Analysis of Emotional Intelligence in Table Tennis Players at Indonesia University of Education Using the TMMS-24 Method

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Abstract

This study examines emotional intelligence as an important factor in competitive sports, mainly table tennis, as table tennis is a sport that needs a high level of concentration and self control. The aim of this study is to analyse the level of emotional intelligence of table tennis players at Indonesian University of Education. Using a descriptive quantitative method with 50 respondents, the Trait Meta Mood Scale (TMMS-24) instrument was employed, which has three main dimensions emotional attention, emotional clarity, and emotional regulation. Data analysis was performed descriptively using SPSS version 22. The results of the study indicate that the players have a good level of emotional intelligence in all three dimensions, with an average score of 29.98 for emotional attention 30.60 for emotional clarity, and 33.18 for emotional regulation. This demonstrates the players capability to identify, understand, and manage their emotions effectively, as well as when on competitive pressure. Altogether, these finds conclude that emotional intelligence plays a vital role in the the mental stability and performance of table tennis players. Hence, players and coaches are urged note attention to emotional intelligence for the development of long termn menta endurance and the grow performance of table tennis players.

How to Cite

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INTRODUCTION

In recent discussions, emotional intelligence has become an important factor and has an influence in sport. (Marheni et al., 2024). With emotional intelligence, a person will be able to manage and express their feelings effectively to achieve the best performance (Fernández et al., 2020; Mon-López et al., 2023). (Mayer & Salovey, 1995) Defining emotional intelligence as a combination of cognitive and emotional processes. Studies have found that emotional intelligence contributes to improved academic achievement . (Sánchez-Álvarez et al., 2020). In addition, (Goleman, 2001) good emotional intelligence enables a person to recognise and manage their own emotions as well as those of others people (Emotionally & Workplace, 1990). It also (Brackett & Mayer, 2003) states that emotional intelligence supports rational thinking and develops the skills to easily adapt to a competitive environment. (Mayer et al., 2001) Suggesting a four-branch model of emotional intelligence, namely the capacity to correctly recognise emotional states, utilise emotional states to aid in the thought process, understand these emotional states, and regulate them for personal development. These parts are important for competitive sports.

Realising this, emotional intelligence has been proven to be a fundamental skill in competitive sports. Because it is often found in competitive sports that athletes demonstrate poor emotional management skills during training, leading to a loss of focus and a more noticeable decline in performance (Empati & Cahyani, 2020). Between sports, table tennis is an individual sport that requires high concentration and the ability to manage emotions well. The fast game, which often fluctuates between good and bad performance, can trigger very strong emotional responses, where The mental strength of table tennis players is being tested, and the skills to manage emotional pressure and to maintain psychological stability are crucial to achieving sustained good performance.

Since players compete individually, the absence of teammates places full emotional and strategic responsibility on the table tennis players. From this perspective, emotional intelligence equips table tennis players with the capability to handle pressure, adapt quickly, and perform consistently across situations. In study (Meilinda, 2021) noted that table tennis requires continuous emotional calibration, as players must remain alert, composed, and tactically aware. Moreover, the rapid rallies and individual responsibility in table tennis heighten emotional instability one mistake can shift the momentum and demand quick emotional recovery.

Therefore, examining the emotional intelligence profiles of table tennis players is crucial for refining coaching strategies and players development programs. Understanding how table tennis players interpret and respond to emotional cues can help design targeted interventions to enhance emotional intelligence.

In study from (Rubio et al., 2022) emphasized emotional intelligence as a predictor of motivation, anxiety, and leadership in athletes. Consequently, this study aims to analyze the level of emotional intelligence among table tennis players in the Student Activity Unit of the Indonesian University of Education. Therefore, this study focuses on table tennis, which is an individual sport that requires open play, quick reactions, and good emotional control. Furthermore, this study specifically uses the Trait Meta Mood Scale 24 (TMMS 24) to analyse emotional intelligence in individual sports, especially table tennis, which is still very limited, especially in Indonesia. Thus, this study is expected to contribute to the potential use of the Trait Meta Mood Scale 24 (TMMS 24) as a psychological evaluation tool to support performance improvement in the context of competitive sports.

METHODS

This study is using a quantitative descriptive approach, aiming to get objective and measurable results through number based data analysis. This method enables researchers to systematically present and describe datausing descriptive analysis techniques (Sofwatillah et al., 2024). This research aims to analyse and obtain objective data with the help of an organised system, and the results can give a strong basis for creating education about their emotional intelligence.

The sample for this study consisted of 50 table tennis players who were members of the Table Tennis Student Activity Unit at the Indonesian University of Education as research participants. This study expanded the number of participants to increase sample representation and to provide a broader analytical perspective. The increase in sample size was intended to strengthen the validity of the findings and enable a more comprehensive exploration of the research variables.

This study used the Trait Meta Mood Scale (TMMS-24) (Fernandez-berrocal et al., 2004) as

an instrument to measure emotional intelligence based on self-reports. In line with the study (Nurjuwita et al., 2023), an individual's emotional intelligence can be measured using the Trait Meta-Mood Scale (TMMS-24) instrument, which consists of three main dimensions, namely emotional attention, emotional clarity, and emotional regulation. This instrument contains 24 statements designed to assess the extent to which a person is able to pay attention to, understand, and manage the emotions they feel. Based on the results of testing the reliability of the Trait Meta-Mood Scale (TMMS-24) instrument, a Cronbach's Alpha value of 0.81 was obtained for the emotional attention dimension, indicating an excellent level of reliability. In the emotional clarity dimension, Cronbach's Alpha reached 0.85, which is also classified as very good reliability, while in the emotional regulation dimension, a value of 0.80 was obtained, indicating good reliability. Before conducting the main analysis, the collected data was first tested through a series of classical assumption tests, including normality, heteroscedasticity, and multicollinearity tests, to ensure the suitability of the regression model. Next, a categorization test was conducted on the variables of psychological well-being, grit, and emotional intelligence to determine the level or category of each variable. Hypothesis testing was then conducted using multiple linear regression to test the relationship between the research variables. Theoretically, TMMS-24 is based on the emotional intelligence model and measures three main aspects: emotional attention (items 1-8) - the extent to which a person is aware of their emotions, emotional clarity (items 9-16) - the ability to understand and interpret one's emotions, emotional regulation (items 17-24) - the ability to control and manage one's emotions. Based on a Likert scale (1 to 5: where 1 means strongly disagree and 5 means strongly agree).

Overall, the Trait Meta-Mood Scale (TMMS-24) describes a construct for measuring emotional intelligence that encompasses three main dimensions, namely emotional attention, emotional clarity, and emotional regulation. Each item on this scale is designed to evaluate an individual's ability to recognize, understand, and adaptively manage emotions in various situations. Through structured statements, the TMMS-24 provides a comprehensive picture of respondents emotional attention and capacity for controlling their feelings. Thus, this instrument is highly relevant in the context of sports research, particularly in table tennis, where emotional sta-

bility and affective regulation abilities play an important role in the performance of table tennis players and consistency in competition.

This section presents the results of a descriptive analysis of the emotional intelligence levels of table tennis players who participated in the study. Measurements were taken using the Trait Meta-Mood Scale (TMMS-24) instrument, which consists of three main dimensions, namely emotional attention, emotional clarity, and emotional regulation. This descriptive analysis aims to provide an overview of the respondents' ability to recognize, understand, and manage emotions effectively.

RESULTS AND DISCUSSION

Table 1. Descriptive statistics results for each dimension of the TMMS-24

	N	Min	Max	Mean	Std. Deviation
Emotional attention	50	12	40	29.98	4.992
Emotional clarity	50	18	40	30.60	5.103
Emotional regulation	50	24	40	33.18	4.168
Valid N (listwise)	50				

As a result **Table 1**, the emotional attention dimension had an average score of 29.98, indicating that respondents were quite capable of recognizing their own feelings. The emotional clarity dimension had an average score of 30.60, indicating a good understanding of personal emotions. Meanwhile, the emotional regulation dimension had the highest score, 33.18, indicating a good ability to manage and adjust emotions. Based on the table above, these results illustrate that respondents have a fairly good level of emotional intelligence, especially in regulating and understanding their emotions in various situations.

Emotional attention dimension

The dimension of emotional awareness is the first part of the 24 item Trait Meta Mood Scale questionnaire about the process of self identification and management emotional. This dimension provides an indication of how well a person recognises, cares for, and understands their own feelings in various situations, both in personal and social contexts. **Table 2** highlights the results of the descriptive analysis of the eight questions on the emotional attention dimension.

Table 2. shows the results of descriptive analysis of eight items on the of the emotional attention dimension

Emotional attention	N	Min	Max	Mean	Std. Deviation
Emosi_1	50	1	5	4.38	.805
Emosi_2	50	1	5	4.32	.794
Emosi_3	50	1	5	4.00	1.010
Emosi_4	50	1	5	4.30	.974
Emosi_5	50	1	5	2.62	1.338
Emosi_6	50	1	5	2.90	1.199
Emosi_7	50	2	5	3.72	.882
Emosi_8	50	1	5	3.74	.922
Valid N (litwise)	50				

The results in the **Table 2** shows that most respondents are very concerned about their feelings. The top scores were obtained from the questions 'I am very careful about my emotions' (Emotion_1) = 4.38 and 'I usually care a lot about my feelings' (Emotion_2 = 4.32), which represents a high level of emotional regard. Respondents were also frequently concerned about their mood and the importance of understanding the emotions they were emotions. (Emotion_3 and Emotion_4 around 4.00–4.30). And instead, states like "I let my feelings influence my thoughts" (Emotion_5 = 2.62) and "I always think about my mood" (Emotion_6 = 2.90) Shows that respondents are better able to keep their emotions and clear thinking in balance.

This shows that table tennis players have great emotional awareness, although the ability to express emotions still varies among respondents.

Emotional clarity dimension

The dimension of emotional clarity relates to how respondents understand, describe, and communicate their emotions. As it relates to table tennis, this will affect decision making and adaptation to the game conditions.

This **Table 3** displays the results of a descriptive analysis of eight items of emotional clarity. The results indicate that the items "I have a clarity of knowing what I am feeling" and "I can understand my feelings" obtained the highest a mean scores (4.10) with a relatively small standard deviation, It can be seen that respondents consistently recognise and understand their personal emotions. Indicators relevant to emotional awareness in various social environments, such as " like to be aware of my feelings in various situations" (kjremosi_5=3.98) and "I understand my feelings about other people" (kjremosi_4 =3.94),

also exhibited a fairly good level of emotional clarity. On the other hand, the indicator "Sometimes I can express how I feel" received the lowest average score (kjremosi7=3.38; SD=1.086), shows that some respondents still have challenges in expressing their emotions vocally. This means that the respondents can be said to have a good sense of emotional clarity, especially in recognising and understanding their own emotions. However, there are differences in their ability to express and manage negative emotions, such as when they are sad and overthinking.

Table 3. shows the results of descriptive analysis of eight items on the emotional clarity dimension.

Emotional clarity	N	Min	Max	Mean	Std. Deviation
kjremosi_1	50	1	5	4.10	.886
kjremosi_2	50	1	5	3.66	.982
kjremosi_3	50	1	5	3.78	1.016
kjremosi_4	50	2	5	3.94	.890
kjremosi_5	50	2	5	3.98	.795
kjremosi_6	50	1	5	3.66	.917
kjremosi_7	50	1	5	3.38	1.086
kjremosi_8	50	2	5	4.10	.789
Valid N (litwise)	50				

Emotional regulation

Furthermore, the dimension of emotional regulation explains how a person manages, adapts, and retains emotional harmony in various situations. This skill is crucial in table tennis as it helps players remain focused, cool headed, and motivated when facing pressure during competitions. With good emotional regulation skills, table tennis players can transform negative feelings into positive motivation and maintain concentration to ensure consistent performance both in training and competition.

The results **Table 4** of the analysis show that most respondents have good emotional regulation skills. The statement with the highest average score was "I have a lot of energy when I feel happy" (rglemosi_7=4.64), indicating that positive emotions have a significant effect on an individual's energy level. Respondents also tend to try to maintain a positive mood through optimistic thinking, even when experiencing negative emotions such as sadness or anger. However, the two statements with the lowest average scores, namely "When I am sad, I think about pleasant things" (rglemosi_3=3.74) and "I think too much and complicate things" (rglemosi_5=3.68), indicate

that some respondents still have difficulty managing sadness and overthinking. Based on the table above, it can be said that the respondents' emotional regulation is relatively good with interindividual variation.

Table 4. shows the results of a descriptive analysis of eight items on the emotional regulation dimension.

Emotional regulation	N	Min	Max	Mean	Std. Deviation
rglemosi_1	50	3	5	4.18	.748
rglemosi_2	50	3	5	4.22	.790
rglemosi_3	50	1	5	3.74	1.175
rglemosi_4	50	2	5	4.20	.833
rglemosi_5	50	1	5	3.68	1.077
rglemosi_6	50	3	5	4.46	.646
rglemosi_7	50	3	5	4.64	.598
rglemosi_8	50	1	5	4.06	1.058
Valid N (litwise)	50				

Emotional attention

The results of the study show that most table tennis players have a high level of emotional attention. They tend to pay attention to and care about their own feelings. However, they are able to keep their emotions from overly influencing their thoughts or actions. This shows their ability to control themselves in emotional situations. This finding is in line with research (Fritsch et al., 2022) which states that individuals with high emotional attention are able to regulate their emotional reactions in a more controlled manner. In addition, according to (Fernández et al., 2020) understanding emotions plays an important role in reducing anxiety and is the basis for the continuous development of table tennis players' emotional intelligence.

Emotional clarity

The results of the study show that most respondents are able to understand and recognize their emotions well, as reflected in the emotional clarity dimension. This finding is in line with (Acebes-Sánchez et al., 2021), which states that table tennis players who are able to recognize and appreciate their emotions and think positively tend to perform better. Based on the results of a meta-analysis of research (Chen et al., 2025), emotional intelligence has been proven to be positively related to social support, organizational conditions, and individual satisfaction, as well as negatively related to stress levels. However, some respondents still have difficulty expressing specif-

ic emotions. This shows that there are differences in the ability to understand and express emotions consistently. In the context of competitive sports, the ability to recognize and manage emotions appropriately is an important factor in maintaining focus, controlling stress, and improving communication during a match.

Emotional regulation

The results of the study show that respondents have good emotional regulation skills. The highest scores appeared in statements related to positive moods, such as "I care about being in a good mood" and "I have a lot of energy when I feel happy," which indicates that positive emotions have a major impact on the mental and physical condition of table tennis players. An optimistic attitude was also evident in their ability to remain positive even in difficult emotional situations. However, some respondents still showed difficulty in controlling negative emotions, such as a tendency to overthink. This is in line with the findings (Karina Nur Safitri et al., 2024) which explain that good emotional regulation can reduce anxiety levels and improve the focus of table tennis players during competition. Overall, although table tennis players' emotional regulation skills are relatively good, further development is still needed, especially in managing complex emotions that can affect their competitive performance.

CONCLUSION

Based on the results of research on 50 table tennis players from the Indonesian University of Education, it can be concluded that their emotional intelligence levels are good in the three main dimensions: emotional attention, emotional clarity, and emotional regulation. Table tennis players demonstrate excellent emotional awareness, recognising and managing their feelings without allowing negative emotions to disrupt their concentration. A clear understanding of emotions also helps them handle internal pressures, maintain psychological stability to remain calm and think clearly, and communicate effectively in competitive environments. Not only that, their ability to regulate positive emotions is demonstrated in their habit of maintaining a positive mood, namely optimism and good positive energy when facing challenges, although some still need to develop their ability to manage negative emotions, such as anxiety or overthinking about unimportant matters. Overall, this study concluded that emotional intelligence is an important factor in

supporting the performance and mental endurance of table tennis players. So, table tennis coaches should be aware of the importance of integrating self awareness, mental clarity, and emotional regulation into their training programmes and give education to players about benefit from emotional intelligence for them. Table tennis players should also be mindful of their psychological side, not just their table tennis skills, to improve their long term mental readiness and performance.

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