

Learning Human Capital in Sport Career: An Anxiety and Performance

Muhammad Nasri Norzamri & Mohamad Zuber Abd. Majid

Faculty of Education, Universiti Kebangsaan Malaysia, Bangi, Selangor, Malaysia

Corresponding Author Email: mzuber@ukm.edu.my

To Link this Article: <http://dx.doi.org/10.6007/IJARPED/v12-i3/19292> DOI:10.6007/IJARPED/v12-i3/19292

Published Online: 19 September, 2023

Abstract

Understanding human capital in sports is not a new thing, in fact it needs to be studied from time to time. The purpose is to find the best practices to improve sports performance among athletes. The stable development of sports will increase the demand of a career in sports. Therefore, the aim of this study is to identify the level of trait anxiety and momentary anxiety among athletes as a sports career. In addition, the study also examines the extent to which trait anxiety and momentary anxiety affect athletes' sports performance as a sports career. This study uses a survey design with a mixed research approach. Questionnaires and structured protocol questions are used as research tools. The research sample involved is sports athletes in the state of Selangor. The research data obtained quantitatively and qualitatively were analyzed using descriptive statistics (percentage) and thematic analysis. The findings reveal the existence of trait anxiety and momentary anxiety among athletes. Findings also found three factors that cause athletes' anxiety about performance and the development of their sports careers. The results of the study can be used as a guide for trainers, coaches and sports intervention makers in planning the psychological management of athletes in sports, games and careers.

Keywords: Trait Anxiety, State Anxiety, Sports Career, Sports Performance, Human Capital in Sport.

Introduction

The term "anxiety" is commonly debated in the field of mental health and psychology. Now nearly 600 million people worldwide suffer from anxiety that comes from pressure from colleagues, jobs and even leadership (Morra, 2020). Constant anxiety will risk the individual to experience mental stress. Stress such as anxiety often occurs in the work environment, and it requires good self-management by an individual. The failure of individuals to control mental health such as these concerns will put career development at risk. This is because, an individual who has excessive anxiety, without good mental management control will cause a loss of productivity in the development of human capital.

Generally, anxiety also occurs in sports careers, where psychological aspects are among the determinants of sports performance for each athlete. Burton et al (2011) stated that the role of psychology is an important role in the achievement of sports performance. All these

psychological influences will affect the personality factors, comfort, and cognitive development of the athletes. In addition, the psychological aspects of sports athletes are also often linked to the aspects of motivation and the efficiency of receiving information by the athletes (Adeyeye et al., 2013). Now, the concentration of human capital in the field of sports is more focused on the effects of mental distress such as anxiety in the development of sports performance and career as a sports athlete (Singh, V., S et al., 2017).

According to Zadkhosh et al., (2018) an increase in extreme anxiety without the psychological management of athletes in a sports career will result in a decrease in sports performance. Anxiety in the scope of sports psychology is divided into two categories, namely momentary anxiety as state anxiety and trait anxiety (Park & Jeon, 2023). This concern will always be experienced by sports athletes due to psychological changes that are influenced by the environment, enthusiasm, and the pressure of winning will directly affect the athletes' thinking.

Anxiety in Human Capital Sport Career

The development of sports human capital or a career in sports is influenced by the performance of an athlete in the game they are engaged in (Schüler et al., 2023). The failure of athletes to maintain good performance or achievements in sports will result in the development of a sports career that is difficult to develop and likely to retire early in the sports arena. The training and physical abilities of the athletes are only one factor in influencing sports performance (Yang et al., 2020). However, prioritizing psychological training such as tactical and technical training is an important element in the development of a sports career. This aspect will help the athlete's mental endurance to maintain sports performance and also the development of an athlete's career.

The influence of psychology in the development of performance and career in sports is very dominant, even though the athletes have been adequately trained in game skills and have a strong physical capacity, but without the control of strong psychological skills will affect achievement and career in sports (Park & Jeon, 2023). Among the psychological elements such as emotional elements are often faced by athletes in a sports championship. Emotions are also related to feeling elements that are influenced by psychosocial aspects (spectators) and also the game environment in influencing sports performance.

Trait anxiety refers to the personality of an individual where the emphasis is more focused on (1) environmental aspects and (2) emotional aspects of anxiety that will affect the level of arousal (Dong et al., 2022; Yang et al., 2020). Consistent sports athlete achievement must have a low level of anxiety. On the other hand, a moderate and high level of anxiety will result in the athlete's achievement in the long term being poor due to the loss of focus. A study of anxiety among the Malaysian perspective of sports human capital shows a moderate level and there is a gap of anxiety between male and female genders (Bekiari, A. & S, 2006).

Anxiety in a sports career also stems from the weak aspect of the athlete's positive thinking in a match. This aspect of thinking is one of the causes contributing to failure in the game (Yang et al., 2020). This situation often happens before a game takes place. The positive thinking attitude is very important to improve the mentality and spirit of the athletes facing the challenges during the tournament. In addition, this positive thinking also plays a role in reducing stress and making it easier for athletes to adapt before a match takes place. The ability to control thoughts positively will help athletes maintain sports performance and human capital in a sports career. Therefore, the focus of this study is to identify the level of

trait anxiety and state anxiety athletes as a sports career. This study also examines the extent to which trait anxiety and state anxiety affect athletes' sports performance as a sports career.

Methodology

Research design

A cross-sectional survey research design was conducted using a mixed research approach (quantitative and qualitative) to examine the level of trait anxiety and state anxiety athletes as a sports career. This mixed method also aims to examine the extent to which trait anxiety and momentary anxiety affect athletes' sports performance as a sports career. This mixed survey research design is suitable to be carried out as recommended by (Creswell & Plano Clark, 2011), that is, research data is collected only once, does not involve a long period of time and deep exploration to understand a phenomenon more deeply.

Population and Sample

The research population involved are 90 athletes majoring in sports who are continuing their studies at a Public University in the State of Selangor. Based on the number of the population, Cohen et al., (2017) suggested a minimum study sample of 44 samples. Systematic random sampling was conducted based on a list of athletes representing sports in the state of Selangor. As a result of the survey conducted, the weakest aspects will be surveyed using a qualitative approach and informants (samples) involving 7 people based on the purposive sampling method as recommended by Merriam & Tisdell, (2016).

Instrument Tool

The questionnaire form of this study was adapted from Martens et al., (1990) study for the state anxiety aspect with reference to the Competitive State Anxiety Inventory (CSAI-2) tool questionnaire. Next, the Sport Competition Anxiety Test (SCAT) was adapted for the trait anxiety construct from the Martens, (1997). The questionnaire of this study consists of three parts, namely (1) Demographics, (2) Trait anxiety, and (3) State anxiety. There is a three-point Likert scale for part 2 i.e., never (1) to always (3). While part 3 uses a 4-point Likert scale, that is, none at all (1) to very high (4). Next, structured interview protocol questions were conducted to obtain detailed data to understand trait anxiety and momentary anxiety among athletes as a career.

Data Analysis

This study uses descriptive analysis (percentage) to report the profile of the study and answer to the first objective of the study, which is to review the level of trait anxiety and state anxiety of athletes in the development of their sports career. The frequency value of the highest percentage of respondents indicates that the highest level of anxiety among the athletes. While qualitative data is analysed using thematic methods follow the procedure recommend by Merriam & Tisdell, (2016).

Results and Discussion

Research profile

The results of the study profile (see to Table 1) shows that the total number of student respondents was 77 people. The frequency distribution based on gender shows that a total of 39 respondents is male and the remaining 38 are female. All of the informants in this study are 66 sport athletes of Malay descent. While the rest are sports athletes from Chinese, Indian

and other ethnic backgrounds, the frequency of respondents is less than 5 people. Next, in terms of sports background, most of the respondents are athletes in football and cricket, each of which recorded a frequency value of 12 people. Followed by netball (11 people), badminton (10 people), handball (9 people), Futsal (6 people), volleyball, hockey and athletics each (4 people), softball (3 people) and ping pong (2 persons).

Table 1

The summary of the respondent's profile

Variabel		Frequency (People)	Percentage (%)
Gender	Male	39	51
	Female	38	49
Race	Melay	66	86
	Chinese	5	7
	Indian	1	1
	Other	5	7
Sport type	Football	12	16
	Netball	11	14
	Volleyball	4	5
	Handball	9	12
	Badminton	10	13
	Hockey	4	5
	Athletics	4	5
	Futsal	6	8
	Softboall	3	4
	Ping pong	2	3
	Cricket	12	16
Total		77	100

The levels of trait anxiety and state anxiety

Referring to Table 2, the findings show that the highest percentage of responses from the majority of respondents indicates the level of trait anxiety indicating that the individual (athlete) sometimes experiences a situation where the environment is a stress factor and increases the level of anxiety among the athlete. As for the occasional response, that is, the trait anxiety that is often faced by the athletes is that they often experience tension (57.1 %). In addition, trait anxiety also occurs when the athletes enjoy themselves while sports are considered to be an aspect of socialization, a sense of calm, and a good athlete recorded their respective ratings (51.9 %). The findings of the study also found aspects of trait anxiety that often happens to sports athletes, which is about setting goals before the game will increase anxiety for athletes with the highest percentage value of 67.5%.

In addition, games that require a lot of energy are also an aspect of increasing trait anxiety for an athlete with a percentage value of 64.9%. Findings also found that trait anxiety will also occur according to the type of individual sports compared to group sports, which is as much as 49.4%. Trait anxiety is more clear when an athlete feels the anxiety of making a mistake during the game and the heart beats faster when starting the game, respectively recording a response value of 42.9 %. Findings also found that things that rarely happen in trait anxiety,

that is, feeling nauseous before competing recorded the highest percentage value of 46.8 %. This finding clearly shows that athletes are always in a state of readiness to avoid trait anxiety.

Table 2.

Percentage level of trait anxiety among athletes

No.	Items	Never (%)	Sometimes (%)	Always (%)
1.	Competing with others is socially enjoyable	6.5	51.9	41.6
2.	I was not comfortable before competing	24.7	51.9	23.4
3.	I was worried before the competition	14.3	45.5	40.3
4.	I am a good sportsman	7.8	51.9	40.3
5.	While competing I worry about making mistakes	19.5	37.7	42.9
6.	Before playing I felt calm	23.4	45.5	31.2
7.	Goal setting is important in sports	7.8	24.7	67.5
8.	I was nauseous before the match	46.8	35.1	18.2
9.	Heart beats fast before playing	18.2	39.0	42.9
10.	Play in a sport that drains energy	5.2	29.9	64.9
11.	Always calm before the game	15.6	50.6	33.8
12.	I was nervous before the match	15.6	50.6	33.8
13.	Team sports are more fun	6.5	44.2	49.4
14.	Always nervous to start a competition	26.0	40.3	33.8
15.	Before the game always feel tense	20.8	57.1	22.1

Referring to Table 3, the results explain the response of state anxiety among sports athletes. This state anxiety refers to aspects of stress that also come from the environment during the game such as worry, fear, and physiological arousal. The results show that the majority of respondents experienced state anxiety at a moderate assessment, which is at a frequency percentage range between 29.9% and 54.5%. Among the simple things that happen state anxiety is related to the athlete's confidence to achieve the goal in the game which is as much as 54.5%. Likewise, the influence of pressure during the game is also among the things that happen to athletes with a rating of 49.4%. The findings also show that aspects of state anxiety that are less common such as the athlete's body feels tight with the assessment (33.8 %) and the body feels tense as much as (36.4 %). A momentary concern that has never happened between athletes, which is the feeling of fear of experiencing suffocation due to pressure, which is the majority giving feedback of 40.3 percent.

Table 3

Percentage level of state anxiety among athletes

No.	Items	Nothing at all (%)	A little (%)	Medium (%)	High (%)
1.	I feel nervous before playing	20.8	26.0	33.8	19.5
2.	I feel worried if I fail to do the right thing	7.8	33.8	39.0	19.5
3.	I am confident in my abilities	5.2	33.8	35.1	26.0
4.	I felt my body tense	24.7	36.4	35.1	3.9
5.	I feel worried about defeat	7.8	32.5	42.9	16.9
6.	I felt my stomach tighten	26.0	26.0	40.3	7.8
7.	I feel confident in the challenge	7.8	26.0	41.6	24.7
8.	I feel afraid of suffocation if stressed	40.3	27.3	29.9	2.6
9.	I felt my heart pounding	10.4	33.8	40.3	15.6
10.	I feel will do the best	3.9	24.7	48.1	23.4
11.	I feel worried about poor performance	9.1	28.6	41.6	20.8

12.	I feel uncomfortable in my stomach	26.0	29.9	35.1	9.1
13.	I believe in myself to achieve the goal	0	19.5	54.5	26.0
14.	I feel worried about my poor performance in sports	14.3	22.1	40.3	23.4
15.	I felt my hands sweat	24.7	26.0	36.4	13.0
16.	I feel I can succeed even under pressure	5.2	29.9	49.4	15.6
17.	I feel my body is tight	24.7	33.8	31.2	10.4

Trait anxiety and state anxiety towards athlete's sports performance as a career

i) Individual Factor

The results of the thematic testing have found four main themes of trait anxiety and state anxiety towards the athlete's sports performance as a career. The individual factor of the athlete is the main factor affecting the trait and state concerns of the athlete's sports performance as a career. Among the significant factors increasing trait anxiety among athletes is making mistakes during matches.

*"I feel very worried about my sports career when I make mistakes during the game."
(K/IV/I1)*

This statement explains that, athletes always feel worried about sports achievements when they make mistakes in the game. This feeling appears more prominently before the game begins. This statement was stated by informant 3.

*"... the feeling of worry will always appear, especially before the game starts. The athletes feel worried if there is a mistake that can cause the achievement to decline."
(K/IV/P/13)*

Other individual aspects, such as the physical condition and readiness of the athlete's heart beat faster when waiting for a game before starting. This aspect was emphasized by informant 2.

"A state of anxiety in which the physical condition and heart beat faster before a game begins..." (K/IV/KK/I2)

Findings also clearly found that individual factors also occur in state anxiety where the existence of feeling worried about the defeat in the game will influence the evaluation of the overall sports performance to the athletes. This statement is confirmed by the majority of sports athletes.

"We feel worried when the game represented suffers for a defeat and it will have a negative effect on the performance of the sport." (K/IV/K/P/17)

This situation is driven by career development as a sports athlete is very dependent on achievements in sports. Failure to show good performance in sports will cause a sports career

to not develop and may lead to early retire from the game. Statements about this aspect were voiced by informants 3, 4 and 5.

"...the worst and most feared thing for athletes is that if they fail to show a good game performance, it will cause their career in this sport to stop early." (K/IV/KS/I3/I4/I5)

Career development in sports is not as stable as other career. The development of a career in sports depends on the achievements of an athlete to be crowned as the best must win many competitions followed. Many past researchers have looked at aspects of a career in sports in relation to achievement in the game.

ii) Motivation of sports athletes in career

Anxiety in sports can also occur if athletes do not receive proper motivational support. This motivational support can exist from the athlete's environment such as the support of coaches, fellow athletes and even support from family. This statement was stated by informant 2.

"...I am confident that I can face the challenge, if I get a lot of motivational support during the competition." (M/PP/I2)

The continued support from the audience and the closest people will increase the spirit of athletes to compete at their best. This situation will encourage the psychological support of the players to be more active to perform in the game. In addition, the athletes also need to set a goal in playing a game, which is to aim for victory in the game. This statement was stated by informants 4 and 7.

"...not just playing, sports athletes like we need to set a goal to win first, we will definitely win." (M/MI/I4/I7)

This finding is supported by the Burton et al., (2011) study where goal setting is very important in motivating sports athletes to perform in games. Athletes who don't set goals make the target for success even slimmer. Such goals will make a career in sports clearer and the direction of achievement in sports more targeted and systematic.

iii) The Support of Playmates in Sports Career Development

The findings in the study also show that the aspect of anxiety in sports will be more reduced if the sports athletes can socialize and work in a team. This aspect emphasizes the ability of sports athletes to communicate and interact in a team to reduce anxiety.

"Yes, the athletes who mingle and are in the same team will have less anxiety. This is because each member of the team will interact by giving encouragement, tactics, and also moral support during the competition." (SRK/B/I3)

This finding is in line with the findings of Yang et al., (2020), showing that the team aspect is very important in providing motivation to members in the game. This collaboration will show the achievements of the game team directly helping in the development of sports careers.

Conclusion

Trait anxiety and state anxiety are normal things experienced by sports athletes. However, this concern if not properly controlled will affect the performance and career development of athletes in sports. The results of this study revealed that trait anxiety does often occur among sports athletes, but in the occasional state of anxiety. Likewise, the findings of state anxiety reveal that athletes often experience this type of anxiety, but only in moderate circumstances. The results of these findings clearly show that trait anxiety and state anxiety will be experienced by athletes before the start of a competition.

Anxiety among sports athletes occurs due to concerns about the performance of athletes in sports that will affect the development of careers in sports. Three main factors were identified to influence aspects of anxiety in sports, namely, individual factors (sports athletes), athlete

motivation in sports and also support in games. These three factors are also things that can be an inspiration to sports athletes for self-regulation in the face of trait and momentary anxiety.

References

- Adeyeye, F., Vipene, J., & Asak, D. (2013). The Impact of Motivation on Athletic Achievement: A Case Study of the 18th National Festival Lagos Nigeria. *Journal Academic Research International*, 4(5), 378–383. www.researchgate.net
- Bekiari, A., K. D., & S, K. (2006). *Associations of Students' Self -Report s of Their Teacher's Verbal Aggression, Intrinsic Motivation, and Perceptions of Reasons for Discipline in Greek Physical Education Classes.*
- Burton, D., Gillham, A., & Glenn, S. (2011). Motivational styles: Examining the impact of personality on the self-talk patterns of adolescent female soccer players. *Journal of Applied Sport Psychology*, 23(4), 413–428. <https://doi.org/10.1080/10413200.2011.568469>
- Cohen, L., Manion, L., & Morrison, K. (2017). Research Methods in Education. *Research Methods in Education*, 1–10. <https://doi.org/10.4324/9781315456539>
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and Conducting Mixed Methods Research. 2nd Edition*,. Sage Publications, Los Angeles.
- Dong, J., Xiao, T., Xu, Q., Liang, F., Gu, S., Wang, F., & Huang, J. H. (2022). Anxious Personality Traits: Perspectives from Basic Emotions and Neurotransmitters. *Brain Sciences*, 12(9), 1–16. <https://doi.org/10.3390/brainsci12091141>
- Martens, R. (1997). *Sport Competition Anxiety Test.* Human Kinetics.
- Martens, R., Burton, D., Vealey, R. S., Bump, L. A., & Smith, D. E. (1990). Development and Validation of the Competitive State Anxiety Inventory-2 (CSAI-2. *Scientific Research An Academic Publisher*, 117–190. <https://www.unhcr.org/publications/manuals/4d9352319/unhcr-protection-training-manual-european-border-entry-officials-2-legal.html?query=excom> 1989
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative Research: A Guide to Design and Implementation (4th ed.)*. San Francisco, CA: Jossey Bass.
- Morra, A. (2020). *Leading Through Anxiety.* <https://hbr.org/2020/05/leading-through-anxiety>
- Park, I., & Jeon, J. (2023). Psychological Skills Training for Athletes in Sports: Web of Science Bibliometric Analysis. *Healthcare (Switzerland)*, 11(2). <https://doi.org/10.3390/healthcare11020259>
- Schüler, J., Wegner, M., Plessner, H., & Eklund, R. C. (2023). Sport and Exercise Psychology: Theory and Application. *Sport and Exercise Psychology: Theory and Application, February*, 1–757. <https://doi.org/10.1007/978-3-031-03921-8>
- Singh, V., S, K., Prakash, S., & Punia, S. (2017). *Relationship between pre- competition anxiety and performance levels in inter-university women football teams.* 136, 136–139.
- Yang, H. X., Wen, X. P., & Xu, F. (2020). The Influence of Positive Emotion and Sports Hope on Pre-competition State Anxiety in Martial Arts Players. *Frontiers in Psychology*, 11(July), 1–10. <https://doi.org/10.3389/fpsyg.2020.01460>
- Zadkhosh, S. M., Gharayagh Zandi, H., & Hemayattablab, R. (2018). Neurofeedback versus mindfulness on young football players anxiety and performance. *Turkish Journal of Kinesiology*, 4(4), 132–141. <https://doi.org/10.31459/turkjkin.467470>