Competitive Anxiety Levels of Track and Field Athletes in Rural Area of Sabah

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The purpose of the study was to examine the competitive anxiety level of track and field athletes in remote areas of Sabah. A total of 213 male athletic athletes aged between sixteen to eighteen years have participated in this study. The participants' competitive anxiety levels before competition were assessed and classified into three categories: cognitive anxiety, somatic anxiety, and self-confidence. The Competitive State Anxiety Inventory (CSAI-2) was utilized in this study, and participants completed the questionnaire 60 minutes before the competition began. The data were analyzed by using a one-way analysis of variance (ANOVA). The results showed that field athletes were significantly better compared to track athletes in cognitive anxiety and self-confidence, ($p < .05$). Nevertheless, there was no significant difference between track and field athletes on somatic anxiety, ($p > 0.05$). The study found that field events athletes can cope with anxiety better than track events athletes. Hence, it was essential for track and field athletes to get a proper training program regarding their psychological demands before the competition. Low anxiety and high confidence levels can contribute to improved performance in athletes.

Keywords: sports psychology, anxiety, track and field, athletics

In sports events, psychological variables (cognitive, motivational, and emotional) play a significant role in an athlete's performance and can define the athlete's degree of competence (Dali & Parnabas, 2018; Grange & Kerr, 2010). Previously, sports scientists were more concerned with athletes' psychological performance, researching the relationship between anxiety and sports performance using models and hypotheses (Englert & Bertrams, 2012).

Anxiety is described as a state of worry or tension that often occurs in the obvious anger or absence of reality (Buckworth & Tomporowski, 2013). According to Marten and colleagues (Martens, Vealey, & Burton, 1990), anxiety is a multi-dimensional construct that may be split into three components: somatic anxiety, cognitive anxiety, and self-confidence.

Somatic anxiety is described as a person's experience of physiological arousal, which includes bodily symptoms such as quicker breathing, rapid heartbeat, muscle tension, and elevated blood pressure (Jing, Omar & Hamid, 2015). Cognitive anxiety was defined as worrying thoughts, negative self-talk and perception, performance anxiety, and a lack of attention when doing a certain activity (Correia & Rosado, 2019). Self-confidence is defined as an individual's belief in their capacity to accomplish a goal

and is seen as a significant component that may impact athletics (Machida, Marie Ward & Vealey, 2012). According to Truong (2017), the best success in sports is affected by an athlete's ability to manage their anxiety level during futsal competition.

In sports, an athlete's performance has always been influenced by the pre-competitive anxiety situation which can occur when athletes fail to manage their emotions (Jing, Omar & Hamid, 2015). When athletes have poor self-confidence and excessive anxiousness before a competition, this scenario can bring a negative influence on their sports performance (Palazzolo, 2020).

The previous study revealed that high anxiety levels during competition have led to a failure in athlete performance, which was shown in numerous situations, such as in football (Wilson, Wood & Vine, 2009), elite golf (Hill, Hanton, Matthews & Fleming, 2010) and poor performance in softball (Garit *et al*., 2021). A different study on anxiety in sports has found that winners have lower levels of somatic anxiety and a higher level of cognitive anxiety than losers (Balyan, Tok, Tatar, Binboga & Balyan, 2016).

In athletic performance, Anagnostopoulos, Carter, and Weissbrod (2015) found that there is no significant difference in pre-competitive anxiety between African American and NHC males. However, little research on competitive anxiety in track and field events has been done, particularly among male rural athletes in Sabah, Malaysia. Since both events are individual sports (except relay events), both must have their performance demands in psychological. In addition, both events have different competition structures which might influence athletes' pre-competitive anxiety. Track events are held in which each participant competes at the same time. Meanwhile, in field events, the athletes will compete one at a time, not simultaneously, but under a set time limit. Based on the results in athletic competition U-18 in Sabah, male athletes from rural areas like Tambunan Keningau, Tenom, and Nabawan always made it to the final stage, either track or field events. Unfortunately, they are unable to give their optimum performance during the final, which the researcher believes is due to psychological reasons.

Therefore, the study aimed to examine the level of cognitive anxiety, somatic anxiety, and self-confidence between track and field athletes in rural areas of Sabah, Malaysia. We believe that specific research should be conducted to determine whether there is a significant difference in an athlete's anxiety level between track and field events, particularly in cognitive anxiety, somatic anxiety, and self-confidence.

Method

Participants

Two hundred and thirteen male athletes (n = 213) with an average age of 17.30 ± 0.6 years has involved in this study. They were selected randomly using purposive sampling and were chosen based on their athletic event, either track or field. All of the athletes were competing in the Sabah District Sports Council Tournament in 2019. The teams that joined the competition were coming from rural areas such as Tambunan, Keningau, Tenom, and Nabawan. The study received ethical approval from the Universiti Malaysia Sabah. Table 1 shows the statistics of the participants according to the areas.

Table 1

Statistics of the participants

Teams	Event	N	Age
Tambunan	Track	32	17.2 ± 0.1

	Field	22	17.2 ± 0.9
Keningau	Track	33	17.4 ± 2.1
	Field	23	17.3 ± 0.6
Tenom	Track	29	17.3 ± 1.9
	Field	21	17.4 ± 0.7
Nabawan	Track	30	17.3 ± 1.0
	Field	23	17.4 ± 0.4
Total		213	17.3 ± 0.6

The athletes that were involved in track events were competing in 100 meters, 200 meters, 400 meters, 800 meters, 1500 meters, 110-meter hurdles, 400-meter hurdles, 10,000 meters, and 5,000 meters of walking. The athletes involved in field events were competing in individual competitions like high jump, long jump, triple jump, shot put, javelin throw, discus throw, and pole vault.

Instruments

The Competitive State Anxiety Inventory-2 (CSAI-2) created by Martens, Vealey, and Burton (1999) was used to assess the participants' anxiety levels. This questionnaire was divided into three dimensions which were cognitive anxiety, somatic anxiety, and self-confidence. This instrument has been modified and translated from English to Malay. The translation of the questionnaire was consulted by an expert consultant in this field. The reliability value of the questionnaire was 0.88 (Nandu, 2021).

The CSAI-2 is a 27-item inventory that measures cognitive anxiety, somatic anxiety, and self-confidence in a competitive situation. Each item on the CSAI-2 is provided by a 4-point Likert scale (1 = *not at all*, 2 = *somewhat*, 3 =

moderately so, 4 = *very much so*. Items were arranged as follows in Table 2. The total score for all items in each dimension was calculated. A high score in the questionnaire showed a high degree of anxiety and self-confidence, whereas a low score showed a low level of anxiety and self-confidence.

Table 2

Items in the CSAI-2

Dimension	N	Number of items
Cognitive anxiety	9	1, 4, 7, 10, 13, 16, 19, 22, 25
Somatic anxiety	9	2, 5, 8, 11, 14, 17, 20, 23, 26
Self-confidence	9	3, 6, 9, 12, 15, 18, 21, 24. 27
Total	27	

Procedure

The CSAI-2 was distributed to participants approximately 60 minutes before their event started. Before answering the questionnaire, participants must first complete the demographic section. The demographic section contains information about participants' age and schools. Following that, participants must read the instructions in which they are requested to answer the questionnaire honestly about their replies.

Statistical analysis

The demographic data were analyzed using a descriptive statistic to calculate the mean and standard deviation (Mean ± SD). The data in each dimension (cognitive anxiety, somatic anxiety, and self-confidence) was calculated as a cumulative frequency. A one-way analysis of variance (ANOVA) was used to determine the difference between track and field on the cognitive anxiety, somatic anxiety, and self-

confidence level. The significant level was set as p < 0.05.

Results

Table 3 shows the mean of cognitive anxiety, somatic anxiety, and self-confidence in two different events; track and field.

Table 3

Mean of cognitive anxiety, somatic anxiety, and self-confidence level

	Track	Field	*p*
Cognitive anxiety	2.4 ± 0.5	2.2 ± 0.5	.001*
Somatic anxiety	2.1 ± 0.5	2.1 ± 0.2	.640
Self-confidence	2.7 ± 0.3	3.1 ± 0.4	.000*

*Mean ± SD, p < .05

Based on the result in Table 3 and Figure 1, athletes in field events have lower cognitive anxiety than athletes in track events, $F (1, 213) = 1.708$, $p < 0.05$ where $p = 0.001$. However, the result in somatic anxiety showed that there was no significant difference between athletes in track and field events, $F (1, 213) = .081$, $p > 0.05$ where $p = .640$. Lastly, the results showed that athletes in field events recorded a higher level of self-confidence than athletes in track events, $F (1, 213) = 17.658$, $p < 0.05$ where $p = 0.000$.
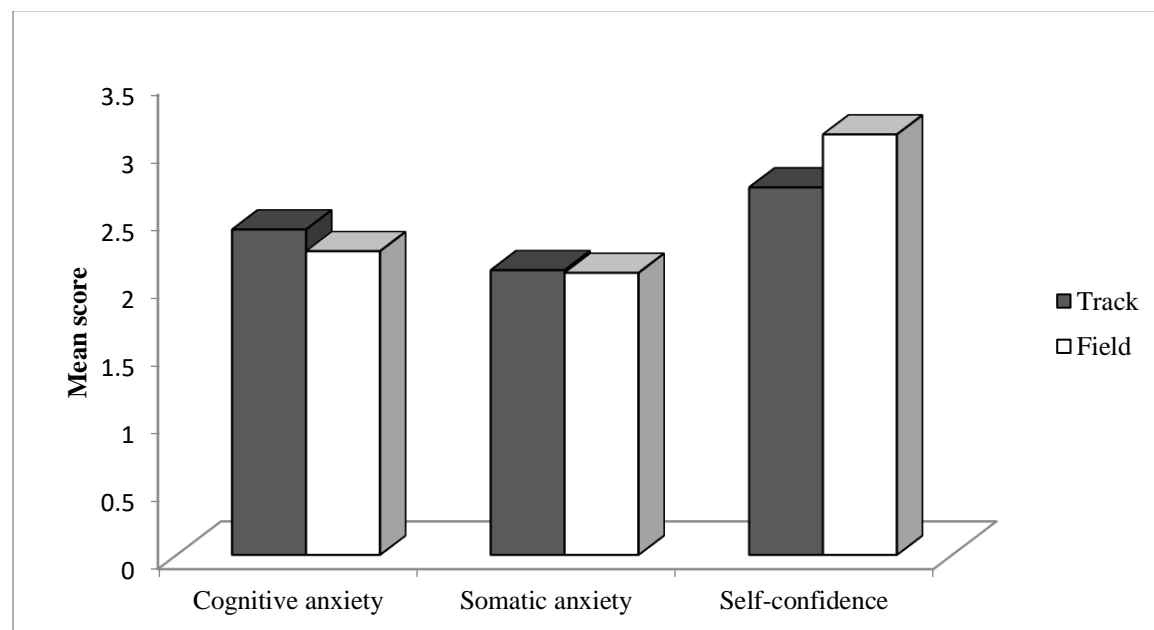

Figure 1 Cognitive anxiety, somatic anxiety, and self-confidence level in each event

Discussion

The study aimed to investigate the level of cognitive anxiety, somatic anxiety, and self-confidence between track and field athletes in rural areas of Sabah. It was hypothesized that athletes in field events would have a lower level of cognitive anxiety and a higher level of self-confidence compared to athletes in track events.

The data supported the hypothesis that athletes in field events had lower mean scores in cognitive anxiety and higher mean scores in self-confidence than athletes in track events. The results also showed that there was no significant difference in somatic anxiety between athletes in these two events. Before the competition, athletes in both events may experience the same somatic anxiety symptoms such as

muscular tension, fast heartbeat, and breathing that lead to this result. It has been demonstrated that athletes in both events have the same level of physiological arousal but differ in their levels of cognitive anxiety and self-confidence before the competition, which might have a major impact on their performance (Dominikus, Fauzee, Abdullah, Meesin & Choosakul, 2009). Based on the results, we knew that athletes in field events have a better ability to control their psychological during pre-competition than athletes in track events. These competitive anxiety factors are important because a high level of anxiety can lead to poor performance (Nicholls, Polman & Levy, 2010).

The structure of sport may influence athlete performance (Ramis Laloux, Viladrich Segues, Sousa & Jannes, 2015). Specifically, athletes who compete in track events tend to feel more tension, especially in short distance races (100 meters, 200 meters, 400 meters, and 110 meters hurdle). They may feel nervous during the starting phase, and this event generally draws more attention for spectators to witness the competition than field events. Moreover, athletes in track events only have one chance to prove their capability during the competition. If athletes make a mistake (e.g., a false start in 100 meters) during the games, they may be disqualified, which may be an unpleasant experience for them. In contrast, field athletes tend to be more comfortable with the structure of the event because they will get a few chances to improve their performance during a competition. It could give them high self-confidence to execute a better performance during their event.

This result is confirmed by a previous study, which found that track and field athletes who mastered imagery techniques were more likely to qualify for the Olympic squad than those who did not (Katsikas, Argeitaki & Smirniotou, 2009). Furthermore, Lawless and Grobbelaar (2015) discovered that successful athletes in athletics have better psychological abilities than less successful athletes. Jing et al. (2015) supported the findings by observing that non-elite athletes had a greater degree of anxiety management during competitions, which resulted in poor performance. According to Lawless and Grobbelaar's (2015) findings, suggested that successful athletes in track and field events exploited each category of imagery significantly greater than less successful athletes.

Conclusion

In conclusion, the study demonstrated that field events athletes can manage anxiety effectively compared to track events athletes. It may be concluded that track and field athletes should have their psychological program in place before the start of the competition. This could give a benefit for them to decrease their cognitive and somatic anxiety level and at the same time to increase their self-confidence during a competition. Athletes that have low anxiety and high confidence levels might perform more successfully. Since the study only focuses on male athletes aged between 16 to 18 years old, it becomes the limitation of the study. Because there has been so little research on psychological factors between track and field events in Malaysia, future research may look at the difference between gender and age on anxiety level in athletic competition. Besides, the data were too general by comparing the cognitive anxiety, somatic anxiety, and self-confidence between track and field athletes. Future studies also should focus on the data (specific construct), which can be a predicted variable that can distinguish athletes' performance.

Acknowledgment

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