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PRE AND POST COMPETITION ANXIETY AND SELF-CONFIDENCE IN KOSOVO GYMNASTS

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Abstract:
The aim of the study was to measure the level of anxiety and self-confidence before and after competitions in artistic gymnastics. The participant was 46 gymnasts aged 15 to 27, 14 female and 32 male. Results indicate no differences in average comparing the analysis of the level of cognitive anxiety, somatic anxiety, and self-confidence, between the first measure realized 30 minutes before the competition and second measure, realized when the gymnasts were fully relaxed. For the realization of the study was used formal questionnaires to collect needed data through the questionnaire (CSAI-2R; Cox et al., 2003) and other general data which was considered important for research. In order to analyze results was used concluding analyzes which show significant differences between males and females on the self-confidence, where males demonstrate a higher level of confidence while females have demonstrated a lower level of self-confidence. While, as regards somatic and cognitive anxiety there were no significant statistic differences found in relation to gender. Based on the regressive analyze it appears that predicting factor in the case of somatic anxiety is cognitive anxiety. The intensity of cognitive anxiety causes somatic anxiety with the value β = .632, p=.000. Anxiety and self-confidence appear to be very important factors in achieving the top results, as they also have an impact on each other and also express their impact depending on specifics and peculiarities of gymnasts.

Keywords: artistic gymnastics, competition, cognitive anxiety, somatic anxiety, self-confidence

Introduction

Gymnastics as an discipline from the sports perspective, is always seen with a special significance for the positive impact it has on the human personality (Pavlovic, et al., 1988), as Barnier (1950), said about sports gymnastics: "*sports gymnastics is appropriate for people who are disciplined, those who are courageous, determined, fantasize easily, and those who desires excellent training. Usually, these people are stable. Good gymnasts are often found in a profession in which the care and punctuality are required. However, this sport is not desired by people who are not disciplined, slow, elderly, scared, and concerned, as well as those who have little practical intelligence*".

Gymnasts, in general, are characterized by high physical and psychological ability, in realizing tough elements of gymnastics, and they are very god at the execution of those elements (Gymnastics Zone, 2011). Science finally has some facts to prove what we have all known for gymnastics, gymnastics is one of the most difficult sport on the planet for women (and men), both mentally and physically. From this, it becomes clear that gymnastics activities are not easy at all, both from the physical and psychological aspects. This fact made many authors to study psychological aspects before and after the competition, in the gymnastics sport and other sports in which the application of sport`s psychology is expressed. According to Wang, Hsu, & Huang (2013) in cases when gymnasts have the same level of preparation and are on the same level with the technical work performance, the winner is determined by psychological factors.

From all psychological factors, thought to influence sports performance, anxiety is often considered the most important one (John S. Raglin, Yuri L. Hanin, 1999). In generally, the emphasis should be made at the cognitive and somatic anxiety. Anxiety is a psychological factor which often is linked with high level of worries (Hanton, Thomas and Maynard 2004; Martinent and Ferrar 2007), injuries are considered very important and connected with anxiety in gymnastics sport (Waples, 2005; Cheung and Lo 1996; Cartoni, Minganti, and Zelli, 2005 (Pero, Minganti, Pesce, Capranica, & Piacentini, 2013). Anxiety within limits is useful, motivating and it helps in achieving top results, as far as anxiety does not exceed the level of normal anxiety. According to Marten`s multidimensional theory, Vealey & Burton, (1990) the anxiety is manifested as cognitive and somatic anxiety (Espejel, Walle, Rodriguez, Villanueva, & Gurrola, 2013). There are two types of anxiety which particular characteristics: cognitive anxiety which includes thoughts, beliefs, their interpretation, (worries, neurosis) etc., and somatic anxiety or expression of anxiety through physical symptoms and it affects: cardiovascular system (tachycardia, hypertension, etc.), respiratory system (need for air, feeling that the

breath-taking is going to stop), skin changes (red signs in the skin, change of body temperature etc.), musculature (trembling, muscular tensions etc.), gastrointestinal system (diarrhea, stomach aches etc.), and other symptoms, such as headaches, sleeping troubles etc.).

Authors Hardy and Crace (1989) dealt with "Anxiety" which is very usual among the gymnasts and has been researched and studied properly how to deal with it. The first recommendation for the trainers was that they should not neglect and underestimate the importance of anxiety among the athletes. Imagine when you are just one night ahead of beginning competition and you begin to worry and feel concerned about your performance and results which you are going to achieve, worries that will increase without finding a particular reason and this starts with uncomfortable or negative feelings. The body begins to impact and therefore the following changes are realized: muscular tensions, uncomfortability, frequent urination and the mouth gets dry. All these symptoms make us understand we are out of control. Thoughts are focused towards us, thus, the negative thoughts dominate and directly impact in defeating of ourselves. The majority has the mixture of reactions during the period before the competitions, but it is extremely important the impact of the entire situation in the results depends on very much from the individual, his confrontation with the anxiety, importance of the competition and level of self-confidence.

Self-confidence in sport is related to the ability of someone to think that he is going to win the competition and that he can be successful in sports competitions (Ray, 2015). Maybe, we found a very concrete answer in the literature if we ask a question: why I feel worried, why my hands are sweating and getting cold, why I feel anxiety?

The study was concentrated on the research of pre and post competition anxiety and self-confidence in Kosovo gymnasts. The study of such a nature has been conducted by authors (Hall, Kerr, & Matthews, 1998), they researched the anxiety before and after the sports competition. Hierarchical analyze of regression that above all the perfection was consistent and of particular importance about the cognitive anxiety. The ability for consistent perception was a predictor of confidence; also, the level of tasks or exercises was an important factor for the cognitive anxiety. Findings of Smith's (1996) helped and suggest that the situation of anxiety is impacted by multidimensional factors and not only by individual differences. Also, similar research has been conducted by authors Espejel, Walle, Rodríguez, Villanueva, & Gurrola (2013), the anxiety before the competitions and self-confidence of Pan American gymnasts, they researched the intensity and direction of indicators of anxiety before the competitions (cognitive and somatic). Also, they researched the issue of self-confidence of gymnasts who took part in Pan American competitions in 2011. In this study, which included 60

gymnasts male and female, results show that cognitive intensity and anxiety showed a positive correlation with somatic anxiety, the self-confidence showed a negative correlation with the intensity of cognitive anxiety, and also, it has foreseen it. Among the female was reported a higher level of somatic anxiety than male. Thus, it was reached a conclusion that confidence lowers perception about anxiety, (Lois, & Arce, 2007; Cox, Martens, & Rusell, 2003).

Wang, Hsu, & Huang, (2013) researched anxiety before the competitions with the sportsmen and when the anxiety was a "peculiarity" of a person, then it has influenced and had a positive liaison with somatic and cognitive anxiety and negative link-up with the self-confidence. Also in this study, the link-up was positive between the somatic and cognitive anxiety and negative with the self-confidence.

According to social cognitive theory Bandura, (1996) and the model of results expectations, the anxiety and development of performance by Krane, Williams, and Fetlz (1992), this study has conducted further researches regarding a relation between the anxiety, result expectations and athletes' performance (Alexander & Krane, 1996).

Data from earlier researches during the measurement of anxiety suggest that children and teenagers, just the same as adults, are able to differ cognitive and somatic anxiety (Muris, Merckelbach, Meesters and van den Brand, 2012; Reynolds &Richmond 1985; Turner & Barrett, 2003; White & Farrel, 2001 Grossbard, Smith, Smoll, & Cumming, 2009).

Methods & Materials

The samples included in the research was 46 respondents, 32 male, and 14 female, collected through a convenience samples in the national artistic gymnastics competition in Kosovo. The age of participants in the study was from 15 to 27 years, with the average age M=18.8 and SD=2.9. Participants in the research were from several clubs of Kosovo cities, who are also participants in the national competitions organized by Kosovo Gymnastic Federation.

In order to measure the emotional intensity and emotional reactions of gymnasts before and after a competition, a questionnaire is used (CSAI-2R; Cox et al., 2003). The questionnaire contains 27 items, which are distributed in three scales to measure the level of somatic anxiety with the internal consistence, α=.87, cognitive anxiety with α =.83, and self-confidence α=.82. The given answers are ranked according to Likert scale estimating from 1 to 4.Administration of questionnaires including data collection procedures, are dedicated to special rules due to research specifics, because the idea of research was to measure the level of anxiety and self-confidence before and after a

competition. First at all participants of the research were informed with the aim of research. Thus, the participants completed the questionnaires twice. The completion of the questionnaire in the first time was realized 30 minutes before the competition and second time of administration of questionnaires was during the time when participants of the research did not have psychological burdens when they were relaxed. Also, the participants in the research were informed about the duration of administration questionnaire where the time to administer a questionnaire was 15 minutes. Based on the results of fundamental parameters, the following parameters appeared: arithmetic average (M), standard deviation (DS), while in order to see changes between male and female has been applied t-test. Also, analyses of correlation to see the interaction and regressive analyses have been applied to found predictive factors of anxiety or self-confidence. Symbols: (F) Female, (M) Male, (1) first measuring, (2) second measuring.

Results

Results will present the main findings of the study by using the adequate concluding analyses to give an answer to the research questions, and to give an explanation to the aim of the research. The internal consistence of the questionnaire in all three scales of questionnaires was at the accepted level to trust the sustainability of measures. The consistence values, in order to be trustworthy, must be $\alpha \geq 0.6$

Table 1: Alfa`s coefficients for CSAI-2, for the first and second measure

Scales of CSAI-2	***Alfa (N=46)***
Cognitive Anxiety-1	.83
Somatic Anxiety-1	.87
Self-confidence-1	.82
Cognitive Anxiety-2	.86
Somatic Anxiety-2	.81
Self-confidence-2	.62

The result presented in the Table 1 show that the internal consistence of the questionnaire is very high and it makes understand that the items within the certain grades have sustainability and they measure what they designed for.

Table 2, Analyses of comparing the average values after two measuring of the same (Paired sample t-test):

Scales of CSAI	M	SD	t-test	sig.
Cognitive anxiety 1	16.5	5.0	-1.82	p=.076
Cognitive anxiety 2	18.0	5.51		
Somatic anxiety 1	17.1	5.8	.252	p=.802
Somatic anxiety 2	16.9	4.9		
Self-confidence 1	27.3	5.2	-1.28	p=.208
Self-confidence 2	28.5	3.6		

In the Table 2, by observing the differences in average values through comparative analyses, the first measure realized 30 minutes before the competition shows the level of cognitive anxiety, level of somatic anxiety and self-confidence in a calm psychological state when gymnasts were relaxed, the results show that there is no significant statistical differences between the first and second measuring.

Table 3: Gender differences in cognitive anxiety, somatic anxiety and self-confidence obtained from the measuring 30 minutes before the competition

Scales of CSAI-2	Gender	M	SD	t-test	sig.
Cognitive anxiety	M	15.6	3.98	-1.147	p=.257
	F	17.5	6.88		
Somatic anxiety	M	16.2	4.02	-1.160	p=.252
	F	18.3	8.37		
Self-confidence	M	28.3	4.50	2.062	p=.045*
	F	24.8	6.52		

Based on the results found through the t-test analyses in the table 3, significant differences are noticeable between the male and female as regards the level of self-confidence, where male express highest level of self-confidence with M=28.3 and DS=4.5, while female have expressed the lowest level of self-confidence with M=24.8 and DS=6.52 where the level of significance is p=.045*. While, for the cognitive and somatic anxiety there no significant differences found in relation to gender.

Table 4: Correlation between the first and second measuring of the cognitive and somatic anxiety and self-confidence

	1	2	3	4	5
1. Cognitive anxiety 1					
2. Somatic anxiety 1	.799**				
3. Self-confidence 1	-.417**	-.396**			
4. Cognitive anxiety 2	.463**	.454**	-.187		
5. Somatic anxiety 2	.352*	.468**	-.160	.440**	
6. Self-confidence 2	-.313*	-.383*	.236	-.362*	-.466**

r = Pearson correlation. *p < 0.05. **p < 0.01

Table 4 presents correlations between the first and second measuring of cognitive and somatic anxiety, and self-confidence. It also shows that there is positive link-up between the cognitive and somatic anxiety, and negative link-up of self-confidence, with somatic and cognitive anxiety. Through the analyses of linear regression we have incorporated in the model several variables which were believed to have impact on the appearance of somatic anxiety before the competition, so we have incorporated into the model the variable of somatic anxiety as a criterion, while as a determining factor are included cognitive anxiety before the competition, self-confidence before the competition, age, as well as the result achieved in the competition. These variables explain the somatic anxiety at the level 70% of the variance. As a predicted factor for somatic anxiety is the cognitive anxiety, the intensity of cognitive anxiety causes somatic anxiety of the value β=.632, p=.000, while the self-confidence before the competition, age and achieved results in the competition appeared to factors which impact the level of significance in the appearing of somatic anxiety.

Discussion

The study was designed to measure and compare the level of cognitive anxiety, somatic anxiety, and self-confidence in a sample of 46 respondents, participants from several clubs of Kosovo Gymnastic Federation. According to the study results, was confirmed the interaction between psychological factors pre and post competitions, specifically anxiety and self-confidence. Results showed that were no significant differences between anxiety and self-confidence pre and post competition, but it was strong interaction and correlation between anxiety pre and post competition. Correlation between first and second measuring of cognitive and somatic anxiety and self-

confidence shows a positive correlation between first and second measurement, same as research conducted with pan-American gymnasts, which concluded that intensity of anxiety in relax time, drive and is an indicator of anxiety pre-competitions (Espejel., et al, 2013). Through the analyses of linear regression was incorporated into the model the dependent variable of somatic anxiety as a criterion, while as a determining factor are included cognitive anxiety before the competition, self-confidence before the competition, age, as well as the result achieved in the competition. As a predicted factor for somatic anxiety is the cognitive anxiety, the intensity of cognitive anxiety causes somatic anxiety, while the self-confidence before the competition, age and achieved results in the competition appeared to factors which impact the level of significance in the appearing of somatic anxiety. Significant differences are noticed between the male and female as regards the level of self-confidence where male express a higher level of self-confidence with M=28.3 and DS=4.5, while female have shown lower level of self-confidence with M=24.8 and DS=6.52 where the level of significance is p=.045*.

Research implication are, coaches who work with gymnasts in Kosovo and not only, should take in consideration the role and importance of working on psychological factors with the aim of achieving better results in the competition and make feel better, all this should reflect to reduce anxiety and increase self-confidence.

As a conclusion of the study are anxiety is higher in the female gymnasts, and self-confidence is higher to male gymnasts, and cognitive anxiety is a predictor of somatic anxiety.

References

1. Alexander, V., & Krane, V. (1996). Relationships among performance expectations, Anxiety, and Performance in Collegiate Volleyball Players. *Jurnal of Sports Behavior*, 246-266.
2. Erceg, M., Milic, M., & Zivkovic, V. (2015). Pre-Competitive Anxiety in Soccer Players. *Research in Physical Education, Sport and Health*, 3-8.
3. Espejel, A. P., Walle, J. L., Rodriguez, J. T., Villanueva, M. M., & Gurrola, O. C. (2013). Pre-competitive anxiety and self-confidence in pan american gymnasts. *Science of Gymnastics Journal*, 39-48.
4. Gezelsofloo, H., Parsian, H., Choorli, A., & Feizi, M. R. (2013). The Impact of Pre-Competition Anger on Self-Confidence and Success of Volleyball Players in Premier League and its Relation with Athletes' Experience. *Journal of Educational and Management Studies*, 215-220.

5. Grossbard, J. R., Smith, R. E., Smoll, F. L., & Cumming, S. P. (2009). Competitive Anxiety in young athletes: Differentiating somatic anxiety, worry, and concentration distrupion. *Anxiety, Stress & Coping*, 153-166.
6. Hall, H. K., Kerr, A. W., & Mattews, J. (1998). Precompetitive Anxiety in Sport: The Contribution of Achievement Goals and Perfectionism. *Jurnal of Sport and Exercise Psychology*, 194-217.
7. Hardy, C., & Crace, K. (1989). *http://facultywp.ccri.edu/ksalisbury/files/2012/02/PrecompetitiveAnxiety.pdf*
8. Pavlovic, J., Budja, P., Radojevic, J., Sedic, P., Gergovic, M., Peleksic, V., Koshi, N. (1988). *Gjimnastika Sportive.* Prishtinë: Enti i teksteve mësimore Prishtinë, Pallati i shtypit.
9. Pero, R. D., Minganti, C., Pesce, C., Capranica, L., & Piacentini, M. F. (2013). The relationship between pre-competition Anxiety, Self-efficacy, and fear of injury in elite team gym athletes. *Kinesiology*, 63-72.
10. Ray, L. (2015, Jan 27). *http://www.livestrong.com/article/105292-define-self-confidence-sports*
11. Ronald E. Smith, Frank L. Smoll, Sean P. Cumming, and Joel R. Grossbard. (2006). Measurement of Multidimensional Sport Performance Anxiety in Children and Adults: The Sport Anxiety Scale-2. *Journal of Sport & Exercise Psychology*, 479-501.
12. Wang, S. C., Hsu, M. H., & Huang, C. C. (2013). A study of pre-competition anxiety of Taiwan division B male table tennis players. *The 13th ITTF Sports Science Congress May 11-12, 2013*, (pp. 139-142). Paris, France.
13. Yuri L. Hanin. (1999). Competitive anxiety. In J. S. Yuri L. Hanin, *Emotions in sport* (p. 90). New Zeland: Human Kinetics.
14. *http://gymnasticszone.com/science-shows-gymnastics-is-the-most-difficult-sport-in-the-world*