

Original research papers

SELECTED PERSONALITY TRAITS OF WOMEN TRAINING COMBAT SPORTS

JOANNA BURDZICKA-WOŁOWIK¹, KATARZYNA GÓRAL-RADZISZEWSKA²

¹*Józef Piłsudski University of Physical Education in Warsaw,
Faculty of Physical Education and Sport in Biała Podlaska, Department of Psychology*

²*Warsaw University of Life Sciences, Faculty of Animal Science,
Department of Genetics and Animal Breeding*

Mailing address: Joanna Burdzicka-Wołowik, Faculty of Physical Education and Sport,
Department of Psychology, 2 Akademicka Street, 21-500 Biała Podlaska,
tel.: +48 83 3428779, fax: +48 83 3428800, e-mail: jwolowik@interia.pl

Abstract

Introduction. Contemporary women are more and more independent nowadays and emancipation of women is also visible in sports. The aim of the study was to present certain personality traits of female athletes training selected combat sports. The authors claim that taking up the aforementioned activity is an attempt at overcoming stereotypical attitude to a social role of women. The analysis of results revealed psychological profiles of female athletes. **Material and methods.** The research included women aged 17 to 36 (N=199). The first group (N=94) consisted of athletes training boxing, judo, wrestling and taekwon-do, the majority of whom had a master sports class. The second group included women not training any sports (N=105). The research was conducted with the use of the following tools: Psychological Gender Inventory, Temperament Inventory, Eysenck Personality Questionnaire (EPQ-R), Creative Behaviour Questionnaire and personal questionnaire created by the authors. **Conclusions.** The analysis of the material showed that female athletes training combat sports contest traditional femininity since they have more personality traits traditionally attributed to men (high level of masculinity). High psychoticism of the athletes is also perceived as a tendency to break conventions. As highly non-conformist individuals, they live according to their own system of values training sports which are stereotypically treated as masculine. Combat sports are trained by women with low emotional and sensory reactivity, which gives them advantageous position in sports competition.

Introduction

In his or her lifetime a person serves at least a few significant social roles, also those connected with gender. Femininity and masculinity are connected with different behaviours, rights and responsibilities. Relations between people are based on numerous stereotypes which tell in detail what a woman or a man may do.

Habitually a woman is a guardian of family warmth, hearth or good relations and a submissive life companion. The research by Heilman showed that women taking up masculine activity are assessed similarly to men as far as their competences are concerned but socially they are exposed to less sympathy and even to interpersonal hostility. Women lose in the competition with men due to negative opinions in society [1].

The majority of areas of human activity are dimorphic; however, sport is attributed to males. Only two sports, i.e. synchronised swimming and rhythmic gymnastics, are intentionally called feminine sports. The aforementioned fact was confirmed by the research carried out on students from the University of Physical Education in the years 1990-2003. It was concluded that sport is a typically masculine activity. It may be expected that if people connected with sport come to such conclusions, individuals not connected with sport at all will hold this opinion even more [2].

In this study women training wrestling, taekwon-do, judo and boxing were subjected to analyses. Called "the weaker sex", women mark their presence in stereotypically masculine sports and achieve success not infrequently at the cost of their health [3, 4]. They have to break conventions meeting the requirements of competition, dominance and endurance. They also have to allow for shortening the distance and entering an intimate sphere through bodily contact during a fight and conform to masculine behaviours [5].

Contemporary women are more self-reliant and independent than previous generations. They are strong, educated and elegant. Additionally, emancipation of women in sport is noted, especially in "masculine" sports, which is explained by general feminisation of the society [6].

The participation of women in sports is a significant determinant of their mental health. As sports psychologists prove, physical activity exerts a positive influence on self-esteem and mental balance [7]. Sport is playing more and more significant role in meeting all the challenges which women treat as their life aims. It helps to care about and shape their body, which gives them more self-confidence [6, 8]. However, this personality trait still needs improving. As Mroczkowska stated, women much less frequently recognise their chances for success than men [9].

Numerous studies regarding the participation of women in

sport in general and in masculine sports revealed the correlation between personality and sports activity taken up by a woman [10].

Research on the correlation between personality and the selected sport indicated significant differences between athletes training diverse sports. It comes as no surprise, taking into account different requirements in different sports.

According to Gacek, personality is a determinant of the level of participation in physical activity. A higher level is presented by extrovert individuals with internal locus of control, with low reactivity and a low level of fear and neuroticism [11]. Daniluk and Litwiniuk revealed that athletes training basketball and taekwon-do have a lower level of neuroticism than women not practising sports at all. Simultaneously they noted better social skills, higher impulsivity and aggression in basketball players than in taekwon-do competitors [12]. Two studies by Lamarre and Nosachuk proved that practising judo lowers aggression levels or keeps them at the same level [13, 14]. A different opinion was presented by Reynes and Lorant, who revealed in their respective studies that training judo increased aggression, while training karate lowered its level [15, 16, 17].

A Russian scientist Łubyszewa concluded that sport shapes women's characters both positively, developing communication skills and increasing motivation, as well as negatively, increasing aggression [6].

The aim of the study was to present certain personality traits of female athletes training selected combat sports. The analysis of results revealed psychological profiles of female athletes. Since the research included elite athletes, it is believed that their personality profiles are the determinants of sports success. The research described in this article is a continuation of this trend; however, it refers to the social role of women. There are no scientific reports regarding such specific population as women training sports which are positively associated with self-perfection but also negatively associated even with crime. The authors claim that taking up the aforementioned activity is an attempt at overcoming stereotypical attitude to a social role of women. Due to possessing particular personality traits, these athletes do not often meet social expectations. However, these traits are very useful in sports activity.

Material and methods

The research included 199 women aged 17 to 36. They were divided into two groups. The first group consisted of athletes training combat sports (N=94), the second group included women not training any sports (N=105) (tab. 1). In the first group the average age was 21.7 years with standard deviation at the level of 4.24, in the second group it was 21.5 years with standard deviation at the level of 2.64. The Mann-Whitney U test revealed no statistically significant differences between groups (U=4330.0; p=0.133).

Table 1. The structure of the examined group with regard to the sport trained (n=94)

Sport	N	%
Wrestling	29	31%
Taekwon-do	28	30%
Boxing	26	28%
Judo	11	12%

Average training experience of the respondents was 7.94 years long with standard deviation at the level of 4.23. Minimal training experience was 1 year long, while maximal

was 20 years long. The first group included elite athletes, over 50% of whom had a master class. A detailed structure of the group with regard to the sports class is presented in table 2.

Table 2. The structure of the examined group with regard to the sports class (n=94)

Sports class	N	%
first	22	23.40%
second	2	2.13%
national master	39	41.49%
international master	10	10.64%
no sports class	21	22.34%

The research was carried out in teams during training camps of the athletes. The meetings with a group of women not training any sports were held at State Higher School in Biała Podlaska and Faculty of Physical Education and Sport in Biała Podlaska.

In order to explain problems bothering scientists, 5 tools commonly used in psychology were used. These included:

1. Psychological Gender Inventory by Alicja Kuczyńska. This method makes it possible to define one of four types of psychological gender. The Inventory includes 35 items, 15 of which describe stereotypical femininity (femininity scale), 15 – stereotypical masculinity (masculinity scale) and 5 – neutral statements which refer to women and men equally. The Inventory includes instructions according to which the respondent marks to what extent the statement refers to her. Answers should be selected from among 5 options beginning from (1) 'I'm not like that at all' to (5) 'I'm exactly like that' [18].
2. The Temperament Questionnaire is used in scientific and clinical research as well as in professional and educational coaching. The Questionnaire includes 120 statements referring to 6 aspects of temperament, i.e. emotional reactivity, activeness, endurance and sensory sensitivity connected with the level of energetic behaviour as well as alertness and perseveration connected with the time description. The norms for the Questionnaire are presented in the 9-level stanine scale [19].
3. The Eysenck's Personality Questionnaire – EPQ-R, assessing basic personality traits of a person (Extraversion, Neuroticism, Psychoticism, with an additional Lie scale). It is one of the most popular methods used by psychologists. This tool is mainly used for scientific and group research. It includes 100 statements, where 24 refer to Neuroticism, 23 to Extraversion, 32 to Psychoticism and 21 refer to the Lie scale. Answers are given on a separate sheet where a respondent marks answers to particular statements [20].
4. The Creative Behaviour Questionnaire by Stanisław Poppek. The questionnaire includes 60 statements referring to various behaviours of a person while learning or during a different activity. The respondent has to reply to every statement marking one of the three possible answers with "+". Marking point 2 with "+" means the respondent's agreement with the statement, marking point 1 means partial agreement with the statement, while marking point 0 means disagreement with the statement. The study makes it possible to calculate results for four scales: C – conformism, N – non-conformism, A – algorithmic behaviours and H – heuristic behaviours. The sum of the results of C and A scales provides information concerning a person's reproductive attitude, while the sum of the results of N and H

scales – a person's creative attitude [21].

5. A questionnaire prepared by the authors making it possible to collect basic data of the respondents.

The research results were analysed statistically with the use of IBM Statistics SPSS 20.0 PL software. In order to compare the two groups, the non-parametric Mann-Whitney U test was used due to the lack of normal distribution of the majority of variables.

Results

The results of the research prove that regardless of the character of the activity undertaken by women, androgynic individuals are a dominating group (61% in the group training combat sports and 46% among those who do not train any sports). The smallest percentage is constituted by individuals whose psychological gender is not defined (5% in the first group and 9% in the second group). Differences between the respondents were noted in the remaining two models of psychological gender. Among women who are not active in sports the second biggest group is constituted by feminine women (40%), while among athletes – by masculine women (22%). In order to compare the distribution of proportions of particular types of psychological gender, a chi-square test was applied. As a result of the comparison between the percentages of particular types in the group of female athletes and percentages in the other group, it turned out that the distributions are not compliant (chi-square = 67.098; $p < 0.001$).

The comparison of the two groups with the Mann-Whitney U test proved that women training combat sports professionally have a significantly lower result on a femininity scale and a significantly higher result on a masculinity scale. The results are presented in table 3.

Table 3. The significance of differences between the results of athletes training combat sports (n=94) and women not training any sports (n=105) in the Psychological Gender Inventory

		M	SD	Min	Max	P	U
FEMININITY SCALE	Athletes	55.17	7.191	31	70	0.019	3983
	Non-training	57.43	6.124	33	68		
	Total	56.36	6.728	31	70		
MASCULINITY SCALE	Athletes	56.37	7.159	41	72	<0.001	2218
	Non-training	48.85	6.725	30	72		
	Total	52.40	7.875	30	72		

A further analysis revealed significant differences in four features of temperament. Athletes have a significantly higher level of reactivity, endurance and activeness. Moreover, they are characterised by a significantly higher level of emotional sensitivity than women who do not practise sports. As for perseverance and sensory sensitivity, no statistically significant differences were revealed (tab. 4).

Table 4. The comparison of the results of athletes training combat sports (n=94) and women not training any sports (n=105) in the Temperament Questionnaire

Temperament feature		M	SD	Min	Max	P	U
AL	Athletes	15.99	2.883	9	20	<0.001	3435.5
	Non-training	14.20	3.421	4	20		
	Total	15.05	3.294	4	20		
PE	Athletes	13.95	3.714	4	20	0.230	4450.5
	Non-training	14.64	3.394	5	20		
	Total	14.31	3.557	4	20		
SS	Athletes	15.90	2.855	7	20	0.519	4675.5
	Non-training	15.60	3.031	4	20		
	Total	15.74	2.946	4	20		
ER	Athletes	9.79	4.539	1	19	0.001	3588
	Non-training	11.90	4.254	1	19		
	Total	10.90	4.505	1	19		
EN	Athletes	10.99	5.077	2	20	<0.001	3435.5
	Non-training	8.26	4.545	0	19		
	Total	9.55	4.982	0	20		
AC	Athletes	12.61	3.946	1	19	0.002	3687
	Non-training	10.72	4.269	0	18		
	Total	11.61	4.216	0	19		

AL – alertness; PE – perseverance; SS – sensory sensitivity; ER – emotional reactivity; EN – endurance; AC – activeness.

While analysing the results received from the compared groups in the Personality Questionnaire (EPQ-R), significant differences were noted in the neuroticism and psychoticism scale. Athletes training combat sports have a significantly lower level of neuroticism ($U = 4043.5$; $p = 0.028$), and a significantly higher level of psychoticism ($U = 3787$; $p = 0.004$) than non-training women (tab. 5).

Table 5. The comparison of the results of athletes training combat sports (n=94) and women not training any sports (n=105) in the Eysenck Personality Questionnaire

Questionnaire scale		M	SD	Min	Max	P	U
NEUROTICISM	Athletes	11.68	5.428	2	22	0.028	4043.5
	Non-training	13.34	5.067	1	23		
	Total	12.56	5.293	1	23		
EXTRAVERSION	Athletes	16.77	4.118	4	23	0.060	4175.5
	Non-training	15.65	4.374	3	23		
	Total	16.18	4.281	3	23		
PSYCHOTISM	Athletes	8.24	3.840	0	22	0.005	3796
	Non-training	6.87	3.528	1	16		
	Total	7.52	3.733	0	22		
LIES	Athletes	8.38	3.553	0	18	0.865	4866.5
	Non-training	8.11	2.880	1	17		
	Total	8.24	3.210	0	18		

The last test analysed was the Creative Behaviour Questionnaire. Due to the character of the publication, two scales of the test were analysed. Statistically significant differences were revealed as far as non-conformist behaviours are concerned. In this case athletes training combat sports had significantly higher results than females not training any sports. On the scale of conformist behaviours the respondents from the second group achieved higher results than athletes; however, these were not statistically significant differences (tab. 6).

Table 6. The comparison of the results of athletes training combat sports (n=94) and women not training any sports (n=105) in the Creative Behaviour Questionnaire

Questionnaire scale		M	SD	Min	Max	P	U
CONFORMISM	Athletes	11.34	4.342	3	23	0.077	4219.5
	Non-training	12.39	4.669	4	22		
	Total	11.89	4.536	3	23		
NON-CONFORMISM	Athletes	19.99	3.840	7	28	<0.001	2946.5
	Non-training	17.14	3.918	9	27		
	Total	18.49	4.125	7	28		

Summary and discussion

The process of changes in the social roles is taking place constantly and bringing about noticeable effects. A contemporary woman acts and takes up activities in the political, economic and social spheres. As exemplified by sport, feminine and masculine roles have been equalised. More and more often women and men take up equal roles.

In this research numerous differences were revealed between athletes training judo, wrestling, boxing and taekwon-do and women not training any sport. These differences made it possible to try to create profiles of athletes training combat sports. The analysed traits constitute personality determinants of the athletes' functioning in masculine sports.

The majority of studies regarding psychological gender in masculine sports have revealed that there are more women sexually defined as masculine and androgynic [22, 23, 24]. The majority of women training judo, wrestling, boxing and taekwon-do are also androgynic and masculine due to their psychological gender. Statistical analysis of the material revealed that athletes are characterised by significantly lower intensity of feminine features and higher intensity of masculine features than females not training any sports. Such a type of psychological gender provides them with a broad spectrum of feminine and masculine behaviours. It enables them to fulfil the role of an athlete and find their way in difficult and stressful situations [25]. The features of masculinity in women help them to be prepared better for social functioning and fulfilling given roles [22, 26]. It may be concluded that they have a higher level of constructive behaviour, do not submit to social influence and have a broader repertoire of behaviours which bring about their higher self-esteem and self-acceptance. A woman in sport masculinises her identity by learning masculine behaviours and at the same time giving herself a chance for a sports career [22, 27, 28]. In the aforementioned sports, effectiveness depends on masculine features: agility, persistence, aggression or endurance [29].

Taking into account temperament features, athletes training combat sports have a significantly higher level of alertness, endurance and activeness as well as a significantly lower level of reactivity. The remaining temperament features did not differentiate the respondents. Therefore, it may be concluded that athletes are more resistant to strong and long-lasting stimulation and a lower level of reactivity makes them more efficient in sports activity and in competitive and risky situations [10, 30]. Low reactivity brings about the fact that they have an optimal level of achievements and aspirations while failures do not disorganise their initial objectives and plans. Failures are treated as a challenge and a chance for further development. Low reactivity, high activeness, need for stimulation and belief in themselves are important determinants of success during training and competitions [31, 32]. A low-reactive athlete functions well during prestigious competitions, fights stress and has divided attention while moments of threat paradoxically lead

to her increased efficiency. Such a person is persistent, conscientious, emotionally resistant and able to work intensively for a long time, which contributes to sports success.

In the light of the results obtained from the EPQ Questionnaire, it may be concluded that in situations of cooperating with others athletes are extrovert, open to the world, sociable, able to share their feelings and competent [20]. Significant differences concerning neuroticism indicate a better control of emotions among women dealing with sport. An average level of emotional balance is an optimum in which an athlete presents emotions but at the same time she can moderate them when it is required by the situation. A configuration of the results of extroversion and neuroticism reveals type B personality of the examined athletes. According to Eysenck, this is a healthy type, able to keep her autonomy. The B pattern of behaviour predisposes a person to dealing with distress. It is typical of sanguine and phlegmatic people who are best prepared for dealing with the surrounding reality [33].

A highly significant difference between the examined groups was revealed with regard to psychoticism level. Women training judo, wrestling, boxing and taekwon-do have a significantly higher level of psychoticism than women who do not train any sport. Scientists correlate this tendency not with psychotic deficiencies but with a higher tendency to break conventions and higher mental flexibility. During sports competition athletes have to react immediately and predict their opponent's movements.

The obtained results are in line with the conclusions drawn in the research carried out by Unrug and Malesza, where they compared individuals training professional and amateur sport [34]. The scientists believe that an increased level of psychoticism is necessary in order to be efficient in combat sports. Additionally, the presented level of non-conformist behaviours indicates this as well. Female athletes have a significantly higher level of non-conformism. They live according to their own rules, beliefs and ideas and do not conform to social pressure. It may be proved by the fact that they took up an activity which is stereotypically reserved for men. Non-conformist athletes believe in their own strength, which gives them a feeling of efficiency. They are internally motivated and hard-working, and they function well in conditions of sports stress, social stress, etc.

Conclusions

The analysis of the material showed that female athletes training judo, boxing, wrestling and taekwon-do contest traditional femininity since they have more personality traits stereotypically attributed to men (high level of masculinity). Scientists perceive high psychoticism of the athletes as a tendency to break conventions. As highly non-conformist individuals, they do not conform to social pressure and live according to their own system of values training sports which are stereotypically treated as masculine. Masculine activity is an attempt at overcoming a stereotypical attitude to women in sports activity. Training combat sports gives them a chance to gain new skills and ways of dealing with stress and difficulties, which are fundamental for well-being. It also teaches how to release negative energy and provides rich experiences used by women not only in sports activity. Combat sports are trained by women with low emotional and sensory sensitivity; however, it gives them advantage in sports competition.

Acknowledgements

The research was accomplished within the framework of re-

search project of Faculty of Physical Education and Sport in Białka Podlaska, Józef Piłsudski University of Physical Education in Warsaw – MN. I/3 – financed by the Ministry of Science and Higher Education.

Literature

1. Heilman M.E., Wallen A.S., Fuchs D., Tamkins M.M. (2004). Penalties for success: Reactions to women who succeed at male gender – typed tasks. *Journal of Personality and Social Psychology* 89, 416-427.
2. Szmajke A., Pawłowska A., Wiliński W. (2005). Competition makes a man? Adapting changes of identity (gender identification) in women and men awaiting sports competition. In E. Wlazło (Ed.), *Youth sport in psychological research* (pp. 147-169). Wrocław: AWF Wrocław. [in Polish]
3. Sahaj T. (2004). Women in contemporary sport. *Sport Wyczerpnowy* 1-2/469-470, 55-63. [in Polish]
4. Gasanowa Z.A. (1997). Women in masculine sports. *Teoria i Praktyka Fizycznej Kultury* 7, 23-26. [in Russian]
5. Stirling L., Schultz J. (2011). Women's football: still in the hands of men. *Sport Management International Journal* 7(2), 53-78.
6. Łubyszewa Ł.I. (2000). Woman and a social aspect of sport. In S. Socha (Ed.), *Problems of sexual dimorphism in sport* (part 6) (pp. 20-24). Katowice: AWF Katowice. [in Russian]
7. Renzetti C.M., Curran D.J. (2008). *Women, men and society*. Warszawa: PWN. [in Polish]
8. Wyźnikiewicz-Kopp Z. (1996). Women's sport in contemporary world. In S. Socha (Ed.), *Problems of sexual dimorphism in sport* (part 3). Katowice: AWF Katowice. [in Polish]
9. Mroczkowska H. (2009). The feminine auto perception of sporting competences and aspirations achievements. *Polish Journal of Sport and Tourism* 16, 229-238.
10. Strelau J., Zawadzki B. (1993). The Formal Characteristics of Behavior – Temperament Inventory (FCB-TI): Theoretical assumptions and scale construction. *European Journal of Personality* 7, 313-336.
11. Gacek M. (2005). Physical activity in the lifestyle of academic youth – psychological conditions. *Annales UMCS Sectio D Medicina* 60 (suppl. 16), 108, 500-503. [in Polish]
12. Litwiniuk A., Daniluk A. (2009). Selected personality traits of women training basketball and taekwon-do WTF. In Z. Żukowska (Ed.), *Sports activity of women. Conditions and results* (pp. 56-62). Warszawa: Polskie Stowarzyszenie Sportu Kobiet. [in Polish]
13. Lamarre B.W., Nosanchuk T.A. (1999). Judo – the gentle way. A replication of studies on martial arts and aggression. *Perceptual and Motor Skills* 88, 992-996.
14. Lamarre B.W., Nosanchuk T.A. (2002). Judo training and aggression: comment on Reynes and Lorant. *Perceptual and Motor Skills* 94, 1057-1058.
15. Reynes E., Lorant J. (2002). Karate and aggressiveness among eight-year-old boys. *Perceptual and Motor Skills* 94, 1041-1042.
16. Reynes E., Lorant J. (2004). Competitive martial arts and aggressiveness: a 2-yr. longitudinal study among young boys. *Perceptual and Motor Skills* 98, 103-105.
17. Reynes E., Lorant J. (2001). Do competitive martial arts attract aggressive children? *Perceptual and Motor Skills* 93, 382-386.
18. Kuczyńska A. (1992). *Psychological gender inventory*. Warszawa: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego. [in Polish]
19. Zawadzki B., Strelau J. (1997). *Formal Characteristics of Behaviour – Temperament Questionnaire. Manual*. Warszawa: Pracownia Testów Psychologicznych PTP. [in Polish]
20. Brzozowski P., Drwal R.Ł. (1995). *Polish adaptation of the Eysenck Personality Questionnaire EPQ-R*. Warszawa: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego. [in Polish]
21. Popek S. (2000). *Creative behaviour questionnaire*. Lublin: UMCS. [in Polish]
22. Soroka A., Bergier J. (2011). Sense of gender identity in women practising football with consideration of the formation. *Polish Journal of Sport and Tourism* 18, 45-58.
23. Szmajke A., Adamczuk A. (1993). Self-esteem, the level of aggressiveness and gender identity. *Trening* 20(4), 117-126. [in Polish]
24. Starzomska M., Kowalczyk A. (2012). Psychological gender of athletes in the light of the results of the authors' own research. The issue of femininity. *Kwartalnik Naukowy Towarzystwa Uniwersyteckiego Fides Et Ratio* 12(4), 127-140. [in Polish]
25. Cashmor E. (2002). *Sport psychology. The key concepts*. London: Routledge.
26. Pospiszyl K. (1997). Psychology of women and psychology of men. *Problemy Rodziny* 3(213), V-VI, 15-21. [in Polish]
27. Guskowska M., Rogacz D., Wit B. (1999). Temperament and gender role orientation in women participating in recreational gymnastics. *Physical Education & Sport / Wychowanie Fizyczne i Sport* 43(4), 81-89.
28. O'Reilly J., Cahn S.K. (2007). *Women and sports in the United States*. New England: Northeastern University Press.
29. Terelak J., Górecki A. (2010). Correlation between personality traits and judo athletes' sports achievements according to H.J. Eysenck. *Kultura Fizyczna* 5-8, 1-9. [in Polish]
30. Dudek B., Hauk M., (2010). Reactivity and the selection of a job. *Przegląd Psychologiczny* 53(2), 195-210. [in Polish]
31. Doliński D., Szmajke A. (1991). Athletes' personality as a determinant of their functioning in sports conditions. In T. Tysza (Ed.), *Psychology and sport* (pp. 78-79). Warszawa: AWF Warszawa. [in Polish]
32. Gracz J., Tomczak M. (2008). Selected temperamental properties and achievement motivation of fencers. *Studies in Physical Culture and Tourism* 15(2), 109-118.
33. Burdzicka-Wołowik J. (2012). Personality in stereotypically masculine sports. *Zeszyty Metodycznie Naukowe AWF Katowice* 33, 127-137. [in Polish]
34. Unrug M., Malesza M. (2012). Differences in personality and temperament of people training amateur and professional combat sports. *Młoda Psychologia* 1, 117-131. [in Polish].

Submitted: December 17, 2013

Accepted: January 20, 2014