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**ANALYSIS OF POWERLIFTING COACH'S ACTIONS IN  
'COACH-ATHLETE' SYSTEM: GENDER ASPECT**

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***Abstract***

The study presents an analysis of the coach's role in the powerlifters' sports activities. The issue has been studied from the point of view of the coach's real and desired actions in training male and female powerlifters. The questionnaire containing 13 coach's actions was used to survey 30 male and 30 female athletes. The study reveals that the most significant actions used by the coach when interacting with male athletes are "rendering assistance at competitions" (I rank), "possession of a unique method of training athletes" (II rank), "taking into account the athlete's individual characteristics" (III rank). The most significant actions used by the coach in relation to female athletes are: "taking into account the athlete's individual characteristics" (I rank), "assisting at the competitions" (II rank), "explaining the methodology for doing exercises" (III.5 Rank), "evaluation of the athlete's success / failure" (III.5 rank). When the athletes describe the coach's desired actions in relation to them, male athletes single out the following as significant: "possession of a unique method of training athletes" (I rank), "assisting at the competitions" (II rank), "being present in training classes" (rank III); whereas female athletes single out: "taking into account the athlete's individual characteristics" (I rank), "explaining the methodology for doing exercises" (II.5 rank) and "assisting at the competitions" (II.5 rank). The results of the study can be used by coaches in training powerlifting athletes with regard for their gender (sex) affiliation.

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**Keywords:** Powerlifting, powerlifter, gender, 'coach-athlete' system.



## 1. Introduction

As a rule, questions of physical and technical training are in the first place in athletes' sports activity, whereas their psychological comfort is considered to be inferior in importance. "Five key factors contribute to success in cognitive sport: technique, physical condition, psychological state, nutrition, and equipment" (Cockerill, 1991, p. 85). The nature of psychological communication in the 'coach-athlete' system largely determines the success of sports activities. If in team sports the athlete, in addition to the coach, is affected not only by the coach but also by the team members, in individual sport disciplines the coach's influence on the athlete is evidently more profound. "In sports, the coach is the most important mentor" (Nakhodkin, 2008, p. 45). The coach is the fundamental basis on which the athlete relies in achieving his highest results. According to Mazzer (2015), coaches are in a position to positively impact young people's mental health and set expectations for themselves to actively support young people in this way. The successful interaction of the coach with the athlete is an important component in the athlete's sports career. Mageau (2003) believes that although many factors may impact athletes' intrinsic and self-determined extrinsic motivation, the coach-athlete relationship is one of the most important influences on athletes' motivation and subsequent performance. "In the athletes' opinion, the 'athlete-coach' relationship is of particular importance for the success of the sports career" (Stambulova, 1999, p. 35). Jowett (2001) stressed the importance of building an effective coach-athlete relationship, as the quality of this relationship is a crucial determinant of athletes' satisfaction, motivation and improved performance. Later Jowett states: "The coach-athlete relationship is not an add-on to or by-product of the coaching process. Instead it is the foundation of coaching" (Jowett, 2005, p. 412). The importance of the coach's role in the athlete's activities is undeniable. According to Sherwin (2016), coaches are uniquely positioned to deliver specific technical and tactical instruction and mentoring programs that support the psychological and social development of athletes in a challenging, goal-oriented and motivational environment. Lyle (1999) believes that coaches who underestimate the importance of the coach-athlete relationship may risk not developing their athletes to their full potential. At the beginning of a sports career, the athlete's inexperience has to be compensated for by the coach's knowledge and experience. Slack (2000) points out that athletes should subordinate themselves to those who can 'help' them to achieve their objectives. The powerlifter's qualification is directly proportional to the coach's qualification provided that the coach takes an active part in developing the athlete's career. These circumstances determine the necessity to study the coach's methods and actions used in training athletes engaged in powerlifting.

## 2. Problem Statement

Every sport is unique, so training of athletes requires an individual approach, taking into account the kind of sports discipline. Studying the psychological aspects of the training of athletes within a certain sport makes it possible to create a perfect model for the training of an athlete aimed at a high sporting outcome. It is a mistake to think that the method of training athletes in powerlifting is comparable to the method applied in weightlifting. For a long time, the training of powerlifters was based on the programs

for training athletes in weightlifting. Chiu (2007) reports that in recent years, coaches associated with powerlifting have promoted the benefits of powerlifting methodology.

“The number of female athletes has increased dramatically during recent years” (Fasting, 2000, p. 93). According to Soboleva (2013), the current trend of emancipation in women’s sports is characterized by “the capture of the once male sports territories by female athletes”. So, the number of women at the Russian Powerlifting Championships (IPF) in 1997 was 69 female participants, in 2007 – 62 female athletes, and in 2017 – 87 female athletes. The increase in the number of women involved in powerlifting puts forward certain conditions for the process of training athletes that would take into account their gender. Thus, a gender-based study of confounding factors in the powerlifters’ sports activities did not reveal any fundamental differences in the allocation of significant confounding factors (Ljdokova et al., 2015), which is an important information for the coach to take into account for building the athletes’ successful sporting activity. The study of the interaction in the ‘coach-athlete’ system is essential for the coach in his attempts to tackle the problems that arise in training. “Eliminating both serious and trivial problems in the team depends on whether the coach knows the appropriate algorithms for their solutions. If so, then half the case has already been done” (Shotskaya, 2014, p. 258). The importance of this research is its application value, for it provides coaches with essential information about effective relationships in the ‘coach-athlete’ system, taking into account the powerlifters’ gender (sex) affiliation.

### **3. Research Questions**

This study is based on the question: “What coach’s real and desired actions are of primary importance in male and female powerlifters’ sporting activity?”

### **4. Purpose of the Study**

The study attempts to determine the significance of the coach's actions in training athletes-powerlifters, taking into account their gender (sex) affiliation as well as to identify statistically significant differences in the coach’s real and desired actions in relation to male and female athletes.

### **5. Research Methods**

Studies on the coach-athlete relationship are as a rule focused on the general content and quality of the relationship, leaving a gap in the role of situational factors (Rhind et al., 2012). The study uses such methods as analysis of scientific literature on the research problem, observation, interview, questionnaire, and methods of mathematical and statistical data processing (Student’s t-test). For gender research on the coach’s role in powerlifters’ sports activities, a questionnaire consisting of 13 coach’s most often used actions was developed.

#### **5.1. Survey participants**

The respondents in the questionnaire were 60 athletes engaged in powerlifting. The sample included 30 men and 30 women. The criteria for inclusion in the study were the experience of training in

powerlifting for at least 2 years and the performance at competitions not below the regional level of the Russian Federation. The experience of sports for powerlifters participating in the survey was from 2 to 14 years. The respondents' sports qualifications varied from the candidates for the master of sports to the title of "Master of Sports of Russia" and "Master of Sports of Russia of International Class". Such a sample is representative and justified, as it enables in subsequent works to consider the coach's interaction with the athletes from different standpoints: gender, age, athlete qualification, etc. This allows for a more informative generalization of the research material.

### **5.2. Procedure**

Filling of questionnaires by athletes took place during the competitions: the Russian Championship in Classical Powerlifting (December 24-27, 2015, Arzamas), the Russian Powerlifting Championships (March 15-20, 2016, Tyumen). The whole procedure was conducted in the athletes' free time and in a place that was convenient for them. In the process of questioning, the respondents arranged the coach's actions in terms of the degree of significance of the influence on the powerlifter, assessing, on a 10-point scale, each criterion of the coach's participation in the athlete's sports activities. The participants of the questionnaire arranged the coach's actions in terms of the degree of significance of the influence on the athlete (score on the 10-point scale of each criterion for the coach's participation in sports activities). In the first case, it was suggested to evaluate the real actions from the position "The coach uses in relation to you", in the second case it was offered to evaluate the desired actions from the position "You would like the coach to use in relation to you".

### **5.3. Statistical analysis**

Determining the importance of the coach's actions in relation to athletes-powerlifters was carried out on the basis of the calculation of the arithmetic mean, after which the ranking of the criteria was performed. So, rank I assigned to a particular factor has the largest value, and rank 13 has the smallest value for the athlete. To identify differences in the actions used by the coach, and desired from the position of male athletes and female athletes, Student's t-test was used.

## **6. Findings**

In the course of the study, a list of the coach's actions in the 'coach-athlete' system was determined that took into account the gender approach (see Table 1).

**Table 01.** The coach's actions in relation to male powerlifters and female powerlifters

No	Coach's Actions	Real		Desirable	
		Male	Female	Male	Female
1	Works out the training plan	IX	V	V	IV
2	Is present in training classes	XII	VII	III	VII
3	Explains the technique of doing exercises	VII	III.5	V	II.5
4	Is present at the competitions	IV	VII	VIII	IX

5	Has a unique method of training athletes	II	VII	I	VII
6	Participates in your life (personal, educational, professional)	XI	XIII	XII	X
7	Assists at the competitions (warm-up, exit to the platform)	I	II	II	II.5
8	Provides psychological support in training and competitions	V	IX.5	VII	VII
9	Demonstrates the performance of exercises	X	XII	IX.5	XIII
10	Is good-humoured	VIII	XI	XI	XII
11	Demonstrates exactingness (observance of regime during training and at competitions, in nutrition diet, etc.)	XIII	IX.5	XIII	XI
12	Evaluates my success / failure	VI	III.5	IX.5	V
13	Takes into account my individual characteristics (state of health, mood, difficulties in life, etc.)	III	I	V	I

### **6.1. Dominant positions of the coach's actions in relation to male and female powerlifters**

The results of the study (Table 1) show that men and women describe the coach's real behavior in relation to them and the desired actions quite similarly. "In sport, because of its rivalry, competitiveness, masculine behavior is more adaptable, which is learned not only by young men, but also by girls who are engaged in it" (Damadaeva, 2012, p. 41). This is supposedly due to the fact that the employment in power sports presupposes, first of all, the focus on a high personal sporting outcome, testing one's personal abilities, and not on close social relations with team members or rivals. Competition is an indicator of the athlete's personal perfection. Both the man and the woman feel more confident and calm next to the coach, especially in the stressful competition situations.

As athletes understand it, the coach should be ready to take various risks, have knowledge of the theory and practice of sports, and apply new ideas in his work (men: "has a unique method of training athletes"). The effectiveness of training depends on its diversity. In order to achieve a good result in each movement, every element of it has to be worked out, visual aids (photo, video, etc.) and a show (women: "explains the technique of doing the exercises") are also important. When developing the system of evaluation of success / failure, the awards (incentives) that have a valid value corresponding to the athlete's level and age are applied. At the same time, it is always necessary to remember that the physical and emotional stress to which athletes are exposed should not exceed the physiological and psychological capabilities of the organism, especially during the initial period of sports activities.

Accounting for individual characteristics, identified as the coach's significant action by the powerlifters of both sexes, determines the whole essence of coaching activity. After all, the main task of the coach is to reveal the athlete's potential opportunities not only in sports, but also in studies, work and life; increase self-esteem (if necessary), help in self-assertion; create conditions for sports, based on the athlete's individual capabilities, his/ her emotional and competitive attitude.

### **6.2. Comparative analysis of the coach's real and desired actions in relation to the powerlifters, taking into account their gender (sex) affiliation**

Using Student's t-test allowed revealing the differences at the statistically significant level in the coach's real and desired actions from the standpoint of male and female athletes (see Table 2).

**Table 02.** Differences in the coach's actions in relation to male and female powerlifters

No.	Coach's Actions	Real			Desired		
		Male (mean)	Female (mean)	Difference	Male (mean)	Female (mean)	Difference
1	Works out the training plan	6.89	9.69	0.001	8.78	9.85	
2	Is present in training classes	6.22	9.46	0.001	8.89	9.62	
3	Explains the technique of doing exercises	7.44	9.77	0.01	8.78	9.92	
4	Is present at competitions	8.11	9.46	0.01	8.22	9.38	
5	Has a unique method of training athletes	8.67	9.46		9.89	9.62	
6	Participates in your life	6.44	7.69		7.11	9.23	0.01
7	Assists at the competitions	9.22	9.92	0.001	9.56	9.92	0.01
8	Provides psychological support in training and competitions	7.78	9.08		8.44	9.62	
9	Demonstrates the performance of exercises	6.78	8.08		8	8.54	
10	Is good-humoured	7	8.46		7.44	8.92	
11	Demonstrates exactingness	6.11	9.08		6.89	9.15	0.01
12	Evaluates my success / failure	7.56	9.77	0.001	8	9.77	0.01
13	Takes into account my individual characteristics	8.22	10	0.001	8.78	10	0.001

According to Table 2, the male mean is lower than the female one. In the authors' opinion, this is quite natural. Sport historically is considered a socialization institution of male behavior stereotypes, the formation of masculine qualities, especially in power sports. An experienced coach today tries to compensate for it by a more careful, methodically detailed and scrupulous work with the athletes, taking into account gender characteristics (men's conditioning abilities are higher than women's, whereas women's coordination ones are higher than men's). The women involved in powerlifting often had no idea beforehand about this kind of sport, about the equipment used, the role of the equipment, therefore the coaches pay so much attention to the training schedule, explanation of the exercise methodology, and of everything related to training and competitive activities. Men usually bring up masculinity from childhood – they played hockey, football, wrestled, fought, used dumbbells or a barbell for training their muscles. Thus, power sports do not seem something completely unexplored to them. When assessing success / failure, the coach actually expresses more reactions of positive feedback to women athletes than to men athletes. In turn, men receive more congratulatory, encouraging remarks after the performance from their comrades than women.

The coach's taking into account the athlete's individual characteristics also plays an important role in the training of women-powerlifters. The adoption of the gender role of female athletes is complicated by the contradictions between the traditional female model of behavior and the requirements for the 'male' style of activity, such as in powerlifting. In general, in sport, due to its characteristics (rivalry, competitiveness), masculine behavior models are more adaptive. However, the uniqueness of this sport is that the women involved in powerlifting do not become 'masculine, the overall habit does not change, and with the correct mode and training method powerlifting does not have negative effects on the

reproductive system of the female body. Taking into account the female psycho-physiological characteristics, the coach pays more attention to female athletes in explaining the methodology of the exercise (bar grip, stand, etc.), observance of safety precautions as the risk of women being injured is much higher than that of men; and the rules of conduct during training. In addition, Ljdokova et al. (2015) believe that one of the coach's tasks (as a person and educator) is that the female athlete should retain the femininity, charm and other qualities inherent only in women.

The observation of the male powerlifters and the female powerlifters has shown that both of them have stable types of individual and social behavior in training for competitions and during competitions: concentration before going out, listening to music, etc. However, in situations of going to competitions as members of the team that can include athletes from different cities, men spend more time with their teammates than women. Women, in turn, spend more time with their coach in the precompetitive phase, and receive much more feedback reactions than the men from their coaches. The same applies to the situation of the competition. The female athletes have a higher need in a coach who is their true comrade. Women need more assistance in the warm-up, and when going to the platform, more cheering support than men.

In addition, in powerlifting, athletes compete non-simultaneously; independently of each other, there is no direct contact between the athletes during the competition. Competitive communication with the rival, constant shortage of space and time, changing conditions of the sport conflict set complex thinking and movement problems to the athletes (Ljdokova et al., 2014). Women-athletes, despite the high level of stress resistance, can get lost in these conditions. The coach develops strategic and tactical moves, which the woman does not reflect: the analysis of the situation, the application for the barbell initial weight, even compliance with the regime of the day and nutrition. The coach's exactingness and even some rigidity will be compensated for by the athlete's success.

Typological features of the female nervous system define it as more emotional, excitable, and impressionable. Colker (1980) found that female athletes are less feminine than non-athletes, but no more masculine than the latter. Here a conclusion can be drawn that a woman remains a woman in any sport. There is often a transfer of the man's training content without any adjustment or modification to the women's training (Fedorov, 1995). However, the entire training program should be designed to take into account the individual characteristics of the female athlete. Everything in it is absolutely significant: a nutrition diet, rest, number of repetitions and approaches, rest time between them, mood, etc. Assessment of success / failure has a different emphasis on the different stages of the formation of the athlete's personality: for beginners it is advisable to use information relating to mechanical principles, self-orders; the experienced athletes should be more focused on the elements of motion.

Women-powerlifters show a high need for coach's participating in their personal lives. It is through him that learning, transfer of knowledge, and education take place. Women are more disposed towards a coach who is open to contacts, gives not only professional advice on the sport, but also by means of direct and indirect questions, finds out how the athlete feels, whether the parents support sports enthusiasm; asks about attitudes towards competitions, life, as well as personal and professional plans. Girls, by nature, are more communicative, more sensitive to people's attitudes towards them, more trusting to good words. The male coach should be aware that when talking with the girls there must be

elements of chivalrous attitude towards the woman. At the same time, female athletes prefer male coaches to train them. This is often the case due to the fact that girls (women) see in their coach the image of their father or an ideal father (good and strong, ready to defend). It is also possible that a woman-athlete may be in love with the coach as a model of masculine type of behaviour. According to the psychoanalytic theory of Z. Freud, this is nothing but a mechanism for transferring the emotional child relationships to the father, a kind of revival of the Electra complex.

## 7. Conclusion

Thus, the research shows that high-rate coaches possess not only emotional self-control and a high level of intellectual development, but are also flexible enough, having a unique method of training athletes and taking into account their gender (sex) affiliation. This understanding and cooperation between the coach and the athlete will allow achieving high levels of physical fitness, which may be the topic of subsequent research.

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