PRE-COMPETITION ANXIETY BETWEEN MALE AND FEMALE STUDENT-ATHLETES OF JIMMA UNIVERSITY: A MULTI-DIMENSIONAL APPROACH

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Abstract

The purpose of this study was to compare pre-competition anxiety between male and female student-athletes of Jimma University. To do so, a cross-sectional study design was employed, possessing all Jimma university student-athletes' as the target population (N =113). Proportional random sampling technique was employed to determine the number of male and female student-athletes (n =35 male, n= 35 female). So, an adapted version of Pre-competitive state Anxiety Inventory-2 questioner (CSAI-2), Was administered 30 minutes before an important competition during the sixth Ethiopian public Universities sport festival held in Arbaminch University from Feb.16 - Mar.3/2013, and finally 63 Completed questionnaires were collected (32 from male, 31 from female ones). Mean, standard deviation, independent t-test, and Point biseral Correlation were calculated to analyze the data at the 5 % level of significance. The results of the study revealed that there were no statistically significant differences in all pre-competition anxiety subscales: cognitive anxiety (t=1.79), somatic anxiety (t=0.529) and self-confidence (t=0.593), since p > 0.05. Marginal significant relationship exists between gender to pre-competitive anxiety, as well. It is therefore recommended to increase the experience of all student-athletes in different tournaments, friendly matches, teaching to insist on more activities, learning the strengths and weaknesses of the opposition, developing experience of playing in a different venue. Above all, building effective mental training programs in exercise sessions such as goal setting, imagery, rehearsal, relaxation, and self-talk for individual athletes and teams, would increase self-efficacy and performance. Provided that coaches do have the basic knowledge of different coping strategies for different situations that could be passed on to the athletes.

KEY WORDS: Anxiety, multi-dimensional, pre-competition.

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INTRODUCTION

One of the most important issues, which attracted the attention of sport psychologists, is anxiety and tension control before a competition (Esfahani & Soflu, 2010). Regarding this, Murphy (1988) elucidated that over 50 of consultations among athletes at an Olympic festival were related to anxiety related problem, as mental state prior to the start of sport competition plays a decisive role in the overall success or failure. Accordingly, Raglin and Hanin (2002) highlighted anxiety as a negative emotional state with a feeling of worry, nervousness, and apprehension; that is, associated with the activation of the body. Initial studies of anxiety were based on the assumption that anxiety is one-dimension (Shahizan, Fortuzan, and Zamani, 2012).

In fact, an important development in exploration of anxiety can be credited to the work of (Spilberger, 1966), who has later made a distinction of anxiety into state and trait anxiety. At this outset, to depict this distinction: trait anxiety is a personality characteristic; on the other hand, state anxiety refers to a "right now" kind of anxiety that is situation-specific. To have a better picture of state and trait anxiety Cox (2007), in a more direct and lucid way, clarified state anxiety as an immediate emotional state; that is, characterized by apprehension, fear, tension, and an increase in physiological arousal. However, trait anxiety is a predisposition to perceive certain environmental situations as threatening and to respond to these with increased state anxiety. Again, Cox goes, step further, pointing out anxiety experienced before an athletic contest is referred as pre-competitive anxiety.

Putting it another way, Hantons (2004) a bit generally moved to elucidate pre-competition anxiety in the sense of three-dimensions: cognitive anxiety, somatic anxiety, and self-confidence. Cognitive anxiety (or worry) is viewed as the mental component of anxiety typified by negative expectations and cognitive concerns about oneself, the situation, and potential outcomes. Somatic anxiety is conceptualized as the physical component of anxiety that reflects the perception of one's physiological responses. At last, self-confidence is conceived as one's belief to successfully perform a desired behavior (Robazza and Bortoli, 2007).

In keeping with the title's central theme, a large and growing body of literatures has illustrated gender differences concerning anxiety sub-scales. For example, cognitive anxiety, somatic anxiety, and self-confidence were assessed using male and female university athletes prior to an important competition. Eventually, males showed no increase in cognitive arousal across time

while females showed a progressive increase as the competition approached. In addition, males and females showed similar patterns in somatic anxiety with increases occurring only on the day of competition. The male's overall levels of somatic anxiety were lower while female athletes exhibited a greater decrease in self-confidence (Amasiatu, Athan, and Sampson, 2013). In general, therefore, from this assertion without going into details, one can be safe to say that male and female athletes do have different patterns of responses to the pre-competition anxiety sub-scales.

As against this, the study conducted by Hardy (1996) pointed out that, self-confidence is one of the most frequently cited psychological factors thought to account for a greater proportion of variance in performance than cognitive or somatic anxiety. What this implies is; the most powerful quality that top performer's posses is a high-level of self-confidence, which may act as a protective factor for cognitive or somatic anxiety. To this end, knowing which gender group and identifying the pre-competition anxiety sub-variables, which are the probable causes of stress, plays a significant role in designing intervention mechanism to facilitate athletes' performance. Thus, it would be meaningful to compare pre-competition anxiety between male and female student-athletes of Jimma University.

STATEMENTS OF THE PROBLEM

Over the past several years, both coaches and athletes have started to realize that strength, speed, and other athletic skills are not sufficient for the production of championship athletes'. Schinke (2012) identified, the fundamentals of athletic sport wining edges as physical preparation, technical skill, and psychological readiness. This model suggests that if any of the above areas are neglected, athletic performance will decline. However, psychological preparation is the component that is most often neglected by athletes and coaches alike (Jones and Hardy, 1990; Martens, Vealey, & Burton 1990; Schinke, 2012). More recently, in the field of sport psychology, mainly Pre-competition anxiety has become a topic of interest and focus of research (Athan, & Sampson, 2013; Esfahani & Soflu, 2010; Vealey, 1990), as anxiety before competitions could have negative and destructive effects on athletes performance or adversely could cause success in achieving the goals considered by the coach. Thus, regarding the absence of sufficient research in sport psychology and pre-competition anxiety, in general Ethiopian context, the researcher attempted to compare the level of anxiety before competition in male and

female student- athletes. To this end, this study was designed to answer the following basic research questions: 1. Do male and female athletes significantly differ in cognitive anxiety, somatic anxiety, and self- confidence? 2. Do male and female athletes significantly associate in pre-competition anxiety?

OBJECTIVE OF THE STUDY

The study was designed to compare pre-competition anxiety between male and female student-athletes of Jimma University. More specifically, the study aimed to:

- Examine the gender differences to cognitive anxiety.
- Examine the gender differences to somatic anxiety.
- Identify the gender differences to self-confidence.
- Determine the gender association to pre-competition anxiety.

Significance of the Study: Honeybourne and Moors (2002) contend that fitness of the body (physiological fitness) and fitness of the mind (psychological fitness) are important if a performer is to reach the highest level in sport. Thus, this research may shed some light on the benefit of sport psychology by providing information to team leaders, athletes, and coaches. Above all, by providing insight for university's coaches, it may help them to re-examine in their training program, fitness of the mind, the other side of a coin. Furthermore, it may serve as a springboard for further research on the same issue with larger setting, essentially in the Ethiopian context.

METHODOLOGY

Study design: This study aimed at comparing pre-competition anxiety between male and female student- athletes of Jimma University. To do so, a cross-sectional research design in approach and comparative in content was adopted.

Participants and site: The study subjects are Jimma University student-athletes' those who have randomly selected and participated (32 male, 31 female) in this study during sixth Ethiopian public universities sport festival held in Arbaminch University from Feb.16 - Mar.3/2013.

Sampling procedure: all Jimma university student-athletes' were considered as the target population (N= 113). To access sufficient number of male and female student-athletes, and considering the questioners that would be filled correctly, and returned all right, the researcher employed sample determination formula to determine the sample size and somewhat 60% of the target population were considered, which constitutes(n=70) . Accordingly, proportional random sampling technique was employed to determine the respondents (n =35 male, n= 35 female). To strength this point, I think quoting Kumar (2011:3) assertion is apt, ''the greater the sample size, the more accurately your findings will reflect the 'true' picture''. Eventually, after the questioner was administered to the randomly selected student-athletes, only 63 correctly completed questioners were collected (n= from 32 male, n= from 31 female once), yet comprising 55% of target population.

Instrument of data collection: the modified Competitive State Anxiety Inventory-2 questioner (CSAI-2), a test developed by Martine's et al. (1990) to assess a number of psychological states thought to be crucial for proper mental preparation prior to athletic competition, was utilized in this research. The CSAI-2 is widely used by different researchers to reliably measure the component of pre-competition anxiety (e.g., Jones, Hanton, & Swain, 1994; Jones & Swain, 1992). It is made up of 27 item with each statement an intensity rating Scale ranging (1: Not at all to 4: very often) and measure's one of the three multidimensional constructs: cognitive anxiety, somatic anxiety, and self-confidence. The multidimensional constructs are also rearranged in the questioner as cognitive anxiety items number 1,4,7,10,13,16,19,22,25,Somatic anxiety items number 2,5,8,11,(14reversed),17,20,23,26 and Self-confidence items number 3,6,9,12,15,18,21,24,27 (Martens et. al., 1990). Moreover, bearing in mind the assumption that English language is the medium of instruction in the university, questioners were administrated in English.

Data collection: After necessary arrangements with coaches and supervisors of Jimma university athletic team, the athletes completed CSAI-2 questioner 30 minutes prior to an important competition and finally 63 properly completed questionnaires were collected (32 from male athletes and 31 from female ones). Yet 7 questionnaires were found to be incomplete.

Procedures: the researcher, who was also the team's coach, contacted Jimma University sport team leaders, to gain permission to conduct this study. On gaining permission from officials, athletes were informed about the purpose of the research. In fact, this was done two days before competition schedule, and all Jimma university student-athletes readily agreed to participate in this study as subject for data collection. However, the randomly selected participants were given instructions, regarding the data collection, and asked to come to the right side of the start/finish line, where the research team's chair was situated before beginning their warm-up routine on the competition day, approximately thirty minutes before the start of the race.

Method of data analysis: Data was analyzed using SPSS version 16.0 software (statistical package for the social science). Two parts of statistical analysis methods: descriptive and inferential were in use. In the descriptive section, mean and standard deviation were computed. However, in inferential section independent t-test and the Point biserial Correlation were carried out ; to examine the possible significance differences in cognitive anxiety, somatic anxiety, and self confidence between male and female student-athletes, and also to determine the existing relationship between gender with respect to the variable pre-competition anxiety at 5 % level of Significant, respectively.

Validity and Reliability of the instrument: the internal consistency for cognitive anxiety, somatic anxiety, and self-confidence has been found to be alpha (α) =.81, .82, and .88, respectively (Martens et. al. 1990). Whereas, Esfahani and Soflu (2010) reported the reliability of this questioner as α= .89 and the validity of this questionnaire was confirmed by senior expertise. In the present study, the instrument was subjected to validation by three experts; each from the department of psychology, education, and sport science and then based on the feedback obtained, amendments were made. The instrument was also administrated to fifteen football players and the Cronbach's Alpa test was used to determine the reliability. As a result, the coefficients of reliability for the three multidimensional constructs cognitive anxiety, somatic anxiety, and self-confidence were $\alpha = 0.85$, $\alpha = 0.88$ and 0.87 respectively; all three values are found to be within an acceptable range ($\alpha \geq 0.8$).

Data management: After administering the instrument, the collected data were coded, edited, cleaned, and entered into the computer for further analysis. For quality control, data were checked in the field to ensure that the information collected was accurately recorded.

Limitation of the Study: One of the limitations in the process of conducting this research work was the inadequacy of literature materials produced in the Ethiopian context. Hence, the literature of this study was based on foreign materials and research works. The other obvious limitation was the sample size, on which future research should mend. With larger sample sizes and different sport clubs, more results that are significant and dependable would be reported.

Ethical considerations: The research was undertaken after clearance has been obtained from Jimma University sport's team leader. Informed consent was also obtained from each study participant before the researcher undertook data collection. Names and ID. Numbers of the respondents' were not also recorded on the questionnaires to ensure the confidentiality and anonymity of the information.

RESULTS

Table 1: Mean scores of Pre-competition anxiety subscales in male and female athletes

	Male student –Athletes		Female student-Athletes			
`Subscales	Mean	SD	Mean	SD	t-test	Sig. (2 tailed)
Cognitive anxiety	23.37	4.73	21.06	5.05	1.794	0.078
Somatic anxiety	20.70	3.72	20.16	4.08	0.529	0.598
Self-confidence	26.30	3.82	25.58	5.33	0.593	0.556

As can be seen from table 1, Male athletes had higher mean scores in cognitive anxiety 23.37, Somatic anxiety 20.70, and self-confidence 26.30 compared to female ones 21.06, 20.16, and 25.58. In addition to this, the independent sample t-test result revealed that, there are no significant differences in all subscales of pre-competitive anxiety between male and female student-athletes, since $P \geq 0.05$.

Table 2: The relationship between pre-competitive anxiety in Male and Female A

Variable		Point biseral correlation = r_{pis} Male	Female
Pre-competition anxiety	Male	1	-0.054
	Female	-0. 054	1

As displayed in table 2, the relationship between gender to pre-competitive anxiety was compared by using point biserial correlation and found to be r = -0.054, which indicates there is very marginal significant association between male and female student-athletes.

DISCUSSION: the purpose of current study was to compare pre-competition anxiety between male and female student-athletes of Jimma University. This study has found that generally there was no significant difference in all pre-competition anxiety subscales: cognitive anxiety, somatic anxiety, and self-confidence. Moreover, the research findings showed very marginal relationship of gender to pre-competitive anxiety. Lower mean score in cognitive and somatic anxiety displayed positive effects on performance; though, higher self-confidence scores are facilitative to performance. Given these points, the present finding seems to be consistent with the findings of similar studies (Krane and Williams, 1994; Woodman and Hardy, 2003). Also, endorses a number of research findings, which has shown there is no significant difference in the level of anxiety between male and female athletes (Seeley et al., 2005; Ramella-DeLuca, 2003; Ampongan, 2001; Hammermeister and Burton, 2001).

However, when cognitive anxiety, somatic anxiety, and self-confidence were investigated based on the nature of sport field (individual and group-based), it became clear that female athletes had higher cognitive and somatic anxiety and lower self-confidence compared to male ones (Esfahani and Soflu, 2010). Likewise, Pears (2007) reported that activity level (professional or amateur);

type of sport (individual or group-based); as well as activity history and experience are of important and effective factors influencing pre-competition anxiety.

With a close look the result, increasing the experience of all Jimma university athletes in different tournaments, friendly matches, teaching to insist on more activities, learning the strengths and weaknesses of the opposition, developing experience of playing in a different venue, would increase their efficacy and performance. In conformity to this , Jones (1995) also indicated that exercising mental skills such as goal setting, imagery, relaxation, and self-talk are important areas in the field of sport psychology and using them during competition is the most applicable strategy for controlling factors that cause failure in athletes' performance. In fact, this can be attained, if coaches at any level do have the proper educational background and training that would prepare them with the knowledge of sport psychology that could be passed on to the athletes.

To this end, this study would have been more complete, had it been made by soliciting data from other universities using different methods. Nevertheless, due to budget constraints, and time inconvenience, as the researcher himself was a coach, the study was delimited in comparing pre-competition anxiety between male and female student-athletes of Jimma University. Further studies, which consider a large number of respondents, alternative research tools, different psychological variables, and different sport types and clubs, particularly considering the Ethiopian sport context, will need to be undertaken.

CONCLUSION AND RECOMMENDATION

Conclusions: Jimma University athletes, regardless of the gender groups participating in competitions, require sufficient psychological skills, and suitable strategies for coping pre-competitive anxiety. In general, it seems that the most often overlooked in exercise secessions, the psychological aspect, is an area that requires improvement.

Recommendation: in spite of a well-organized physical preparation, the causes of failure in athletes and reasons of weak performance during competition can be attributed to lack of experience, lack of concentration and sufficient self-confidence, which decrease performance

and create unusual behaviors and states in athletes (Shinke and Costa, 2001). In this regard, coaches are highly advised to maintain applicable strategies in exercise sessions in order to control and modify the tension and anxiety before competition in a planned and regular manner. Along with this, Sadeghi, Sofian, and Jamalis, (2010) pointed out that in an attempt to prepare systematic programs to develop mental skill; coaches should pay attention to the individual differences as well as the specific physical, technical, and psychological necessities of a sport, having a deep understanding of the athletes' thoughts and behaviors.

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REFERENCES

Amasiatu, Athan, Sampson. (2013) .Coping with pre-competitive anxiety in sports competition. *European Journal of Natural and Applied Science*, 1(1), 1-9.

Bortoli, L., & Robazza, C. (2007).Perceived impact of anger and anxiety on sporting performance in rugby players. *Journals of Psychology of Sport and Exercise.* 8, 875-896.

Cox, R. H. (2007).Sport psychology concepts, and application. New York: Mc Graw-Hill Edu.

Cox, R. H. (2002) .Sport psychology concepts, and applications. (5th Ed.). New York: Mc Graw –Hill.

Esfahani, N., & Soflu, G.H. (2010).The comparison of pre-competition anxiety and state anger between female and male volleyball players. *World Journal of Sport Sciences*, 3(4):237-242.

Hardy, L. (2006). Speaking clearly: A critical review of the self-talk literature. *Psychology of Sport and Exercise, 7* (1), 81-97.

Hardy, L. (1999). Stress, anxiety, and performance. *Journal of Science and Medicine in Sport.* 2, 227-233.

Hammermeister, j., & Burton, D. (2001). Stress, appraisal, and coping revisited: Examining the antecedents of competitive state anxiety with endurance athletes. *Sport Psychologist.* 15, 66-90.

Jones, G., Hanton, Swain. (1994) .Intensity and interpretation of anxiety symptoms in elite and non-elite sports performances. *Personality and Individual Difference.* 17, 657-663.

Jones, G., & Hardy, L. (1990).Stress & performance in sport. London: John Wiley & sons Ltd.

Karne , V. & Williams, J.M. (1994). Cognitive anxiety, somatic anxiety, and self-confidence in track and field athletes: The impact of gender, competitive level, and task characteristics. *International Journal of Sport Psychology*. 25, 203-217.

Krane, V. (1994).Comparative anxiety, situation criticality, and softball performance. *Sport psychology*. 8, 58-71.

Kumar, R. (2005).Research methodology. London: SAGE publication Ltd.

Martens, R., Vealey, R., & Burton, D. (1990). Competitive anxiety in sport. Champaign, IL: Human Kinetics

Martens, R., (1977). Sport competition anxiety test. Champaign IL: Human Kinetics.

Murphy, S.M. (1988). Effects on a stress management program on injury and stress. *Journal of Sport and Exercise Psychology*. 27, 289-310.

Nazerian ,I .,Shahizan, H, & Foruzan, M , Zamani. (2012).Anxiety,cognitive and physical anxiety of male and female athletes competing at different levels. *Proceeding of International Conference on Business Management and IT*. Vol. 2, 22-24.

Ramella-Deluca, N.H. (2003). Investigating life stress, competitive trait anxiety, and competitive state anxiety with athletic injury occurrence in NCAA division I Athletes. Masters theses, Electronic Theses and Dissertations at East Tennessee State University. Retrieved at May 29, 2012, from the website temoa: Open Educational Resources (OER) Portal at http://www.temoa.info/node/291893

Raglin & Morgan. (1988).Interpreting direction of anxiety. *Journal of Applied Sport Psychology*. 14, 43-52.

Robazza, C., & Bortoli, L. (2006). Perceived impact of anger and anxiety on sporting performance in rugby players. *Psychology of Sport and Exercise*. 8, 875-896.

Seeley, G., Storey, J., Wagner, D., Walker, C., & Watts, K. (2005). Anxiety levels and gender differences in social volleyball players' before and during competition in an Australian setting. *Journal of Applied Sport Psychology*. 7, 3- 16.

Spilberger, D. (1966).Theory and research on anxiety. Anxiety and behavior. New York: Academic press.

Thomas, O., Maynand, & Hanton, S. (2004).Temporal aspects of competitive anxiety and self-confidence as a function of anxiety perceptions. *The Sport Psychology*. 18: 172-187.

Woodman, T., & Hardy, L. (2003). The relative impact of cognitive anxiety and self-confidence up on sport performance: A Meta analysis. *Journal of Sport Science*, 21(6), 443-457.

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