
LEVEL OF MENTAL TOUGHNESS ON ACADEMIC ACHIEVEMENT OF STUDENT-ATHLETES UNIVERSITI TUN HUSSEIN ONN MALAYSIA (UHTM)

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Abstract. The active involvement of student-athletes in sports and representing themselves in sports tournaments is the cause of students-athletes who further study in Higher Education Institution to get unsatisfactory results and low performance in academic achievement. Among the causal factors of this scenario is due to the mental toughness of the student athlete whom are deem to be weak which influence their learning performance. Thus, the purpose of this study is to identify the level of the mental toughness of students-athletes towards the academic achievement in Universiti Tun Hussein Onn Malaysia (UTHM). The research design used in this study is quantitative method approach. A total of 210 UTHM student-athletes were involved in the survey questionnaire. This study uses the instrument Mental Toughness Questionnaire 48 (MTQ48) that has been adapted and adopted from previous research. Data were analysed using descriptive statistical analysis to identify each element of UTHM student-athletes mental toughness level, independent T-Test statistical analysis test to determine differences in mental toughness level with the gender of UTHM student-athletes and testing using Pearson correlation statistical analysis to determine the relationship between mental toughness and the academic achievement of UTHM student-athletes. The results of the study showed that there was no significant relationship between the elements of mental toughness with the academic achievement of UTHM student-athletes. The relationship between the elements of mental toughness with the academic achievement of student-athletes was moderately strong with values $r = -0.033$ and $\text{sig} = 0.64$ ($p > 0.05$). The results of the study prove that the relationship between the mental toughness of students-athletes does not affect the academic achievement of UTHM student-athletes.

Keywords: Mental Toughness, Academic Achievement, Student-Athletes

1. Introduction

Mental toughness refers to the presence of several values, attitudes, emotions, thoughts, and behaviours that influence an individual's way of approaching, responding to and evaluating negative and positive pressures and challenges. Mental toughness can also be assessed how an individual faces the difficulty of achieving his or her life goals consistently (Coulter, Mallett, and Gucciardi, 2010). The concept of mental toughness focuses on three characteristics, first characteristic, the researchers have explained the mental toughness as psychological capabilities. In other words, mental toughness describes an individual's thoughts, emotions, and behaviour as opposed to the influence of context or social settings. Second, researchers have referred to mental toughness as a concept that can provide a consistently high presentation of individuals covering physical, technical, and tactical aspects that are important variables in academic and sports performance. This shows that mental toughness as the psychological ability to be possessed by an individual. Third, researchers have referred to mental toughness as a concept related to various types of situations. That is, individuals can exhibit positive mental toughness such as success, victory, and achievement, negative traits such as failure, hardship, difficulty and mental toughness can be exhibited through situations such as environmental examples (Gucciardi, Hanton, Gordon, Mallett, & Temby, 2015). Therefore, the characteristics of which are the mental toughness can be defined as the ability of psychology that allows individuals to make the performance of the best and the ability of an individual regardless of the situation at hand, whether positive or negative.

The involvement of student-athletes in sports is an issue and problem that is often a conversation to the community and students. Based on Rozali (2018), statistics of academic achievement according to the average cumulative grade value (CGPA) of students in Higher Education Institutions, almost 40 percent recorded results below 3.00 for the 2015/2016 study session. This shows that the academic achievement of students involved in sports has a negative impact on their academics in Institutions of Higher Learning and other students' perceptions of students are also affected. Most of the community and students in Malaysia are more concerned with academic achievement than achievement in a sport. The factors of academic achievement of students-athletes become weak in their involvement in sports can be seen through the level of mental toughness possessed by the students themselves. Most student-athletes involved in sports will have problems in terms of mental toughness. Based on the study of Dahlan and Muhamad (2017), the failure of the national football team in the 2022 World Cup / Asia Cup 2023 qualifying competition can be seen through the mental toughness of the players where the level of control of the players' concentration while playing is quite weak and causes the players cannot control emotions the occurrence of negative things during the match. According to Khalid, Isa, and Fadhil (2018), athletes who have high mental skills and good mental management in sports will be seen as individuals who are motivated and highly confident, always focused on something, and always ready in terms of mental strength compared to athletes who do not apply good mental skills in sports. This is because, poor mental management will give a big impact to students in a sports coaching even the academic achievement performance of students at the University will also be affected.

Inefficient mental management will affect the mental toughness of students-athletes and will also have a negative impact on a tournament represented and even the academic achievement performance of student-athletes in High Educational Institution is also affected. Several previous studies have identified that an individual has mental toughness problems in terms of challenges, commitment, emotional control, life control, self-confidence, and interpersonal. Students who engage in sports do not have the basic skills in this aspect of mental toughness which causes them to be unable to control, manage their mental and emotional in a sport and even academic performance is affected. In addition, gender differences in student-athletes who are active in sports also contribute to poor academic achievement. Some evidence from previous studies has proven that male student-athletes have a strong mental toughness in terms of commitment to sports involvement and female students-athletes have a strong mental toughness towards academic achievement. This clearly shows that gender differences in academic achievement among student-athletes depending on whether men outnumber women or vice versa. Therefore, this study was conducted to identify the level of mental toughness of students-athletes Universiti Tun Hussein Onn Malaysia (UTHM) influence their academic achievement. This study will focus on elements of mental toughness such as self-control, commitment, challenges, and self-confidence of student-athletes at Universiti Tun Hussein Onn Malaysia (UTHM).

2. Mental toughness in student athletes

Mental toughness is described as personality building related to how an individual copes with challenges, and stress regardless of the circumstances surrounding them. According to Coulter, Mallett, & Gucciardi (2010) an individual's mental toughness can be assessed in a way how an individual faces the difficulty of achieving his or her life goals consistently. As such, mental toughness can be referred to as the presence of several values, attitudes, emotions, thoughts, and behaviours that influence an individual's way of approaching, responding to and evaluating negative and positive pressures and challenges. Based on the study of Gucciardi et al. (2015), mental toughness is a psychological source that is functional, flexible and efficient towards an effort directed at an individual's goals and mental toughness can be termed as an umbrella terms that includes the construction of positive psychology. A student-athlete who has a strong mentality, they will always be confident to achieve victory in many things in life compared to those who are weak and always think negative.

In sports, most athletes and coaches identify mental toughness as the main factor that can contribute to the performance of a sport. According to Weinberg, Freysinger, Mellano, & Brookhouse (2016), the mental toughness possessed by an individual or athlete is a key psychological characteristic associated with success in sports. Every coach and manager of a team needs to be aware to build the athlete's skills to a higher level of sports performance through preparation for the mental and physical strength of the athletes. Psychological researchers argue that mental toughness is an individual's personal ability that enables athletes to perform to the best of their ability regardless of the circumstances they face, always being positive such as trying to win, preventing negative attitudes such as avoiding injury, or giving them the opportunity to learn new skills (Gordon & Gucciardi, 2011). Therefore, every student-

athlete needs to understand in depth about the concept of mental toughness in ensuring that every action they take is always positive towards the efforts and challenges faced to ensure that students-athletes succeed in achieving the goals that have been determined.

In Malaysia, the perceptions and concerns of society, parents, and students on the academic achievement of children and students still exist when their children and students are involved in sports. Based on Ekeke's study (2014), the community's concern, especially parents and guardians on their children's academic achievement has existed since the beginning of school and their children's involvement in sports further increases the perception and negative views of society and parents on academic achievement and sports. This is because excessive student-athlete involvement in sports and co-curriculum can cause the academic achievement of students-athletes is not encouraging. In addition, there are some studies have found the involvement of student-athletes Malay participate actively in sports and co-curricular activities in schools, colleges and universities have academic achievement (CPA), which is low compared with the student-athletes not wither (Nor Martin, Mona Riza, Sevia, Nik Noordini, 2006). This situation will further raise the perception of the community, parents, and students on the involvement of students-athletes in sports and co-curriculum that can have a negative impact on academic achievement.

Gender is one of the factors that need to be mentioned in the literature review in this study where it has a big impact on the academic performance of students-athletes especially to student-athletes involved in sports and at the same time they are conducting study sessions in educational institutions. Gender may influence student-athlete academic performance. A study conducted by Lumpkin and Favor (2012) found that, overall female student-athletes consistently outperform male student-athletes at Grade Point Average (GPA). Among athletes, 87% of female student-athletes achieved an academic achievement of 3.0 GPA or higher compared to 74% of male student-athletes. These findings indicate that female student-athletes are more serious students or have found better methods to balance their academic commitment and sports participation. In the context of sports, the views that explain gender differences in academic achievement among athletes depending on whether men outnumber women or vice versa. Harrison and Lawrence (2004) have also sought to explain why female student-athletes are better than high-performing male student-athletes in academia. The researcher argues that significant differences in academic performance between male and female student-athletes may be due to the strict demands on male student-athletes to participate in highly competitive sports and assumes that the intensity of male-athlete competition usually leaves them with little time to focus on their lessons. Female students, on the other hand, have less strong demands on them in terms of competition and are therefore able to spend enough time learning and achieving higher levels of academic performance than male students.

3. Methodology

The quantitative method approach was implemented by the researcher to measure the level of mental toughness of the student-athletes towards academic achievement while the student-

athletes conducted academic study sessions and their active involvement in sports in this study. The quantitative method approach conducted in this study uses a survey with questionnaires prepared and distributed by researchers among UTHM student-athletes who are active in sports and student-athletes under the supervision of UTHM Sports Centre.

3.1 Research Instrument

This study uses a questionnaire as a research instrument, which is the Mental Toughness Questionnaire 48 (MTQ48). This instrument was adapted from Dahlan and Muhamad (2017), where this instrument has been processed from the instrument Mental Toughness Questionnaire 48 (MTQ48) study from Clough et al. (2002). The use of the Mental Toughness Questionnaire 48 (MTQ48) instrument in this study was to measure the level of mental toughness of UTHM students-athletes from the four elements of mental toughness developed by Clough et al. (2002) which is self-confidence, commitment, challenge and self-control. The MTQ 48 questionnaire instrument contains 48 items that have been adapted and used to measure the level of mental toughness of the academic achievement of UTHM student-athletes. Questionnaire of this study used the Malay language to give easier respondents to understand the questions in the questionnaire. The reliability of the instrument was measured by a small group of 30 respondents' students-athletes from the Non-Resident College, Universiti Teknologi MARA (UiTM) Shah Alam Campus. The instrument was reliable with Cronbach's alpha 0.77. This clearly proves that the value obtained gives the meaning of the instrument used is in a moderate condition and is acceptable to the reliability of the instrument used by the researcher.

3.2 Population and sample

A total of 210 UTHM student-athletes were involved in this study. The questionnaire was distributed to UTHM student-athletes who are active in sports and the distribution of questionnaire survey form to UTHM student-athletes through online method using Google Form. After the survey questionnaire was collected, the researchers prepared the data to be analysed using Statistical Package for Social Sciences (SPSS) version 24.0 software. Data were analysed using descriptive statistical analysis to identify each element of UTHM students-athletes mental toughness level, independent T-Test statistical analysis test to determine the difference in mental toughness level with Gender of student-athletes involved in sports at UTHM and testing using analysis Pearson correlation statistics to find out the relationship of mental toughness to the academic achievement of UTHM students-athletes.

4.0 Findings and Discussion of the Study

Based on the analysis, researchers found that that the element of mental toughness for the commitment element shows is the highest of the elements ($M = 3.80$, $SD = 0.476$) compared to other mental toughness elements. The second highest is the element of challenge ($M = 3.71$, $SD = 0.438$) and the third highest is the element of mental toughness for the element of self-confidence ($M = 3.70$, $SD = 0.467$). While the element of self-control shows the lowest mean element of mental toughness ($M = 3.63$, $SD = 0.463$). All four elements of mental toughness

show a high mean value that is above the mean value of 3.5 and is at a high level. This shows that student-athletes have a high level of mental toughness under the four elements of mental toughness, which is commitment, self-control, challenge, and confidence. The results of this study are in line with the findings of a study conducted by Dahlan and Muhamad (2017) which shows that the level of mental toughness of students-athletes Universiti Kebangsaan Malaysia (UKM) is at a high level on these four elements. This proves that UTHM student-athletes have good mental toughness when they are actively involved in sports and at the same time, they also need to focus on academic study sessions at the University. The mean values for the descriptive analysis of the elements of the level of mental toughness of UTHM students are shown in Table 1.

Table 1. Descriptive Analysis of Student Mental Strength Level Elements

Element	N	Mean	SD	Interpretation
Commitment	210	3.80	0.48	Higher
Self-Control	210	3.63	0.46	Higher
Challenges	210	3.71	0.44	Higher
Self-Confidence	210	3.70	0.47	Higher

Next, researchers tested the significant difference between the level of mental toughness with the gender of UTHM student-athletes by using independent T-test analysis. In determining the significant differences between the elements of mental toughness and gender of UTHM student-athletes, the researcher refer to the value of Sig. (2 tailed) in the results of independent T-Test statistical analysis. If the value of Sig. (2 tailed) is equal to or less than 0.05, there is a significant difference in the mean score between the level of mental toughness with the gender of UTHM students-athletes. If the value of Sig. (2 tailed) is more than 0.05, there is no significant difference in the mean score between the level of mental toughness with the gender of UTHM students-athletes. The results of the study findings for the second research question in this study is shown in Table 2.

Table 2. Differences in Mental Toughness Level with Gender of UTHM Student-Athletes

Relationship	Gender	N	Mean	F	Sig.	Sig. (2 tailed)	t	df
Mental Toughness	Male	127	3.76	1.216	0.271	0.011	2.55	208
	Female	83	3.62					

Table 2 shows the results of the analysis of differences in the level of mental toughness with the Gender of student-athletes who participate in sports at UTHM. The findings shows the value of Sig. (2 tailed) for independent T-test analysis was less than 0.05 ($p < 0.05$). Thus, there was a significant difference in the mean score of male gender ($M = 3.76$, $SD = 0.42$ and female [$M = 3.62$, $SD = 0.33$; $t(208) = 2.55$, $p = 0.01$] on the mental toughness of UTHM student-athletes. This indicates that the gender of UTHM student-athletes affects the level of mental toughness of UTHM students.

The results of this study are in line with studies conducted by Newland, Newton, Finch, Harbke, and Podlog (2013), showing that there are significant differences between relationships elements of mental toughness with the gender of Basketball student-athletes in the National Association of Intercollegiate Athletes (NAIA) and the National Collegiate Athletic Association (NCAA) The findings shows that the male gender gets a higher score in all measurements of study instruments researchers in this study and stated that there is a difference between the sexes on the elements of self-confidence and the elements of self-control. Both elements note that women get lower scores than men. Therefore, it can be concluded that the element of mental toughness is able to influence the group of male and female student-athletes where it will have a positive and negative effect on mental toughness among male and female student-athletes who are conducting academic study sessions and their involvement in sports.

Next, researchers tested the relationship of mental toughness and academic achievement of UTHM student-athletes using Pearson correlation statistical analysis. Table 3 shows the result analysis for relationship of Relationship of Mental Toughness and Academic Achievement Of UTHM Student-Athletes

Table 3. Relationship of Mental Toughness and Academic Achievement Of UTHM Student-Athletes

Relationship	Academic Achievement			Interpretation
Mental Toughness	N	r	Sig. (2 tailed)	Moderate
	210	-0.033	0.64	

Table 3 shows the results of the analysis of the relationship of mental toughness to the academic achievement of UTHM students-athletes. Pearson correlation analysis showed that there was no significant relationship between mental toughness and academic achievement of UTHM student-athletes with values $r = -0.033$ and $sig = 0.64$ ($p > 0.05$). The results of the analysis show that there is a moderately strong relationship between mental toughness and academic achievement of UTHM student-athletes. Therefore, the findings of the study prove that the relationship of mental

toughness of students-athletes does not affect the academic achievement of UTHM student-athletes. The results of this study are in line with the study that has been implemented by Khalid, Isa and Fadhil (2018). According to the study of Khalid, Isa, and Fadhil (2018), athletes who have high mental toughness and good mental strength management in sports will be seen as individuals who are motivated and highly confident, always focused on something, and always ready for mental strength that owned compared to athletes who do not apply the elements of good mental strength in sports. This is because, poor mental strength management will have a big impact on students in a sports coaching even the academic achievement performance of students at the University will also be affected.

4. Conclusion

In conclusion, this study was conducted to identify the level of mental toughness towards the academic achievement of student-athletes of Universiti Tun Hussein Onn Malaysia (UTHM) and also to analyse the level of mental toughness of student-athletes through each elements of mental toughness such as elements of commitment, self-control, self-confidence and elements of challenges to the academic achievement of student-athletes of Universiti Tun Hussein Onn Malaysia (UTHM). The findings from this study found that student-athletes of Universiti Tun Hussein Onn Malaysia (UTHM) have a good and high level of mental toughness for each elements of mental toughness such as elements of commitment, elements of self-control, elements of challenge, and elements of confidence. The mental toughness possessed by UTHM student-athletes does not affect the academic study sessions and the active involvement of their sports at Universiti Tun Hussein Onn Malaysia (UTHM). In addition, the findings of this study prove that the element of mental toughness from the findings of this study affects the gender of UTHM student-athletes between men and women where it will have a positive and negative effect on mental toughness among male and female student-athletes who are conducting study sessions academics and their active involvement in sports at Universiti Tun Hussein Onn Malaysia (UTHM). This explains that gender differences in academic achievement among athletes depending on whether men outnumber women or vice versa (Harrison and Lawrence, 2004). Through this study has also proved that the relationship between the elements of mental toughness and academic achievement of student-athletes is moderately strong and it proves that the elements of mental toughness possessed by students will not affect their academic achievement when UTHM student-athletes engage in sports and also in academics. As a conclusion to this study, the researcher hopes that the study that has been implemented can contribute to stakeholders in implementing and assisting student-athletes of Universities and other Educational Institutions in Malaysia in terms of preparation of students' mental strength in sports and academics.

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