
Competitive Anxiety Among University Student-Athlete of Uitm Sarawak

Redha Afifi Hasni^{1*}, Suhardi Kram¹ & Ebby Waqqash Mohamad Chan²

¹*Faculty of Sports Science and Recreation, Universiti Teknologi MARA,
Cawangan Sarawak, Malaysia.*

²*Centre for Sport and Exercise Sciences, University of Malaya, Malaysia.*

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Abstract

This study investigates the competitive anxiety between genders and types of sports among university student-athletes of Universiti Teknologi MARA (UiTM) Sarawak. A cross-sectional study was conducted with 155 student-athletes (85 males and 70 females) using Sport Anxiety Scale-2 (SAS-2) to evaluate sports anxiety. A stratified random sampling technique was utilised in participants selection. The analysis result by independent-sample t-test shows that there was a significant difference between male and female university student-athletes. ANOVA test was conducted to the university student-athletes to compare competitive anxiety between age groups and it was reported that there was no significant difference for somatic anxiety and worry but the result shows a significant for concentration disruption. Most of the participants scored highly in a moderate level of competitive anxiety because an anxious person is more vulnerable to poor productivity as they focus more often on potential environmental threats due to the negative effects of the shift and inhibition of the attention system. This indicates anxiety is appraised differently by athletes based on their gender and age groups.

Keywords: Anxiety, Student-Athletes, Demographic Variables

INTRODUCTION

Anxiety is defined as “an unpleasant psychological state in reaction to perceived stress concerning the performance of a task under pressure”, and is a common emotional state experienced by athletes at all levels of performance (Cheng, Hardy, and Markland, 2009). Competitive anxiety is defined as sport-specific trait anxiety that regularly appears before or during the competition (Martens, 1977). In a sports context, anxiety is often regarded as a typical response to a situation where an athlete’s skills are being evaluated (Smith and Smoll, 1990). An athlete’s performance will be influenced by the level of anxiety and how the athlete interprets the anxiety (Yago, Carme, Catarina and Caroline, 2015).

Anxiety is said to be more prominent in competitive sports environments. According to Robinson and Smith (2015), anxiety and sports are closely interrelated. They further stated that Anxiety often isn't unpleasant but it can encourage teams to concentrate their actions and warn them. It is found that athletes become anxious when engaging in different sporting activities. In a research study, conducted by Kumar and Woo (2015) it is concluded that mainly young or inexperienced players become nervous and thus their performance is affected.

Martens (1977) described competitive state anxiety as the propensity to interpret and respond to competitive situations as threatening, with feelings of fear and pressure. Such feelings involve somatic and cognitive anxiety symptoms. Somatic anxiety refers to "physiological and emotional aspects of anxiety" (Martens, Vealey, and Burton, 1990). The division of cognitive anxiety components

(i.e., anxiety and concentration disruption) showed dissimilarities in their relationship with other adolescent athletes (Grossbard, Smith, Smoll, & Cumming, 2009). Worry is referred to as non-optimistic thinking about the negative individual and interpersonal effects of poor outcomes (Sarason, 1984). Concentration disruption involves challenges in concentrating on specific tasks and thinking rationally in a competitive environment (Nideffer & Sagal, 2006).

Student-athletes are known to come across specific stress factors that are not often encountered by the general student population. Student-athletes also could be at a greater risk of anxiety and depression (Perry, 2020). Many of the stress factors which can impact athletes in the university include peer pressures, independence, need to please family, friends, and coaches, high level of expectations with a very strong commitment to succeeding and winning in competitive and intense intercollegiate sports, time management for academic demands, sports, relationships, and well-being, mood status, history of mental illness, injuries including concussions, and adjusting to the length of time for recovery from injuries, fears of reinjury, or return-to-play concerns, managing body and weight concerns related to performance, and unexpected medical conditions such as infectious mononucleosis (Sutcliffe and Greenberger, 2020) This study aims to explore the competitive anxiety among university student-athletes.

METHOD AND MATERIALS

Research Design and Participants

A cross-sectional study was conducted among university student-athletes of Universiti Teknologi Mara (UiTM) Cawangan Sarawak. It was carried out from May until July 2020. Approval for the study was obtained from the UiTM Research Ethics Committee. A total of 155 respondents participated in this study.

Survey questionnaire

The questionnaire consists of two sections: (Part A) demographic information (Part B) Sport Anxiety Scale-2 (SAS-2). This first section includes sociodemographic information such as gender and age groups. The second section of the questionnaire is the SAS-2 which was assessed by the 15-items SAS-2 (Smith, Smoll, Cumming, & Grossbard, 2006). The instrument's three subscales (Somatic Anxiety, Worry, and Concentration Disruption) each consist of five items. A composite performance-anxiety score based on summing the three subscale scores can also be obtained. The SAS-2 was constructed from items from the original SAS that were deemed appropriate for young children as well as older age groups with the proviso that the revised items had Flesch-Kincaid readability levels of 4th-grade level, with the overall scale set at a reading level of grade 2.4. The 15 items of the SAS-2 (Table 2) were designed to reflect possible responses that young athletes may have before or while they compete in sports (e.g., "My body feels tense," "I worry that I will not play my best," "I lose focus on the game"). For each item, children indicated how they typically felt based on a 4-point Likert scale, ranging from not at all (1) to very much (4). The SAS-2 subscale scores were derived by summing scores on the individual items for each subscale (somatic anxiety, worry, and concentration disruption). Internal consistency was supported with high Cronbach's alphas for total scores (0.91), and somatic (0.84), worry (0.89), and concentration disruption (0.84) subscales (Smith, Smoll, Cumming, & Grossbard, 2006). Coefficients were acceptable for all subscales at all age groups. Test-retest reliability (at a 1-week interval) was acceptable with subscale coefficients ranging from 0.76 to 0.90 and the three-factor structure of the scale was also supported by factor analysis (construct-related validity) (Morrow, Mood, Disch, & Kang, 2015).

Data Collection Procedures

The questionnaires were distributed to university student-athletes of Universiti Teknologi Mara (UiTM) Cawangan Sarawak from May to July 2020 using stratified random sampling in which every member of the population will have an equal chance of being included in the sample from the population of university student-athletes of Universiti Teknologi Mara (UiTM) Cawangan Sarawak. The study was conducted through google forms and all the instructions were stated in the google forms as well due to the Movement Control Order (MCO) of Covid-19 Pandemic by the Malaysian Government.

Data analysis

Descriptive data will be presented in mean and standard deviation (SD), frequency and percentages. Demographic data as gender and type of sports utilized the descriptive analysis to summarize the data to be more easily interpreted. Inferential statistics were used to reject or fail to reject null hypotheses that were set. Independent sample t-test was utilized to measure competitive anxiety (somatic anxiety, worry and concentration disruption) of the university athletes to compare the competitive anxiety between genders. Apart from that, one-way analysis of variance was utilized to measure competitive anxiety (somatic anxiety, worry and concentration disruption) of the university athletes to compare the competitive anxiety between age groups among UiTM Sarawak athletes.

Statistical analysis

All data analysis was conducted using Statistical package SPSS version 22.0. For descriptive statistics, means and standard deviations were calculated for continuous variables (i.e. somatic anxiety, worry, and concentration disruption). For inferential statistics, the independent-sample t-test was used to determine the competitive anxiety between male and female among university student-athletes. A one-way analysis of variance was used to determine the competitive anxiety between age groups among university student-athletes. Statistical significance was set at $p < 0.05$.

RESULTS

Completion rate

155 university student-athletes of Universiti Teknologi Mara (UiTM) Cawangan Sarawak participated in this study. The respondents' completion rate was 100% ($n = 100$) with no respondent has incomplete data in their questionnaires.

Participants

Table 1 shows the gender of the participants. Both male and female athletes were taken as the participants of this study. The male participants were the highest in number which consists of $n=85(54.8\%)$ and followed by the female participants which were $n=70(45.2)$. Table 2 shows the age groups of the participants. Most of the participants were 20 to 21 years old, which consist of $n=54(34.8\%)$ participants and followed by 18 to 19 years old that is $n=48(31.0\%)$ participants. Next, $n=45(29.0\%)$ participants aged 22 to 23 years old. Finally, only a few participants were 24 years old and above involve that is $n=8(5.2\%)$.

Table 1. Demographic data of participant's gender ($n=155$)

Gender	n	(%)
Male	85	54.8
Female	70	45.2

Table 2. Demographic data of participant’s age groups (n=155)

Age groups	n	(%)
18-19	48	31.0
20-21	54	34.8
22-23	45	29.0
24 and above	8	5.2

Descriptive statistics

The descriptive statistic showed in Table 3 is the mean (M) and standard deviation (SD) for Sport Anxiety Scale-2 (SAS-2), worry has the highest mean which is M= 2.468 and SD= 0.692, followed by somatic anxiety M=1.949 and SD= 0.582, and lastly concentration disruption M= 1.834 and SD= 0.438.

Table 3. Descriptive Statistic of Sport Anxiety Scale-2 (SAS-2)

Variable	M	SD
Somatic anxiety	1.949	0.582
Worry	2.468	0.692
Concentration disruption	1.834	0.438

Inferential statistic

Table 4 shows the results of Competitive Anxiety between male and female among university student-athletes. An independent-sample t-test was conducted to compare the somatic anxiety scores for males and females. There was a significant difference in scores for males (M= 1.74, SD= 0.484) and females (M= 2.20, SD= 0.698; $t(153) = -5.211$, $p = 0.000$, two-tailed). The magnitude of the differences in the means (mean difference= -0.46, 95% CI: -0.63 to -0.28) was very small (-0.217). For worry, the result show that there was a significant difference in scores for males (M= 2.44, SD= 0.671) and females (M= 2.90, SD= 0.637; $t(153) = -4.296$, $p = 0.000$, two-tailed). The magnitude of the differences in the means (mean difference= -0.46, 95% CI: -0.66 to -0.25) was very small (-0.138).The result for concentration disruption shows that There was a significant difference in scores for males (M= 1.75, SD= 0.391) and females (M= 1.93, SD= 0.471; $t(153) = -2.651$, $p = 0.009$, two-tailed). The magnitude of the differences in the means (mean difference= -0.18, 95% CI: -0.32 to -0.05) was very small (-0.048).

Table 4. The Independent Sample T-Test for Competitive Anxiety between Male and Female among University Student-Athletes.

Variable	Gender	n	M	SD	t	Sig. (2-tailed)
Somatic anxiety	Male	84	1.74	.484	-5.211	.000
	Female	70	2.20	.598		
Worry	Male	84	2.44	.671	-4.296	.000
	Female	70	2.90	.637		
Concentration disruption	Male	85	1.75	.391	-2.651	.009
	Female	70	1.93	.471		

A one-way between-groups analysis of variance was conducted to compare the competitive anxiety between age groups among university student-athletes, as measured by the Sport Anxiety Scale-2 (SAS-2). Participants were divided into five groups according to their age (Group 1: 18-19; Group 2: 20-21; Group 3: 22-23; and Group 4: 24 and above). There was no significant difference for somatic anxiety at the $p > 0.05$ level in LOT scores for the five age groups: $F(3, 151) = 1.0$, $p = 0.40$. The

effect size, calculated using eta squared, was .02. For worry, there was also no significant difference at the $p > .05$ level in LOT scores for the five age groups: $F(3, 151) = 1.4, p = 0.25$. The effect size, calculated using eta squared, was 0.03. The result for concentration disruption shows a significant difference at the $p < 0.05$ level in LOT scores for the five age groups: $F(3, 151) = 3.1, p = .03$. The effect size calculated using eta squared was 0.06. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 ($M = 1.93, SD = 0.53$) was significantly different from Group 3 ($M = 1.67, SD = 0.34$). Group 2 ($M = 1.88, SD = 0.35$) did not differ significantly from either Group 1, 3 or 4 and Group 4 ($M = 1.90, SD = 0.68$) did not differ significantly from either Group 1, 2 or 3. The tables below show one-way analysis of variance for Sport Anxiety Scale-2 (SAS-2) between age groups and groups among university student-athletes and a Tukey post hoc for Sport Anxiety Scale-2 (SAS-2) between the age group of concentration disruption among university student-athletes.

Table 5. One-way Analysis of Variance for Sport Anxiety Scale-2 (SAS-2) between Age Group among University Student-Athletes.

		n	M	SD	Min	Max
Somatic anxiety	18-19	48	2.03	0.59	1.00	4.00
	20-21	54	1.87	0.49	1.00	3.20
	22-23	45	1.99	0.67	1.00	3.60
	24 and above	8	1.78	0.60	1.00	2.60
Worry	18-19	48	2.70	0.71	1.20	4.00
	20-21	54	2.74	0.72	1.60	4.00
	22-23	45	2.53	0.61	1.40	3.80
	24 and above	8	2.35	0.72	1.00	3.20
Concentration disruption	18-19	48	1.93	0.53	1.00	4.00
	20-21	54	1.88	0.35	1.20	3.00
	22-23	45	1.67	0.34	1.00	2.20
	24 and above	8	1.90	0.68	1.00	3.00

Table 6. One-way Analysis of Variance for Sport Anxiety Scale-2 (SAS-2) between groups among University Student-Athletes.

		Sum of Squares	df	Mean Square	F	Sig.
Somatic Anxiety	Between Groups	0.10	3	0.33	0.98	0.40
	Within Groups	51.23	151	0.34		
	Total	52.23	154			
Worry	Between Groups	1.98	3	0.66	1.39	0.25
	Within Groups	71.79	151	0.48		
	Total	73.77	154			
Concentration Disruption	Between Groups	1.73	3	0.68	3.14	0.03
	Within Groups	27.78	151	0.18		
	Total	29.51	154			

Table 7. A Tukey post hoc for-Sport Anxiety Scale-2 (SAS-2) between Age Group of Concentration Disruption among University Student-Athletes.

			Mean Difference	SD	Sig.
Concentration Disruption	1. 18-19	2. 20-21	0.05	0.08	0.94
		3. 22-23	0.25*	0.09	0.03*
	2. 20-21	4. 24 and above	0.03	0.16	0.99
		1. 18-19	-0.05	0.09	0.95
3. 22-23	3. 22-23	0.21	0.09	0.08	
	4. 24 and above	-0.02	0.16	0.99	
	1. 18-19	-0.25	0.09	0.03*	
4. 24 and above	2. 20-21	-0.21	0.09	0.08	
	4. 24 and above	-0.23	0.17	0.51	
	1. 18-19	-0.03	0.16	0.99	
	2. 20-21	0.02	0.16	0.99	
		3. 22-23	0.23	0.17	0.51

DISCUSSION

Gender

The overall total of respondent involved in this study was (n=155) who represent the university student-athletes from Universiti Teknologi MARA Sarawak. Both male and female university student-athletes were involved in the study. According to the results of this study, it is shown that female university student-athlete showed a higher level of somatic anxiety compare to the male university student-athlete with mean scores of female (2.20) and male (1.74). Besides that, female university student-athlete also showed a higher level of worry than male university student-athlete with a mean score of female (2.90) and male (2.44). The result also indicated that female university student-athlete showed a higher level of concentration disruption than male university student-athlete with a mean score of female (1.93) and male (1.75). It indicates that there was a significant difference between competitive anxiety and the gender factor in the independent-sample t-test. Therefore, it can be concluded that gender can be one of the factors in the high level of competitive anxiety.

The result was contradicting to the findings of the previous study by Al-Ansi, Muhamad, Salamuddin and Hassan (2016) where male student-athletes reported higher in terms of worry. Yago, Carme, Catarina and Caroline (2015) also reported that male athletes reported a higher level of worry and concentration disruption than female athletes.

Based on the present study, the study is supported by Abrahamsen, Roberts, and Pensgaard (2008) where they have stated that there was a slight difference in somatic anxiety between female student-athletes and male athletes where females are higher. Besides that, female athletes presented significantly higher levels for somatic anxiety and concentration disruption (Correia and Rosado, 2019).

Age groups

According to the results of this study, it is shown that the age groups show no significant differences in terms of somatic anxiety and worry where $p > 0.05$. However, in terms of concentration disruption, the age groups show a significant difference. Based on the Tukey post hoc test, group 1 (M = 1.93, SD = 0.53) was significantly different from Group 3 (M = 1.67, SD = 0.34).

The result was contradicting from the previous study by Azimkhani, Gursoy and Torbati (2015) as their results indicated that there was a significant difference between competitive anxiety among younger and older athletes. However, according to Grossbard, Smith, Smoll and Cumming (2009)

the younger athlete was unable to distinguish between subjects responding to the somatic and cognitive elements of the anxiety response.

CONCLUSION

In summary, the finding shows that women tend to have sport-performance anxiety symptoms, and would show more sport-performance anxiety symptoms and general anxiety. This suggests that women appear to be treated with anxiety compared to men. Besides that, anxiety disorders are more common among women. Apart from that, female university student-athlete experienced a high level of competitive anxiety compared to male university student-athlete due to the high rates of global competitive anxiety reported by a female athlete as female athletes tend to be more nervous than male athletes.

Apart from that, for the age groups, young age is directly concerned with factors such as feelings of fear, interpersonal dependence, and the use of less sophisticated physiological strategic responses. An anxious person is more vulnerable to poor productivity as they focus more often on potential environmental threats due to the negative effects of the shift (including the use of sustained attention to deflect optimally within and between tasks) and inhibition (including the use of sustained attention to counteract interference disturbances from task-relevant stimuli) of the attention system.

Anxiety and sport are closely related to each other (Robinson and Smith, 2015). He also mentioned that anxiety is not always bad, but that it can help players to concentrate and warn of their actions. Kumar and Woo (2015) stated that the player should not be too anxious neither his level of anxiety should be very low. In moderation, anxiety is not always bad. According to Robinson and Smith (2015), an adequate level of anxiety can produce a better result in sports.

REFERENCES

- Abrahamsen, F. E., Roberts, G. C., & Pensgaard, A. M. (2008). Achievement Goals and Gender Effects on Multidimensional Anxiety in National Elite Sport: *Psychology of Sport and Exercise*, 9(4), 449-464. doi: 10.1016/j.psychsport.2007.06.005.
- Al-Ansi, F. M. A., Muhamad, T. A., Salamuddin, N., & Hassan, F. D. (2016). Demographic Differences in Sport Anxiety among Universities Student Athletes in The Republic of Yemen: *Journal of Sports and Physical Education*, 3(5), 91-96.
- Atarody, E. (2011). The Relationship between Anxiety and Performance Anxiety Coaches Football Players: University of Gonabad.
- Azimkhani, A., Gursoy, R., & Torbati H. R. T. (2015). Analyzing the Relationship between Mental Skills and Competition Anxiety among Young and Adult Skiers: *International Journal of Sport Studies*, 5, 860-867.
- Cheng, W. K. N., Hardy, L., & Markland, D. (2009). Toward A Three-Dimensional Conceptualization of Performance Anxiety: Rationale and Initial Measurement Development. *Psychology of Sport and Exercise*, 10(2), 271-278. doi: 10.1016/j.psychsport.2008.08.001.
- Correia, M., & Rosado, A. F. B. (2019). Anxiety in Athletes: Gender and Type of Sport Differences: *International Journal of Psychological Research*, 12(1), 9-17. doi: 10.21500/20112084.3552.
- Grossbard, J. R., Smith, R. E., Smoll, F. L., & Cumming, S. P. (2009). Competitive Anxiety in Young Athletes: Differentiating Somatic Anxiety, Worry, And Concentration disruption: *Anxiety Stress Coping*, 22(2), 153-66.
- Kumar, M. S., & Woo J. (2015). Public debt and growth. *Economica*, 82(328), 705-739. doi:org/10.1111/ecca.12138.
- Leray, E., Camara, A., Drapier, D., Rlou, F., Bougeant, N., Pelissolo, A., & Millet, B. (2011). Prevalence, characteristics and comorbidities of anxiety disorders in France: *Mental Health in General Population survey (MHGP). European Psychiatry*, 26(6), 339-345.
- Martens, R. (1977). Sport competition anxiety test. *Champaign: IL: Human Kinetics*

- Martens, R., Vealey, R. S., & Burton, D. (1990). Competitive Anxiety in Sport. *Champaign, Illinois: Human Kinetics.*
- Morrow, J. R., Mood, D. P., Disch, J. G., & Kang, M. (2016). Psychological Measurements in Sports and Exercise: *Measurement and Evaluation in Human Performance with Web Study Guide (5th Edition)*, 330-331.
- Nideffer, R. M., & Sagal, M. S. (2006). Concentration and Attention Control Training: *Applied Sport Psychology: Personal Growth to Peak Performance*, 5, 382–403.
- Perry, J. (2020). Dealing with Stress as A College Athlete: *Athlete Network.*
- Robinson, E., & Smith, E. (2015). *Biblical Researches in Palestine and the adjacent regions* 2.
- Sarason, I. G. (1984). Stress, Anxiety, and Cognitive Interference: Reactions To Tests: *Journal of Personality and Social Psychology*, 46(4), 929–938. doi: org/10.1037/0022-3514.46.4.929.
- Smith, R. E., & Smoll, F. (1990). Sport Performance Anxiety. *Handbook of social and evaluation anxiety*, 417–454.
- Smith, R. E., Smoll, F. L., Cumming, S. P., & Grossbard, J. R. (2006). Measurement of Multidimensional Sport Performance Anxiety in Children and Adults: The Sport Anxiety Scale-2: *Journal of Sport & Exercise Psychology*, 28(4), 479-501. doi: 10.1123/jsep.28.4.479.
- Smith, R.E., Smoll, F.L., & Schutz, R.W. (1990). Measurement and correlates of Sport-specific Cognitive and Somatic Trait Anxiety: *The Sport Anxiety Scale. Anxiety Research*, 2, 263-280. doi: 10.1080/08917779008248733.
- Sutcliffe, J. H., & Greenberger, P. A. (2020). Identifying Psychological Difficulties in College Athletes: *Journal of Allergy and Clinical Immunology: In Practice*, 8(7), 2216-2219.
- Thatcher, J., Thatcher, R., & Dorling, D. (2004). Gender Differences in the Pre-Competition Temporal Patterning of Anxiety and Hormonal Responses: *Journal of Sports Medicine and Physical Fitness*, 44(3), 300-308.
- Yago, R., Carne, V., Catarina, S., & Caroline, J. (2015). Exploring the Factorial Structure of the Sport Anxiety Scale-2: Invariance across Language, Gender, Age and Type of Sport: *Psicothema*, 27(2), 174-81. doi: 10.7334/psicothema2014.263.

□ Redha Afifi Hasni
Faculty of Sports Science and Recreation,
Universiti Teknologi MARA,
Cawangan Sarawak,
Malaysia.
Email: redhaafifi3001@gmail.com