Pre-competition anxiety score among Elite Boy Swimmers in Iran

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Abstract

Introduction: The present study was performed to measure the precompetitive anxiety and its two subcomponents (somatic and cognitive) and its relationship with age, weight, height and body mass index. Methods: This is a descriptive study performed using a demographic questionnaire and sport competition anxiety test (SCAT) designed by Martens consisting of 15 questions. The study population consisted of 14 elite boy swimmers. The questionnaires were filled out by swimmers 30 minutes before competition. The data were analyzed by SPSS software, using pair t-test, student t-test and linear regression test. Results: The mean score of precompetitive, somatic and cognitive anxiety was 17.93±3.25, 14.71±2.95, 3.21±0.97, respectively. The percent of somatic and cognitive competitive anxiety was not significantly different. The results showed no significant relationship between precompetitive, somatic and cognitive anxiety with age, weight, height and body mass index of swimmers ($p>0.05$). Conclusions: Our study suggests that the swimming competition equally effects on somatic and cognitive components of anxiety.

Key words: precompetitive anxiety, cognitive, somatic, male, swimmer

Introduction

Anxiety is defined as a significant negative effect (1) and is a common fact of everyday life that plays an important role in human life. Anxiety in athletes is common and is a physiological response to a real or imagined threat. According to Murphy over 50 percent of consultations in athletes at an Olympic festival were related to stress (2). The findings of Katkat in male Judo, Karate and Taekwondo athletes (3), Raglan et al in high school swimmers (4), Parnabas and Yahaya in Malaysian athletes (5), Serhat and Yildiz in Turkey elders wrestling national team (6), Matsumoto et al in male elite judo athletes (7), Singh et al among male inter-collegiate badminton players (8), Mottaghi et al in the futsal players (9) and Esfahani and Softlu among volleyball players (10) suggest the existence of sport anxiety in athletes.

Anxiety includes two subcomponent, cognitive and somatic (11, 12). The somatic component is often accompanied by physiological aspect, which is related to negative symptoms such as nervousness, elevated blood pressure, dry throat and mouth, muscle tension, rapid heart rate and sweaty palms (11-13). This type of anxiety had no role in decreasing the performance (11, 14). But, the mental component of anxiety is cognitive which is characteristic of fears about performance, failure image, failure to concentrate and disturbed consideration (11, 12).

The mean score of cognitive anxiety among runners of different skills were 12.41 for national, 14.73 for state, 17.39 for district and 21.45 for university (15). The results of a study showed that cognitive and somatic anxiety score were 16.6 ± 3.7 and 15.4 ± 3.2 in 18 elite male basketball

players, respectively (16). According to Cooper, the somatic and cognitive anxiety level was 14.08±3.87 and 17.95±4.16 among 37 youth classic soccer players with CSAI-2 questionnaire (17).

A positive amount of anxiety is required to achieve a desirable task. Higher level of anxiety physically inhibits performance by causing muscular tension and disturbing coordination of the movements.

Recent research has shown that athletes suffer stress which significantly affects mental health (18). Nowadays one of the most challenging tasks for athletes is how they improve psychological behavior and performance in competitive sports. It has been previously accepted that psycho-physiological conditioning programs and traditionally skill practices are of fundamental prominence in high-level competitive sports, which highly affects an athlete's performance. Researchers showed a significantly negative correlation between anxiety scores and sport performance, that higher anxiety levels impair sporting performance (15, 19, 20). Also, competition anxiety is negatively correlated with sport experience, sport ability and general physical competence (21).

Remco et al detected that cognitive state anxiety but not somatic state anxiety was associated with swimming performance in child swimmers during competition (22). Also, Parnabas et al showed that higher cognitive anxiety lowered the sport performance (23). Even, Hatzigeorgiadis and Chromi et al showed that intensity of cognitive anxiety had low to moderate negative correlations with approach coping strategies (24). Also, Vosloo et al showed that compatible groups of swimmers had a more facilitative clarification of somatic anxiety and high levels of self-confidence (25). Cognitive anxiety had a linear relationship with performance, and somatic anxiety had an inverted-U relationship with performance (26).

The aim of the study was to measure sport anxiety and to examine the difference of subcomponents of sport anxiety. Also the present study aimed to determine the relationship of competitive anxiety (cognitive and somatic) between some variables (age, weight, height and Body Mass Index) among elite boy swimmers.

Methods and Materials

The subjects for the present study included 14 elite boy swimmers with ages ranging from 10 to 13 years. A questionnaire to record some data such as age, weight and height was used by the researcher. The investigator used the Sport Competition Anxiety Test (SCAT) questionnaire for assessing sport competition anxiety approximately 30 minutes before competition. The SCAT questionnaire consists of fifteen items of which five items, including first, fourth, seventh, tenth and thirteenth items are neutral questions and are not scored. All items are rated on 3-points Likert-type scale that varies from 1 (hardly ever), 2 (sometimes) and 3 (often). The items number 6 and 11 are scoring reversed, 1 (often), 2 (sometimes) and 3 (hardly ever). The competitive anxiety score is computed by summing ten items with 10 for low anxiety and 30 for high anxiety. The questions 2, 6, 8, 9, 11, 12, 14, and 15 were related to evaluation of physical or somatic competitive anxiety level, and questions 3 and 5 were for cognitive competitive anxiety evaluation (27). To compare the cognitive and physical anxiety scores, the score obtained was expressed as a percentage. The competitive score less than 17 said low level of, 17-24 an average level of and more than 24 a high level of anxiety. The SCAT has also been extensively used in sports research and shown to be both reliable and valid (28, 29).

The athletes who met the selection criteria were included and convinced that the information provided by himself would be kept confidential and would be used for research purposes only. All the participants were informed of the study objectives and how to complete the questionnaires. Before the interview, written informed consent was obtained from all of their parents, who were assured that the information would remain private, and they were told that they would be allowed to leave the study at any stage if they did not wish to continue. The athletes were asked to read all instructions carefully and give the answer of questions as exactly as possible. All data were collected 30 minutes before competition.

Subjects diagnosed with systemic diseases and who had performed any intense exercise or consumed alcohol for two weeks before competition were excluded from the study.

The present study was approved by the Ethics Committee of Jahrom University of Medical Sciences. The participants received oral information about the study.

The data were analyzed by SPSS for Windows (version 15; SPSS Inc., Chicago, IL., USA), and distribution of data was expressed in mean and standard deviation. Pair (dependent) t statistical test was used to examine difference of cognitive and somatic score and student (independent) t test was used for difference of anxiety subcomponents and age, weight, height and BMI groups. Linear regression test was used for relationship anxiety components with age, weight, height and BMI. Statistical significance was set at $P < 0.05$ for all comparisons.

Results

Fourteen young elite male swimmers participated in our study. Table 1 provides some data of participants such as age, height, and weight and body mass index.

The majority of the boys were 12 years old (50.0%) and age varied from 10-13 years with mean age of 11.71±0.82 years. The result showed that 57.1% participants had BMI ≥19.5.

The response of subjects to Sport Competition Anxiety Test is shown in Table 2.

Table 1: Demographic data of youth swimmer players

Data	Number (n=14)	Percent (%)
Age (year), 10	1	7.1
11	4	28.6
12	7	50.0
13	2	14.3
Height (cm), <155	7	50.0
≥155	7	50.0
Weight (kg), ≤45	7	50.0
>45	7	50.0
Body Mass Index, <19.5	8	57.1
≥19.5	6	42.9
Continues variables	Mean	SD*
Mean of age	11.71	0.82
Height (cm)	155.64	8.09
Weight (kg)	47.00	6.66
Body Mass Index	19.55	1.29

* Standard Deviation

Table 2: Participants response to the Sport Competition Anxiety Test

Item	Hardly ever, No (%)	Sometime No (%)	Often No (%)	Mean	Median	Standard Deviation
2. Before I compete I feel uneasy	0 (0.0)	6 (42.9)	8 (57.1)	2.57	3	0.51
3. Before I compete I worry about not performing well	5 (35.7)	4 (28.6)	5 (35.7)	2	2	0.88
5. When I compete, I worry about making mistakes	11 (78.6)	3 (21.4)	0 (0.0)	1.21	1	0.43
6. Before I compete I am calm	3 (21.4)	7 (50.0)	4 (28.6)	2.07	2	0.73
8. Before I compete I get a queasy feeling in my stomach	9 (64.3)	4 (28.6)	1 (7.1)	1.43	1	0.65
9. Just before competing, I notice my heart beats faster than usual	5 (35.7)	6 (42.9)	3 (21.4)	1.86	2	0.77
11. Before I compete I feel relaxed	1 (7.1)	7 (50.0)	6 (42.9)	2.36	2	0.63
12. Before I compete I am nervous	9 (64.3)	2 (14.3)	3 (21.4)	1.57	1	0.85
14. I get nervous wanting to start the game	9 (64.3)	2 (14.3)	3 (21.4)	1.57	1	0.85
15. Before I compete I usually get uptight	12(85.7)	0 (0.0)	2 (14.3)	1.29	1	0.73

Table 3: Mean competitive anxiety scores by some variables

	Somatic, Mean (SD)	Cognitive, Mean (SD)
All swimmers	14.71 (2.95)	3.21 (0.97)
Age (year), 10-11	13.20 (1.10)	3.20 (1.30)
12-13	15.50 (3.36)	3.22 (0.83)
p-value	0.081	0.969
Height (cm), <155	13.14 (0.69)	3.00 (1.16)
≥155	16.29 (3.55)	3.43 (0.79)
p-value	0.058	0.433
Weight (kg), ≤45	13.57 (1.62)	3.29 (1.11)
>45	15.86 (3.62)	3.14 (0.90)
p-value	0.165	0.796
BMI, <19.5	13.75 (1.39)	3.38 (10.6)
≥19.5	16.00 (4.05)	3.00 (0.89)
p-value	0.241	0.498

With regard to the cognitive subscale, high-percentage responses were identified when participants were asked specific questions related to experiencing cognitive anxiety previous to a competition. When responding to "Before I compete I worry about not performing well" 35.7% and 28.6% of the participants responded hardly ever or sometimes. Near 79% of participants responded hardly ever or sometimes to the item "When I compete, I worry about making mistakes."

With regard to the somatic subscale, high-percentage responses were identified when participants were asked particular questions related to experiencing somatic anxiety before competition. When responding "Before I compete I usually get uptight" about 86% of participants stated hardly ever. When responding to "Before I compete I am nervous" approximately 64% responded hardly ever. Over 64% participants responded hardly ever to the item "I get nervous wanting to start the game". Also, over 85% participants responded hardly ever to the item "Before I compete, I usually get uptight".

The overall mean score of sport anxiety was 17.93±3.25 among swimmers, that was higher than 50% of total score (30 score). According to classification of anxiety, 35.7% (5), 57.1% (8) and 7.1% (1) of elite boy swimmers had low, average and high level of sport anxiety 30 minutes before competition, respectively.

Our result showed that the percentage of somatic sport anxiety (61.31±12.28) is not significantly different to cognitive component (53.51±16.25) among male elite swimmers (Table 3). Also, our results revealed that the average somatic and cognitive anxiety score was not significantly different for the boy swimmers aged 10-11 years over boys aged 12-13 years, with a difference of 2.30 (p=0.081). Our results revealed that, although the average somatic anxiety score appeared to be slightly higher for the participants with height less than 155 cm, weight ≤45kg and BMI<19.5 over than other groups, height ≥155 cm, weight >45 kg and BMI≥19.5, scores between the two groups were not significantly different. Based on the results we found no significant differences between the cognitive anxiety with age, height, weight and BMI groups.

The linear regression test revealed that the somatic and cognitive anxiety scores were not significantly related to age, weight, height and BMI.

Discussion

The study was designed to measure and compare the level of cognitive anxiety and somatic anxiety in a sample of 14 elite male swimmers.

Our result found that the precompetitive anxiety score was at an average level (17.93±3.25) and 59.77% of total score in swimmers. As stated by SCAT scale score (17-24), individuals have an average level of anxiety which is good in psychological terms. The precompetitive score was higher than in a study conducted by Sahu ((30) in 20 male batsmen (16.35±2.03) and 20 male bowlers (16.20±2.95), Sil (31) in 23 male basketball players (17.13±2.83), Kerketta (32) in 30 volleyball male players (18.66±2.82) and 30 soccer male players (17.85±3.74), Mottaghi et al (9) in soccer players (16.79±2.10), Schaeferet al (33) in 164 male golfers (15.57±3.96).

But the results of Saxena and Sathe (34) in 30 urban school state level male players (18.63±3.71), Kumar (35) in 30 male basketball players (20.79±0.64) and Matsumoto et al (7) in 43 male judo athletes (22.05±3.77), were higher than our result.

Precompetitive anxiety is dependent upon factors such as skill level, experience and general level of arousal in daily activities. Avramidou et al found that the competitive

environment increased the intensity of somatic anxiety and decreased the level of self-confidence in the twenty swimmers, whereas cognitive-anxiety intensity was not significantly different (36). Parnabas et al identified the negative correlation between cognitive anxiety and sport performance in swimmers (37).

Although, the percentage of somatic anxiety score was higher than percentage of cognitive score, there is no significant different. This result is similar to reports by Halilaj et al (38) and Agaoglu (39). Adversely, Mehdipoor et al (40) suggested more cognitive anxiety score than somatic component of anxiety among college athletes. Also, Soltani et al indicated that cognitive sport anxiety was significantly higher than somatic anxiety among team sport and individual sport athletes.(41).

The cognitive anxiety score in a study conducted by Parnabas et al (37) was lower (16.34 of 36) in 15 district swimmers, than in our finding.

However, according to Drive theory, the presence of audience for low skilled athletes, during the sport competition could increase their cognitive anxiety. Cognitive anxiety is the extent to which an athlete worries or has negative thoughts, and the negative thoughts may include fear of failure, loss of self-esteem and self-confidence. It could lead to poor performance of an athlete in competition. It may start before a competition in the form of pre-competitive anxiety that might affect performance throughout the competition.

The relationship between cognitive anxiety and performance was explained best in Multidimensional Anxiety Theory. This theory explains that cognitive anxiety effects performance. The relationship between cognitive anxiety, where an athlete experiences worries, negative thoughts and fear of failure, will affect the performance (42).

According to Martens and researchers (14), somatic A-state anxiety may be classified as a common response to competition and can cause no necessary harm to performance. Unfortunately, an increase in cognitive A-state anxiety in an athlete can cause concentration and focus disruption and a mental development of worry and self-doubt. A lack of focus and concentration while participating in sports can negatively affect overall performance. Possible causes of cognitive A-state are negative verbal feedback, lack of readiness for competition, a negative attitude towards a previous poor performance, or negative expectations from other individuals such as team members, coaches, and family members.

Significant differences are not noticed between the precompetitive, somatic and cognitive anxiety with age, weight, height and BMI. Also, Schaefer et al found that the age of golfers did not effect on their competitive anxiety (33). Inversely, Modrono and Guillen (43) reported a significant relationship between age and cognitive anxiety. Also, the results of the Taner et al study (21) pointed out that age is a one of the important factors in determining competition anxiety. Das and Ghosh (44) show that middle adolescent and late adolescent players differ significantly from each other and late adolescents are found more anxious than middle adolescents. Ferreira et al (45), Agurre-loaiza and Bermudez (46) and Mottaghi et al (9) showed that there was a significant inverse (negative) relationship between the competitive anxiety levels and age. This may have been the result of the older athletes having had more experience than their younger counterparts.

Conclusion

As a conclusion of the study, the somatic and cognitive anxiety is equal in the elite male swimmers 30 minutes before competition, and the factors of age, weight, height and body mass index have no effect on somatic and cognitive anxiety.

References

1. Rachman S. Clinical Psychology: Anxiety. 1998.
2. Murphy SM. The on-site provision of sport psychology services at the 1987. U. S Olympic Festival. The Sport Psychologist. 1988;2:105-130105-130.
3. Katkat D. Level of Anxiety and Burnout among Martial Athletes into 17th Mediterranean Games. Anthropologist. 2015;19(3):673-8.
4. Raglin JS, Morgan WP, Wise KJ. Pre-Competition Anxiety and Performance in Female High School Swimmers: A Test of Optimal Function Theory. Int J Sports Med. 1990;11(3):171-5.
5. Parnabas VA, Yahaya M. Competitive anxiety level before and during competition among Malaysian athletes. Pertanika Journal of Social Science & Humanities. 2010;18(2):399-406.
6. Serhat O, Yıldız M. Comparison Of State Anxiety Level Of Sportsmen Before And After Competition İn Turkey Elders Wrestling National Team. Sport & Society / Sport si Societate. 2013;13(2):76-80.
7. Matsumoto D, Takeuchi M, Nakajima T, Iida E. Competition Anxiety, Self-Confidence, Personality And Competition Peformance Of American Elite And Non-Elite Judo Athletes. 2000;32(3):12-21.
8. Singh MN, Abdul R, Singh KM. A Comparative Study Of Sports Competition Anxiety Between Male And Female Inter-collegiate Badminton Players Of Manipur. Indian Streams Research Journal. 2013;3(9):1-2.
9. Mottaghi M, Atarodi A, Rohani Z. The Relationship between Coaches' and Athletes' Competitive Anxiety, and their Performance. Iran J Psychiatry Behav Sci. 2013;7(2):68-76.
10. Esfahani N, Soflu HG. The comparison of pre-competition anxiety and state anger between female and male volleyball players. World Journal of Sport Sciences. 2010;3(4):237-42.
11. Martens R, Vealey RS, Burton D. Competitive Anxiety in Sport Champaign, Illinois: Human Kinetics. 1990:129-30.
12. Jarvis M. Sport Psychology New York Routledg. 2002.
13. Jones G. Stress and anxiety. In S.J. Bull, Sport Psychology: A self-help Guide (p. 31-51). Ramsbury, Marlborough: Crowood. 2000.

14. Martens R, Burten D, Vealey R, Bump L, Smith D. The Development of the Competitive State Anxiety Inventory (CSA-2). In R. Martens, R.S. Vealey, & D. Burton (Eds.), Competitive anxiety in sport. Champaign, Illinois: Human Kinetics. 1990:117-90.
15. Parnabas V, Parnabas J, Parnabas AM. The Relationship between Cognitive Anxiety and Sport Performance on Running Athletes. The International Journal of Indian Psychology. 2015;2:72-9.
16. Arruda AFS, Aoki MS, Freitas CG, Drago G, Oliveira R, Crewther BT, et al. Influence of competition playing venue on the hormonal responses, state anxiety and perception of effort in elite basketball athletes. Physiology & Behavior. 2014;130:1-5.
17. Cooper J. The Relationship Between Level of Competition and Competitive Sport Anxiety in Youth Recreational Soccer Players. 2010. available: http://hdlhandlenet/10342/2733.
18. Humphrey JH, Yow DA, Bowden WW. Stress in college athletics: Causes, consequences, coping. Binghamton. NY: The Haworth Half-Court Press. 2000.
19. Hannon B, Fitzgerald P. Anxiety and performance in elite non-professional athletes. Irish Medical Journal. 2006;99(8):238-40.
20. Lucía A, Francisco A, María-Isabel P, Nuria U. Relationship Between The Anxiety And Performance Of A Basketball Team During Competition. Revista de Psicología del Deporte. 2009 Supplement;18:409-13.
21. Taner B, Mutlu T, Murat K. The Effects Of Age, Sports Experience And Physical Self Perception On Competition Anxiety Levels Of Female Football Players. International Journal of Academic Research. 2013;5(4):509-13.
22. Remco P, Naomi R, Erika B, Levy A. Precompetitive State Anxiety, Objective and Subjective Performance, and Causal Attributions in Competitive Swimmers. Pediatric Exercise Science. 2007;19(1):39-50.
23. Parnabas V. Identifying the Gender Differences on the Level of Competitive State Anxiety and Sport Performance among Track and Field Athletes. The International Journal of Indian Psychology. 2015;2(Special):23-9.
24. Hatzigeorgiadis A, Chroni S. Pre-Competition Anxiety and In-Competition Coping in Experienced Male Swimmers. International Journal of Sports Science and Coaching. 2007;2(2):181-9.
25. Vosloo J, Ostrow A, Watson JC. The Relationships Between Motivational Climate, Goal Orientations, Anxiety, and Self-Confidence Among Swimmers. Journal of Sport Behavior. 2009;32(3).
26. Fu M. Study on the Relationship between Precompetition Anxiety and Competition Performance of Athletes in College. China Sport Science And Technology. 1997;10.
27. Duun JGH, Duun JC. Relationships Among the Sport Competition Anxiety Test, the Sport Anxiety Scale, and the Collegiate Hockey Worry Scale. JOURNAL OF APPLIED SPORT PSYCHOLOGY. 2001;13:411–29.
28. Corcoran KJ. Is competitive anxiety an observable behavior? A sociometric validity study of the SCAT. Journal of Personality Assessment. 1989;53(4): 677-84.
29. Ichimura M. A factor analytic study on the traits of stage fright. Japan Journal of Physical Education. 1965a;9(2).
30. Sahu DP. A comparative study of precompetitive anxiety between club levels batsmen and bowlers. International Journal of Physiology, Nutrition and Physical Education. 2016;1(1):46-8.
31. Sil P. A comparative study on competition anxiety between male and female national level basketball players. International Journal of Physical Education, Sports and Health. 2016;3(1):133-4.
32. Kerketta I. A comparative study of sports competition Anxiety between district levels male Volleyball and soccer players. International Journal of Physical Education, Sports and Health. 2015;1(3):53-5.
33. Schaefer J, Vella SA, Allen MS, Magee CA. Competition Anxiety, Motivation, and Mental Toughness in Golf. Journal of Applied Sport Psychology 2016;28(3):309-20.
34. Saxena A, Sathe VB. A comparative study of sports competition anxiety of rural and urban male players. International Journal of Applied Research.2(5):375-6.
35. Kumar A. A study on mental toughness and sports competition anxiety for male and female basketball players. International Journal of Physical Education, Sports and Health. 2016;3(2):379-81.
36. Avramidou E, Avramidis S, Pollman R. Competitive Anxiety in Lifesavers and Swimmers. International Journal of Aquatic Research and Education. 2007;1(2):108-17.
37. Parnabas V, Parnabas J, Parnabas AM. The Level of Cognitive Anxiety and Sport Performance among Swimmers. The International Journal of Indian Psychology. 2015;2:48-55.
38. Halilaj B, Gallopeni F, Gllareva I. Pre And Post Competition Anxiety And Self-Confidence In Kosovo Gymnasts. European Journal of Physical Education and Sport Science. 2016;1(1):39-47.
39. Grossbard JR, Smith RE, Smoll FL, Cumming SP. Competitive anxiety in young athletes: Differentiating somatic anxiety, worry, and concentration disruption. 2009;22(2):153-66.
40. Mehdipoor-Keikha B, Yusof S, Jourkesh M. The Relationship between Pre-Competition State Anxiety Components and Mood State Sub-Scales Scores and the Result of among College Athletes through Temporal Patterning. International Journal of Sports Science. 2015;5(1):8-15.
41. Soltani H, Hojati Z, Attarzadeh-Hossini S-R. Comparative Analysis Of Competitive State Anxiety Among Team Sport And Individual Sport Athletes In Iran. Physical Education Of Students. 2016;5:57-61.
42. Ampofo-Boateng K. Understanding Sport Psychology. Selangor, Malaysia: UPENA. 2009.
43. Modrono C, Guillen F. Anxiety Characteristics of Competitive Windsurfers: Relationships with Age, Gender, and Performance Outcomes. Journal of Sport Behavior. 2010;34(3):281-94.
44. Das M, Ghosh K. A Comparison Of Competition Anxiety Between Cricket Players Of Middle Adolescent And Late Adolescent Group. International Journal of Health, Physical Education and Computer Science in Sports. 2014;14(1):30-2.
45. Ferreira Jd, Leite LPR, Nascimento CMC. Relationship between levels of competitive anxiety and age of volleyball athletes and analyze of these levels pre and post-competition. Motriz, Rio Claro. 2010;16(4):853-7.
46. Aguirre-Loaiza HH, Bermúdez SR. Anxiety & State and Sociodemographic Variables in Youth Colombian Footballers During Competition. Revista Diversitas - Perspectivas En Psicología. 2011;7(2):239-51.