

Age Differences in the Connection Between Emotional Intelligence and Stress Among Pahang's Young Jump Ropers

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Abstract

Introduction: It has been acknowledged that emotional intelligence and stress are essential parts of sports performance. Emotional intelligence is the ability to process dynamic information accurately and efficiently. Meanwhile, stress is a physiological and psychological response to an environmental demand after individuals perceive that they cannot adequately cope with the current market. *Objective:* The goal of this research was to recognize the relationship between emotional intelligence and stress among adolescent jump ropes in Pahang based on age differences. *Methods:* Ninety-five Pahang's jump ropers (N=95); (1.64±.482yrs; 159.82±27.85cm; 55.57±9.305kg) were selected to participate in this study. The study employed a survey design that involved the Assessing Emotions Scale (Schutte et al., 1998) and The Perceived Stress Scale (PSS; Cohen et al., 1983). *Findings:* The result showed a significant positive relationship between EI and stress among adolescent jump ropes in Pahang. Besides, The Mann Whitney U test of ages 13 to 15 revealed a higher scored in emotional intelligence as compared to 16-17 years old jump ropes. Again, another Mann-Whitney score for stress results indicated that the 13 to 15 years old group experienced low stress compared to 16 to 17 years old. In conclusion, 13 to 15 years old can control their emotions and cognitive ability in handling and coping with stressful situations. *Conclusion:* Although their age has increased into adolescence, they are still unable to manage their stress effectively due to several factors such as school performance, relationships, and others.

Keywords: Jump Ropes, Emotional Intelligence, Stress, Adolescent

Introduction

In sports performance, emotions play an important big role (Campo et al., 2018). Thus, controlling emotions has become crucial for not getting carried away by the flow of harmful elements. Today, the school is engaged in completing the curriculum while forgetting to devote time to managing the emotional needs of students and developing their emotional intelligence (EI). This has also resulted in the deterioration of the students' performance in terms of achievements and adjustments (Kauts, 2021). It has entailed a point of inflection in the study of emotions, which went from being reviewed as uncontrollable components of

cognitive processes to being examined as a vital situation of human beings that give helpful information to solve our daily problems (Fernandez-Berrocal et al., 2004). The management of emotions has gotten more attention in psychology and organizational management over the decades because it has been found to affect critical workplace attitudes and behaviours (Lee & Chelladurai, 2017).

EI has been established to be firmly related to critical thinking, academic achievement, help-seeking, and peer learning and it is also helpful in enhancing mood and decreasing the effects of stress (Asturias et al., 2021). Research carried into the study of how perception and emotional processes could interrelate to increase thinking, in which context Salovey and Mayer first introduced the construct of emotional intelligence. Their first explanation described emotional intelligence as the “capability to observe one’s own and other’s feelings and emotions, to separate among them, and to use this information to guide one’s thinking and actions” (Fiori et al., 2019). Emotionally expanded persons, that is, those who correctly manage their feelings and know how to clarify and relate to the emotions of others, benefit from an advantageous situation in all domains of life (Fernández et al., 2020). Many tasks such as training, education, leadership and guidance of others, mental health and well-being, and personal life can be impacted by an individual’s EI (Talip et al., 2019). It involves verbal and non-verbal assessment, expression of emotions, and the use of emotions in solving problems (Mayer et al., 2008 as cited in Fiori et al., 2019).

Individuals experience psychological stress when they are confronted with situations that they perceive to be too taxing or that go beyond their control. Stress, in small doses, can be a useful motivator for adapting to new situations, overcoming obstacles, and achieving goals. nevertheless, research shows that prolonged exposure to high levels of stress can have negative effects on both physical and mental wellbeing (Saddki et al., 2017). In some studies, stress has influenced many parameters of higher mental roles like concentration, attention, learning, and memory. Generally, all stressful events generate a specific category of emotions of varying intensity, affecting cognition and performance (Fiori et al., 2019).

Individuals with weak emotional intelligence face several difficulties in managing stress-related issues (Fteiha & Awwad, 2020). This reality is inscribed from separate studies that propose a strong relationship between stress and emotional intelligence. De Las Heras-Fernandez et al (2020) indicated that 143 dancers participated in a study on the relationship between emotional intelligence and personality traits among Spanish dancers showed that emotional intelligence is linked to the responsible, agreeable personalities that dancers develop. To the extent of researchers’ knowledge, to this current date, there is still an open question on the relationship of EI and stress among jump ropes in Pahang, Malaysia. Besides, there were no studies yet about the relationship of EI and stress among the adolescent jump ropes. Therefore, this study is aimed to identify the relationship between emotional intelligence and stress among adolescent jump ropes in Pahang based on age differences.

Methodology

Participants

Purposive sampling was used in this study, which enrolled 132 individuals of jump rope (N=95). They were selected based on the following inclusion criterias: jump ropers representing Pahang districts, age between 13 and 17 years, having experience of playing jump rope more than 3 years. Following that, each participant was required to sign a consent form expressing their voluntary participation in the study.

Procedure

The study was separated into two groups of age, the first group was 13 to 15 years old, and the second group was 16 to 17 years old. Questionnaire of the Assessing Emotions Scale (AES) (Schutte et al., 1998) and The Perceived Stress Scale (PSS) (Cohen et al., 1983) were used to determine relationship between emotional intelligence and stress among athletes' jump ropes in Pahang's districts based on age difference group.

The respondents who were involved were required to answer the survey questionnaires via a google form. Each answer was collected, followed by specified criteria after all the respondents completed the survey. It is imperative to monitor the response rate at the last stage, depending on how many subjects the survey has ended. In the last part, the answered questionnaires were analyzed to measure the outcomes and results.

Instruments**Assessing Emotion Scale (AES)**

Assessing emotion scale was developed to measure self-perceived EI based on the EI framework proposed by Salovey and Mayer (Saddki et al. 2017). The conceptualization of EI consists of four branches which were perceiving emotions, understanding emotions, managing emotions and harnessing emotions. The AES has 33 items that assess a respondent's evaluation and emotional expression in themselves and others, as well as their management of emotion (Saddki et al., 2017). Scores below 110 are usually considered lower than average EI, and scores higher than 138 are usually considered above average EI. This scale has good internal consistency and reliability, with Cronbach's alpha of 0.90, and has fair stability over time, with a 2-week test-retest reliability score of 0.78 (Saddki et al., 2017). In the AES, respondents are asked to rate themselves on the 33 items using a 5-point scale (1 = strongly disagree; 2 = somewhat disagree; 3 = neither agree nor disagree; 4 = somewhat agree; and 5 = strongly agree). The total score is between 33 and 165, with a higher number reflecting a greater EI.

The Perceived Stress Scale (PSS)

The Perceived Stress Scale (PSS) was used to determine the subjects' perceived stress (Asturias et al., 2021). PSS ($r=.90$) were using a 5-point Likert scale that ranges from 0 to 4 (0 = never; 1 = almost never; 2 = sometimes; 3 = fairly often; 4 = very often) (Talip et al., 2019). It divides the results into three categories, which are as follows: A score of '0 to 13' indicates low perceived stress, '14 to 26' indicates moderate perceived stress, and '27 to 40' indicates high perceived stress (Asturias et al., 2021). This scale contains six items with negative remarks and four with positive remarks that assess an individual's perception of life as stressful. (Saddki et al., 2017).

Data Analysis

The Statistical Package for the Social Sciences was used to examine the data (SPSS. Version 24.0). To compare differences between two separate classes, the Mann Whitney U test, where the independent variable is either ordinal or constant, but not normally distributed, is used. For example, the Mann-Whitney U Test may explain independent variables, calculated regularly and vary according to age. The dependent variable would be emotional intelligence and stress. Age would be the independent variable, which includes two age categories.

Findings**Result of Emotional Intelligence outcome between groups**

Table 1

The Outcome Result of EI Between Groups

Age	N	Mean
13 to 15	34	49.47
16 to 17	61	47.18
Mann – Whitney U		987.00
Wilcoxon W		2878.00
Z		-.39
Asymp. Sig		.69

*Significant level set at $p > .05$

A Mann Whitney U test was used to examine the difference of EI between ages as measured by AES and PSS test scores. Table 7 showed that a significance difference in the EI of age 13 – 15 years old ($M = 49.47$, $N = 34$) higher than a group of 16-17 years old ($M = 47.18$, $n = 61$), $U = 987$, $Z = -.39$, $p = .69$.

The Outcome Result of Stress Between Groups*Table 2**The Outcome Result of Stress Between Groups*

Age	N	Mean
13 to 15	34	40.71
16 to 17	61	52.07
Mann – Whitney U		789.00
Wilcoxon W		1384.00
Z		-1.93
Asymp. Sig		.05

* Significant level set at $p > .05$

Mann Whitney U test revealed no significance difference in the stress of age 13 – 15 years old (M=40.71, N=34) lower than a group of 16-17 years old (M =52.07, N = 61), U = 789, Z = -1.93, $p = .05$.

The Outcome Result of Relationship Between EI And Stress

Table 3

Relationship Between EI And PS Between Age

Age		Stress	
13 to 15 years old	EI	Correlation Coefficient	.36
		Sig. (2-tailed)	.03
		N	34
16 to 17 years old	EI	Correlation Coefficient	.13
		Sig. (2-tailed)	.29
		N	61

The relationship between EI and PS between age 13 to 15 and 16 to 17 years old among jump rope students around Pahang was identified using Spearman Correlation Test. Pallant (2010) suggested that the weak correlation between EI and PS should be between $r = .10$ and $r = .29$; the medium correlation should be between $r = .30$ and $r = .49$; and the strong correlation should be between $r = .50$ and $r = 1.0$. In general, there was a medium, positive correlation between EI and stress on the age of 13-15 years old, $r = .36$, $N = 34$, $p = .03$ meanwhile for the age 16 to 17 years old, there was a small, positive correlation between EI and stress with $r = .13$, $N = 61$, $p = .29$. For the overall relationship between emotional intelligence and stress, there was a small, positive correlation between EI and stress among adolescents jump ropes in Pahang with the values of $r = .22$, $N = 95$, $p = .03$.

Discussion

The result of the present study indicates that there was a significant difference in EI between the ages of 13 to 15 years old and 16 to 17 years old among jump ropes in Pahang. However, based on the mean of the results, the age group of 13 to 15 was found to have a higher EI mean score than 16 to 17 years old. It means that 13 to 15 years old can control their emotions and cognitive skills better than 16 to 17 years old. People with higher levels of emotional intelligence typically achieve more positive life outcomes, such as psychological wellbeing, educational attainment, and job-related success (Lea et al., 2019). People with high EI can influence their subordinates and peers to increase the level of EI as they nurture the ability and competencies to understand and control their own emotions and emotion of

others. This statement stated that the person with high EI could positively manage their emotions to relieve stress and support their friend who has the problems. Besides, they also can overcome challenges and defuse conflict, which makes them able to deal with stress.

EI is taught and acquired according on age. However, unlike studying other abilities such as mathematics, physics, or english language arts, there is no such point as a relatively early or late time to improve one's EI, as all areas of the brain must develop EI from birth. This is likely due to other factors having more significant effects than age, such as education, experience, or socialisation into new roles or behaviours, which would explain any probable changes in emotional intelligence among adolescents (Esnaola et al., 2017).

The other finding indicates that young adults who are able to effectively manage their emotions are less likely to be miniature, vulnerable to anxiety situations well at university, college, and the workplace get better adjusted to these kinds of environments because of low on dimensions of emotional intelligence are more likely to get over negative emotions that ultimately lead them into severe anxiety and other mental unwell being situations. This is in contrast to young adults who do not effectively manage their emotions, who are more likely to be vulnerable to anxiety situations at university, college, and the workplace (Kumar et al., 2021). The present study may be due to the life experience of 13 to 15 years olds whose emotions will often be stronger and more purely positive or negative than the emotions of adults involved in the same situation. In addition, adolescents between the ages of 13 and 15 have stable emotions since they are not yet becoming more independent and have not yet begun to think about the future in terms of their careers, relationships, families, and homes.

Fteiha and Awwad (2020) revealed that most students had a high level of emotional intelligence because the age group focused. In this study, instability and emotional imbalance were prevalent at the beginning, which resulted in the development of awareness and emotional maturity as they progressed beyond the time of adolescence. This is possibly because the factors such as family, school, media, and appropriate social work intervention can significantly impact adolescent emotional intelligence.

The second objective of this study is to compare the stress levels between different aged groups among adolescent Jump Ropes in Pahang. The current research also found that there was no significant difference in the levels of stress experienced by jump rope players in Pahang between the ages of 13 and 15 and 16 and 17. On the other hand, it was shown that individuals in the age range of 16 to 17 years old had significantly higher mean stress ratings compared to individuals in the age group of 13 to 15 years old. Higher levels of tension were reported by individuals in the age group of 16 to 17 years old. This is most likely due to the fact that individuals in this age range would rather conceal their feelings than disclose them to others. Aside from that, they are probably going to have to deal with a greater amount of responsibility and conflict in areas such as their schoolwork or their relationships. In addition, students started to think about the obstacles they would face in their lives, such as dropping out of school, enrolling in higher courses, or getting a job, which added to the pressure and stress they were already under. Anniko et al (2019) claimed that social pressures such as arguments with parents, fitting in with classmates, and managing romantic relationships become more prevalent and relevant during adolescence. Hueston et al (2017) further asserted that adolescents face the same stressors as adults owing to a variety of circumstances, including excessive expectations, marital issues, illness in the family, and financial strain on the family. Young adults may experience greater pressure than older adults due to their inability to manage stress; yet, they are less likely to feel overwhelmed by the challenges.

The third objective of this study is to examine the relationship between emotional intelligence and stress among adolescent Jump Ropes in Pahang. The present study found a significant positive relationship between EI and stress among ages 13 to 15 and 16 to 17. As a basic daily lifestyle, stress and emotions are interchangeable feelings that may impact one's condition. This relationship between EI and stress has a positive connection depending on how you channel stress. With the existence of this emotional intelligence, it helps to deal with stress. This finding was similar to the previous study by Talip et al. (2019), which revealed a significant positive relationship between EI and stress among university students, which showed that although the students can be open and control feelings in oneself still, they are suffering from a high level of stress because of they do not have confidence in their EI ability. It is clearly stated that even though you can control your emotions, it is not possible you can have a high-stress level.

The present study results may be due to the maturity of the adulthood among the jump ropers where they are still less able to control their stress stably due to several factors such as life experience, maturity of thinking, and others. Besides, the questionnaires were distributed in December which during this time, they have online distance learning at home. There are many challenges of online distance learning for students that can make them feel very stressed such as lack of instant communication, not receiving clear instructions, and having some technical issues. This factor probably puts the respondents in a stress state when answering this questionnaire and may explain a positive correlation between EI and stress.

Conclusions

This has brought the researcher closer conclusions and recommendations to be improved for future research purposes. The result shows that both groups can control their emotions better even though they are still the phase of developing maturity. This is probably due to the other factors with more relevant effects than age, such as education, experience, or socialization in different roles or behaviors. The researcher suggests that the adolescent jump ropers can develop the EI by reframing the perceptions of self-management, working on self-awareness, and becoming aware of the emotional triggers. Teaching emotional intelligence to individuals builds their expressive skills and sustains the education over several years (Nelis et al., 2009, as cited in Choudhury, 2020).

By developing emotional intelligence, individuals can become more productive and successful at what they do and help others succeed. The previous study also stated that the process and outcomes of emotional intelligence development also contain many elements, including reducing stress for individuals and organizations by moderating conflict, promoting understanding and relationships, and fostering stability, continuity, and harmony (Serrat, 2017).

The secondary data shows that stress is a major issue for both populations. They may have hit puberty, yet they still can't handle stress well because of issues like those discussed above, including their academic performance and their relationships with others. The study's author recommends that stressed-out adolescents who jump rope look into different coping techniques in addition to developing their emotional intelligence. Stress in the classroom can be dealt with in a variety of ways. These results may shed light on the link between emotional intelligence and stress in a population of Pahang teenagers who jumped rope at two different ages: 13–15 and 16–17. In conclusion, more studies are needed to determine the relationship between EI and stress in Pahang adolescents who jump rope.

Future research recommended consideration of involving different sports backgrounds. They can conduct a study in determining the relationship of EI and stress on the individual or team sport. With that, the researcher can select the result of EI and stress upon the sports backgrounds, and understand factors that may influence the outcome.

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References

- Anniko, M. K., Boersma, K., & Tillfors, M. (2019). Sources of stress and worry in the development of stress-related mental health problems: A longitudinal investigation from early-to mid-adolescence. *Anxiety, Stress, & Coping*, *32*(2), 155-167.
- Asturias, N., Andrew, S., Boardman, G., & Kerr, D. (2021). The influence of socio-demographic factors on stress and coping strategies among undergraduate nursing students. *Nurse Education Today*, *99*, 104780. <https://doi.org/10.1016/j.nedt.2021.104780>
- Campo, M., Martinent, G., Pellet, J., Boulanger, J., Louvet, B., & Nicolas, M. (2018). Emotion–performance relationships in team sport: The role of personal and social identities. *International Journal of Sports Science & Coaching*, *13*(5), 629-635.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of health and social behavior*, 385-396.
- De las Heras Fernández, R., Espada Mateos, M., Carrascal Domínguez, S., & García Coll, V. (2020). Evaluation and analysis of emotional intelligence, mood and coping strategies in two Spanish dance companies. *Research in Dance Education*, *21*(3), 231–244. <https://doi.org/10.1080/14647893.2020.1746253>
- De Las Heras-Fernandez, R., Espada, M., Garcia-Coll, V., & Anguita, J. M. (2020). Emotional intelligence of Spanish dancers and its relationship with personality traits. *Journal of Physical Education & Sport*, *20*(5).
- Fernandez-Berrocal, P., Extremera, N., & Ramos, N. (2004). Validity and Reliability of the Spanish Modified Version of the Trait Meta-Mood Scale. *Psychological Reports*, *94*(3), 751–755. <https://doi.org/10.2466/pr0.94.3.751-755>.
- Fiori, M., Udayar, S., & Vesely-Maillefer, A. (2019). Introducing A New Component of Emotional Intelligence: Emotion Information Processing. *Academy of Management Proceedings*, *2019*(1), 17276. <https://doi.org/10.5465/ambpp.2019.17276abstract>
- Fteiha, M., & Awwad, N. (2020). Emotional intelligence and its relationship with stress coping style. *Health Psychology Open*, *7*(2), 205510292097041. <https://doi.org/10.1177/2055102920970416>
- Kauts, D., S. (2021). Emotional Intelligence in Relation to Stress on Boys and Girls at the Secondary Stage. *MIER Journal of Educational Studies Trends & Practices*, 1–16. <https://doi.org/10.52634/mier/2018/v8/i1/1425>.
- Kumar, P., Agarwal, S., Khwairakpam, S., & Modi, D. R. (2021). Relationship between Emotional Intelligence and Anxiety among Young Adults. *Asian Pacific Journal of Health Sciences*, *8*(4), 150-154.
- Lea, R. G., Davis, S. K., Mahoney, B., & Qualter, P. (2019). Does Emotional Intelligence Buffer the Effects of Acute Stress? A Systematic Review. *Frontiers in psychology*, *10*, 810. <https://doi.org/10.3389/fpsyg.2019.00810>

- Lee, Y. H., & Chelladurai, P. (2017). Emotional intelligence, emotional labor, coach burnout, job satisfaction, and turnover intention in sport leadership. *European Sport Management Quarterly*, 18(4), 393–412. <https://doi.org/10.1080/16184742.2017.1406971>
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2008). Emotional intelligence: New ability or eclectic traits? *American Psychologist*, 63(6), 503–517. <https://doi.org/10.1037/0003-066x.63.6.503>
- Saddki, N., Sukerman, N., & Mohamad, D. (2017). Association between Emotional Intelligence and Perceived Stress in Undergraduate Dental Students. *Malaysian Journal of Medical Sciences*, 24(1), 59–68. <https://doi.org/10.21315/mjms2017.24.1.7>
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and individual differences*, 25(2), 167-177.
- Talip, N. K. A., Budull, C. R., Majeed, H. A., Ahing, T., Sabturani, N., & Talip, M. S. A. (2019). Emotional Intelligence and Perception of Stress among Undergraduate University Students. *International Journal of Academic Research in Business and Social Sciences*, 9(9). <https://doi.org/10.6007/ijarbss/v9-i9/6380>