JOURNAL OF PHYSICAL ACTIVITY NUTRITION AND REHABILITATION

Journal of Physical Activity, Nutrition and Rehabilitation, 2017
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Differences in motivation among female athletes that participate in 'masculine', 'feminine' and gender - 'neutral' sports

Simeonidou, S*.

School of Physical Education and Sport Science, Aristotle University of Thessaloniki, Thermi, 57001, Thessaloniki, Greece

Abstract

Self-determination theory (Deci and Ryan, 1985) constitutes a modern frame of studying motivation in sports domain. For the quantification of the basic principles of the theory, the Sport Motivation Scale was developed (Pelletier, Fortier, Vallerand, Tuson, Briere, and Blais, 1995). Based on the above theoretical framework the aim of the present study was the investigation of the differences in motives between female athletes that participated in three different categories of sports. The sample consisted of 435 female athletes from six different sports, which were categorized as "masculine" "feminine" and gender - "neutral". Results indicated, that female athletes who participated in masculine sports displayed higher levels of external regulation and identification compared to those who participated in gender-neutral sports. In addition, athletes who participated in masculine sports displayed higher introjected regulation in comparison with the two other categories. As far as intrinsic motivation to experience stimulation is concerned, results revealed that athletes who took part in gender-neutral sports demonstrated higher levels than those who participated in feminine sports. Finally, analyses showed no statistically significant differences in intrinsic motivation to know, intrinsic motivation to accomplish and amotivation between athletes of the three categories. The explanation of the results is based on the theoretical frame and on psychosocial aspects that have been postulated for the effects of nature of sport on behavior and on engagement in the training process.
Keywords: Masculine; Feminine; Gender-neutral sports; Motivation; Female.

1 Introduction

Physical activity and sports constitute an important field, which is possible to influence the biological, psychological and social development of women. Women who participate in sports experience physical, mental, and behavioral benefits (Pacheco, Soto Mas, Olivarez & Avila, 2012). Researchers pointed out that the participation of women in sports has positive effects on diverse psychological variables, such as motives, self-confidence, self-efficacy (Weiss & Glenn, 1992), and self-esteem and the body image (Pacheco et al., 2012). Moreover, they realized that the psychological profits are tightly connected with the social dimensions of women's attendance in sports.

Generally, sports are recognized as a field of action of men (Riemer &Visio, 2003). Matteo (1986) discriminated the athletic activities between suitable and unsuitable for women. However, this discrimination, according to Koivula (1995), has historical supports, which strengthened and finally established the standardization in "male" and "female" sports.

Over the last decades, Mass Media have been considered as an additional factor that plays an important role in the discrimination of sports and physical activities between suitable for men and unsuitable for women. In the USA, sports media generally dedicate

*Corresponding author: e-mail: symeoni@sch.gr

from 5% to 8% of coverage to women's sports even though 40% of sports participation is by women (Hardin & Greer, 2009). In addition, King (2007) indicated how female athletes competing in the Olympic Games from 1948 to 2004 were underrepresented by two British national newspapers. As far as the type of sport is concerned, females competing in 'gender-appropriate' sports such as swimming, gymnastics, tennis, and diving received more newspaper coverage than female athletes competing in the "gender-inappropriate" sports of soccer, softball, field hockey, and volleyball (Vincent, Imwold, Johnson and Massey, 2003).

As in other social domains, important efforts are recorded for the improvement of the position of woman in physical education and sports. Even if the question remains open for the value of contribution of each domain in this effort, it is ascertained that nowadays girls have different opportunities to participate in sports comparatively with the previous generations (Chalabaev, Sarrazin, Fontayne, Boiché & Clément-Guillotin, 2013).Female sport involvement has been considerably increased in these latter decades. In the USA, for example, female participation in high school sports rose from 294,015 to 3,665,367 participants between 1972 and 2007 (Chalabaev et al., 2013).

However, despite the changes that were pointed out above, the athletic domain still remains closely connected with the so called 'masculine' elements of culture. The social character of sports, as a stereotyped field of men's action, is obvious in the standardization of athletic activities in suitable and unsuitable for women. This parameter was studied systematically by Metheny (1965). The standardization that was adopted is portrayed in a lot of researches, where it is realized that the stereotypes of the two genders in sports remain in force even today (Jones, Murrell, & Jackson, 1999; Harahousou & Konstantinidou, 2000 Hively & El-Alayli, 2014).

The discrimination of sports between socially acceptable or not acceptable for women was the subject of several comprehensive researches. A lot of them were focused on the question whether sports are adapted in the traditional pictures of appropriate feminine behavior (Rowe, 1998). Specifically, Matteo (1986) categorized sports in three categories: 'suitably for men' (basketball, football), 'suitably for women' (gymnastics, figure skating, ballet) and 'neutrally' (tennis, volleyball, golf). In the first category of sports, it is emphasized the bodily contact via active aggressive and autonomous behavior. On the other hand, according to the opinion of Csizma, Wittig, and Schurr, (1988), in the second category of it is emphasized the aesthetic quality, the beauty and the gentleness, and it is avoided the physical strain.

Although sports have historically been defined as masculine or feminine, the rise of female participation in certain activities has led society to view some sports as gender neutral (Hardin & Greer, 2009). For example, in the United States, sports such as soccer, tennis, and swimming are viewed as gender neutral and "acceptable" for both males and females. This gender-neutral status, however, can vary depending on the geographical location. In many countries, for example, soccer is not an acceptable activity for females to participate in (Walter & Du Randt, 2011).

The assessment of findings revealed that the sport domain is an appropriate field of action for boys and men and that the characteristics of a good athlete (competitive, physically strong, etc.) are considered formally 'masculine'. Accordingly, in a female athlete that participates in a traditionally 'masculine' sport, it is possible to be attributed certain negative attributes and characterizations, such as virility, lack of attractiveness and deviant sexual behavior (Barnett & Wright, 1994). However, such characterizations and the direct or indirect social rejection, can repel women from particular sports and make them less dedicated to these sports.

From the research data that were evaluated above it is obviously resulted that female athletes are treated in a different manner, compared to male athletes. These different

effects evoke the reinforcement of different types of motives and the externalization of concrete behaviors that arise from them. Motives are referred to as the forces that cause, direct and maintain a behavior (McClelland, 1985; Weiner, 1992).

A lot of theories were developed in order to study the motives and the way they influence the behavior. One of the most often used theories that have been developed in the light of cognitive approach for the study of motives in athletic domain, is the self-determination theory (Deci & Ryan, 1985). This particular theory examines certain psychosocial aspects that influence motivation, such as the structure of sport itself, the sources of knowledge, coaches' behavior and the team spirit. Self-determination theory distinguishes motives as intrinsic, extrinsic and a third dimension called amotivation.

The study of the differences in motivation between the two genders was examined by many researchers in the sport domain (Kondric, Sindik, Gordana, Mandic & Schiefler, 2013; van Heerden, 2014; Amorose & Horn, 2000). Amorose and Horn (2000) examined the relation of gender with intrinsic motivation in male and female college athletes. Field hockey, ice hockey, swimming, soccer and gymnastics were several sports that athletes participated in. Still, it should be pointed out that it was not applied the classification of sports that was proposed by Matteo (1986). The results showed that female athletes, comparatively with male athletes, had lower levels of intrinsic motivation. No significant differences were found between gender groups and their motivation for sport participation in the research of van Heerden, (2014).

According to self-determination theory, apart from the factor of sex, motivation may be activated and configured by the level of competition (Deci & Ryan, 1985). For example, in the research of Chantal, Guay, Dobreva-Martinova, and Vallerand (1996) were individually examined athletes of different level and gender in intrinsic and extrinsic motivation as well as in amotivation. Eventhough it was not studied the interaction of these two factors, it was resulted that high-level athletes compared to low level ones presented higher rates in non-self-determined forms of motivation and amotivation. In a more recent study, athletes competing at local level are less supported by self-determination compared to their younger counterparts or to age-matched athletes competing at national or international level (De Pero, R., Amici, S., Benvenuti, C. et al., 2009).

The athletic frame, also, constitutes an important factor that it is possible to differentiate the motives of attendance. Researches have shown that the accent in the victory and in the surpassing of others leads to reduction of intrinsic motivation (Frederick & Ryan, 1995). Fortier, Vallerand, Briere and Provencher (1995) studied the differences in motives between athletes of competitive level and individuals that participated for recreational reasons. The results showed that the last ones presented higher ratings in intrinsic motivation for achievement and for inherent satisfaction comparing to the athletes of competitive level, who presented higher ratings in amotivation. In the same research, it was found that female athletes presented higher ratings in intrinsic motivation for achievement and in identified regulation comparatively with the male athletes, which presented higher ratings in external regulation and in amotivation. However, detailed statistical analyses did not show interactions between gender and competition level.

The same question was examined between male and female university students, who participated in various sports (Pelletier et al., 1995). Female athletes presented higher rates in the intrinsic motives for knowledge and for achievement compared to male athletes, who presented higher rates in external regulation. In this research, however, it was not examined the differences in motivation between male and female athletes from different sports as well as the interaction of sports and gender.

The review of literature showed that motivation plays an important role in the sport domain, since it creates, directs, and maintains a particular behavior (Vallerand & Rousseau, 2001). Even if the differences in motivation between male and female athletes were the subject of many studies (Fortier et al., 1995; Pelletier et al., 1995), nevertheless the dominant profile of motives that women of different sports present constitute an important question in the athletic field.

Based upon the evaluation of previous findings the present study was designed to examine the differences in motivation between female athletes who participated in sports from three different categories, 'masculine', 'feminine' and gender - 'neutral'. It is expected that female athletes who participated in 'masculine' sports will exhibit higher rates in extrinsic motivation compared to female athletes from the other two categories. It is also, expected that female athletes from gender - 'neutral' sports will present higher rates in intrinsic motivation than athletes from the other sport categories.

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2 Method

2.1 Participants

The sample of the present study consisted of 435 female athletes from six different sports (gymnastics, synchronized swimming, volleyball, soccer and weightlifting). The mean age of the participants was 19.9 years (T.A. = 5.4). In table 1 appears the distribution of the athletes in the sports and their mean age in each one of them.

Table 1. Distribution of the athletes in six sports and mean ages

Sport	Number of athletes	Mean age	Standard deviation (SD)
Weightlifting	45	16.0	2
Soccer	92	22.2	5.4
Basketball	136	22.1	3.6
Volleyball	68	23.1	4.8
Gymnastics	47	13.5	2
Synchronized swimming	47	14.1	2.2

2.2 Sport Motivation Scale

For the evaluation of intrinsic and extrinsic motivation as well as amotivation the Greek version of Sport Motivation Scale was used (SMS) by Pelletier et al. (1995). The scale is consisted from seven subscales, which evaluate the three forms of intrinsic motivation which are intrinsic motivation to know (e.g.: for the pleasure of discovering new performance strategies), intrinsic motivation to accomplish (e.g.: for the satisfaction, I experience while I am perfecting my abilities) and intrinsic motivation to experience stimulation (e.g.: for the excitement, I feel when I am really involved in the activity). The scale, also, evaluates three forms of extrinsic motivation which are identified regulation (e.g.: because it is a good way to learn lots of things which could be useful to me in other areas of my life), introjected regulation (e.g.: because I must do sports to feel good about myself) and external regulation (e.g.: because it allows me to be well regarded by people that I know). Finally, the scale evaluates also the dimension of amotivation (e.g.: I don't seem to be enjoying my sport as much as I previously did).

The scale has been adapted and used in the Greek area by Tsorbatzoudis, Moshopoulou, Zahariadis, Barkoukis and Grouios (2000). The researchers reported

satisfactory indicators of structural validity and reliability of the scale. Each question was evaluated in a 7-point Likert scale (from 1 = I absolutely disagree until 7 = I absolutely agree).

2.3 Procedure

In the present study sports were classified in three categories. For the discrimination the terms 'feminine', 'masculine' and gender - 'neutral' sports were used. The classification in the three categories was based on past research of Matteo (1986).

Feminine sports, in which only women participate, are characterized for the skilled and rhythmical movements. In the present study, such sports are gymnastics and synchronized swimming and the participants were 94 female athletes.

The term 'masculine' characterizes those sports in which more men participate than women and involve characteristics including physical contact, strength, and aggressiveness. Soccer and weightlifting are characterized as 'masculine' sports in this study and the participants were 137 female athletes.

In gender - 'neutral' sports the degree of participation of both men and women is almost the same. Basketball and volleyball represented this category in this study and 204 female athletes participated in these sports.

Female athletes who were members of teams and clubs in North Greece and Athens were chosen to complete the questionnaires. All the questionnaires were completed at the beginning of the training and this procedure lasted approximately fifteen minutes. There was written guidance for the completion of the questionnaires and no further explanations were given to the athletes.

Several questionnaires were mailed to the athletes who participated in teams and clubs away from Thessaloniki. In the envelope, beyond the questionnaire, it was enclosed a second envelope as well as the stamps required for the return of the questionnaire back to the researcher.

The collection of data lasted almost three months. Participants were informed for the opportunity to withdraw anytime during the research. Furthermore, there was written confirmation that the answers were confidential and would be used only for research purposes.

2.4 Data analysis

Correlations among the subscales are computed to test for the presence of a simplex pattern. Analysis of variance (ANOVA) for the factor 'categories of sports' was applied to test the hypothesis. Dependent variables were intrinsic motivation to know, intrinsic motivation to accomplish and intrinsic motivation to experience stimulation, external regulation, introjected regulation, identified regulation and amotivation. Independent variables were the three categories of sports (masculine, gender-neutral and feminine). Sheffe Post hoc test was used in order to discover the existed differences between the three categories of sports.

3 Results

Pearson correlations computed among the seven subscales are presented in table 2. All correlations above 0.13 were statistically significant. Strong positive correlations were found among the three types of IM similarly to previous study (Pelletier et al., 1995). Moreover, as it was expected, adjacent subscales showed higher correlations than

subscales further apart. Overall, the present results are in agreement with those obtained from previous studies (Pelletier et al., 1995).

Table 2. Correlations among the seven subscales of SMS

	IM to acc.	IM stimul.	Identified	Introjected	External	Amotivation
IM to know	0.76**	0.55**	0.4**	0.37**	0.22**	-0.19**
IM to acc.		0.6**	0.39**	0.42**	0.26**	-0.16**
IM stimul.			0.4**	0.44**	0.14**	-0.12*
Identified				0.52**	0.46**	0.13**
Introjected					0.52**	0.09*
External						0.31**

Note. n=435. **p<0.01 (2-tailed). *p<0.05 (2-tailed).

Table 3 shows the means and standard deviations of each factor for the three categories of sports.

Table 3. Correlations among the seven subscales of SMS

	Masculine		Neutral		Feminine	
Motivation	Mean	SD	Mean	SD	Mean	SD
Intrinsic to know	5.66	1.05	5.45	0.94	5.62	1.14
Intrinsic to accomplish	5.70	1.02	5.52	0.97	5.69	1.11
Intrinsic to experience stimulation**	5.77	0.94	5.78	0.77	5.47	0.96
Identified regulation*	5.04	1.26	4.65	1.00	4.77	1.32
Introjected regulation***	5.47	1.09	5.04	1.07	4.60	1.27
External regulation*	3.73	1.32	3.13	1.25	3.37	1.41
Amotivation	2.81	1.27	2.60	1.13	2.49	1.42

Note: (*) statistically significant between 'masculine' and gender-'neutral' sports, p<.05. (***) statistically significant between 'masculine', 'feminine' and gender-'neutral' sports, p<.05. (**) statistically significant between 'feminine' and gender-'neutral' sports p<.05.

Statistical analysis showed that female athletes from the three categories presented statistically significant differences in introjected regulation [F (2, 419) = 16.101, p < 05], in external regulation [F (2, 416) = 8.172, p < 05], in identified regulation [F (2, 419) = 4.726, p < 05] and in intrinsic motivation to experience stimulation [F (2, 412) = 4.038, p < 05].

Further analysis with Sheffe Post hoc test showed higher external regulation and identified regulation for participants of 'masculine' sports compared to athletes of gender-'neutral' sports. Furthermore, female athletes of 'masculine' sports presented higher introjected regulation than athletes of the other two categories. Finally, in regard to intrinsic motivation to experience stimulation, the analysis showed that athletes of gender-'neutral' sports presented higher means comparatively with those from 'feminine' sports.

In regard to the intrinsic motivation to know, intrinsic motivation to accomplish and amotivation, analysis of variance showed no statistically significant differences between female of the three categories. More specifically the results were nonsignificant for intrinsic motivation to know [F (2, 416) = 1.891, p = 152], intrinsic motivation to accomplish [F (2, 409) = 1.55, p = .213] and the amotivation [F (2, 417) = 1.91, p = .14].

4 Discussion

The present study was designed to examine the differences in motivation between female athletes that participate in three different categories of sports (masculine, feminine and gender-neutral).

As far as the first hypothesis is concerned, it was found that the athletes of masculine sports presented higher extrinsic motivation (introjected regulation, external regulation and identified regulation), compared to the athletes of the other two categories. These findings are in line with the predictions of self-determination theory and partly with the results from other studies as well. In most of them it was found that men compared to women presented higher extrinsic motivation. Furthermore, it was found that females' behavior was based on intrinsic motivation (Pelletier et al., 1995; Fortier et al., 1995).

For the interpretation of the results of the present research the sociological data has offered important frame. These data pertained to the nature of the sport and to the way that female athletes who participate in 'masculine' sports are treated from the wider social context. It is noteworthy that soccer and weightlifting are not widespread sports among women in Greece and besides that there are not suitable institutional structures and infrastructures that will feature and support them. Consequently, female athletes, who participate in a traditionally 'masculine' sport, are often given certain negative attributes and characterizations, as manliness, lack of attractiveness and deviant sexual behavior (Barnett & Wright, 1994).

Moreover, Mass Media plays an important role in the way they present female athletes of 'masculine' sports compared to athletes of 'feminine' and gender-'neutral' sports. Soccer and weightlifting, as purely "men's" sports, require application of big force and existence of bodily contact, resulting in an inevitable comparison in records among male and female (Jones et al., 1999). According to the above findings, it is likely, that the attendance of female athletes in these particular sports depends on extrinsic motives and not on pleasure and satisfaction that derives from the physical activity itself.

Furthermore, in the present research it was found that female athletes that participated in 'neutral' sports had higher intrinsic motives experience stimulation than those of 'feminine' sports. These findings can be explained, partly, based on the dimensions of self-determination theory, in which it is supported that a collaborative environment develops the most self-determined forms of motivation (Deci & Ryan, 1985). Therefore, considering that two team sports were the gender-'neutral' sports (basketball and volleyball) in the present study, those athletes presented higher intrinsic motivation compared to athletes of 'feminine' sports who participated in individual sports (gymnastics).

Moreover, according to self-determination theory (Deci & Ryan, 1985) differences in intrinsic motivation between athletes of gender - 'neutral' sports and athletes of 'feminine' sports, are attributed to the interaction of athletes and coaches. In 'feminine' sports, such as gymnastics and synchronized swimming in the present research, training is characterized of high level of difficulty and is strictly guided and controlled from coaches. This situation does not allow female athletes to act autonomously, resulting in lower intrinsic motivation compared to athletes of gender - 'neutral' sports. Research data have shown that coaches who gave the opportunity to athletes to make decisions and did not control them, they enhanced their intrinsic motivation for attendance (Vallerand & Rousseau, 2001). On the contrary, athletes who felt that they were controlled from coaches, reported lower intrinsic motivation and identified regulation and higher amotivation and external regulation (Pelletier et al., 1995).

Statistical and sociological data have shown that both men and women preferred to participate more in gender - 'neutral' sports, to a smaller degree in gender-appropriate sports and much less in gender-inappropriate sports (Matteo, 1986). This finding, probably, explained the enhanced intrinsic motivation of athletes who participate in gender - 'neutral' sports, compared to athletes of 'feminine' sports.

In summary, it is necessary to emphasize that the discussion of the present findings does not aim to compare female athletes' behavior of 'masculine' sports and men's behavior. However, it appears that the nature of sport recommends a decisive factor that it is possible to influence directly or indirectly (e.g. via coach's feedback) athletes' motivation. To this direction, it is important to give particular attention to the teaching methods of sports as well as to the intervention programs, considering that intrinsic motivation leads to higher pleasure and satisfaction (Brustad, 1988; Pelletier et al., 1995), increases interest (Li, 1999), increases effort (Williams & Gill, 1995), increases persistence (Ryan, Frederick, Lepes, Rubio, & Sheldon, 1997) and the frequency of attendance (Alexandris, Tsorbatzoudis & Grouios, 2002). Finally, it should be pointed out that the differences in motivation among female athletes of the three sport categories can constitute the guide to study the total of sports and to generalize the conclusions. The knowledge of the nature and the reasons of those differences will allow, among others, the formation of specific intervention programs that will be referred to both the teaching of these sports and the infrastructures. Moreover, these elements will extend the capability of Mass Media to handle more suitably the information concerning the genders.

5 Limitations and future directions

The type of sports that were selected for the three categories are not representative for the whole sport field, therefore the results cannot be generalized to a larger population. Future studies should include more sports in each of the three categories to get better results for a larger number of female athletes. The wide variation in chronological and training age may have influenced the results of this study. The existence of this great variation could not be avoided, as the age of maximum performance, and therefore the age of the onset of sport participation, varies in a great degree. Finally, the study of motivation in conjunction with other psychological parameters in female athletes of these three categories of sports may also display interesting results and should be investigated in more depth.

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