

# Psychological gender of women taking up typically masculine sports activity

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## Summary

*Study aim:* To examine which gender scheme is used by women who take up stereotypically masculine sports activity and to obtain an answer to the question of whether these subjects achieve higher results on the masculinity scale and lower results in femininity than women who practise other sports and women who do not take up any sports activity. Do women who practise masculine sports achieve a higher sports class and self-evaluate their results better if they identify with a masculine image?

*Material and methods:* 90 women participated in the research: 30 sportswomen who practise masculine sports (judo, boxing, wrestling); 30 women training in gymnastics, swimming and basketball; and 30 women not taking up any sports activity. The research utilized the inventory of psychological gender assessment (IPP) by Kuczynska and a questionnaire prepared by the author.

*Results:* The analysis of the results revealed that individuals taking up sports activity are to a large extent androgynic, while as far as masculine sports are concerned, a masculine gender scheme dominates. Women practising masculine sports gain significantly higher masculinity indices and lower femininity indices when compared to the remaining subjects. Simultaneously it was not proved whether individuals with a higher intensity of masculinity achieved a higher sports class or whether they self-evaluated their sports skills better.

*Conclusions:* Women that take part in sport activities considered by society as masculine, identify themselves with masculine and androgynic gender schema.

**Key words:** Psychological gender – Women – Masculine sport – Sports activity

## Introduction

Until recently gender had been treated as an obvious construct in which a woman is feminine and a man is masculine. Human intuition enables us to differentiate women from men, which is facilitated by build, haircut, or clothes. The most frequent definition of gender we can encounter is the collection of features that allow for the creation of female and male gametes, fertilisation, and raising offspring. Biological gender is determined by two chromosomes, X and Y. Genetic differences determine the physiology, morphology, and anatomy of an individual. Additionally, attention is paid to the fact that biological gender may determine psychological gender, revealing itself in interests and social behaviour, and thus in a definite masculine or feminine type of features of an individual.

Contemporary science enables us to distinguish several types of gender, i.e., chromosomal, gonadal, hormonal, internal and external genital, phenotypic, metabolic, as well as social and mental gender. The latter two, ow-

ing to the needs of this work, will be presented in more detail. Biological gender enables an individual to reproduce; however, gender is not only reproduction. Any belief in what a woman is allowed to do and what a man is allowed to do is not the result of biological gender but rather from an opinion that a man and a woman are completely different individuals [16]. In the literature of psychology and sexology more and more space is devoted to the issue of psychological gender. Psychology deals with imitation and identification in the area of an individual's identification with gender, while sexology deals with the connection that individuals feel with their gender. Psychological gender is defined as the collection of mental features connected with gender created from early childhood, as well as the participation of an individual in social activity. Psychological gender determines the undertaken activity and constructive behaviour. The issue of gender identity was shown by Bem in her gender schema theory [2]. According to the theory, while assimilating contents from society we acquire information connected

with gender, and then we store it accordingly and create a cognitive gender scheme. These schemes determine facts that we perceive and remember. While learning the contents of the aforementioned schemes we get to know the distinguishing features of our gender. We learn what is feminine and what is masculine but we also examine different applications of the same attribute. We assess ourselves according to the scheme and behave in accordance with the scheme of masculinity or femininity. The profile of an individual is based on the attributes used, and on the preferred behaviour and gender. The research by Bem [2] showed that sexually defined individuals cluster information easily in the categories of masculinity or femininity. Approximately forty years ago it was believed that psychological gender could be presented as a continuum with two poles: masculinity and femininity. According to the author of this theory these are not two poles of the same continuum but two separate dimensions of personality, which allows for possessing both masculine and feminine features and creating an androgynic individual [5,6]. The undertaken research and theoretical assumptions made it possible to select four types of individuals: sexually defined individuals (compliance of psychological and biological gender, i.e., feminine women and masculine men), androgynic individuals (with a similar intensity of masculine and feminine features), sexually non-defined individuals (a weak intensity of masculine and feminine features), and transversely defined individuals (masculine women and feminine men). Owing to the fact that the basis for the typology is constituted by the connection of biological gender and mental features with stereotypes in a particular culture, the conventionality of the individuals with compliant biological and psychological gender and non-conventionality of the androgynic individuals is assumed. On the basis of theoretical assumptions and published results of the research by Bem [2,14], it can be concluded that sexually defined individuals undertake activity compliant with gender scheme more frequently than androgynic individuals. Moreover, when obliged to behave in a way not proper for their gender scheme, they feel irritated and their verbal behaviour is more compliant with gender scheme than in the case of androgynic individuals. Additionally, sexually defined individuals diversify people according to physical attractiveness and reveal considerable liveliness in contacts with attractive people. Bem [2] also revealed that androgynic humans are not socially influenced and have higher possibilities of constructive behaviour; thus, this gender type was accepted as an optimal model.

There occur apparent differences in the undertaken activity, as well as sports activity, between individuals of both genders. In numerous societies the superiority of a man over a woman is accepted; thus, dominance was

recognised as a typically masculine feature. We distinguish the following four spheres in which men play the main roles: society in general, social roles, politics and business, and inter-group relations, e.g., international relations. Stereotypes encourage people to undertake particular activity. A liberal, altruistic, and empathic woman satisfies her needs in family, whereas a dominant, strong, and sometimes bossy man finds his place in leadership positions [16]. A woman's fears are connected with the lack of family, partner, and children. There occurs a strong need for contact with surroundings and social relations. A woman's personality does not often match the model of successful people. According to common opinion, the ideal of success is a masculine scheme. However, women exist who decided to oppose this view and they took up an activity that is not adequate to their gender, i.e., sport [7]. Every day a larger and larger percentage of women take up activities requiring physical contact, e.g., wrestling, physical effort (e.g., in weight-lifting), or fighting (e.g., in boxing). These women have to learn how to oppose criticism [10,11,15] and how to take up activities leading to success. The aforementioned fact may appear to be positive, since, as my research presented at the International Conference "Contemporary Problems in Women's Sport" proved, such activity among the female part of society leads to the fact that women shape type-B personality in this way. They become better adapted to coping in society, more emotionally balanced and open to the world. With a growing number of women in masculine sports, social acceptance of such activity of women grows; together with the growing acceptance, a particular sport ceases to be perceived as solely masculine.

The aim of the study was to identify which gender scheme is used by women who take up stereotypically masculine sports activity. Do these women achieve higher results in masculinity scale and lower results in femininity than women practising other sports or women not taking up any sports activity? Is there a statistically significant difference as far as a femininity and masculinity index is concerned between women training in typically masculine sports and women training in sports that are socially accepted as feminine, e.g., gymnastics and swimming? Is there any connection between the intensity of masculine features in respondents from group 1 (training a masculine sport) and the sports class as well as the self-evaluation of their sports skills and achievements?

## Material and Methods

The research was carried out in 2010-2011 during sports camps. Ninety women divided into three research groups participated in the research. The first group (n=30) included female boxers (n=15), judokas (n=7), and wres-

tlers (n=8), i.e., athletes practicing sports that are perceived by society as typically masculine. Among them there were 13 athletes in the so-called master sports class, 16 athletes with lower classes, and only 1 athlete without any sports class. The second group included respondents (n=30) taking up neutral sports activity. They were highly qualified swimmers (n=9), gymnasts (n=10), and basketball players (n=11). This group included 26 athletes with master sports class, 1 athlete with the first class, and 3 athletes without any sports class. The third group included women (n=30) who do not deal with sport at all. They were students at the State School of Higher Education in Biala Podlaska who were studying at the faculties not connected with sport. Two groups of students were randomly selected and afterwards those students who do not participate in sports activity were chosen in these groups. All the examined women were adults with an average age of  $20.9 \pm 3.0$  years. The oldest women were athletes practicing neutral sports whose average age was  $21.2 \pm 3.2$  years, while the youngest ones practicing masculine sports,  $20.5 \pm 2.7$  years.

In the research the following methods were used:

- Inventory of psychological gender assessment (IPP), by Alicja Kuczynska. This method enables the researcher to define one of the four types of psychological gender. It may be used for individual and group research. The inventory of psychological gender is built from 35 items, including 15 items concerning stereotypical femininity (femininity scale), 15 concerning stereotypical masculinity (masculinity scale), and 5 concerning neutral statements that characterise men and women to a similar extent. The sheet includes instructions according to which a respondent marks the extent to which the statement describes him or her. Answers should be given by marking one of five possible values beginning from "I'm not like that" (1) through intermediary answers to "I'm exactly like that" (5).

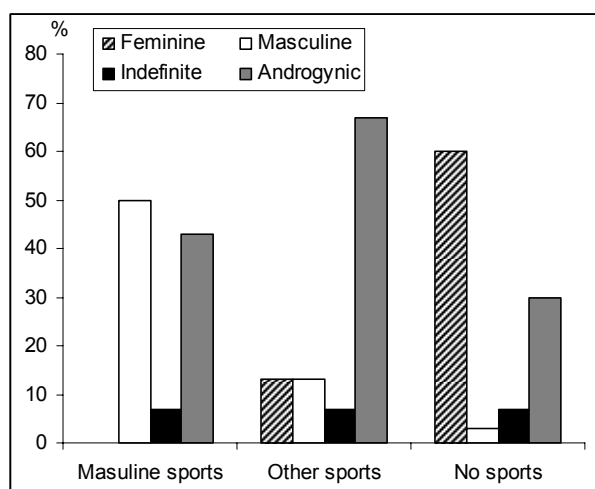
- A personal questionnaire created by the author, which makes it possible to collect basic data about the respondents. The questionnaire included 15 questions concerning age, level of education, place of living, sports experience, and sports class of the respondents. Additionally, it included questions concerning successes and the self-evaluation of sports results and skills in the 5-grade scale, where 1 means very low and 5 means very high.

The obtained results were then analysed statistically using the SPSS 17.0 software. The results were compared by using one-way analysis of variance (ANOVA) followed by the Duncan's test (*post hoc*). Pearson's correlation was used to assess relationships between the studied variables in group of women practicing masculine sports. In all analyses the level of  $\alpha = 0.05$  was considered significant.

## Results

On the basis of the research results it can be observed that the highest percentage of all the respondents included women using an androgynic gender scheme (46.7%). Women achieving a high result both in masculinity and in femininity constituted nearly a half of the respondents. The second-biggest group included feminine women, who constituted nearly one-quarter of the respondents (24.4%). Individuals defined transversely, i.e., masculine women, took the third position (22.2%). The smallest group included respondents who had a low level of both masculine and feminine features (sexually non-defined people) (6.7%).

While comparing types of gender identity in the three examined groups, the highest index of androgyny was revealed among women taking up physical activity which is associated exclusively with men (group 2), while the lowest number of individuals describing themselves as ones who possess both masculine and feminine features was found in the group of women not taking up any sports activity. Due to the type of the research question, it is worth highlighting that the biggest number of masculine women was found in the group of respondents who train sports stereotypically associated with a male part of the society on an everyday basis. The lowest percentage of women who identify with a masculine gender scheme occurred in the group of women not practising any sport. In this group feminine women constituted as much as 60%. It is worth highlighting that women identifying with typically feminine features were not found in the group of women training such sports as judo, boxing, and wrestling (group 1). The description of the respondents seems interesting since the largest number of women identifying with a masculine gender scheme can be found in the group of women practising stereotypically masculine sports while in the group of women practising other sports the biggest percentage is comprised of androgynic individuals. However, as far as women who don't take up any sports activity are concerned, the highest level of correlation between a psychological and biological gender is revealed. Therefore, it may be pointed out that in the examined group of women practising various sports, the biggest number is comprised of androgynic and masculine individuals, whereas the lowest number by feminine women. An analogous situation can be observed in the group of women not taking up any sports activity. The largest group includes women identifying with stereotypically feminine features and the lowest number of ladies expressed the concept of their personality as masculine (Figure 1).



**Fig.1.** The types (%) of gender identity among women training masculine, other or not practicing any sports (n = 30 in each group)

The analysis of variance ANOVA (variables had a normal distribution) revealed that there exist highly significant differences in the intensity of masculinity ( $F_{2,87} = 22.2$ ;  $p < 0.001$ ) and femininity index ( $F_{2,87} = 11.9$ ;  $p < 0.001$ ) in the subjects. Women taking up masculine sports activity have a significantly lower femininity index than women training in other sports and a highly significantly lower index than women not practising any sports who have the highest femininity index ( $59.5 \pm 5.1$ ; Table 1). As far as masculinity index is concerned, the situation is similar, i.e., women taking up masculine sports activity have a significantly higher masculinity index than the remaining groups ( $p < 0.01$ ). Additionally, women not taking up sports activity have a significantly lower masculinity index than the remaining ones.

**Table 1.** Mean values ( $\pm$ SD) and ranges of femininity and masculinity indices recorded in women training a masculine sport (MS; n = 30), other sports (OS; n = 30) and in women not taking up any sports activity (NS; n = 30)

Variable	MS	OS	NS
Femininity index	$52.0 \pm 7.0$ (38÷67)	$55.6 \pm 5.6^*$ (46÷66)	$59.5 \pm 5.1^{** \#}$ (47÷68)
Masculinity index	$57.5 \pm 6.2$ (47÷70)	$53.4 \pm 6.9^*$ (38÷65)	$47.1 \pm 5.0^{** \#\#}$ (37÷57)

Significantly different from MS group: \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; Significantly different from OS group: #  $p < 0.05$ ; ##  $p < 0.01$ ;

In a further part of the analysis, it was checked whether differences exist in the intensity of masculine and feminine features between those women training masculine sports and those women practising sports that are perceived by society as more feminine (only gymnasts and

swimmers were taken into account, n = 19). Significant differences between the groups were observed, regarding the femininity index ( $F_{1,47} = 5.09$ ;  $p < 0.05$ ) and the masculinity index ( $F_{1,47} = 6.29$ ;  $p < 0.05$ ). Indeed, as compared with women training typical masculinity disciplines, those involved in feminine sports have higher values of femininity scale ( $52.0 \pm 7.0$  and  $56.3 \pm 5.6$ , respectively) and lower values of masculinity scale ( $57.7 \pm 6.2$  and  $52.5 \pm 7.6$ , respectively).

In the group of women training in masculine sports, no significant correlation was found between the intensity of masculinity and other features such as a sports class, self-evaluation of one's own skills, evaluation of sports achievements, and number of successes.

## Discussion

It was observed in the research that the highest percentage of all respondents is comprised of androgynic individuals. It is the most desirable scheme of gender identity. In order to function efficiently in a society and to fulfil their roles, contemporary humans must possess features of their own gender as well as features of the opposite gender. An androgynic woman is factual, assertive and rational at work, and empathic and sensitive at home. The domination of androgynic respondents is visible in two groups that are connected with sports activity. Most probably the participation in sport makes an individual more androgynic and masculinises her gender identity. When a woman enters the sphere of sport, she creates numerous masculine features and learns masculine behaviours, as opposed to men, who only master them [13,11]. Therefore, it may be predicted that a woman's sports career depends on the creation of both masculine and feminine features [8,18]. Cashmor also noted that sportswomen must create many masculine features in order to achieve more [4]. An androgynic sportswoman is flexible and can adapt to changeable, frequently stressful situations [1,3,12]. The lowest percentage of androgynic individuals was revealed in the group of women not taking up any sports activity. Sport makes a woman learn masculine behaviours and create features non-compliant with the femininity stereotype [17]. Being able to use a masculine repertoire of behaviours becomes a factor determining effective sports activity [12]. Masculine features facilitate achieving success in sport.

In the literature of the subject, claims concerning a wide spectrum of behaviours of a contemporary woman can be found. Sports activity is not limited to the stereotypical feminine model on condition that there is no pressure from the surroundings. Research by Terelak and Siołkowska [20] did not confirm the assumption concerning a more

frequent occurrence of androgynic and masculine women among sportswomen than non-training women and did not allow for the conclusion that one type is the dominating one among women not practising sport [20]. The results of the research do not correspond to the aforementioned conclusions. The research revealed that a correlation between biological gender and sports activity exists. In fact, among women dealing with masculine sports, the largest group included ladies identifying with a masculine gender, while there were no typically feminine women. Women training in masculine sports had a significantly lower femininity index than women training in other sports and highly significantly lower than women not practising sport. This fact may result from the requirements that are set for women training in boxing, wrestling, and judo. The effect of sports activity depends here on masculine features such as strength, endurance, agility, "sports anger", persistence, and aggression [9,19].

Summing up, women taking up masculine sports activity identify mainly with a masculine and androgynic gender scheme. Moreover, women practising masculine sports have a lower femininity index than women training in other sports and much lower index than women not practising any sport. It turned out that women who don't practise sports are the most feminine in terms of psychological gender. Women training in swimming and gymnastics basically use an androgynic gender schema and they less identify with masculine features than women training wrestling, boxing, and judo.

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