

The Correlation between Mental Toughness and Critical Thinking Ability With Indonesian Squash Pelatnas Athlete's Anxiety

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Abstract: The purpose of this study was to determine the relationship between mental toughness and anxiety, the relationship between critical thinking skills and anxiety, and the relationship between mental toughness with critical thinking skills and anxiety. The method was descriptive correlational. The sample was Indonesian Squash Athletes participating in SEA GAMES XXIX 2017 in Malaysia. The research instrument used is Mental Toughness Questionnaire (MTQ48) questionnaire, Critical Thinking Critical Questionnaire and Competitive Anxiety Inventory-2 (CSAI-2) Questionnaire. The result: there is a significant correlation between mental toughness and anxiety, there is a significant correlation between critical thinking skills and anxiety, and there is a significant correlation between mental toughness and critical thinking skills and anxiety.

1 INTRODUCTION

The athlete's performance on the pitch is not only affected by their physical and technical skill but it is also affected by their psychological skill. One of the psychological aspect that may affect the athletes' performance is anxiety. Anxiety can be interpreted as a negative phenomenon arising from the arrival of pressure, so it can cause feelings of nervousness, worry, and feelings of fear of everything that will be done. Weinberg and Gould (2010) says that "Anxiety is a negative emotional state characterized by nervousness, worry, and apprehension and associated with activation or arousal of the body. This means that anxiety is a negative emotional symptom with a marked nervousness, concerns associated with activation of body arousal. Almost all athletes experience different levels of anxiety before and during the competition, sometimes this state of anxiety leads to a weak appearance (Tahmasebi Boroujeni, Mirheydari, Kaviri, and Shahhosseini, 2012). This means that when anxiety can not be controlled properly, it will adversely affect performance. Anxiety caused by the condition wherein an athlete is not able to control his emotions against the impending discomfort, resulting in symptoms of anxiety and depression.

From some of the above opinions, then Komarudin (p. 1) argues that "man is made up of the unity of soul and body or also called" psychosomatic unity which means that one part affect another" Similarly, experienced by Pelatnas Squash Indonesia athletes who will face SEA GAMES XXIX in Malaysia. This will affect the athletes' psychological condition. This disorder is caused by several factors that affect them so that they experience anxiety. Among them is to imagine the opponent, afraid of not giving the best performance. If anxiety can not be minimized and managed well then it will affect the appearance of athletes in the field. Ardiansyah (2014, in Raynadi p.150) argues, the good or bad ability of an athlete in the field will affect the psychological state of the athlete especially on feelings like anxiety.

(Jones, 2010) defines mental toughness as having a psychological side that enables an athlete to tackle the pressures and demands of the sport consistently in Competition, training, and athletic life. The results revealed that emotional intelligence (part of mental toughness) self-reported is negatively associated with depression and anxiety levels, meaning that when a person has good emotional intelligence it will have an impact on the low level of anxiety athletes themselves (Fernandez-Berrocal, 2006). (Lane, Thelwell, Lowther, and Devenport, 2009) claimed that emotions with successful

performance vigor, calmness and happiness, whereas emotions associating with poor performance include confusion, depression and fatigue. Research from Lane claims that emotions with successful performance are related to tranquility and happiness, whereas poor performance is associated with confusion, depression and fatigue. Several studies have revealed that an athlete who has mental toughness and good critical thinking can minimize the anxiety symptoms that occur before the game. (Gucciardi and Jones, 2012) show that teenage cricket players with high mental toughness are reported to be more developed and negative levels of negative emotional states compared with peers who have moderate levels of mental toughness.

In the performance of the sport, critical thinking skills are needed when an athlete is under pressure so that quick and precise thinking is needed so that the pressure can be managed well. Critical thinking skills can help athletes to perform at their best when they are under high pressure and stress (Sulaiman, 2013). This means that the ability to think critically capable of helping athletes to be able to perform as well as possible when under high pressure. An athlete will always be faced with anxious symptoms when going to match or during a match. It is a common reaction because of the fear that comes to him, so he feels threatened.

Cognitive skills as well as critical thinking skills shape judgments about situations such as decision making, and the development of high-quality assessments (Facione, 2011). In addition, critical thinking refers to one's internal motivation for critical thinking when faced with several problems or challenges that need to be solved, evaluating ideas, or making decisions (Facione, 2011). (Facione, 2011) describes some of the components of critical thinking skills such as: interpretation, analysis, conclusions, evaluation, explanations, and self-regulation that athletes can apply to improve their sports performance in competition. From the above explanation it can be concluded that the first step of the main critical thinking skill refers to the interpretation that mentions how to understand and express meaning and situations, events, judgments, conventions, roles, criteria, and significant procedures. Therefore, athletes should be able to apply their interpretation as the core of critical thinking skills to address various types of sports competitions. They need to have a clear insight into their situation in the competition. For example, they need to differentiate about the event (e.g. what competition they attended), experience (e.g. what experiences they had to face with the competition),

situations (e.g. what kind of situation they had to face), and assessment (e.g. what their assessment about their ability or success). From some of the above opinions so that the author intends to conduct scientific studies through a study of the Relationship of Mental Reliability and Critical Thinking Ability against Anxiety Squash Athlete.

2 METHODS

This research used Descriptive Correlational Method. The population selected in this study was Indonesian Squash Athletes. From the population, those participating in SEA GAMES national team aged 17-22 years old were chosen as the sample. The instrument used in this study were the Mental Toughness Questionnaire (MTQ48) (Clough et al., 2002), questionnaire of Critical Thinking ability adopted from Bambang Abduljabar's research (Dissertation, 2009. pp.292), and the Competitive State Anxiety Inventory - 2 (CSAI-2) from Martens, et al. (1990).

3 RESULTS AND DISCUSSION

3.1 Statistical Description

The means and standard deviation of mental toughness, critical thinking skill and anxiety are described in the following table 1 and 2.

Table 1: The means and standard deviation of mental toughness, critical thinking and anxiety (N = 20).

	Means and Standard Deviation
Mental toughness	108,58 ± 16,86
Critical thinking	165,25 ± 25,29
Anxiety	53,00 ± 9,458

Table 2: The coefficient correlation of mental toughness and anxiety.

	Anxiety
Mental toughness	-0,785*
Critical thinking	-0,689*

3.1.1 The Correlation between Mental Toughness and Anxiety

Table 3: The correlation between athletes' mental toughness and their anxiety.

		Mental toughness	Anxiety
Mental toughness	Pearson correlation	1	-.785
	Sig.(2-tailed)		.002
	N	12	12
	R Squared	0,616	
Anxiety	Pearson correlation	-.785	1
	Sig.(2-tailed)	.002	
	N	12	12
	R Squared	0,616	

Table 3 shows that the coefficient correlation (r) = -0,785 and sig. = 0,002 < 0,05. It means that there is a significant correlation in this case there is a negative correlation between mental toughness and anxiety. It implies that the correlation is reversed. The higher the mental toughness score is, the lower the anxiety score will be. In other word, the better mental toughness an athlete has, the lower the level of anxiety he will have.

Correlation calculation results using product moment correlation states that the relationship between mental toughness with anxiety athletes squash has a relationship of -0.785, at a significant level of 0.002 which means the value is < 0,05. R Square between mental toughness and anxiety of 0.616 means they have a very strong relationship. As a result, $0,616 \times 100\% = 61,6\%$ 61.6% anxiety is caused by mental toughness while the rest is not investigated by the researchers. Personality shows that certain characteristics affect from the type of situation that is considered as stress as well as the assessment of the stressor. For example, neurotic individuals are more likely to experience stressors and interpersonal assessment Situations with higher levels of stress reactivity and negative influences (Suls and Martin, 2005). Based on the conceptualization of mental toughness, so it can be predicted that people who have a high mental toughness will experience a tense event as a challenge, something that can be influenced and act upon seeing themselves that they are capable of doing the things (Kaiseler, Polman, and Nicholls, 2009). So it can be said that mental toughness can be attributed to the emotional stability of an athlete while experiencing a tense event that makes the athlete feel anxious (Horsburgh, Schermer, Veselka, and Vernon, 2009), when athletes feel tense and

anxious, to play a role in minimizing the situation. From the above theories suggest that individuals who have a strong mentality rate stressful conditions with lower levels of stress intensity and with higher perception of control during appearance (Kaiseler et al., 2009). Although according to him until now there has been no research conducted to support this opinion.

Other research results from Zulkarnaen and Rahmasari (2013) indicate that there is a negative and significant relationship between self efficacy which is one component of mental toughness with anxiety compete in martial athletes. In addition, the results of the study (Martin, Craib, and Mitchell, 1995) showed that athletes who have high self-awareness, are more able to be alert and manage themselves against the emergence of anxiety. Self-awareness is a manifestation of the components of mental toughness, namely control life. But besides that, Athan and Sampson (2013) add skill level, experience and level of distraction in daily activities is a factor affecting the anxiety of match. So from the results of the above research, it can be concluded that the higher the mental toughness of an athlete, then the anxiety when facing the problem will be lower.

3.1.2 The Correlation between Critical Thinking and Anxiety

Table 4: The correlation between critical thinking and anxiety.

		Critical Thinking skill	Anxiety
Critical Thinking skill	Pearson correlation	1	-.689*
	Sig.(2-tailed)		.013
	N	12	12
	R Squared	0,475	
Anxiety	Pearson correlation	-.689*	1
	Sig.(2-tailed)	.013	
	N	12	12
	R Squared	0,475	

Table 4 shows that the coefficient correlation (r) = -0,689 and sig. = 0,013 < 0,05. It means that there is a significant correlation in this case there is a negative correlation between critical thinking and anxiety. It implies that the correlation is reversed. The higher the critical thinking score is, the lower the level of anxiety will be. In other word, the better critical thinking an athlete has, the lower the level of anxiety he will have.

Furthermore, the calculation of correlation using product moment correlation in the next test states that the relationship between the ability to think critically with anxiety squash anxiety has a relationship of -0.689, at a significant level of $0,13 < 0,05$. R Square value of 0.475 means $0.475 \times 100\% = 47.5\%$ anxiety caused by the ability to think critically, while the rest is not examined by researchers. Anxiety occurs when athletes feel a potentially threatening competition situation, resulting in an unpleasant emotional response (Englert and Bertrams, 2012). The threat may be perceptual or situational. Perception is defined as everything that comes to make itself feel threatened, whereas situational is the condition of the game or the field, can be a distraction from the audience, the referee's decision, even the pressure coming from the coach who wants the match to get maximum result. The ability to think critically helps an athlete to think about the threats that come so that it does not affect the appearance of the field. Critical thinking skills can help athletes to perform at their best when they are under high pressure and stress (Sulaiman, 2013). The point is that the ability to think critically can help the athlete to perform well when they are under pressure. Through observation, analysis and quick decision making the ability to think critically can help athletes avoid distractions during the game. The disposition of critical thinking consists of analytical, open-minded, seeking for the necessary, systematic, confident, curiosity and adult attitude (Profetto-McGrath, 2003). Critical thinking encourages athletes to clarify misunderstandings, discover the truth of a mistake both when competing

and during practice, ignoring something that is unreasonably convincing, seeing conflicting attitudes, and measuring bad evidence (Edmonds, Hull, Janik, and Rylance, 2005). Sulaiman (2013) says that critical thinking plays an important role in sports competitions because it can help athletes to analyze, evaluate, explain and restructure their thinking more effectively, and also leads to a reduction in risk of adoption, action, or thinking. That way the trainer can promote and apply critical thinking skills as a useful tool among athletes as it can increase self-confidence, self-esteem, self-image, etc. in competition and can also create a recurrent thought process for questionable and positive approaches to athletes. Solve the problem properly. Athletes can also improve their sports performance by applying critical thinking skills through the Socratic Method in sports competitions (Sulaiman, 2013).

3.1.3 The Relationship between Mental Toughness and Critical Thinking and Athletes' Anxiety

Table 5 shows that $R = -0,818$ and $sig. = 0,013 < 0,05$ meaning that the correlation is significant. In this case the correlation between mental toughness and critical thinking and anxiety is negatively significant it implies that the correlation is reversed. The higher the score of mental toughness and the ability to think critically is, the lower the anxiety score will become. In other words, the better mental toughness and critical thinking an athlete has, the low the anxiety he will have.

Table 5: The correlation between mental toughness and critical thinking and athletes' anxiety.

R	R Squared	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
-.818	.669	.596	6.013	.669	9.109	2	9	.007

Negative events, crises, and challenges in life are inevitable. Generating a number of human responses some individuals adapt to the event, but there are also others who fail to cope with the stress experience. Maintaining a good individual requires skills and resources to overcome negative events (Gerber et al., 2013). It can not be denied that the problem could have been experienced by athletes when he was not a career as an athlete. In Indonesia, many former athletes who now work as a profession that is not widely viewed by some as a profession.

Although when they were active as athletes and achieve high goals, their victory never last long. This is a challenge that can not be seen as an opportunity for a better career. Of course if we look at the components of mental toughness, then it can be said only temporary, meaning that mental toughness is only limited as an athlete only.

This proves that, the appearance of an athlete in the field of course is not only supported by the physical and technical capabilities alone, but the psychological and cognitive abilities of athletes that

have an impact on anxiety. Weinberg and Gould (2010) said that "sport end exercise physiology is the scientific study of people and their behaviour in sport and exercise context". The sport of "winning focus" in competitive sports often leads to stressful situations, causing athletes and coaches to experience unpleasant events, which can inhibit the appearance of athletes (Juru and Dan; 2007). Imagining the strength of the opponent, the disturbance from the audience, until the fear of not being able to display his performance well, it always comes to the athletes who experience competition, causing anxiety. If the anxiety experienced by the athlete can not be controlled and well organized it can adversely affect his appearance in the field. This is certainly one of the main concerns for trainers, that the importance of psychological ability for the athlete's appearance. The mental development of athletes is no less important than physical development, techniques, tactics, strategies, if the mental does not develop, achievement is unlikely to be achieved, Harsono, (1988, pp. 101).

4 CONCLUSIONS

In conclusion, critical thinking skills have a wider and deeper impact on individuals to face difficult problems and situations especially for athletes to challenge their thinking and beliefs to improve their performance before, during and after sports competitions. So an athlete will be able to cope with threats coming that make him feel confident and avoid anxiety. (Athans and Sampson 2013) explains that the level of skill, experience, and level of distraction in daily activities is a factor that affects the emergence of anxiety compete. So the components of mental toughness and critical thinking skills help the athlete to control and minimize anxiety disorders that come to him.

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