P-ISSN: 2709-6254	Journal of Development and Social Sciences	Jul-Sep 2023, Vol.4, No.3
O-ISSN:2709-6262	http://dx.doi.org/10.47205/jdss.2023(4-III)56	[594-608]

Journal of Development and Social Sciences
www.jdss.org.pk

RESEARCH PAPER

Assessing the Emotional Intelligence and Sleep-Wake Pattern among Varsity Male Soccer Athletes Vs Male Non-Athletes Varsity Students

[1]Muhammad Ahsan [2] Dr. Asif Ali*

1. BS. Physical Education & Sports Sciences student at Government College University Lahore, Punjab, Pakistan.
2. Associate Professor Department of Physical Education & Sports Sciences Government College University Lahore, Punjab, Pakistan

***Corresponding Author:** asif.ali@gcu.edu.pk

ABSTRACT

Emotional intelligence (EI) and sleep were critical factors for undergraduate university students. Participation in team sports, like soccer, has numerous positive effects on physical and physiological health of university students. This study investigated soccer's impact on EI and sleep in 90 male soccer athletes and 90 male non-athletes students studding in five universities in Lahore, Pakistan. BESI-10 and MCTQ use to assessed EI and sleep. The T-Test analysis had revealed significantly higher regulation of own emotions in soccer athletes compared to non-athletes, indicating greater EI in soccer players. Both groups had similar chronotype. Simple linear regression analysis had shown a positive association between soccer experience and emotional regulation, suggesting increased participation improved EI. Increased caffeine consumption, regardless of athletic status, had led to decreased emotional regulation. These finding had highlighted soccer's effectiveness in enhancing EI among male university undergraduates, emphasizing the importance of sports participation in university life

KEYWORDS Athletes, Emotions Intelligence, Sleep, Soccer, Students, University

Introduction

Emotional intelligence (EI), sleep and sports participation have been as perceived district concepts. However, some researcher has argued that there may be link between these three variables. EI has been conceptualized as the ability to understand not only own emotions but also other people's emotions, recognizing differences between the emotions, and utilize them as a guide for one's actions and decisions (Salovey & Mayer, 1990). Emotions and EI were both widely accepted as important variables in the field of sports and believed to be related with augmentation in performance in team sports such as soccer (Jones, 2003). In addition, the term "emotional regulation" refers to many sets of activities that include surroundings selections, situation modification, attention-seeking, change in cognition, and response modulation. (Wager et al., 2008). Turning down the experiential or behavioral components of negative emotions including anger, fear and sadness has been considering an important component of emotional regulation(Gross et al., 2006). EI has been reported to be linked with communication skills (Petrovici & Dobrescu, 2014), academic success (Humphrey et al., 2007), well-being (Sánchez-Álvarez et al., 2016), job performance (O'Boyle Jr et al., 2011), self-efficacy (Chan, 2004), self-efficacy (Farhan & Alfin, 2019) and job satisfaction (Sembiring et al., 2020).

On the other hand, the term "morning-ness" or "evening-ness" described a person's ideal time of sleep and wakefulness (Dijk & Lazar, 2012) when compared to the chronotype, it refers to the time of the day when a person physiological clock was set to the 24-hour cycle (Roenneberg et al., 2004). Good sleep assumed to be played an important part in a number of functions, including improving the immune system, lowering caloric intake, rebuilding brain energy storage, and preventing performance decline brought on by awakening (Hall et al., 2012). In addition, it has been assumed to be essential for emotional control (Hall et

al., 2012). Poor sleep appeared to be related with reduces muscular strength (Knowles et al., 2018), and hindering athletic performance, thus getting enough sleep seems essentials for sports performance (Swinbourne et al., 2018). Various research looking into how the lack of sleep affects cognitive function reported slower and less accurate cognitive functioning (Fullagar et al., 2015). In the case of elite athletes, sleep assumed to be play very critical role for recovery process and achieving peak performance. Due to key role of sleep in physical, psychological health, academic and athletic performance, it has become the topic of great interest to conduct investigation its link with other variables such as sports participation and physical exercise. Since the institutions of higher education deals with the education, personality development, health and well-being of youth, therefore universities has become the main focus in the researcher in this regard (Fullagar et al., 2023).

Since, EI and sleep has important role in the life of university students. Therefore, researchers have been very curious to investigate the means to promote EI and sleep among young university students. There were some indications that sports participation has some association with EI and sleep related variables. For example, sports participation has numerous advantages for the body and mental health of the youth (Dobersek & Arellano, 2017). A study has shown that participating in sports has a significant impact on the EI, sports can help improve one's ability to control their emotions, and increasing the emotional regulation skills as well (Shahan et al., 2023). In addition, Pawlowski et al. (2014) observed that engagement in sports had significant effects on subjective well-being across all age groups, although its intensity changed over time. Sports participation has been strongly associated with improvement in the standard of life, life pleasure, mood, social support, athletic ability and wellness advantages (Diaz et al., 2019). However, some studies reported conflicting results in this regard, The finding of the study by Méndez-Giménez et al. (2022) revealed that participation in sports has an positive impact on EI, the study suggested that sports can enhance an capacity for emotional regulation, and effective emotional regulation methods have a beneficial impact on EI. However, some findings showed a negative relationship between emotional attentions and the numbers of years spent participating in sports. Male athletes who trained more intensely and performed at higher levels were more likely to display improved emotional regulation. It's crucial to remember that all of the relationship we found were actually weak (Rodriguez-Romo et al., 2021).

The conflicting results observed in past work regarding link of sports participation with EI and sleep point to be need further studies to gain more understanding on this topic. Moreover, it seems plausible that the variation in the results of the past studies might have been caused by the diversity of the study participants, including geographical, climatic and environmental factors, type of sports, gender, and level of sports experience. Therefore, we specifically chose to conduct our research on varsity male soccer athlete's vs male non-athletes varsity students, with the primary objective of better understanding of how participation in soccer impacts EI and sleep.

Therefore, the objectives of this study were to examine, a) was there any relationship of participation in soccer sports at university level with EI and sleep? b) Was there any link between soccer sports participation with EI and sleep? c) Additionally, we were curious to know any relationship of caffeine consumption with sleep regardless of the fact that whether the participant were soccer male athletes or non-athletes. The finding emerged may hold significance for professionals in public health care, professionals dealing with health related issues among university students, professionals related with sports promotion in universities.

Literature Review

Effects of soccer playing on EI

Numerous studies have examined the differences between athletes and non-athletes on the basis of EI. According to those research's, athletes have higher EI than non-athletes, particularly in the area of assertiveness, self-awareness, and emotional regulation (Szabo & Urbán, 2014). Castro-Sánchez et al. (2018) founded that the soccer player showed higher level of emotional regulation as compared to athletes who participating in individual sports. This finding emphasizes how participant's EI was influenced by the nature and level of the sports, showing the strong relationship between sports and the development of EI (Stan et al., 2022).

Although athletes with good cognitive abilities have better positive thinking and decision-making power (Ishak et al., 2023). The result of study by Méndez-Giménez et al. (2022) showed that a person's participation in sports has an effect on their EI, sports can improve one's ability to control their emotions, and good emotional regulation techniques have a positive impact on one's EI.

Furthermore, EI showed the significant difference between athletes and non-athletes. Athletes typically perform better in EI than their non-athletes counterpart. According to previous study conducted by Bostani and Saiiari (2011). It's important to keep in mind, though, than the majority of these previous research mostly concentrated on EI within specific gender and age groupings among adults university students, which might not truly represent the larger community of athletes. As a result, there were few studies that thoroughly examine EI in athletes, especially in term of gender and age differences (Laborde et al., 2016).

Effects of soccer playing on sleep

Research has shown that getting enough sleep was beneficial for sports performance (Swinbourne et al., 2018). Sleep was indicated to be crucial for athlete performance, since it was believed to be a fundamental mechanism for healthy physiological and cognitive functioning. Young soccer players slept for longer periods of the time than non-athletes did (Whitworth-Turner et al., 2018).

After soccer game, the study found that both the quantity and quality of sleep decreased (Roberts et al., 2019). The study focuses on regular sleep and wake patterns in young athletes, the factors that influence these patterns, and the effects of disrupted sleep ad wake patterns. Due to less time spent in bed after training and competition in the afternoon or evening, sleep duration appears to be shorter (Whitworth-Turner et al., 2018).

Material and Methods

Research Design

This research was quantitative cross-sectional study.

Population and Sample

The study consisted of 180 university students, consist of 90 athletes (age means = 21.60, SD = 1.78) and 90 non-athletes (age means = 21.11, SD = 1.43), with age ranging from 18-25years. Purposive sampling technique was used for sampling, five universities targeted for the data collection. We collected data from those 5 universities and gathered information from the soccer team of each university, with 18 athletes and 18 non-athletes. The department, study program and semester were also same for the athletes and non-athletes who were selected for the information. The inclusion criteria were that only soccer players who played at the intervarsity level, national level or international level were included and they had to be a part of the university team and also had to be enrolled in the BS program.

Instruments

Following instruments had been used for the purpose of collecting data from the targeted universities in Lahore, Pakistan.

Demographic

Demographic consist of 12 items, including the gender, age, semester, marital status, residence, family income, caffeine intake and using electronics for sleep quality, as well as sports status, level of participation and years of sports experience for athletes only.

EI Scale

The (BESI-10) used in the study was developed by Davies et al. (2010) to measure EI. The brief EI had five factors of emotion intelligence. In this study, an EI tool was used to gather the data. According to the global scale, a score of 20 or less indicated low EI, a score of 21-26 showed average EI, and score of 27 or more indicated high EI. The Cronbach's Alpha value was 0.573.

Ultra Short Version of the Munich Chrono Type Questionnaire (MCTQ)

Roenneberg et al. (2019) developed the MCTQ that was the ultra-short version was designed to identify an individual's Chrono type and gather information about their sleep-wake pattern. The MCTQ helps determine whether a person was more of a morning person, an evening person, or falls somewhere in between.

Procedure

A self-administered questionnaire with three sections was used to collect data: a demographic questionnaire, an EI section and a sleep quality section. Questionnaire was briefed to the respondents and they were allowed to ask and clarify any questions they did not understand. Questionnaires were distributed among the respondents and data were collected one by one from each participant. Respondents took almost 10 minutes to fill out the questionnaire.

Data Analysis

SPSS was used for the data analysis. Descriptive analysis Independent T-Test and simple linear regression tests were used for data analysis. The *p*-value criteria for significant was lower than 0.05.

Result and Discussion

Table 1
Demographics Characteristics of the Participants

Variables	***f (% age)***
University	
1	36 (20)
2	36 (20)
3	36 (20)
4	36 (20)
5	36 (20)
Semester	34 (18.9)
1	45 (25)
2	52 (28.9)
3	49 (27.2)

4	
Marital Status	
Married	6 (3.3)
Unmarried	174 (96.7)
Family Income	
Less than 50k	46 (25.6)
50k-1 lakh	83 (46.1)
1lakh-1.50lakh	18 (10)
More than 1.5lakh	33(18.3)
Area of Residency	
Urban	114 (63.3)
Rural	66 (36.7)
Athletic Status	
Athletes	90 (50)
Non-Athletes	90 (50)
Highest playing Level	
Non-participation	90 (50)
Intervarsity	41 (22.8)
National	29 (16.1)
International	3 (1.7)
Other	17 (9.4)

Note: N = 180*, f* = Frequency*, %* = percentage*,*

We can conclude the following results:

The descriptive analysis finding revealed the demographics characteristics of the participants. In term of the first variable, university, the age frequencies for the five universities were as follow: the 1st university had 36 (20), 2nd university had 36 (20), 3rd university had 36 (20), 4th university had 36 (20), and 5th university had 36 (20).

The descriptive analysis finding revealed the demographics characteristics of the participants. Concerning the second variable, semester, the age frequencies for the semester were as follow: 1st semester had 34 (18.9), 2nd semester had 45 (25), 3rd semester had 52 (28.9), and 4th semester had 49 (27.2).

The descriptive analysis finding revealed the demographics characteristics of the participants. Regarding the third variable, Marital Status, the age frequencies were as follow: married had 6 (3.3), and unmarried had 174 (96.7).

The descriptive analysis finding revealed the demographics characteristics of the participants. Concerning the fourth variable, family income, the age frequencies for the family income were as follow: less than 50k had 46 (25.6), 50k-1 lack had 83 (46.1), 1 lack-1.5 lack had 18 (10), and more than 1.5 lack had 33(18.3).

The descriptive analysis finding revealed the demographics characteristics of the participants. Regarding the fifth variable, area of residency, the age frequencies for the area of residency were as follow: urban age frequency had 114 (63.3), and rural age frequency had 66 (36.7).

The descriptive analysis finding revealed the demographics characteristics of the participants. Regarding the sixth variable, athletic status, the age frequencies for the athletic status were as follow: athletes had 90 (50), and non-athletes had 90 (50).

The descriptive analysis finding revealed the demographics characteristics of the participants. Regarding the seven variable, higher playing level, the age frequencies for the

higher playing level were as follow: Non-participation had 90 (50), Intervarsity had 41 (22.8), National had 29 (16.1), International had 3 (1.7), and others had 17 (9.4).

Table 2
Demographics Characteristics of the male soccer athletes Participants

Variables	***f (% age)***
University	
1	18 (20)
2	18 (20)
3	18 (20)
4	18 (20)
5	18 (20)
Semester	
1	16 (17.8)
2	23 (25.6)
3	26 (28.9)
4	25 (27.8)
Marital Status	
Married	6 (6.7)
Unmarried	84 (93.3)
Family Income	
Less than 50k	25 (27.8)
50k-1 lakh	47 (52.2)
1lakh-1.50lakh	6 (6.7)
More than 1.5lakh	12 (13.3)
Area of Residency	
Urban	52 (57.8)
Rural	38 (42.2)
Highest playing Level	
Intervarsity	41 (45.6)
National	29 (32.2)
International	3 (3.3)
Other	17 (18.9)

Note: N = 90, *f* = Frequency, *%* = percentage,

We can conclude the following results:

The descriptive analysis finding revealed the demographics characteristics of the male soccer athletes participants, the means = 21.60 and SD = 1.78.

The descriptive analysis finding revealed the demographics characteristics of the male soccer athlete's participants. In term of the first variable, university, the age frequencies for the five universities were as follow: 1st university had 18 (20), 2nd university had 18 (20), 3rd university had 18 (20), 4th university had 18 (20), and 5th university had 18 (20).

The descriptive analysis finding revealed the demographics characteristics of the male soccer athlete's participants. Concerning the second variable, semester, the age frequencies for the semester were as follow: 1st semester had 16 (17.8), 2nd semester had 23 (25.6), 3rd semester had 26 (28.9) and 4th semester had 25 (27.8).

The descriptive analysis finding revealed the demographics characteristics of the male soccer athlete's participants. Regarding the third variable, Marital Status, the age frequencies were as follow: married age frequency had 6 (6.7), and unmarried age frequency had 84 (93.3).

The descriptive analysis finding revealed the demographics characteristics of the male soccer athlete's participants. The forth variable was family income, less than, the age frequencies for the family income were as follow: 50k age frequency had 25 (27.8), 50k-1 lack age frequency had 47 (52.2), 1 lack- 1.5 lack had 6 (6.7), and more than 1.5 lack had 12 (13.3).

The descriptive analysis finding revealed the demographics characteristics of the male soccer athlete's participants. Regarding the fifth variable, area of residency, the age frequencies for the area of residency were as follow: urban had 52 (57.8), and rural had 38 (42.2).

The descriptive analysis finding revealed the demographics characteristics of the male soccer athlete's participants. Regarding the sixth variable, higher playing level, the age frequencies for the higher playing level were as follow: intervarsity had 41 (45.6), National had 29 (32.2), International had 3 (3.3), and others had 17 (18.9).

Table 3
Demographics Characteristics of the male non-athletes students Participants

Variables	***f (% age)***
University	
1	18 (20)
2	18 (20)
3	18 (20)
4	18 (20)
5	18 (20)
Semester	
1	18 (20)
2	22 (24.4)
3	26 (28.9)
4	24 (26.7)
Marital Status	
Unmarried	90 (100)
Family Income	
Less than 50k	21 (23.3)
50k-1 lakh	36 (40)
1lakh-1.50lakh	12 (13.3)
More than 1.5lakh	21 (23.3)
Area of Residency	
Urban	62 (68.9)
Rural	38 (31.1)
Highest playing Level Non-participation	90 (100)

Note: N = 90, *f* = Frequency, *%* = percentage,

We can conclude the following results:

The descriptive analysis finding revealed that the demographics characteristics of the male non-athletes students participants, the means = 21.11 and SD = 1.43.

The descriptive analysis finding revealed the demographics characteristics of the male non-athletes student's participants. In term of the first variable, university, the age frequencies for the five universities were as follow: 1st university had 18 (20), 2nd university had 18 (20), 3rd university had 18 (20), 4th university had 18 (20), and 5th university had 18 (20).

The descriptive analysis finding revealed the demographics characteristics of the male non-athletes student's participants. Concerning the second variable, semester, the age frequencies for the semester were as follow: 1st semester had 36 (20), 2nd semester had 22 (24.4), 3rd semester had 26 (28.9) and 4th semester had 24 (26.7).

The descriptive analysis finding revealed the demographics characteristics of the male non-athletes student's participants. Regarding the third variable, Marital Status, the age frequency were as follow: unmarried had 90 (100).

The descriptive analysis finding revealed the demographics characteristics of the male non-athletes student's participants. The forth variable was family income, less than, the age frequencies for the family income were as follow: less than 50k had 21 (23.3), 50k-1 lack had 36 (40), 1 lack- 1.5 lack had 12 (13.3), and more than 1.5 lack had 21 (23.3).

The descriptive analysis finding revealed the demographics characteristics of the male non-athletes student's participants. Regarding the fifth variable, area of residency, the age frequencies for the area of residency were as follow: urban had 62 (68.9), and rural had 38 (31.1).

The descriptive analysis finding revealed the demographics characteristics of the male non-athletes student's participants. Regarding the sixth variable, higher playing level, the age frequency for the higher playing level were as follow: non-participation had 90 (100).

Cronbach's Alpha value was 0.573.

Table 4
Mean Comparison of Soccer Varsity Student Athletes and Non-Athletes on Emotional Intelligence and Sleep Quality

	Athletes		Non-Athletes				
Variables	**M**	**SD**	**M**	**SD**	**t(178)**	**p**	**Cohen's d**
Appraisal of Own Emotions	4.02	.649	4.06	.647	-0.345	.730	0.06
Appraisal of Other Emotions	3.91	.777	4.11	.594	-1.939	.054	0.29
Regulation of Own Emotion	4.03	.640	3.67	.786	3.433	**.001**	0.50
Regulation of Other Emotion	4.04	.958	3.81	.830	1.747	.082	0.26
Utilization of Emotions	4.14	.557	4.11	.578	.460	.646	0.05
Global score of BEIS10 (Brief EI Scale)	40.30	4.128	39.49	4.090	1.324	.187	0.20
Average weekly sleep duration	7.54	1.751	7.35	1.744	.733	.464	0.11
Chrono type	2.31	.697	2.38	.712	-.634	.527	0.10

Mean difference between varsity soccer athlete's vs non-athletes varsity students on the basis of their EI and Sleep Quality. From this we can conclude the following results:

Finding revealed that soccer varsity student athletes and non-athletes exhibits non-significance mean difference on EI (Appraisal of own Emotion) with t (178) =-0.345, p>.730.The Cohen's d value was 0.06(< 0.2), indicating a small effect size.

Finding revealed that soccer varsity student athletes and non-athletes exhibits non-significance mean difference on EI (Appraisal of Other Emotions) with t (178) =-1.939, p>.054. The Cohen's d value was 0.29(< 0.50), indicating a small effect size.

Finding revealed that soccer varsity student athletes and non-athletes exhibits significance mean difference on EI (Regulation of Own Emotion) with t (178) =3.433, p<.001. The Cohen's d value was 0.50(< 0.80), indicating a small effect size.

Finding revealed that soccer varsity student athletes and non-athletes exhibits non-significance mean difference on EI (Regulation of Other Emotion) with t (178) =1.747, p>.082. The Cohen's d value was 0.26(< 0.50), indicating a small effect size.

Finding revealed that soccer varsity student athletes and non-athletes exhibits non-significance mean difference on EI (Utilization of Emotions) with t (178) =.460, p>.646. The Cohen's d value was 0.05(< 0.2), indicating a small effect size.

Finding revealed that soccer varsity student athletes and non-athletes exhibits non-significance mean difference on EI (Global score of BEIS10 (Brief Emotional Intelligence Scale)) with t (178) =1.324, p>.187. The Cohen's d value was 0.20(< 0.50), indicating a small effect size.

Finding revealed that soccer varsity student athletes and non-athletes exhibits non-significance mean difference on EI (Average weekly sleep duration) with t (178) =0.733, p>.464. The Cohen's d value was 0.11(< 0.50), indicating a small effect size.

Finding revealed that soccer varsity student athletes and non-athletes exhibits non-significance mean difference Sleep wake-pattern with t (178) =-0.634, p>.527. The Cohen's d value was 0.10(< 0.50), indicating a small effect size.

Table 5
Regression Coefficients of higher level of participation on sports of emotional intelligence factors.

Dependent Variable of EI factors	Predictor Variable	B	β	SE	R^2	p
Appraisal of own emotions	Sports participation	-.006	-.01	.04	.000	.866
Appraisal of other emotions	Sports participation	-.076*	-.14	.04	.02	.068
Regulation of own emotions	Sports participation	.10*	.17	.04	.03	**.020**
Regulation of other emotions	Sports participation	.062	.09	.05	.01	.245
Utilization of emotions	Sports participation	.049	.11	.03	.01	.143

*p<.05. *EI=Emotional Intelligence*

The higher level of sports participation was our predictor variable and factors of EI (appraisal of own emotion, appraisal of other emotions, regulation of own emotions, regulation of other emotions and utilization of emotions) was our dependent variable. The Table 4.5 showed no significant relationship in appraisal of own emotion, appraisal of other emotions, regulation of other emotions and utilization of emotions on higher level of participation in soccer.

The appraisal of own emotion showed no significant relationship with a higher level of participation in soccer sports. (See table 5) Its means that there was no impact on appraisal of own emotion when the level of participation of soccer sports were increasing. The predictor variable was found to have an explanation because the R^2 value was .00 with F (1,178) = .029, p< .05. Outcome variable has .0% variance.

The appraisal of other emotion showed no significant relationship with a higher level of participation in soccer sports. (See table 5) Its means that there was no impact on appraisal of other emotion when the level of participation of soccer sports were increasing. The predictor variable was found to have an explanation because the R^2 value was .02 with F (1,178) = 3.38, p> .05. Outcome variable has .02% variance.

The regulation of own emotion showed a significant relationship with a higher level of participation in soccer. (See table 5) Its means soccer player participation was increasing in sports, it increasing in regulation of own emotions. If soccer participation level increased than the EI also increased. The predictor variable was found to have an explanation because the R^2 value was .03 with F (1,178) = 5.54, p< .05. Outcome variable has .03% variance.

The regulation of other emotion showed no significant relationship with a higher level of participation in soccer sports. (See table 5) Its means that there was no impact on regulation of other emotion when the level of participation of soccer sports increased. The predictor variable was found to have an explanation because the R^2 value was .01 with F (1,178) = 1.36, p> .05. . Outcome variable has .01% variance.

The utilization of emotion showed no significant relationship with a higher level of participation in soccer sports. (See table 5) Its means that there was no impact on utilization of emotion when the level of participation of soccer sports increased. The predictor variable was found to have an explanation because the R^2 value was .01 with F (1,178) = 2.17, p> .05. Outcome variable has .01% variance.

Table 6
Regression Coefficients of consumption of Caffeine before bed on Regulation of own emotions (EI Factor).

Dependent Variable of EI factors	*Predictor Variable*	*B*	*β*	*SE*	R^2	*p*
Regulation of own emotions	any kind of Caffeine before bed	-.17	-.17	.08	.03	.023

*$p<.05$. *EI=Emotional Intelligence*

The consumption of caffeine before bed was our predictor variable and factors of EI (regulation of own emotions) was our dependent variable. The Table 6 showed significant relationship in regulation of own emotions on consumption of caffeine before bed.

The regulation of own emotion has a significant relationship with the consumption of caffeine before bed. Its means increasing the consumption of caffeine before bad, it increasing the effect on the regulation of own emotions. If the consumption of caffeine has increased than the EI also effected. The predictor variable was found to have an explanation because the R^2 value was .03 with F (1,178) = 5.21, p< .05. Outcome variable has .03% variance.

Discussions

The aim of study was to examine the effects of participation in soccer sports on EI and sleep-wake pattern in varsity male soccer athlete's vs male non-athlete's varsity students. The findings yielded that playing soccer could help to better EI and increasing participating in soccer was associated with increased EI. Additionally, we attend to sought the association of caffeine consumption with EI.

Some earlier studies have investigated how participation in sports like soccer can effects on the EI, emotional regulation (Palmateer & Tamminen, 2018), interpersonal functioning (Vohs & Ciarocco, 2004), and overall well-being (Arribas Galarraga et al., 2017). Previous researches on the relationship between combat sports and EI showed the years of experience in the combat sports can helps to developed EI (Fernández et al., 2020). Furthermore, a different study discovered that male athletes who trained harder and competed at the higher level of sports were more likely to show higher EI (Rodriguez-Romo et al., 2021).

Team sports participation exhibit different personality trails compared to individual sports participants, they showed higher level of demonstrative and low levels of conscientiousness (Allen et al., 2013). Furthermore, emotionality and sociability were traits associated with managing the emotions of others and were likely to have been noticeable in the team sports participants (Laborde et al., 2014).

Based on research finding, it might be said that athletes consider the control of interpersonal emotions as essential to their ability to perform well in sports (Palmateer & Tamminen, 2018). Another study showed that self-regulation was necessary for interpersonal functioning (Vohs & Ciarocco, 2004) and emotional self-regulation can

promote strong relationship between team. Emotion perception and its utilization, crucial for engagements, and it also play a significant role in the well-being and satisfaction experienced in sports like soccer (Arribas Galarraga et al., 2017).

The finding of this study indicated that increased caffeine consumption was associated with a decreased in the regulation of own emotions, a component of EI regardless the participants were athletes or non-athletes. This study align with other research, which has shown that increasing the amount of caffeine consumed has a direct impact on emotion regulation (Sökmen et al., 2008). High consumption caffeine was a result of insufficient sleep, and it can impair the initiation and continuity of subsequent sleep. According to previous study, caffeine consumption reduced total sleep time by 45 minutes, and also decreased sleep efficiency by 7% (Gardiner et al., 2023)

Caffeine, founded in coffee, tea, and cola soft drinks, was the world's most widely used substance, known to raise blood pressure (James, 1997). Numerous studies have demonstrated the ergogenic effects of caffeine on athlete's performance, as well as various aspects of its metabolic, hormonal, and physiologic effects (Sökmen et al., 2008)..

Regardless of the evidence, report showing that excessive caffeine consumption can be harmful for young adults (Temple, 2019). This was crucial in this case since research on the association between increasing caffeine intake and cognitive ability decline has indicating significant effect on men, especially concerning cognitive ability decline associated with caffeine consumption (Haskell-Ramsay et al., 2018).

Implications

According to this study, participating in soccer can enhance the regulation of own emotions. Therefore, it can be suggested that university student should consider participating in soccer to develop their emotional regulation skills, since previous study has shown that participating in sport can improve both EI and academic performance (Shahan et al., 2023).

Limitations

Although this study offered useful data, it was important to point out the limitations that were be taken into mind. This study was cross-sectional in design, it hard to make conclusion the causes of the association between EI and sleep in varsity soccer athlete's vs non-athletes varsity students. It was possible that the lack of significant in sleep was due to a small sample size or maybe the type of sample size. Because the data were conducted only the varsity soccer male athletes and non-athletes varsity students.

Conclusion

In this study, the finding revealed that the varsity soccer athletes had exhibited higher level of EI than non-athletes varsity students and also showed that as the level of participation in soccer increased, the EI also increased. Participation in soccer could have been the reason for increasing personal abilities to figure out and recognize regulation of own emotions within ourselves. If the future studies consider the personalities of different soccer players and university students, it would help to determine their impact on EI.

Recommendations

In order to have make this research more widely applicable, future research should look at the relationship between EI and sleep on soccer athletes by using larger and more specialized sample size, such as only male and female participations or both genders, or only professional soccer athletes. By using these methods the future research create more

interesting finding in the flied of soccer. Our study found no signification association between soccer participation and sleep. Future studies could investigate this further using different assessment tools, level of participation, type of sports or changed the nature of study such as longitudinal study in the hope to possibly discover different results.

References:

Allen, M. S., Greenlees, I., & Jones, M. (2013). Personality in sport: A comprehensive review. *International Review of Sport and Exercise Psychology*, *6*(1), 184-208.

Arribas Galarraga, S., Saies, E., Cecchini, J. A., Arruza, J. A., & Luis de Cos, M. I. (2017). The relationship between emotional intelligence, self-determined motivation and performance in canoeists.Journal of Human Sports and Exercise.

Bostani, M., & Saiiari, A. (2011). Comparison emotional intelligence and mental health between athletic and non-athletic students. *Procedia-Social and Behavioral Sciences*, *30*, 2259-2263.

Castro-Sánchez, M., Chacón-Cuberos, R., Zurita-Ortega, F., Puertas-Molero, P., Sánchez-Zafra, M., & Ramírez-Granizo, I. (2018). Emotional intelligence and motivation in athletes of different modalities. *Journal of Human Sport and Exercise.*

Chan, D. W. (2004). Perceived emotional intelligence and self-efficacy among Chinese secondary school teachers in Hong Kong. *Personality and Individual Differences*, *36*(8), 1781-1795.

Davies, K. A., Lane, A. M., Devonport, T. J., & Scott, J. A. (2010). Validity and reliability of a brief emotional intelligence scale (BEIS-10). *Journal of Individual Differences* 31(4), 198-208.

Diaz, R., Miller, E. K., Kraus, E., & Fredericson, M. (2019). Impact of adaptive sports participation on quality of life. *Sports medicine and arthroscopy review*, *27*(2), 73-82.

Dijk, D.-J., & Lazar, A. S. (2012). The regulation of human sleep and wakefulness: Sleep homeostasis and circadian rhythmicity. University of Surrey.

Dobersek, U., & Arellano, D. L. (2017). Investigating the relationship between emotional intelligence, involvement in collegiate sport, and academic performance. *The Sport Journal*, *24*(1), 1-17.

Farhan, M., & Alfin, E. (2019). The effect of emotional intelligence and self effycacy towards students achievement. *JIPM (Jurnal Ilmiah Pendidikan Matematika)*, *8*(1), 37-46.

Fernández, M. M., Brito, C. J., Miarka, B., & Díaz-de-Durana, A. L. (2020). Anxiety and emotional intelligence: Comparisons between combat sports, gender and levels using the trait meta-mood scale and the inventory of situations and anxiety response. *Frontiers in psychology*, *11*, 130.

Fullagar, H. H., Skorski, S., Duffield, R., Hammes, D., Coutts, A. J., & Meyer, T. (2015). Sleep and athletic performance: the effects of sleep loss on exercise performance, and physiological and cognitive responses to exercise. *Sports Medicine*, *45*(2), 161-186.

Fullagar, H. H., Vincent, G. E., McCullough, M., Halson, S., & Fowler, P. (2023). Sleep and sport performance. *Journal of Clinical Neurophysiology*, *40*(5), 408-416.

Gardiner, C., Weakley, J., Burke, L. M., Roach, G. D., Sargent, C., Maniar, N., Townshend, A., & Halson, S. L. (2023). The effect of caffeine on subsequent sleep: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 69(1-14) 101764.

Gross, J. J., Richards, J. M., & John, O. P. (2006). Emotion regulation in everyday life.

Hall, M., Levenson, J., & Hasler, B. (2012). Sleep and emotion. *The Oxford handbook of sleep and sleep disorders*, 131-149.Oxford University Press.

Haskell-Ramsay, C. F., Jackson, P. A., Forster, J. S., Dodd, F. L., Bowerbank, S. L., & Kennedy, D. O. (2018). The acute effects of caffeinated black coffee on cognition and mood in healthy young and older adults. *Nutrients*, *10*(10), 1386.

Humphrey, N., Curran, A., Morris, E., Farrell, P., & Woods, K. (2007). Emotional intelligence and education: A critical review. *Educational Psychology*, *27*(2), 235-254.

Ishak, M. A., Kassim, A. F. M., Miswan, M. S., & Zainuddin, N. F. (2023). The Comparison of Decision-Making Skills between Athletes and Non-athletes among University Students. *Journal of Human Centered Technology*, *2*(1), 73-77.

James, J. E. (1997). Is habitual caffeine use a preventable cardiovascular risk factor? *The Lancet*, *349*(9047), 279-281.

Jones, M. V. (2003). Controlling emotions in sport. *The sport psychologist*, *17*(4), 471-486.

Knowles, O. E., Drinkwater, E. J., Urwin, C. S., Lamon, S., & Aisbett, B. (2018). Inadequate sleep and muscle strength: Implications for resistance training. *Journal of science and medicine in sport*, *21*(9), 959-968.

Laborde, S., Dosseville, F., & Allen, M. S. (2016). Emotional intelligence in sport and exercise: A systematic review. *Scandinavian journal of medicine & science in sports*, *26*(8), 862-874.

Laborde, S., Dosseville, F., Guillén, F., & Chávez, E. (2014). Validity of the trait emotional intelligence questionnaire in sports and its links with performance satisfaction. *Psychology of sport and exercise*, *15*(5), 481-490.

Méndez-Giménez, A., del Pilar Mahedero-Navarrete, M., Puente-Maxera, F., & de Ojeda, D. M. (2022). Effects of the Sport Education model on adolescents' motivational, emotional, and well-being dimensions during a school year. *European Physical Education Review*, *28*(2), 380-396.

O'Boyle Jr, E. H., Humphrey, R. H., Pollack, J. M., Hawver, T. H., & Story, P. A. (2011). The relation between emotional intelligence and job performance: A meta-analysis. *Journal of Organizational Behavior*, *32*(5), 788-818.

Palmateer, T., & Tamminen, K. (2018). A case study of interpersonal emotion regulation within a varsity volleyball team. *Journal of Applied Sport Psychology*, *30*(3), 321-340.

Pawlowski, T., Downward, P., & Rasciute, S. (2014). Does national pride from international sporting success contribute to well-being? An international investigation. *Sport management review*, *17*(2), 121-132.

Petrovici, A., & Dobrescu, T. (2014). The role of emotional intelligence in building interpersonal communication skills. *Procedia-Social and Behavioral Sciences*, *116*, 1405-1410.

Roberts, S. S. H., Teo, W.-P., & Warmington, S. A. (2019). Effects of training and competition on the sleep of elite athletes: a systematic review and meta-analysis. *British journal of sports medicine*, *53*(8), 513-522.

Rodriguez-Romo, G., Blanco-Garcia, C., Diez-Vega, I., & Acebes-Sánchez, J. (2021). Emotional intelligence of undergraduate athletes: The role of sports experience. *Frontiers in psychology*, *12*, 609154.

Roenneberg, T., Kuehnle, T., Pramstaller, P. P., Ricken, J., Havel, M., Guth, A., & Merrow, M. (2004). A marker for the end of adolescence. *Current biology*, *14*(24), R1038-R1039.

Roenneberg, T., Pilz, L. K., Zerbini, G., & Winnebeck, E. C. (2019). Chronotype and social jetlag: a (self-) critical review. *Biology*, *8*(3), 54.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition and personality*, *9*(3), 185-211.

Sánchez-Álvarez, N., Extremera, N., & Fernández-Berrocal, P. (2016). The relation between emotional intelligence and subjective well-being: A meta-analytic investigation. *The Journal of Positive Psychology*, *11*(3), 276-285.

Sembiring, N., Nimran, U., Astuti, E. S., & Utami, H. N. (2020). The effects of emotional intelligence and organizational justice on job satisfaction, caring climate, and criminal investigation officers' performance. *International Journal of Organizational Analysis*, *28*(5), 1113-1130.

Shahan, M. F., Ali, A., & Rasool, M. (2023). Assessing Emotional Intelligence and Academic Performance among Male Field Hockey Varsity Student Athletes and Non-Athletes. *Journal of Development and Social Sciences*, *4*(3), 371-381.

Sökmen, B., Armstrong, L. E., Kraemer, W. J., Casa, D. J., Dias, J. C., Judelson, D. A., & Maresh, C. M. (2008). Caffeine use in sports: considerations for the athlete. *The Journal of Strength & Conditioning Research*, *22*(3), 978-986.

Stan, T., Koronas, V., & Tohanean, D. (2022). Comparative Study on Emotional Intelligence in Alpine Skiing Versus Football. *Bulletin of the Transilvania University of Braşov. Series IX: Sciences of Human Kinetics*, 35-42.

Swinbourne, R., Miller, J., Smart, D., Dulson, D. K., & Gill, N. (2018). The effects of sleep extension on sleep, performance, immunity and physical stress in rugby players. *Sports*, *6*(2), 42.

Szabo, A., & Urbán, F. (2014). Do combat sports develop emotional intelligence? *Kinesiology*, *46*(1),53-60.

Temple, J. L. (2019). Trends, safety, and recommendations for caffeine use in children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *58*(1), 36-45.

Vohs, K. D., & Ciarocco, N. J. (2004). Interpersonal functioning requires self-regulation. *Handbook of self-regulation*, 392-410. The Guilford Press.

Wager, T. D., Barrett, L. F., Bliss-Moreau, E., Lindquist, K., Duncan, S., Kober, H., Joseph, J., Davidson, M., & Mize, J. (2008). The neuroimaging of emotion. *Handbook of emotions*, *3*, 249-271.

Whitworth-Turner, C., Di Michele, R., Muir, I., Gregson, W., & Drust, B. (2018). A comparison of sleep patterns in youth soccer players and non-athletes. *Science and Medicine in Football*, *2*(1), 3-8.