

Student Athletes: Does Emotional Regulation Affect Mental Toughness?

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Abstract Student athletes are required to have good mental abilities to be able to direct their emotions toward optimal performance. But in reality, some athletes are less able to develop their emotions and behavioral strategies when competing, which can cause a decrease in mental toughness in student athletes. This study aims to determine the contribution of emotion regulation to mental toughness in student athletes. A sample of 188 students participated in this study. The sampling technique used was accidental sampling. The scales used for data collection were Indonesian Emotional Regulation for (IERQ4S) and the Mental Toughness Scale. 119 student athletes presented with a moderate mental toughness score of 63.30%. The majority of the emotional regulation of subjects was categorized as moderate, namely 116 student athletes with a percentage of 62.77%. The results of data analysis techniques show a value of $R = 0.778$, $R^2 = 0.605$, and $p > 0.01$, meaning that emotion regulation contributes to mental toughness by 60.5%. Through emotion regulation, student athletes are able to have positive responses affect their mental toughness. The implication of this research is to provide assistance so that student athletes can develop good emotion regulation related to mental toughness to achieve optimal sports performance.

Keywords Emotion Regulation, IERQ4S, Mental Toughness, Student Athlete

1. Introduction

The term "athlete" usually indicates someone who studies and specifically performs in various areas within the field of sports [1]. According to Jannah and Wahini [2], Yukhymenko-Lescroart [3], states that an athlete is someone who pursues and works in certain sports to achieve a level of competence within the sport in which they partake. Teenage athletes who pursue sports and young university students, are usually referred to as student athletes [3]. Students who are also athletes tend to face many stressors that are quite hindering in their sports profession, such as academic assignments, emotional burdens, and injuries, which can cause various mental health problems.

Mental health is comprised of an individual's emotional and psychological well-being. The individual's mental health state facilitates their cognitive and emotional abilities to function optimally [4,5]. Improving physical, technical, and tactical skills without mental coaching will lead to negative results because mentality is a driving force for strengthening physical, technical, and tactical abilities in sports [6-8]. Mental health helps student athletes carry out sports activities to the fullest and achieve in every

match.

This is related to emotion regulation which is a person's capacity to manage his own emotional response and to maintain and handle emotions. For that, a person needs to regulate emotions, which can be regulated in a way, namely how unpleasant feelings are processed by the person and how these emotions actually help in certain situations [9-11]. Sometimes emotions control a person's actions as emotional dysregulation, when the person is unable to regulate his emotions and is unable to use healthy strategies to reduce negative emotions. On the other hand, emotion regulation functions as a protective factor to deal with stressors by helping the person get out of a negative emotional state [12,13]. Through emotion regulation, athletes can think clearly while competing, which helps them come up with good strategies.

Prolonged decline in mental health among student athletes can lead to various psychopathologies such as depression, stress, lack of sleep, and emotional exhaustion [14,15]. These mental health problems can also interfere with the professional, personal, social, and emotional functioning of athletes. Among many other factors, mental toughness is one that can serve as a protector for various psychopathologies [15]. Mental toughness has an important role in the world of sports. The function of mental toughness is as an athlete's self-defense when facing difficult situations. Mental toughness gives athletes additional energy when competing.

Mental toughness is defined as a personality factor that focuses on a person's handling of life's challenges and pressures regardless of existing circumstances [16]. Because mental toughness is an important aspect for a person to be free from pressure, mental toughness is an important and widely studied aspect, especially in sports that involve athletes. To examine more in relation to athletes, mental toughness is interchangeably used to refer to the resilience, fortitude, hardiness, and other psychological constructs present in athletes. So that indirectly, mental toughness is an important factor that affects the performance of athletes in matches or competitions, especially in overcoming the pressure and stress that arise during competition.

Mental toughness is a basic component of the athlete's ability to deal with stressors and challenges. Komatsu et al [17] state that mental toughness emerges as an attribute that allows athletes to be better prepared physically and mentally so they are able to overcome risks or challenges while on the field. When getting a bad stimulus, an athlete must integrate the stimulus into a positive stimulus. With the integration of stimuli carried out by athletes, they will be calmer and think more clearly when competing. Of

course this can be done when an athlete has good mental toughness. Because mental toughness gives athletes new strength in overcoming the various obstacles faced during competition, even pressure from various parties.

Research conducted by Komatsu et al [17] states that mentally tough individuals not only provide strength in facing risks but also provide resilience for athletes to keep going even though the experiences they get contain something that is risky or negative. Mental toughness is a collection of values, attitudes, behaviors, and emotions that causes athletes to survive and overcome all obstacles, difficulties, and pressures that have been experienced [18]. When an athlete has good mental toughness, he will be able to control negative emotions and be able to control himself even when he is under pressure.

Yarayan et al [18] in their research found that a high level of mental toughness can help a person use positive emotions to get through an unpleasant experience. Therefore, psychological factors have a function as a driver of or influence on athlete performance [19]. One of them is emotional instability in athletes, which can be triggered by many things in the surrounding environment.

Good emotional regulation in athletes will be very helpful when facing unpleasant situations. Meanwhile, based on other sources, namely Gross [20], it is stated that emotion regulation is a strategy that is carried out consciously or unconsciously to maintain, strengthen, or reduce one or more aspects of emotional response, namely emotional experience and behavior. Someone who presents with the ability to emotionally regulate can maintain or increase the emotions he feels, both positive and negative. So that the success of the process of emotion regulation is determined by factors that are both external and internal to the individual.

Therefore, it is interesting to know whether there is a contribution from athletes' emotional regulation to their mental toughness. After all, emotional regulation and mental toughness are two important things for athletes. Especially for student athletes, because at a young age they must try to have good emotional regulation and mental toughness. Based on this case, researchers will conduct research with the aim of knowing the contribution of emotion regulation to mental toughness in student athletes.

2. Materials and Methods

2.1. Participants

The subjects of this study were student athletes, totalling 188. The description of the research subject is as follows:

Table 1. Subject demographics

Aspect	Characteristic	Amount (N=188)	%
Sex	Male	109	58
	Female	79	42
Age	14 years old	23	12,23
	15 years old	100	53,19
	16 years old	36	19,15
	17 years old	19	10,11
	18 years old	10	5,32
Types of sport	Beach volleyball	12	6,38
	Diving	5	2,66
	Fencing	5	2,66
	Golf	3	1,60
	Gulat	24	12,77
	Judo	19	10,11
	Karate	31	16,49
	Pencak Silat	24	12,77
	Rock climbing	6	3,29
	Roller skating	3	1,60
	Swimming	6	3,19
	Table tennis	4	2,13
	Taekwondo	15	7,98
	Takraw	11	5,85
	Tennis	4	2,13
	Track and field	16	8,51

The data in table 1 above show that the majority of research participants were male, 109 or 58%. Out of these participants the predominant age was 15 years, reflecting a 53,19%. Most participants took part in karate, namely 16,49%.

Meanwhile, the sports with the lowest participants were golf and roller skating, each accounted for 1.60%. These findings indicated that the sport of karate held significant popularity among the research participants compared to other sports. However, to gain a deeper understanding of the influence of emotional regulation and mental toughness on student athletes, further analysis and comprehensive exploration of the entire dataset across various sports were necessary. These data suggested the potential for further exploration into the impact of this sport on the psychological aspects of student athletes.

2.2. Instruments

Mental Toughness Scale was adapted from Gucciardi et al [21]. The scale consists of 14 items with the dimensions thrive through challenge, tough attitude, sport awareness and desire for success. The reliability scale is 0.820. Choice of answers on this scale is with a range of 1-4. The lowest value is 14 and the highest value on the scale is 56.

Based on the Mental Toughness Scale's score range is then categorized into three parts, namely high, moderate, and low. The categories are as in table 2 below.

Table 2. Categories of mental toughness scale scores

Category	Value Range
Low	14-27
Moderate	28-41
High	42 and above

2.2.1. Emotion Regulation Questionnaires on Indonesian Sport Setting (IERQ4S)

The scale used to measure emotion regulation is the Emotion Regulation Questionnaire on Indonesian Sport Setting (IERQ4S) [22]. The IERQ4S scale has 10 elements in each dimension, with each dimension namely: attitude of emphasis and rethinking, awareness of practice and desire to succeed. Based on these dimensions, the reliability scale of the measurements obtained is 0.824. The range of choices on the questionnaire on the IERQ4S scale ranges from 1-4. The lowest score is 10 and the highest score on the scale is 40. Based on the range of scores on the IERQ4S scale, it is then categorized into three parts, namely high, medium and low. These categories are as in table 3 below.

Table 3. Categories of emotion regulation scale scores

Category	Value Range
Low	10-19
Moderate	20-29
High	30 and above

2.3. Data Collection and Analysis

The data were collected using accidental sampling. For 3 consecutive days, the researchers came to the sports school and students athletes who were engaged with, resulting in a total of 188 participants. Data testing used simple linear regression analysis techniques assisted by the Jeffreys' Amazing Statistics Program (JASP) for windows version 0.14.1.0.

3. Results

From the results of the research conducted in the field, the following data were obtained.

Table 4. Category of subject

Instrument	Category	Score	Total	%
IER4QS	Low	10-19	2	0
	Moderate	20-29	116	62,77
	High	30 and above	68	36,17
MTS	Low	14-27	38	20,21
	Moderate	28-21	119	63,30
	High	41 and above	31	16,49

It could be seen from table 4 above that the majority of

the emotional regulation of subjects was categorized as moderate, namely 116 student athletes with a percentage of 62.77%. As for the mental toughness score, the subjects in the moderate category were 119 student athletes with a percentage of 63.30%. These results indicated that the majority of the research subjects had a balanced level of emotional regulation and mental toughness, falling into the moderate category.

The results of data analysis techniques show a value of $R = 0.778$, $R^2 = 0.605$, and $p > 0.01$, meaning that emotion regulation contributes to mental toughness by 60.5%. This significant contribution indicated that emotional regulation played an essential role in shaping mental toughness. The magnitude of emotional regulation's contribution to mental toughness was 60.5%.

4. Discussion

In this study, it showed a contribution of 60.5% of emotional regulation to the mental toughness of student athletes. These two aspects, namely emotional regulation and mental toughness, have an influence on the psychological aspects of student athletes. Psychological aspects can affect student athlete performance, such as emotional maturity and emotional management [23]. This is in line with the underlying theory of mental toughness, that the higher a person's level of mental toughness, the higher their efficiency in applying emotional regulation [24].

Mental toughness is a positive attitude that individuals have to overcome all challenges in order to achieve the goals they want to. Herfiantoro and Setyawati [24] stated that athletes can be said to be mentally ready when they no longer feel anxious about worrying, and other negative feelings. Athletes can be said to have good mental stamina when they can meet the four dimensions of thriving through challenge, sport awareness, tough attitude, and desire for success [25].

Emotional regulation is the ability to regulate, extinguish emotions at a high level so that the skills to organize feelings, physiological actions, thinking, and emotional responses arise. Athletes with good emotional regulation abilities can make a plan to suppress the feelings that culminate as a result of the many negative impulses experienced. Individuals with positive emotional regulation abilities can impact an athlete's physical health, behavior, and social relationships.

To maintain emotional and mental stability, athletes require a great deal from a coach. Sin states that the personal condition derived from the individual is obtained by the existence of a balance between emotional and intellectual responses [24]. An athlete can be mentally formed and enhanced when he has a good and maximum mental condition. Zhang [26], stated that the better an individual is at regulating their emotions, the better the individual rises from the problems faced and is able to

solve them well.

Student athletes with good emotional regulation abilities are able to suppress feelings that peak due to the numerous urges found in the field. Student athletes with good emotional regulation can deal with the anxiety and tension that occur during the match [27].

Jun et al [28] explain that students-athletes can maximize their performance when they are mentally trained, the more skilled they are at dealing with emotional problems, the more they know the causes of the emergence of emotions so that they can focus more on the selection and use of techniques and tactics to win the match. Because in a competition, athletes generally will be faced with various emotional levels that can break their concentration at any time.

Athletes need to remain calm and mentally strong in order to protect themselves from psychological effects, including the effects of stress, trauma symptoms and depression by maintaining positive emotions [29]. Similar to the study conducted by Jannah et al [30], which stated that mentally resilient individuals not only provide strength in the face of risk, but also provide resilience for athletes to continue to advance even though the experience acquired contains something risky or negative. Athletes with high Mental Toughness will be positively related to their performance and flow experience when competing [31]. Furthermore, a resilient individual will intelligently use positive emotions to achieve superior outcomes; therefore, positive emotional experiences can be an effective factor for the individual's mental stability and endurance.

The descriptive analysis of the variables of mental stamina, revealed that the mental toughness experienced by athletes is at a high level, meaning the athlete's emotional regulation still needs to be improved. Because when an individual has a good emotional setting, he can control his emotions quite well.

5. Conclusions

The study concluded that the mental toughness in student athletes usually requires at least a 60.5% contribution from the athlete. So it can be said that emotional regulation plays an important role in the mental toughness of student athletes in every activity. With the presence of emotional regulation from the athletes, they will be able to do their best, in addition to having good mental toughness. Because as athletes, they face a variety of demands to be able to do their best in any activity or competition, where both variables are important in supporting their success. It is expected for student athletes to maintain and/or raise their emotional regulation. Because when athletes are under emotional stress that leads to a decrease in the level of mental toughness, they will be impacted in their competence in the competition. As an athlete, you are always expected to achieve the best results. The implications of these findings could support the

development of more targeted and effective mental training programs for athletes to enhance their performance. The implemented training programs could be more directed, not only focusing on the physical aspect but also delving deeper into emotional regulation, ensuring the mental toughness of student athletes is well maintained.

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REFERENCES

- [1] Jannah, M., Widohardhono, R., Fatimah, F., Dewi, D. K., Umanailo, M. C. B., "Managing cognitive anxiety through expressive writing in student-athletes," *International Journal of Science and Technology Research*, vol. 8, no. 10, pp. 1615–1618, 2019. <https://www.ijstr.org/final-print/oct2019/Managing-Cognitive-Anxiety-Through-Expressive-Writing-In-Student-athletes.pdf>
- [2] Jannah, M., Wahini, M., "Concentration, self-confidence and student athlete's performance," *International Journal of Life Science and Pharma Research*, vol. 8, no. 4, pp. 1–13, 2018. DOI: 10.22376/ijpbs/lpr.2018.8.4.aseansp.i.1-13
- [3] Yukhymenko-Lescroart, M. A., "Sport-to-School Spillover Effects of Passion for Sport: The Role of Identity in Academic Performance," *Psychological Reports*, vol. 125, no. 3, pp. 1469–1493, 2022. DOI: 10.1177/00332941211106925
- [4] Gould, D., Mignano, M., "Youth Sport," in *Sport, Exercise and Performance Psychology*, E. Filho, I. Basevitch (Eds.), Oxford University Press, 2021, pp. 250–263. DOI: 10.1093/oso/9780197512494.003.0018
- [5] Mohebi, M., Zarei, S., Sohbatih, M., "The Relationship between Emotion Regulation Strategies and Mental Toughness in Elite Taekwondo Athletes," *Sport Psychology Studies*, vol. 6, no. 21, pp. 29–42, 2017. DOI: 10.22089/spsyj.2017.2830.1294
- [6] Adling, R., "Importance of sports psychology in physical education and sports," *International Journal of Yoga, Physiotherapy and Physical Education*, vol. 2, no. 5, pp. 215–218, 2017. <https://www.sportsjournal.in/archives/2017/vol2/issue5>
- [7] Isorna-Folgar, M., Leirós-Rodríguez, R., López-Roel, S., García-Soldán, J. L., "Effects of a Cognitive-Behavioral Therapy Intervention on the Rowers of the Junior Spain National Team," *Healthcare*, vol. 10, no. 12, pp. 1–11, 2022. DOI: 10.3390/healthcare10122357
- [8] Shiraz, S., Salimei, C., Aracri, M., Di Lorenzo, C., Farsetti, P., Parisi, A., Iellamo, F., Caminiti, G., Perrone, M. A., "The Effects of High-Intensity Interval Training on Cognitive and Physical Skills in Basketball and Soccer Players," *Journal of Functional Morphology and Kinesiology*, vol. 9, no. 3, p. 112, Jun. 2024. DOI: 10.3390/jfmk9030112
- [9] Purnomo, R. A. A., Jannah, M., "The role of emotional regulation in predicting psychological well-being among physical education teachers," *Journal of Sport Area*, vol. 10, no. 1, pp. 97–108, 2025. DOI: 10.25299/sportarea.2025.v0110(1).20023
- [10] Levillain, G., Martinent, G., Vacher, P., Nicolas, M., "Longitudinal trajectories of emotions among athletes in sports competitions: Does emotional intelligence matter?," *Psychology of Sport and Exercise*, vol. 58, p. 102012, 2022. DOI: 10.1016/j.psychsport.2021.102012
- [11] Verzeletti, C., Zammuner, V. L., Galli, C., Agnoli, S., "Emotion regulation strategies and psychosocial well-being in adolescence," *Cogent Psychology*, vol. 3, no. 1, 2016. DOI: 10.1080/23311908.2016.1199294
- [12] Aslam, S., Saleem, S., Mahmood, Z., "Mental toughness and mental health problems in doctors: A mediating role of emotion regulation," *Khyber Medical University Journal*, vol. 13, no. 1, pp. 10–14, 2021. DOI: 10.35845/kmu.j.2021.19923
- [13] You, I. J., Bae, Y., Beck, A. R., Shin, S., "Lateral hypothalamic proenkephalin neurons drive threat-induced overeating associated with a negative emotional state," *Nature Communications*, vol. 14, no. 1, pp. 1–20, 2023. DOI: 10.1038/s41467-023-42623-6
- [14] Christoforou, R., Boyes, M., Hasking, P., "Emotion profiles of university students engaging in non-suicidal self-injury: Association with functions of self-injury and other mental health concerns," *Psychiatry Research*, vol. 305, p. 114253, 2021. DOI: 10.1016/j.psychres.2021.114253
- [15] Grandner, M. A., Hall, C., Jaszewski, A., Alfonso-Miller, P., Gehrels, J.-A., Killgore, W. D. S., Athey, A., "Mental Health in Student Athletes: Associations With Sleep Duration, Sleep Quality, Insomnia, Fatigue, and Sleep Apnea Symptoms," *Athletic Training Sports Health Care*, vol. 13, no. 4, pp. 8–10, 2021. DOI: 10.3928/19425864-20200521-01
- [16] Uslu, E., Özdemir, H. Ç., Peşkirici, T., "The relationship between chronotype and mental toughness in adolescents: Is resilience a mediator?," *Archives de Pédiatrie*, vol. 31, no. 7, pp. 446–450, Oct. 2024. DOI: 10.1016/j.arcped.2024.06.001
- [17] Komatsu, S., Yoshinuma, S., Kato, C., Aoki, K., "Consideration on Factors Related to Athletes' Mental Toughness," *Psychology*, vol. 12, no. 4, pp. 595–606, 2021. DOI: 10.4236/psych.2021.124037
- [18] Yarayan, Y. E., Lhan, E. L., Esentür, O. K., Ari, Ç., Gülşen, D. B. A., "Does Emotional Intelligence Affect Mental Toughness in Physically Disabled Athletes?," *Sports Science Research Journal*, vol. 8, no. 2, pp. 231–242, Jun. 2023. DOI: 10.25307/jssr.1228541
- [19] Ruoxi, W., Albattat, A., Tham, J., "Psychological factors influencing sport players' performance in China," *European Journal of Social Sciences Studies*, vol. 9, no. 2, pp. 1–22, Sep. 2023. DOI: 10.46827/ejss.v9i2.1555
- [20] Gross, J. J., "Emotion Regulation: Current Status and Future Prospects," *Psychological Inquiry*, vol. 26, no. 1, pp. 1–26, Jan. 2015. DOI: 10.1080/1047840X.2014.940781

- [21] Gucciardi, D. F., "Measuring mental toughness in sport: A psychometric examination of the psychological performance inventory-A and its predecessor," *Journal of Personality Assessment*, vol. 94, no. 4, pp. 393–403, 2012. DOI: 10.1080/00223891.2012.660292
- [22] Jannah, M., Sholichah, I. F., Widohardhono, R., "Confirmatory factor analysis: Emotion Regulation Questionnaires on Indonesian Sport Setting (IERQ4S)," *Jurnal Psikologi Teori dan Terapan*, vol. 14, no. 1, pp. 153–160, 2023. DOI: 10.26740/jptt.v14n1.p153-16019
- [23] Prabowo, T. A., Sukamti, E. R., Fauzi, F., Tomoliyus, T., Hartanto, A., "Emotional maturity and self control as predictors of boxing athlete aggressiveness: Is it proven?," *Fizjoterapia Polska*, vol. 24, no. 1, pp. 83–90, Mar. 2024. DOI: 10.56984/8ZG2EF8365
- [24] Herfiantoro, A., Setyawati, H. "The Effect of Imagery Exercises and Emotional Quotient on the Athletes' Anxiety Level," *Journal of Physical Education and Sport*, vol. 7, no. 2, pp. 101–107, 2018. <https://journal.unnes.ac.id/sju/jpes/article/view/28072>
- [25] Gotwals, J. K., Tamminen, K. A., "Intercollegiate perfectionistic athletes' perspectives on success and failure in sport," *Journal of Applied Sport Psychology*, vol. 34, no. 1, pp. 25–46, Jan. 2022. DOI: 10.1080/10413200.2020.1740826
- [26] Zhang, Z., "An Investigation into the Ways in Which 'Emos' Relieve Their Emotions," *Frontiers in Humanities and Social Sciences*, vol. 3, no. 4, pp. 51–53, Apr. 2023. DOI: 10.54691/fhss.v3i4.4752
- [27] Malinauskas, R., Vazne, Z., "Emotional Intelligence among Lithuanian and Latvian Student Athletes," *Baltic Journal of Sport and Health Sciences*, vol. 2, no. 93, pp. 29–33, May 2018. DOI: 10.33607/bjshs.v2i93.115
- [28] Jun, M. G., Kim, J. H., Choi, C., "Effects of Psychological Skills Training on Brain Quotient and Perceived Performance of High School Rapid-Fire Pistol Athletes," *Applied Sciences*, vol. 13, no. 5, 2023. DOI: 10.3390/app13053118
- [29] Egan, L. A., Park, H. R., Gatt, J. M., "Resilience to stress and trauma: a narrative review of neuroimaging research," *Current Opinion in Behavioral Sciences*, vol. 58, p. 101408, Aug. 2024. DOI: 10.1016/j.cobeha.2024.101408
- [30] Jannah, M., Halimatussa'diyah, L., Nabila, N., Widohardhono, R., "Anxiety and Mental Toughness Among Athlete Students," *Proceedings of the 2nd International Conference on Education Innovation (ICEI 2018)*, Atlantis Press, Paris, pp. 547–549, 2018. DOI: 10.2991/icei-18.2018.119
- [31] Gucciardi, D. F., Jackson, B., Hodge, K., Anthony, D. R., Brooke, L. E., "Implicit theories of mental toughness: Relations with cognitive, motivational, and behavioral correlates," *Sport, Exercise, and Performance Psychology*, vol. 4, no. 2, pp. 100–112, May 2015. DOI: 10.1037/spy0000024