it was revealed that female students were exposed to gender discrimination more often.

In our study the total GEM scale score averages were found to be lower in the Turkish (p=0.001) and foreign (p=0.023) students who suffered from domestic violence. In a study it was determined that equalitarian gender attitudes of girls who suffered from domestic violence, were affected negatively.

The studies support the argument that domestic violence is an important risk factor for developing inequal gender attitude, which is in agreement with our study. In another study it was reported that being exposed to violence increased tendency to violence and sexist approach attitudes, which was associated with the fact that violence is a learned behavior and is handed down the next generations in this way. The reason for this matter is that children and youth take their parents as a model and the constantly encountered violence is perceived to be normal.

It was found that the Turkish and foreign students who were not able to talk about sexual issues with their parents, had significantly lower total GEM scale and subscale score averages. The studies have revealed that families who are open to communication concerning sexual issues, have more equalitarian gender norms regarding parenting roles. The reason for this condition is that equalitarian and conscious parents do not consider sexual issues a taboo and thus their children have an equalitarian gender attitude.

In our study one of the factors affecting attitudes toward gender roles was educational level of the parents of the students. It was found that as educational level of the parents of foreign students increased, their attitudes became more equalitarian. It was determined that the GEM scores of the Turkish students were affected by educational level of their father. It was observed that as educational level of the father of the Turkish students increased, they developed more equalitarian attitudes. In the study by Terzioglu it was found that as educational level of families increased, the gender equality perspective was affected positively, which is in agreement with our study.

**Limitations of the study:** As this study was conducted with the students who were enrolled only in the third-year nursing faculty of the related university, the results cannot be generalized to all students. All the data in relation to personality traits and attitudes toward gender roles were based on the personal statements, which requires considering the fallibility.

**CONCLUSION**

The foreign students’ gender equality attitudes were found to be lower than the Turkish students, which was associated with cultural differences.
It was determined that students who were male, suffered from domestic violence, were not able to talk about sexual issues with their parents, and whose father had a lower educational level, had lower gender equality attitudes. In order for the students to develop more equitarian attitudes, it is important that they are taught again and again the significance of gender equality until graduation. The impact of culture on gender equality in educational planning, should be remembered.

Grant Support & Financial Disclosures: None.

REFERENCES

1. UN Development Programme. Human Development Report 2016: Human Development for Everyone, 2016.
2. Lusey H, San Sebastian M, Christianson M, Edin KE. Prevalence and correlates of gender inequitable norms among young, church-going women and men in Kinshasa, Democratic Republic of Congo. BMC Public Health. 2018;18(1):887. doi: 10.1186/s12889-018-5742-9
3. Global Gender Gap Report (2017), http://reports.weforum.org/global-gender-gap-report-2017/ dataexplorer/#economy=TUR [access: 10.02.2020].
4. Djikanovic B, Stamenkovic Z, Mikanovic VB, Vukovic D, Tonsing JC. Domestic violence: intersection of culture, gender and context. Journal of immigrant and minority health. 2016;18(2):442-446 doi:10.1007/s10903-015-0193-1
5. Dijkanovic B, Stamenkovic Z, Mikanovic VB, Yukovic D, Gordeev VS, Maksimovic N. Negative attitudes related to violence against women: Gender and ethnic differences among youth living in Serbia. Int J Public Health. 2018;63(8):923-932. doi: 10.1007/s00038-017-1033-y
6. Aydin Ozkan S, Kucukkelepce DS. Do university students' personality traits affect their attitudes towards gender roles? Perspect Psychiatr Care. 2019;55(4):562-569. doi:10.1111/ppc.12375
7. Pulerwitz J, Barker G. Measuring attitudes toward gender roles and violence against women and girls (VAWG): baseline findings from an RCT of 1752 youths in Pakistan. Glob. Health Action 2017;10(1):1542454.doi: 10.1080/16549716.2017.1342454
8. Timshel I, Montgomery E, Dalgaard NT. A systematic review of risk and protective factors associated with family related violence in refugee families. Child abuse & neglect. 2017;70:315-330. doi:10.1016/j.chiabu.2017.06.023
9. Ameli V, Meinck F, Munthali A, Ushie B, Langhaug, L. Associations between adolescent experiences of violence in Malawi and gender-based attitudes, internalizing, and externalizing behaviors. Child abuse & neglect. 2017;67:305-314. doi:10.1016/j.chiabu.2017.02.027
10. Basar, F., & Demirci, N. Domestic violence against women in Turkey. Pak J Med Sci. 2018;34(3):660. doi: 10.12669/pjms.343.15139
11. Grossman JM, Jenkins LJ, Richer AM. Parents’ perspectives on family sexuality communication from middle school to high school. Int J Environ Res Public Health. 2018;15(1):107. doi: 10.3390/ijerph15010107
12. Malacane M, Beckmeyer JJ. A review of parent-based barriers to parent–adolescent communication about sex and sexuality: Implications for sex and family educators. American Journal of Sexuality Education. 2016;11(1):27-40. doi.org/10.1080/15549716.2016.1146187
13. Terzioglu, F., Kok, G., Guvenc, G., Ozdemir, F., Gonenc, I. M., Hicyilmaz, B. D., & Sezer, N. Y. (2018). Sexual and reproductive health education needs, gender roles attitudes and acceptance of couple violence according to engaged men and women. Community mental health journal, 54(3), 354-360. 360. doi:10.1007/s10597-017-0227-3

Authors Contribution:
ST: Conceived, designed and did statistical analysis & editing of manuscript and takes the responsibility and is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved
AP: Did data collection and manuscript writing.
ST: Did review and final approval of manuscript.