



## Research Article

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# Gender Role Attitudes among Higher Education Students in Jordan

**Amal El Kharouf**

*Professor, Women's Studies Program,  
University of Jordan, Jordan*

**Nour Daoud**

*Ph.D. Candidate, Social Sciences: Interaction,  
Communication and Cultural Construction Program,  
University of Padova, Italy*

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## Abstract

*Youth are the change agents of any society, therefore, it is critical to identify their attitudes toward gender roles. The study utilizes a social survey approach, where a stratified random sample is selected from the study population, which consists of Jordanian youth who are enrolled at the University of Jordan in Amman, Jordan. The size of the sample is 848 youth, with 33.5% (N=284) males and 66.5% females (N=564). A survey, based on two scales, is developed to measure youth's attitudes toward gender roles: the gender professions scale and the gender skills scale. The study also examines the effect of the following variables: age, type of college, place of residence, monthly income, and educational level of the mother. The analysis uses statistical methods to recognize differences in attitudes, to understand the relationship between the independent and dependent variables, and to determine statistical significance (set at  $p \leq 0.05$ ). The results show that the attitudes of female youth toward gender roles are nontraditional in comparison to those of their male counterparts. Moreover, attitudes toward gender roles tend to be gender-balanced among older youth who live in urban areas, study in humanitarian colleges, and whose mother's educational level is high. The study highlights the importance of institutionalizing the concept of gender in higher educational institutions.*

**Keywords:** *developing societies, educational institutions, gender-balanced attitudes, Jordan, Middle-East, socialization*

## 1. Introduction

Gender is a sociocultural process that is constantly being produced and reproduced (Wharton, 2012). It is defined as masculine and feminine properties that are culturally and psychologically formed and developed within society (Kessler and McKenna, 2001). Gender differs from the concept of sex, which refers to the physiological and biological characteristics that distinguish males and females (Oakley, 1991; Lindsey, 2015). Gender is important due to its role in shaping relations of inequality that arise from the biological differences according to which social resources and privileges are distributed.

Gender roles are the acts that men and women are expected to perform according to their sex, and such roles are produced through the interaction of individuals with their environments (Lindsey, 2015), as well as through the stereotyping process, which forms an image in the individual's mind that is not based on personal experience but derived from the culture and surrounding environment (Lippmann, 1994). This image is generally simple and inaccurate, as it is

attained via transference between individuals. Traditional gender attitudes link the roles and functions of women in society to typical female characteristics, such as emotionality. Therefore, females are given the responsibilities of caring for the home or performing certain occupations, such as nursing. This is no different for men, who are linked to traditional male characteristics, such as rationality and responsibility in making important family decisions.

Many modern societies are interested in combating traditional gender notions and providing equal opportunities for men and women. In their book *Rising tide: Gender equality and cultural change around the world*, Inglehart and Norris (2003) examined how traditional attitudes toward gender roles in 70 countries changed during the 20th century, including Jordan, which ranked low compared to rich industrial and post-industrial countries. In the current century, Jordan, a Middle Eastern developing country affected by surrounding crises and political conflicts, seeks to move from the stage of “Neopatriarchy” (Sharabi, 1992) to modernity, especially with regard to gender equality, through all its institutions. Jordan ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1992, acknowledging women’s rights as human rights that cannot be violated in any context. The results of the latest report from the CEDAW Committee showed several positive temporary measures that have been taken in Jordan to accelerate gender equality. For example, the Municipalities Law for 2011 has increased the proportion assigned to women in the municipal councils from 20% to 25% (CEDAW, 2016). However, CEDAW experts have expressed concerns about Jordan’s decline in rank, to 140th, in gender equality. They have called on Jordan to make effective use of temporary special measures to counter customs and beliefs that hinder the full participation of women in public and economic life (Reliefweb, 2017).

The youth are the leaders of change in any society, so it is necessary to study their attitudes toward gender roles within the various institutions that affect their social upbringing. We will focus here on higher education institutions, as represented by the University of Jordan, the main university in Jordan, as we are aware of the role of these institutions in reproducing gender roles across generations. Knowing youth’s attitudes toward gender roles, whether traditional, nontraditional, or gender-balanced,<sup>1</sup> will help highlight the role of Jordan’s higher education institutions in bridging the gender gap and achieving gender equality.

## 2. Theorizing Gender Role Attitudes (GRA)

Many theories address the concept of gender roles, including biological scientific theories, psychological approaches, sociocultural views, and feminist thought. Biological theories focus on the body organs and biological and hormonal differences between the two sexes to explain the attraction of women to female gender roles and men’s tendency to choose male gender roles. As for the psychological theories, Freud’s *psychoanalysis theory* argued that gender development occurs in the third stage, which is called the *phallic stage*, which occurs between the ages of three and six. Freud noted that gender development varied between boys and girls, and he explained this as follows: The boy takes on the gender role of his father in an attempt to solve the *Oedipus complex*, which is generated through his jealousy of his father and his desire to possess his mother; the girl unravels the *Electra complex*, taking on her mother’s gender role in an attempt to possess her father (Lindsey, 2015). *Object Relations theory*, which has been used by many theorists, such as Chodorow, affirms that gender roles are formed during childhood through the mother, who is considered in many societies to be the first educator of her children. For Chodorow, the mother sees her daughter as an extension of herself, so she associates herself with her daughter in a narcissistic way. Consequently, the daughter grows up representing her mother and exercising her gender roles. With the son, the mother’s awareness that he is different from her gives her the courage to separate him from her female world so that he will grow up performing male gender

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<sup>1</sup> *Traditional gender attitudes are trends that depend on social and cultural stereotyping to link roles, professions, and skills to one gender and not the other. In contrast, nontraditional gender attitudes are trends whose followers refuse to depend upon stereotyping to determine gender roles, always supporting the opposite direction. A gender-balanced attitude is a trend whose followers adopt impartiality in terms of gender role-modeling, skills, and professions, without seeing any gender as monopolizing these.*

roles (Chodorow, 1978, 1992). Furthermore, *Social Learning theory* sheds light on the socialization process, suggesting that children acquire gender roles through the processes of observation, imitation, simulation, and modeling of the similar sex, and these roles are enhanced through reward and punishment (Bandura, 2002). The *Theory of Cognitive Development* contradicts the later theory, affirming that the child's understanding of gender evolves through different stages of life. This starts with the "gender identity" stage, which is when the child realizes that he or she is a boy or a girl; it is followed by the "gender stability" stage, which stresses the child's recognition that his/her gender identity does not change over time; finally, in the "gender consistency" stage, gender identity does not alter with the appearance, clothing, or characteristics of the individual. This is not achieved through social learning processes, but rather through the cognitive maturation of children, who become aware of gender roles that must be practiced in society according to their age (Martin et al., 2002). All previous cognitive theories contributed to the development of *Gender Schema* theory, which argues that children develop what it means to be male and female at early ages, using gender schemata to classify information, make decisions, and behave in a certain manner (Starr & Zurbriggen, 2016). For Sandra Bem, the pioneer of this theory, gender roles are defined by the culture around us. A child who grows up in a traditional gender environment has gender schemata that reinforce his/her traditional gender roles, while a child born in a gender-balanced environment that does not depend on biological differences has a balanced, androgenic personality that combines male and female characteristics (Bem, 1983).

One well-known sociological theory is *Social Role theory*, which posits that the social roles of men and women, which are built historically, culturally, and socially, are based on the principle of division of labor according to physical characteristics. This theory has played a significant role in the development of theories regarding gender roles and behaviors expected of men and women (Eagly et al., 2000). Refusal to perform these roles may surprise and confuse others, as this contradicts the established societal norms and may threaten social relations and cohesion (Harrison & Lynch, 2005). In *Gender Socialization theory*, gender roles are acquired through various institutions over two stages: the primary stage (with family) and the secondary stage (at school, through friends, or through other institutions, such as media) (Berger & Luckmann, 1991). This theory argues that the educational system in general play an important role in achieving gender equality (Sadker et al., 2009).

Finally, it is vital to address some feminist views, which play an important role in dismantling stereotypes about gender roles and providing balanced gender attitudes based on the principle of equality between men and women. *Liberal feminism* defends women's rationality and decision-making capacity and considers education to be critical in liberating women from their traditional gender roles (Lindsey, 2015). *Radical feminism* argues that gender equality is to be achieved only through challenging the patriarchal system, which benefits from women performing nonproductive gender roles (Bryson, 1995). *Socialist feminism* focuses on ending sexism by eradicating "the interrelationships between capitalism and patriarchy as expressed through the sexual division of labor" (Eisenstein, 1990, p.197).

In sum, all the above theories aim to explain the formation and acquisition of gender roles, and all contain elements of validity. There are considerable contradictions, limitations, and sometimes overlap among them; however, we cannot underestimate the importance of each in that each addresses gender discrimination from a different perspective.

### 3. Literature Review

There are several studies that describe the effects of different variables on gender role attitudes among youth and adolescents. Previous literature has noted that attitudes toward gender roles vary between male and female youth. Al Kharouf and Al Bdour (2006) found that the attitudes among male youth in the city of Al-Tafilah in Jordan were more traditional than those of females, especially regarding making final decisions in the family. Similarly, studies Fan and Marini (2000), Mensch et al. (2004), Japaridze et al. (2013), Hajnalka (2014) found that female youth in the US, Egypt, Georgia, Central and Eastern Europe, respectively, had less traditional gender attitudes than their male counterparts.

As for the age variable, LaFont's (2010) study in Namibia revealed that younger youth (16 years old) were more responsive to gender equality than older youth (20 years old). This was confirmed by Tinklin et al. (2005), who found that young people between the ages of 16 and 17 believed in the right of both males and females to complete their higher education, and that the responsibility of caring for children should be a joint responsibility between the spouses. Similarly, Obare et al. (2013) confirmed the inclination of older adolescent females in Kenya to reveal more conservative views concerning decision making within the household compared to their younger counterparts. However, Watts and Borders (2005) pointed out that youth in adolescence are subject to societal pressures and thus develop their traditional gender roles based on prevailing stereotypes in society.

On the other hand, LaFont (2010) found that younger youth living in cities had less traditional attitudes toward gender roles when compared to younger youth who lived in rural areas and villages. This was also confirmed by Japaridze et al. (2013) and Shteiwi (2015). However, these results were rejected by Hajnalka (2014), who found no difference between university students living in cities and those living in rural areas.

Furthermore, Tallichet and Willits (1986) found that young women with high educational and economic status showed less traditional attitudes toward gender roles, a result echoed by Japaridze et al. (2013). However, in Egypt and Sri Lanka, Mensch et al., (2004) and Wijewardene (2016) noted that the level of education, openness, and technological advancement did not change the traditional perceptions of youth about the gender roles. Finally, Shteiwi (2015) pointed out that, in Jordan, an individual's gender role attitudes tended to be more traditional if the individual had a Master's degree or above.

Additionally, the results of Baruch and Barnett (1986) indicated that girls whose mothers supported more equitable gender roles, developed more egalitarian attitudes over time. Likewise, the study of Fan and Marini (2000, p.279) presented that American youth "whose parents were more highly educated and whose mothers were employed had more egalitarian gender-role attitudes than those whose parents were less well-educated and whose mothers were not employed". On another note, Updegraff et al. (2014) confirmed that when Mexican-American mothers reported more stereotypical attitudes toward gender roles, their adolescents reported the same.

Finally, in various quantitative studies such as Foshee and Bauman (1992), Evertsson (2006) and Hess et al. (2014) adolescents from higher social-economic status generally conveyed more equitable gender role attitudes.

#### 4. Methodology

The population of the study consists of all female and male youth who are enrolled at the University of Jordan during the academic year 2017-2018. A stratified random sample of students is extracted, where the total number of students is 848, 284 (33.5%) of whom are male and 564 (66.5%) of whom are female, taking into account the distribution of students by college.

The study adopts a social survey approach. The survey has three parts. The first focuses on the demographic, social, and economic characteristics of the student. The second consists of the gender professions scale, and third part includes the gender skills scale. The two scales are sensitively developed in line with the Jordanian context. For each separate paragraph, scores between 1 and 3 are given for the participants' responses to the two scales used to measure attitudes toward gender roles, where 1 is given for a traditional attitude, 2 for a nontraditional attitude, and 3 for a gender-balanced attitude (see Appendix 1).

Before the implementation phase of the study, the validity of the tool was verified through a pilot experiment in which 40 surveys were distributed. This experiment was repeated two weeks after the date of the pre-test experiment with the same respondents. Pearson correlation coefficients were calculated between the pre-test results and the post-experiment results, and all were greater than 80% (85% for the professions scale and 92% for the skills scale), indicating a high level of stability in the survey used.

Having developed, reviewed, and validated the survey, and upon obtaining approval from the

University of Jordan to implement the study, the survey was distributed to all sample members. Prior to data collection, the objectives of the study were explained to each member, as well as their right to refuse to answer the survey or any part of it, and the participants were told that their responses would remain confidential.

This study is based on statistical methods such as arithmetical means and standard deviations. Moreover, some tests were used to address the objectives of the study, including t-tests and one-way ANOVAs. These enabled the recognition of differences in attitudes and an understanding of the relationship between the independent variables (gender, age, college, place of residence, monthly income of the family, educational level of the mother) and the dependent variable (attitudes of young people toward gender roles in terms of professions and skills); these tests also revealed any statistical significance at the level of  $p \leq 0.05$ .

For the purposes of determining students' attitudes toward gender roles on the skills and professions scales, the mathematical averages of the responses were divided into the following categories: 1–1.74 = traditional gender attitude; 1.75–2.24 = nontraditional gender attitude; and 2.25–3 = gender-balanced attitude.

## 5. Results

### 5.1 Students' Attitudes Toward Gender Roles According to Gender

Table (1) shows the arithmetic means and standard deviations of the participants' responses to the gender skills scale, for which they were asked to decide whether a given skill was suitable for males, females, or both. The females' overall average response was higher than that of the males, at 2.13 and 1.73, respectively. The highest average among female responses was 2.43, corresponding to the paragraph that refers to the "reception of guests," while the lowest was 1.56, on the paragraph referring to "training on car driving." As for males, the highest average response was 2.02, on the paragraph on "cooking," while the lowest average male response was 1.22, on the paragraph that refers to "replacing gas cylinder."

**Table 1:** Students' Attitudes Toward Appropriate Skills for Genders by Student Gender

# Skill	Gender			
	Male		Female	
	Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation
1 Setting the table	1.65	0.57	2.03	0.83
2 Washing the dishes	1.86	0.49	2.25	0.88
3 Washing the clothes	1.85	0.54	2.15	0.84
4 Buying the newspaper	1.64	0.78	2.39	0.75
5 Using the Internet	1.74	0.85	2.40	0.69
6 Buying household items	1.67	0.72	2.41	0.69
7 Replacing gas cylinder	1.22	0.55	2.15	0.70
8 Ironing	2.00	0.63	2.07	0.92
9 Reception of guests	1.72	0.84	2.43	0.69
10 Home maintenance	1.66	0.81	1.97	0.95
11 Training on car driving	1.74	0.78	1.56	0.71
12 Cooking	2.02	0.69	1.73	0.57
Total	1.73	0.37	2.13	0.55

Note: 1–1.74: traditional attitude; 1.75–2.24: nontraditional attitude; 2.25–3: gender-balanced attitude.

Table (2) shows the arithmetic means and standard deviations of the participants' responses on the gender professions scale, in which they were asked to decide whether certain professions were suitable for males, females, or both. The females' overall average response on this scale was higher than that of the males, at 2.07 and 1.65, respectively. The highest average male response on this scale was for the air host/hostess profession, with 2.09, while the highest average female responses were for teaching, nursing, gynecology, and obstetrics professions, all of which had an average score of 2.43.

**Table 2: Students' Attitudes Toward Appropriate Professions for Genders by Student Gender**

# Profession	Gender			
	Male		Female	
	Arithmetic	Standard	Arithmetic	Standard
	Mean	Deviation	Mean	Deviation
1 Teaching	2.00	0.00	2.43	0.69
2 Working in the press	2.02	0.69	2.22	0.92
3 Defense careers (such as military and civil defense)	1.00	0.00	2.22	0.92
4 Holding a ministerial post	1.00	0.00	1.87	0.93
5 TV or radio director	2.02	0.69	2.22	0.92
6 Management (companies, factories, individuals, institutions)	2.02	0.69	1.55	0.82
7 Nursing	2.00	0.00	2.43	0.69
8 Presenting television or radio programs	2.00	0.00	2.27	0.66
9 Agricultural work	2.02	0.69	2.22	0.92
10 Secretarial work	2.00	0.06	1.97	0.45
11 Working in police (traffic, criminal investigation)	1.00	0.00	1.52	0.81
12 Aircraft pilot	2.02	0.69	2.22	0.92
13 Work in the general intelligence	1.00	0.00	1.80	0.92
14 Taxi driver	1.30	0.46	2.22	0.92
15 Judge	1.30	0.46	2.22	0.92
16 Car mechanic	1.30	0.46	2.22	0.92
17 Working in construction (selling, buying, building, leasing lands and houses)	1.30	0.46	2.22	0.92
18 Ambassador of the state	1.30	0.46	2.22	0.92
19 Air host/hostess	2.09	0.63	2.23	0.64
20 Lawyer	2.02	0.69	1.37	0.77
21 Engineering professions	2.02	0.69	2.22	0.92
22 Sewing work	1.72	0.84	2.00	0.00
23 Gynecology and obstetrics	1.72	0.84	2.43	0.69
24 Surgery and anesthesia	1.00	0.00	1.36	0.69
25 Producing television or radio programs	2.02	0.69	2.22	0.92
Total	1.65	0.28	2.07	0.64

Note: 1–1.74: traditional attitude; 1.75–2.24: nontraditional attitude; 2.25–3: gender-balanced attitude.

Table (3) shows the results of the t-test, which help us to better understand the differences between the participants' average scores on both the gender professions and the gender skills scales. There are statistically significant differences between male and female students on the gender skills scale, in favor of females, for whom the value of  $t$  is 11.00, and its statistical significance is  $p < 0.000$ . In general, female attitudes toward gender roles on this scale are nontraditional, with an average of 2.13, while male attitudes are traditional, with an average of 1.73. Furthermore, there are also statistically significant differences between males and females on the gender professions scale, in favor of females, for whom the value of  $t$  is 10.75 ( $p < 0.000$ ). Female attitudes toward gender roles on this scale are also nontraditional, at an average of 2.07, compared to males at 1.65.

**Table 3: T-test Results for Gender Role Attitudes by Student Gender**

Scale	Gender	Number	Arithmetic Mean	Standard Deviation	Value of $t$	Sig.
Gender skills	Male	284	1.73	0.37	11.00	0.000
	Female	564	2.13	0.55		
Gender professions	Male	284	1.65	0.28	10.75	0.000
	Female	564	2.07	0.64		

Note: 1–1.74: traditional attitude; 1.75–2.24: nontraditional attitude; 2.25–3: gender-balanced attitude.

## 5.2 Students' Attitudes toward Gender Roles according to Student Age and Place of Residence

Table (4) shows the differences between the average student attitudes with respect to gender roles

according to the students' age and their place of residence.<sup>2</sup>

**Table 4:** Students' Attitudes Toward Appropriate Gender Roles by Student Age and Place of Residence

Scale	Age	Number	Arithmetic Mean	Standard Deviation
Gender skills	<18 years old	253	1.77	0.37
	18–22 years	132	1.59	0.16
	>22 years	463	2.23	0.55
Gender professions	<18 years old	253	1.48	0.34
	18–22 years	132	1.51	0.23
	>22 years	463	2.30	0.49
Scale	Place of Residence	Number	Arithmetic Mean	Standard Deviation
Gender skills	Outside Amman	456	1.82	0.39
	Eastern Amman	131	1.96	0.59
	Western Amman	261	2.33	0.56
Gender professions	Outside Amman	456	1.63	0.46
	Eastern Amman	131	2.08	0.61
	Western Amman	261	2.37	0.42

Note: 1–1.74: traditional attitude; 1.75–2.24: nontraditional attitude; 2.25–3: gender-balanced attitude.

To determine whether these differences are statistically significant, a one-way ANOVA was applied, the results of which are shown in Table (5).

**Table 5:** Results of One-Way ANOVA for Gender Role Attitudes Based on Student Age and Place of Residence

Scale	Source of Variance	Sum of Squares	DF	Mean Squares	F Value	Sig.
Gender Skills	Between groups	60.35	2	30.17	142.48	0.000
	Within groups	178.96	845	0.21		
	Total	239.31	847			
Gender professions	Between groups	135.88	2	67.94	386.24	0.000
	Within groups	148.64	845	0.18		
	Total	284.52	847			
Scale	Source of Variance	Sum of Squares	DF	Mean Squares	F Value	Sig.
Gender skills	Between groups	42.89	2	21.44	92.26	0.000
	Within groups	196.42	845	0.23		
	Total	239.31	847			
Gender Professions	Between groups	94.14	2	47.07	208.93	0.000
	Within groups	190.38	845	0.23		
	Total	284.52	847			

It is clear from Tables (4) and (5) that the highest average responses with respect to attitudes on the gender skills scale belong to the third age group, which is the eldest (> 22 years), where the average response to this category is 2.23 and therefore nontraditional. The highest average responses on the gender professions scale are also for the third age group, with an average response of 2.30; here, the students' attitudes are gender-balanced. The results of the one-way ANOVA based on student age show statistically significant differences on both scales, where the F value is 142.48 for gender skills and 386.42 for gender professions ( $p < 0.000$  for both).

As for the place of residence variable, it can be seen in tables (4) and (5) that the highest average responses on the gender skills and professions scales are from participants from West Amman, at 2.33 and 2.37, respectively. The results of the one-way ANOVA show statistically significant differences on both scales, where the F value is 92.26 for gender skills and 208.93 for gender professions ( $p < 0.000$  for both).

<sup>2</sup> There are huge differences, particularly in socioeconomic terms, between Amman East, Amman West, and areas outside Amman.

### 5.3 Students' Attitudes Toward Gender Roles Based on Students' College

Table (6) displays the results of the t-test, which help us to better understand the difference between the average responses according to the variable of student college. The average responses of students enrolled in humanitarian colleges are higher those of students registered at scientific colleges. The results of the t-test show statistically significant differences between the students' attitudes according to the college variable on both the gender profession and skill scales, in favor of the humanitarian colleges, with t-values at 7.66 and 11.50, respectively ( $p < 0.000$ ).

**Table 6:** Results of T-test for Gender Role Attitudes Based on Students' College Type

Scale	College	Number	Arithmetic Mean	Standard Deviation	Value of t	Significance Level
Gender skills	Scientific	453	1.87	0.43	7.66	0.000
	Humanitarian	395	2.14	0.60		
Gender profession	Scientific	453	1.73	0.49	11.50	0.000
	Humanitarian	395	2.16	0.59		

Note: 1–1.74: traditional attitude; 1.75–2.24: nontraditional attitude; 2.25–3: gender-balanced attitude.

### 5.4 Students' Attitudes Toward Gender Roles Based on Students' Monthly Income and their Mother's Educational Level

Table (7) shows the differences between the students' average attitudes according to their monthly income<sup>3</sup> and their mother's educational level.

**Table 7:** Students' Attitudes Toward Appropriate Gender Roles Based on Students' Monthly Income and Mother's Educational Level

Scale	Monthly Income	Number	Arithmetic Mean	Standard Deviation
Gender skills	<200	85	1.60	0.17
	200 - < 400	184	1.73	0.42
	400 - < 600	127	1.83	0.33
	600 - < 800	201	2.04	0.47
	800 or above	251	2.37	0.57
	< 200	127	1.50	0.34
Gender professions	200 - < 400	85	1.51	0.23
	400 - < 600	184	1.58	0.42
	600 - < 800	201	2.13	0.42
	800 or above	251	2.39	0.55

  

Scale	Mother's Educational Level	Number	Arithmetic Mean	Standard Deviation
Gender skills	Illiterate	109	1.51	0.12
	Primary	101	1.54	0.19
	Preparatory	132	1.73	0.41
	Secondary	18	1.75	0.09
	Community college	115	1.77	0.28
	Bachelor's	133	2.42	0.15
Gender professions	Postgraduate	240	2.44	0.52
	Illiterate	18	1.28	0.00
	Primary	115	1.44	0.31
	Preparatory	101	1.52	0.22
	Secondary	132	1.54	0.45
	Community college	109	1.66	0.10
	Bachelor's	133	2.42	0.17
	Postgraduate	240	2.45	0.50

Note: 1–1.74: traditional attitude; 1.75–2.24: nontraditional attitude; 2.25–3: gender-balanced attitude.

<sup>3</sup> 100 Jordanian Dinar is equal to almost 122 Euro.



To determine whether these differences are statistically significant, a one-way ANOVA was applied, the results of which are shown in Table 8.

**Table 8:** Results of One-Way ANOVA for Gender Role Attitudes based on Students' Monthly Income and Mother's Educational Level

Scale	Source of Variance	Sum of Squares	DF	Mean Squares	F Value	Sig.
Gender skills	Between groups	65.12	4	16.28	78.79	0.000
	Within groups	174.19	843	0.21		
	Total	239.31	847			
Gender professions	Between groups	121.71	4	30.43	157.55	0.000
	Within groups	162.81	843	0.19		
	Total	284.52	847			
Scale	Source of Variance	Sum of Squares	DF	Mean Squares	F Value	Sig.
Gender skills	Between groups	135.08	6	22.51	181.66	0.000
	Within groups	104.23	841	0.12		
	Total	239.31	847			
Gender professions	Between groups	179.00	6	29.83	237.75	0.000
	Within groups	105.53	841	0.13		
	Total	284.52	847			

It can be seen in Tables (7) and (8) that the highest average responses on the gender skills and professions scales are in from those with a monthly income above 800, with average responses of 2.37 and 2.39, respectively. The results of the one-way ANOVA show statistically significant differences on both the gender skills and the professions scales, with F values of 78.79 and 157.55, respectively ( $p < 0.000$  for both). The tables also show that the highest average responses on the gender skills and professions scales are from students whose mother has earned a postgraduate degree, at 2.44 and 2.45, respectively. The results of the one-way ANOVA show statistically significant differences on the gender skills and professions scales, with F values at 181.66 and 237.753, respectively ( $p < 0.000$  for both).

## 6. Discussion

The results of the study show that the attitudes of male students toward gender roles on the skills and professions scales are more traditional than those of female students, who tend to be nontraditional. This is in line with the results of previous studies (Fan and Marini, 2000; Mensch et al., 2004; Al Kharouf & Al Bdour, 2006; Japaridze et al., 2013; Hajnalka, 2014). Female students unanimously agreed that the responsibility for setting the dining table, washing clothes, replacing the gas cylinder and ironing lay exclusively with men, and that the professions of journalist, automotive mechanic, taxi driver, and judge must be reserved exclusively for women. This illustrates the females' nontraditional way of thinking and their lack of a balanced gender concept. This also indicates a misconception of female students regarding the concept of gender justice, as they are attempting to combat cultural and social stereotyping based on biological differences between the sexes by showing bias instead for their own sex. As for male youth, their attitudes are traditional and typical, considering that they believe that skills such as training on driving a car, home maintenance, reception of guests, purchase of the newspaper, purchase of household items, and replacement of the gas cylinder must be carried out by men. This reflects the fact that males may refuse to perform any tasks beyond those assigned to them by their society and culture. There was consensus among the participants that the occupation of police officer was not suitable for women. This is strange, as we see female police officers deployed in the streets of Jordan exercising their duties as well as any man. This is likely due to the fact that the intrusion of women into this field is a result of the breaking of stereotypes in Jordanian society. This case, despite its weirdness, reflects the fact that Jordanian society, represented by its young male and female students, still rejects the idea of women taking over men's careers in the police force. Also, the

students unanimously agreed that the professions of surgeon and anesthesiologist were suitable for males only.

As for the results of the age variable, the students' attitudes toward gender roles on both scales tend to become more balanced as their age increases. This can be attributed to increased maturity as they get older and gain more knowledge and experience. Students in the fourth and fifth year, for example, are more aware of technological progress and cultural openness than first-year students, who spend their first academic year trying to define themselves academically and to understand how things work. This result is different from the results of the studies done by Tinklin et al. (2005), LaFont (2010) and Obare et al. (2013).

The study results showed that the attitudes of students in humanitarian colleges are less traditional than those of students in scientific colleges on the gender scales. This can be explained by the fact that the curriculum and textbooks at humanitarian colleges deal with the concept of gender more often than in scientific colleges. This helps students at humanitarian colleges understand their role in society more clearly, as they can explore this concept more in their studies and research. For students at scientific colleges, their scientific resources and books do not come close to discussing the concept of gender, its perception, or its dimensions. In fact, the two researchers faced a lack of understanding of this concept and its role in socialization when working with students from scientific colleges, while the responses from students at humanitarian colleges were quick and accurate, showing that they had previous knowledge of the subject.

As for the monthly income variable, the study results showed that students' attitudes tend to become more balanced regarding gender as students' families' monthly income and standard of living increases. This result is consistent with the results of El Kharouf and Al Bdour (2006), which showed that women's opportunity to participate in family decisions increased along with the social and economic level of the family. This can be explained by the fact that a better standard of living enables students to mix, travel, study abroad, and interact with other cultures. This makes their definitions less stereotypical with respect to the concepts of masculinity, femininity, and the skills and occupations that both sexes can perform when compared to those with lower living standards. A high standard of living leads to a different lifestyle and, therefore, different concepts and roles are learned from the models surrounding them. This may affect ways of eating, dressing, or education, dealing with persons of the opposite sex, or even prevailing values, which also vary according to differences in living standards.

The place of residence variable also influenced the students' attitudes toward gender roles; they tend to become more gender-balanced as the place of residence moves from outside Amman to East Amman and West Amman. This can be explained by the fact that the socialization and upbringing institutions experienced by the inhabitants of the West Amman regions are relatively different from those encountered by the inhabitants of East Amman or areas outside the capital Amman. Hence, their attitudes are formulated as they define the concepts of masculinity and femininity through different stages of growth according to the surrounding environment. This result is consistent with the results of the studies by Japaridze et al (2013) and Shteivi (2015).

Finally, the study results showed that as the students' mother's educational level increase, the students' gender attitudes become more balanced and farther from traditional. This is consistent with Fan and Marini (2000). This result confirms the mother's role in the process of socialization, as well as the role of her education, through which she will eventually change the stereotypes regarding both genders and encourage her sons and daughters to exchange roles. The education of the mother allows her to overcome cultural taboos and look at things more scientifically, rather than using a traditional perspective inherited from older generations. Ignorance and illiteracy serve as a closed circle, such that the uneducated mother is trapped and tries to raise sons and daughters as she was raised, and any deviation from the rules with which she was raised is seen as disobedience.

## 7. Conclusion

The achievement of a fair gender society requires that the attitudes of its members be gender-balanced, gender-neutral, and unbiased. Given the biological differences between the sexes, we

believe in their existence as a basis for interaction between the genders, and not for discrimination between them. Achieving gender equality requires a change in the practice of socialization in all institutions, including education institutions, and especially higher education. Therefore, the results of this study highlight the need to review the patterns of socialization inherited through the educational system in general and in universities in particular, and to use a balanced educational approach that seeks to reproduce unbiased social structures.

Moreover, this study calls for the institutionalization of the concept of gender in higher education institutions by training university professors to apply it during the educational process. University professors can play a major role in changing students' traditional gender roles through the concept of gender identification. Teachers have a power similar to parental authority, whereby students interpret the process of personal identification of their teacher, whether male or female, and acquire his/her gender roles.

The study results reflect the students' lack of understanding of the concept of gender and its social and cultural dimensions. Therefore, it is necessary to reconsider the teaching curricula to work to eliminate traditional gender stereotypes, activating the role of women in curriculum formulation. In addition to developing curricula focused on the concept of gender, the components of this concept, including its social and cultural dimensions, ought to be taught to all university students as a mandatory requirement. It is through freedom from the social and cultural constraints that hinder individuals in our society, from the duality of discourse, and from the stereotyped and traditional conceptual images inherited from our grandparents that we can reach optimal gender balance and equality.

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## Appendix 1

### Weights of the gender skills scale

#	Skill	Male	Female	Both
1.	Setting the table	Nontraditional	Traditional	Balanced Attitude
2.	Washing the dishes	Nontraditional	Traditional	Balanced Attitude
3.	Washing the clothes	Nontraditional	Traditional	Balanced Attitude
4.	Buying the newspaper	Traditional	Nontraditional	Balanced Attitude
5.	Using the Internet	Traditional	Nontraditional	Balanced Attitude
6.	Buying household items	Traditional	Nontraditional	Balanced Attitude
7.	Replacing gas cylinder	Traditional	Nontraditional	Balanced Attitude
8.	Ironing	Nontraditional	Traditional	Balanced Attitude
9.	Reception of guests	Traditional	Nontraditional	Balanced Attitude
10.	Home maintenance	Traditional	Nontraditional	Balanced Attitude
11.	Training on car driving	Traditional	Nontraditional	Balanced Attitude
12.	Cooking	Nontraditional	Traditional	Balanced Attitude

### Weights of the gender professions scale

#	Profession	Male	Female	Both
1.	Teaching	Nontraditional	Traditional	Balanced Attitude
2.	Working in the press	Traditional	Nontraditional	Balanced Attitude
3.	Defense careers (such as military and civil defense)	Traditional	Nontraditional	Balanced Attitude
4.	Holding a ministerial post	Traditional	Nontraditional	Balanced Attitude
5.	TV or radio director	Traditional	Nontraditional	Balanced Attitude
6.	Management (companies, factories, individuals, institutions)	Traditional	Nontraditional	Balanced Attitude
7.	Nursing	Nontraditional	Traditional	Balanced Attitude
8.	Presenting television or radio programs	Nontraditional	Traditional	Balanced Attitude
9.	Agricultural work	Traditional	Nontraditional	Balanced Attitude
10.	Secretarial work	Nontraditional	Traditional	Balanced Attitude
11.	Working in police (traffic, criminal investigation)	Traditional	Nontraditional	Balanced Attitude
12.	Aircraft pilot	Traditional	Nontraditional	Balanced Attitude
13.	Work in the general intelligence	Traditional	Nontraditional	Balanced Attitude
14.	Taxi driver	Traditional	Nontraditional	Balanced Attitude
15.	Judge	Traditional	Nontraditional	Balanced Attitude
16.	Car mechanic	Traditional	Nontraditional	Balanced Attitude
17.	Working in construction (selling, buying, building, leasing lands and houses)	Traditional	Nontraditional	Balanced Attitude
18.	Ambassador of the state	Traditional	Nontraditional	Balanced Attitude
19.	Air host/hostess	Nontraditional	Traditional	Balanced Attitude
20.	Lawyer	Traditional	Nontraditional	Balanced Attitude
21.	Engineering professions	Traditional	Nontraditional	Balanced Attitude
22.	Sewing work	Nontraditional	Traditional	Balanced Attitude
23.	Gynecology and obstetrics	Nontraditional	Traditional	Balanced Attitude
24.	Surgery and anesthesia	Traditional	Nontraditional	Balanced Attitude
25.	Producing television or radio programs	Traditional	Nontraditional	Balanced Attitude