

Full Length Research Paper

Comparison of communal sex roles of female sports students studying in different universities in Turkey

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We investigated whether doing sports has any effect on the androgynous characteristics of women. In 15 universities from different regions of Turkey, a questionnaire was administered to 341 students (170 elite sportlers from nine sport categories and 171 sedantary controls) during the 2012-2013 study period. The Bem sex role inventory was used to determine whether doing sport differentiates female students' social gender roles. There was a significant difference between subjects who do sport and those who do not in terms of masculinity and social acceptability ($p < 0.001$), but there was no significant difference in terms of femininity ($p = 0.116$). Female athletes are more androgynous compared to the non-sportlers. There was a significant difference between exercising and non-exercising women with regard to masculine/feminine features, and feminine/androgynous features ($p < 0.001$) but there was no significant difference in terms of masculine/androgynous features ($p = 0.820$). As a conclusion, in addition to its advantages for health, sports is very important for women to have a more effective place in the society in terms of gender roles.

Key words: Sex roles, androgynous, sport.

INTRODUCTION

A child is firstly labelled as a girl or boy by the society; then he/she begins to learn and earn cultural meanings of sex. Cultural meanings of sex are seen as gender roles. Gender role is a group of expectations associated with sex, which is defined by the society and expects from individuals to fulfill (Atay and Danju, 2012; Brahler, 2008). However, there are many differences in terms of capabilities, latent power, physical and personality even among women with women and men with men. Although there are many differences between the sexes, sometimes an individual may also carry characteristics of opposite sex in addition to his/her own characteristics.

There are different opinions about whether biological structure and environmental factors play a role in the differences between men and women or not. Also there are some different opinions about their reflection in the terminology. Some argue that the differences which are based on biological factors should be expressed with "sex", and the differences which are based on socio-cultural factors should be expressed with "gender". But some others claim that the differences between men and women result from both of them and it is not convenient to put forward both of them as the same reasons (Lippa, 2010; Oertelt-Prigione et al., 2010; Pryzgoda and

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Chrisler, 2000).

The term "sex" refers to the biological aspects of being male or female. It is a demographic category which is determined on the basis of a sex of an individual and it refers to a biological structure. The term "gender" refers to the meanings and expectations to be female or male imposed by the society and culture. Gender is the psychosocial characteristics, which characterize individuals as feminine or masculine. However; to distinguish sex and gender is not completely possible, because the expectations of culture (gender) from men and women are not entirely separated from the observations concerning about the physical body of man and woman (sex). Accordingly, the cultural configurations of gender in a sense include also biological sex. Generally it is not possible to know exactly whether some differences between men and women are biological or cultural. Essentially many variations are a result of the interaction of them (Dökmen, 2012; Rice, 1996; Lippa, 2010). Nowadays; social rules, cultural and social values continue to maintain the pressure on men and women in the configuration of sex roles.

Traditionally, Turkey has been seen as a geographical and cultural bridge between East and West. This feature has its reflections in social values too. We expect gender stereotypes in the Turkish society to be different from those of Western countries. In fact, some studies have claimed that the content of Turkish gender stereotypes can be mostly accounted for by instrumental and expressive dimensions (Gürbüz, 1985; Kağıtcıbaşı and Sunar, 1992).

The relationship between gender identity and sports is gaining interest of researchers during recent years. These studies postulate that the importance of body and physical performance during sportive experiences prepares a strong ground for constructing and proving gender identity ideologies (Koca, 2006). Also the perceptions and values of the population play an important role in gender preferences. Majority of boys and girls will draw a male playing soccer when they are asked to draw a sports person (Colley et al., 2005).

Past studies have shown that gender identity is related to sport participation: female participants are mostly androgynous and masculine (Clément-Guillotin and Fontayne, 2011). These females engage more in masculine sports (Fontayne et al., 2001), and dropout from their activity less frequently (Guillet et al., 2000, 2006).

According to the Bem Sex Role Inventory used in our study, persons who have characteristics defined by society as feminine (emotional, insightful, kind, compassionate, etc.) are considered as feminine by the society. On the other hand, persons who have the characteristics defined by society as masculine (dominant, effective, courageous, ambitious, etc.) are considered as masculine by the society. Persons who show both masculine and feminine characteristics on a high level are described

as androgynous. Persons who show these two groups of characteristics on a low level are determined as undifferentiated.

In fact, the concept of "androgynous" indicates characteristics of being a human for men and women. Also it has emerged from possessing both sexes' characteristics. Androgynous individuals show same sex role characteristics of the opposite sex as well as their own sex role characteristics. The reason for this might be acting upon the environment with possessing some feminine and masculine characteristics that adopted by society (Bem, 1974).

Sandra Lipsitz Bem has mainly done some researches in the 1970s about showing the positive aspects of androgynous individuals. She revealed that androgynous people may behave more flexible and they may more compatible sex role behaviors in different environments (Bem et al., 1976b). The concept of androgynous is very important for our age in terms of being flexible in behavioral patterns of people and maintaining their life more convenient and easier in the society. Additionally, androgyny model suggests that those with high levels of both masculinity and femininity (androgynous) are more adaptive and hence have better health (Afshin et al., 2014).

Sport is not only a physical work but also a process of adaptation and socialization to a society. Sport is a self-control mechanism. Sport is also the common denominator of many people from different societies and cultures due to its universal nature. Sport also plays an important role in the development of a democratic personality.

Thus, the athlete feels comfortable, personality and free. As the person realizes that he or she is valued, his or her self-esteem will increase and success will get maximized. There is evidence that sportive activities shape the character and have both physically as well as psychologically important effects on people (Krane and Baird, 2005).

It is of special interest whether there is any difference in the androgynous features of women according to their sportling status.

This study investigated the effect of sports on masculinity, femininity, and androgyny of women with respect to gender identity. We hypothesized that one reason for the experiences of women in sports is their gender identity and looked whether there is any connection with their gender roles and their biological status as a result of their sportive experience. In sports, sex-typed individuals (i.e., masculine males and feminine females) perceive masculine activities as more masculine than other individuals and feminine activities as more feminine (Koivula 1995; Hardin and Greer, 2009). We attempted to demonstrate the importance of sports in developing androgynous features as an important factor in positive human behaviors and to make some suggestions in the light of the findings.

MATERIALS AND METHODS

Research model

This is an analytical cross-sectional study designed to determine the sex roles among elite sportswomen from different universities who exercise compared with those who do not. Dependent variable of the study was the Bem sex-role inventory applied to elite female athletes studying sports in the university compared with non-exercising women of the same age. Additionally, some independent variables such as age, height, weight, exercise status, and sports category have been questioned.

Study group

Sample size calculation

Sample size calculation was based on the main study outcome "Gender role". Feminine gender is expected to be around 38.5% (P1) among women in general population (Dökmen, 1999). Taking alpha error as 5%, 328 participants (164 in exercising group, 164 in not exercising group) are needed to find a difference in two groups (elite sportswomen vs. other women) with an effect of interest of 16% (P2=54.5%) and a power of 80.1% using the test comparing two proportions. In order to compensate for non-responders, we invited 180 elite sportswomen and 180 other women to our study (Lenth, R. V. Java Applets for Power and Sample Size [Computer software]) (Lenth, 2014).

Sampling

The study group has been selected from elite female students who have top level performance (contestant and/or national/international degree) during the 2012-2013 competition season in the categories of athletics, wrestling, soccer, gymnastics, skiing, handball, judo, basketball, and volleyball in Akdeniz, Ankara, Atatürk, Celal Bayar, Cumhuriyet, Ege, Erciyes, Fırat, Gazi, İstanbul, Kafkas, Karadeniz Teknik, Marmara, Selçuk, and Trakya universities (n=180) and women who were studying at Erzurum Atatürk University and had sedentary lifestyles (n=180). Consistent across countries, sport is generally accepted as a male domain (Hardin and Greer, 2009; Koivula, 1995). When considering the categories, we paid attention to select more masculine sports.

Data collection

The data in this study were collected via a *personal information form* and *Bem sex role inventory* which was developed by Bem and adapted to Turkish by Kavuncu (1974) (Kavuncu, 1987). Data of 170 individuals from elite athletes group and 171 from the other group were analyzed.

Personal information form

A personal information form consisting of five questions was used to determine personal characteristics of participants (age, weight, height, sport participation and sport branch).

Bem Sex Role Inventory

Bem Sex Role Inventory has been used to determine sex role orientations of the participants in the study. The inventory is a self-

rating scale and it consists of seven grade. The scale consists of 60 items in total and it consists of three different sub-scales such as "femininity", "masculinity" and "social acceptability (appreciation)" (Kavuncu, 1987). After adapted to Turkish by Kavuncu in 1987, the reliability and validity study on the Turkish version of the inventory were made by Kavuncu and Dökmen. Template Judgement Scale about sex roles which was developed by Kandiyoti, has been used as a criterion in Dökmen's validity and reliability study. Some significant relationships have been found between the femininity and masculinity scale of Bem Sex Role Inventory and femininity and masculinity subscales of Template Judgement Scale (R= 0.51 for femininity and masculinity $r = 0.63$). The split halves reliability coefficient of the scale are 0.77 for femininity and 0.71 for masculinity (Dökmen, 1991).

In the inventory participants were asked to rate themselves on a scale of seven grades. The responses given to the items listed in the subscales were collected separately. After this process, the median of femininity and masculinity scores of sample were calculated. Subjects whose femininity score were above of median and masculinity score were below of median, are classified as feminine. Subjects whose masculinity score were above of median and femininity score were below of median were classified as masculine. Subjects whose both feminine score and masculinity score were above of median were classified as androgynous. Individuals whose both scores were below of median were classified as undifferentiated individuals.

The research hypotheses

"Androgynous characteristics of women who do sport, are not different from those who do not" was the main hypothesis of this research. Some other hypotheses were also tested like "Whether masculinity characteristics in women show any difference according to the sport or not", "Whether femininity characteristics in women show any difference according to the sport or not", "Whether social appreciation in women shows any difference according to the sport or not".

RESULTS AND DISCUSSION

Demographic characteristics

Mean \pm standard deviations (SD) for numerical data were calculated. Age, height and weight averages (\pm SD) in women who do sport were 21.0 ± 1.8 years, 170.0 ± 8.9 cm and 59.4 ± 8.0 kg respectively; and in women who do not were 21.0 ± 2.0 , 164.7 ± 5.2 $\pm 59.4 \pm 8.0$ respectively.

Sport behavior and comparison of participants

General mean values were determined in participants of the research with some questions about femininity, masculinity and social appreciation in terms of doing sport or not. The distribution of the averages for each variable was calculated and the differences were compared. There was a significant difference between subjects who do sport and who do not in terms of points of masculinity and social acceptability. But there was no significant difference in terms of femininity (Table 1); while there was more than 1 unit difference in the masculinity domain,

Table 1. Comparison of Bem Sex-Role Inventory scores of participants according to sports status.

	Exercise status	N	\bar{X}	SD	T	P
Masculinity	Elite athletes	170	5.39	0.67	12.57	<0.001
	Sedentary	171	4.10	1.16		
Femininity	Elite athletes	170	5.53	0.59	1.57	0.116
	Sedentary	171	5.42	0.73		
Social acceptability	Elite athletes	170	4.67	0.51	2.99	0.003
	Sedentary	171	4.51	0.46		

the differences between groups in the other domains were negligible.

When analyzing the characteristics of masculinity in Table 1, female sports students had higher values in terms of masculine role specifications than those who do not do sport. There was a significant difference between the groups in addition to this; both masculinity and femininity values were over the median. This finding proves that female sports students show androgynous features according to the criteria defined in the Bem Sex Role Inventory. As to the Bem Sex Roles Inventory femininity scores are above the median for feminine scores and masculinity scores are above the medial value for masculine scores. Our findings indicate that exercise may have a substantial positive influence on the androgynous features of women.

This finding proves that female students who do sport show androgynous characteristics according to the criteria specified in the Bem Sex Role Inventory. Persons whose femininity scores are above of median and masculinity scores are above of median are considered as androgynous according to the inventory of Bem's sex roles. Women who do sport have more femininity characteristics than those who do not, but we could not determine a significant difference in terms of femininity characteristics between the groups. There was a significant difference in terms of social appreciation between women who do sport and those who do not. Especially, positive features at lower scales were higher in women who do sport.

Chi-square test was performed to determine the significance of differences between the distributions of sex roles among women who do sport and those who do not, and significant differences were identified between the groups in terms of sex roles (Chi square = 84.695, $p < 0.001$). A sub-group comparison was made in order to determine the differences between groups. Accordingly, there was a significant difference between exercising and non-exercising women with regard to masculine/feminine features (91.7% ($n=55$) of exercising vs. 36.5% ($n=27$) of non-exercising women were masculine; Chi Square=42.405; $p < 0.001$), and feminine/androgynous features (4.6% ($n=5$) of exercising vs. 46.5% ($n=47$) of non-exercising women were feminine; Chi

Square=49.037; $p < 0.001$) but there was no significant difference with regard to masculine/androgynous features (Chi square=0.052; $p=0.820$) (Table 2).

The sample of interest in our research was composed of university students who share the same environment. Therefore, as expected, they have some common points. However it is an important finding that communal sex roles of women who study in a university show differences according to their exercise habits.

In a more recent study conducted in Turkey, the authors found significant differences between men and women only on two masculinity items, but significant differences in 8 of 10 femininity items (Özkan and Lajunen, 2005). However, the studied population are highly selected students studying in English and thus dominating probably more Western values. Our sample, on the other hand, includes students from all geographical, cultural as well as socioeconomical layers of Turkey. Hence, it is very likely that our study is more representative of the general public.

Gender studies on sport sciences usually focus on gender role differences between subjects who are athletes and who are not. At the end, it was found that most of the athletes had more masculine features compared to the subjects who were not athletes (Koca and Aşçı, 2000; Hively and El-Alayli, 2014; Holt and Morley, 2004).

Considering these findings, it can be seen that women who exercise have stronger masculine and androgynous features whereas women who do not exercise have a more feminine or undifferentiated role. It has been determined that women who exercise have some differences when compared with women who do not exercise in terms of masculine features; women who exercise have higher masculine features than those who do not exercise. Considering that exercising women have higher masculine features together with lower feminine features is evidence for the masculine effect of sport on women when compared with women who do not exercise. Additionally, this study has demonstrated that androgenous subjects had higher scores for femininity and masculinity but subjects who are in the group of undifferentiated gender roles had lower scores for both of these features.

Table 2. Distribution of sex roles according to making sport.

	Masculine		Feminine		Androgynous		Unknown		Total	
	n	%	n	%	N	%	n	%	n	%
Elite athletes	55	32.4	5	2.9	103	60.6	7	4.1	170	100
Sedentary	27	15.8	47	27.5	54	31.6	43	25.1	171	100
Total	82	24.0	52	15.2	157	46.0	50	14.7	341	100

Findings provide similarities in between the research results of Koca and Aşçı. In their study on the role of the gender; they indicated that masculine points of the athletes dealing with individual sports were higher than that of the other two groups; while there was no difference about the feminine points (Koca and Aşçı, 2000). Hence, it may be pronounced that there is a difference on masculine points of the practicing and non-practicing women because of the fact that practicing women are elite athletes having the properties of high level of power, endurance, competitiveness and ambition which are mostly pronounced for men.

In his study, Birrel found that sport has an important effect on women's androgynous status. He reported that feminine roles among women who exercise, change towards masculine and as a result of the decrease in femininity androgynous features increase comparatively (Birrell, 1988). In another research carried out over women; it has been found out that there is no difference between practicing and non-practicing women in terms of the feminine properties while practicing women have more pronounced masculine properties compared to that of the non-practicing women (Mccutcheon and Mitchell, 1984). In the study of Gill, it has been found out that practicing women have indicated considerably less feminine properties at the level of 13-22 %; while they respond to androgynous tendency more than that of masculine tendency (Gill, 1992).

It has been observed in the answers given to the questions on sub-scales determining the social acceptability features that women who exercise exceed the mean values in terms of reliability, honesty, being serious for their jobs, tolerance, helpfulness, intimacy, hospitality, being respectful, friendly, and adaptable. On the other hand, it has been determined that they are under the average for being conservative, jealous, pessimistic, incoherent, unorganized, sulky, goship, selfish, arrogant and pretended. Therefore, it has been observed that positive aspects of social acceptability come into prominence much more than exercise activities.

The most important result reached with this research is that women who exercise have higher levels for both masculine and feminine features. In other words, it has been determined that women who exercise have more androgynous features.

The term "androgynous" has been accepted and adopted because it is a liberal and humane selection that

has been developed against feminine and masculine conceptualizations of sexual standards related with mental health. Androgynous people are both more independent and more interested in population-related issues.(Bem et al., 1976a; Swenson and Ragucci, 1984). Androgyny is associated with better mobility and physical and mental health (Afshin, 2014).Gender studies which are done in the field of sport sciences are generally concentrated on the gender role differences of athletes and non-athletic people and as a result of these studies it was found that most athletes have more masculine characteristics than non-athletic people. Contemporary concepts in sports claim that engaging in sportive activities helps women to improve their masculine features together with feminine ones and support positive changes in the psychological factors (Marsh and Jackson, 1986).

Another similar study investigating gender roles of women athletes showed that 32.77 % of women athletes have androgynous gender roles, 26.88% of them have masculine gender roles, 21.84 % of them have feminine, and 22.68% have undifferentiated gender roles (Gill, 1992). In a study done with long distance runners of a school team, it was found that 17.6% of them showed feminine characteristics and 33.8% showed androgynous characteristics (Harris and Jennings, 1977).

In a study which was done in Texas University for defining gender roles of athlete females and non-athletic females, it was reported that 39% of female team athletes have androgen characteristics and 10% of these athletes have traditional feminine characteristics; 32% of non-athletic female have feminine characteristics and 27% of these non-athletic females have androgynous characteristics (Spence and Helmreich, 1978).

According to literature on gender role, females with more feminine than masculine characteristics have more gender role conflict and these are less relaxed when compared to those who are masculine and have androgynous characteristics (Miller et al., 2002; Pryzgodna and Chrisler 2000; Unger and Crawford, 1998).From the study done by Gillit it was documented that female athletes had androgynous tendency more than masculine tendency; in gender role study it was also determined that female athletes are more masculine than non-athletic females (Gill, 1992).

Finally, it is possible to say that in addition to its advantages for health, sports is very important for women in having a more effective role in the society in terms of

gender roles. Therefore, it is an important area that should be studied whether factors leading women to do sports are physical and physiological features that come from birth, environmental factors, education etc. or whether they are due to having more prominent androgynous features.

Conflict of Interests

The author has not declared any conflict of interests.

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