Cuadernos de Psicología del Deporte, vol. 25, 3, 17-32
Recibido: 04/03/2025
Aceptado: 13/08/2025

Murcia (España) ISSN edición impresa:1578-8423
ISSNediciónweb(*http://revistas.um.es/cpd*):1989-5879

Cita: Kambitta Valappil, I. N., Nuppatta, S. N., Anto, A. C., M. S., A. K., Nambron, A., Vasanthi, G., Elayaraja, M. (2025). Unravelling the association between stress management and emotional maturity: A holistic exploration among employed and unemployed sportswomen. *Cuadernos de Psicología del Deporte, 25*(3), 17-32.

Desentrañando la relación entre la gestión del estrés y la madurez emocional: una exploración holística entre deportistas empleadas y desempleadas

Unravelling the association between stress management and emotional maturity: A holistic exploration among employed and unemployed sportswomen

Desvendando a associação entre gestão do stress e maturidade emocional: uma exploração holística entre atletas empregadas e desempregadas

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RESUMEN

Los deportes profesionales son altamente competitivos, lo que a menudo llama la atención sobre la destreza física de los atletas. El éxito y el bienestar de los atletas están determinados por una intrincada red de desafíos mentales y emocionales, especialmente el manejo del estrés y la madurez emocional. Las deportistas se enfrentan a una variedad de demandas más allá de la cancha, incluido el entrenamiento riguroso, la competencia intensa y los altibajos de sus carreras. El propósito de este estudio fue investigar la asociación entre el manejo del estrés y la madurez emocional entre deportistas empleadas y desempleadas. Para determinar la influencia de la madurez emocional y el manejo del estrés. Los participantes incluyeron 146 deportistas (70 desempleadas y 76 deportistas empleadas) de todo Kerala. El manejo del estrés y la madurez emocional se evaluaron utilizando cuestionarios estándar. Los resultados mostraron que la madurez emocional fue significativamente diferente en deportistas empleadas y desempleadas ($p = 0,003$, $d = 0,50$). Sin embargo, no hubo diferencia en el manejo del estrés entre deportistas empleadas y desempleadas ($p = 0,283$, $d = 0,18$). Del análisis de correlación, la madurez emocional mostró una asociación negativa significativa con el manejo del estrés en deportistas totales ($r=-.374$, $p<0.01$), deportistas desempleadas ($r=-.241$, $p<0.05$) y deportistas empleadas ($r=-.450$, $p<0.01$). La regresión, la madurez emocional tuvo un efecto negativo mínimo en el manejo del estrés ($\beta=-.374$) con un 13.4 por ciento de predicción en deportistas totales. Y la madurez emocional tuvo un efecto negativo mínimo en el manejo del estrés ($\beta=-.241$) con un 4.5 por ciento de predicción en deportistas desempleadas. Finalmente, la madurez emocional tuvo un efecto negativo mínimo en el manejo del estrés ($\beta=-.450$) con un 19 por ciento de predicción en deportistas empleadas. Se concluye que, si bien la madurez emocional ayuda a las deportistas empleadas a manejar el estrés, tiene una influencia limitada en las deportistas desempleadas. La conexión muestra una fuerte relación negativa entre la

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madurez emocional y el manejo del estrés de las deportistas en general y también de las deportistas empleadas. Sin embargo, esta asociación se observa entre las deportistas desempleadas con un efecto negativo débil.

Palabras clave: Madurez emocional; Progresión emocional; Estabilidad emocional; Integración de la personalidad; Adaptación social; Manejo del estrés.

ABSTRACT

Professional sports are highly competitive, which often draws attention to the physical prowess of the athletes. The success and well-being of the athletes are determined by an intricate web of mental and emotional challenges, especially stress management and emotional maturity. Sportswomen are facing a variety of demands beyond the court, including rigorous training, intense competition, and the highs and lows of their careers. The purpose of this study was to investigate the association between stress management and emotional maturity among employed and unemployed sportswomen. To determine the influence of emotional maturity and stress management. Participants included 146 sportswomen (70 unemployed and 76 employed sportswomen) from all over Kerala. Stress management and emotional maturity were assessed using standard questionnaires. The results showed that emotional maturity was significantly deference in employed and unemployed sportswomen ($p = .003$, $d = 0.50$). However, there was no difference in stress management between employed and unemployed sportswomen ($p = .283$, $d = 0.18$). From the correlation analysis, emotional maturity showed a significant negative association with stress management in total sportswomen ($r = -.374$, $p < .01$), unemployed sportswomen ($r = -.241$, $p < .05$), and employed sportswomen ($r = -.450$, $p < .01$). The regression, emotional maturity had a minimal negative effect on stress management ($\beta = -.374$) with a 13.4 percent prediction in total sportswomen. And emotional maturity had a minimal negative effect on stress management ($\beta = -.241$) with a 4.5 percentage of prediction in unemployed sportswomen. Finally, emotional maturity had a minimal negative effect on stress management ($\beta = -.450$) with a 19 percentage of prediction in employed sportswomen. It is concluded that, while emotional maturity helps employed sportswomen manage stress, it has a limited influence on unemployed sportswomen. The connection shows a strong negative relationship between emotional maturity and stress management of overall sportswomen and also employed sportswomen. However, this association is seen among unemployed sportswomen with a weak negative effect.

Keywords: Emotional maturity; Emotional progression; Emotional stability; Personality integration; social adjustment; Stress Management.

RESUMO

Os desportos profissionais são altamente competitivos, o que muitas vezes chama a atenção para a destreza física dos atletas. O sucesso e o bem-estar dos atletas são determinados por uma intrincada rede de desafios mentais e emocionais, especialmente a gestão do stress e a maturidade emocional. As atletas enfrentam uma variedade de exigências para além dos campos, incluindo treinos rigorosos, competição intensa e os altos e baixos das suas carreiras. O objetivo deste estudo foi investigar a associação entre a gestão do stress e a maturidade emocional entre atletas empregadas e desempregadas. Determinar a influência da maturidade emocional e da gestão do stress. Os participantes incluíram 146 desportistas (70 desempregadas e 76 empregadas) de todo o estado de Kerala. A gestão do stress e a maturidade emocional foram avaliadas através de questionários padrão. Os resultados mostraram que a maturidade emocional foi significativamente deferida nas atletas empregadas e desempregadas ($p = .003$, $d = 0.50$). No entanto, não houve diferença na gestão do stress entre as atletas empregadas e desempregadas ($p = .283$, $d = 0.18$). Da análise de correlação, a maturidade emocional mostrou uma associação negativa significativa com a gestão do stress em atletas femininas totais ($r = -.374$, $p < .01$), atletas femininas desempregadas ($r = -.241$, $p < .05$) e atletas femininas empregadas ($r = -.450$, $p < .01$). A regressão e a maturidade emocional tiveram um efeito negativo mínimo na gestão do stress ($\beta = -.374$) com uma previsão de 13,4% no total de atletas femininas. E a maturidade emocional teve um efeito negativo mínimo na gestão do stress ($\beta = -.241$) com uma percentagem de previsão de 4,5 em atletas desempregadas. Por fim, a maturidade emocional teve um

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efeito negativo mínimo na gestão do stress (β = -. 450), com uma previsão de 19% nas atletas empregadas. Conclui-se que, embora a maturidade emocional ajude as desportistas empregadas a controlar o stress, tem uma influência limitada nas desportistas desempregadas. A ligação mostra uma forte relação negativa entre a maturidade emocional e a gestão do stress dos desportistas em geral e também das desportistas empregadas. No entanto, esta associação é observada entre atletas desempregadas com um efeito negativo fraco.

Palavras chave: Maturidade emocional; Progressão emocional; Estabilidade emocional; Integração da personalidade; ajustamento social; Gestão do stress.

INTRODUCCIÓN

Sports participation can strengthen skills such as communication, responsibility, and emotional regulation, which contributes to a person's overall psychosocial development. Taking part in sports is widely regarded as being beneficial for overall mental health (Walton et al., 2024). Psychological stress and physical activity are believed to have a reciprocal relationship (Stults-Kolehmainen & Sinha, 2014). During times of stress, Langlie (2016) observed that people regard sustaining health practices as costly. For those who view exercise as a disruption an inconvenience, or another obligation, it makes sense to predict that exercise will reduce their stress levels. In order to gain a better understanding of the impact of stress on performance, Nixon (1979) produced the following stress performance curve graph, which provides a theoretical explanation, A person experiences a gradual to abrupt fall in performance levels when stress is viewed as unpredictable or unmanageable. This leads to a decrease in productivity and eagerness to cope with stress. When stress management is done properly, performance levels improve. Demands and pressure are two kinds of stressors that might boost performance by encouraging a stronger stress response. For example, a basketball player feels pressure from the fans, from close games, and from daring opponents to run faster and make more effective three-point shots (Bali, 2015). In modern society, stress management is considered a key component of happiness and success. In addition to reducing anxiety and enhancing well-being, stress management offers a number of ways to address mental health issues (Kaur, 2018). In sports competitions, stress management means controlling and reducing the negative impact of stress (Santi et al., 2021). Among the main stressors for athletes are the hopes they have for achievement in their competition (Bhadauriya & Tripathi, 2018). Few studies have assessed the association between stress and emotional maturity (Archana & Sudhakaran, 2020; Kumar & Kayalvizhi, 2022; Saldanha et al., 2021; Shah & Mistry, 2020). Furthermore, In the dynamic and challenging world of women's basketball, success extends beyond physical skill and into the complex areas of the psychological terrain. Stress management emerges as a critical aspect in creating a career path, impacting performance, mental well-being, and the whole sports experience of the players. The competitive aspect of women's basketball, along with outside expectations and personal problems, creates a variety of pressures that extend beyond the basketball court. Stress, if not managed, may have a negative influence on the physical ability, mental resilience, and emotional balance of an athlete. Thus, recognizing and successfully managing stress are key components in improving athletic performance and ensuring the overall well-being of female basketball players.

Emotional maturity is characterized by the capacity to channel and direct emotional inclinations towards anticipated results. Those with emotional maturity exhibit a goal-oriented approach, possessing a strong drive to achieve objectives, engage in calculated risks, actively seek information to minimize uncertainty, hope for a positive outlook toward success rather than fearing failure, and perceive setbacks as challenges to overcome rather than personal shortcomings, as indicated by (Yusoff et al., 2011). Emotional maturity is a psychological trait that has an impact on the performance of a sportsman. To achieve the best sports performance at any level, players must develop emotional maturity, which aids in making wise and mature decisions during competition (Kaur et al., 2019). Sohrabi et al. (2011) investigate the comparative scores between athlete and non-athlete groups in various dimensions. The athlete group demonstrates higher average scores in problem-solving, liveliness, stress endurance, self-flourishing, emotional consciousness, realism, optimism, intimacy, and courage compared to the non-athlete group. Conversely, the non-athlete group surpasses the athlete group in independence, interpersonal relationships,

self-esteem, shock regulation, adaptability, social responsibility, and overall emotional intelligence. Boroujeni et al. (2012) explore that Emotional intelligence and competitive anxiety were found to have a negative association in Tehran Super League female basketball players.

Modern basketball games are not only physical contests, but mental competitions as well (Lu & Li, 2023). Researchers have found that basketball is widely played among students pursuing degrees in pedagogy, engineering, economics, and other fields. A basketball class stimulates motor activity in students and allows them to move simply and efficiently. In order to maintain physical health and develop various motor abilities, physical activity is crucial. Intensive educational activities, also provide psychological relief among students as well as strengthen their emotional background (Heydari et al., 2021; Shao et al., 2023). Moreover, the competition state has demonstrated that mental preparation is crucial to competition success. Coaches and players usually prepare for games mentally and psychologically based on their understanding of the importance of the game. In order for psychological countermeasures to be successfully implemented in the competition, each team's abilities and mental states need to be considered and communicated to the players before the event. Make sure the players have faith in the event so they can remain in a good psychological state no matter what happens before or during competition (Meng, 2022). During adolescence, pushing the young athlete under more stress, anxiety, and social pressure, may cause a rise in the risk of injury, which also has an impact on their performance. In addition to coaches, and parents who may raise the stress and anxiety (Merkel, 2013). In the fast-paced and competitive world of sports, women basketball players often face a slew of problems that extend beyond the physical requirements of their chosen activity. One such crucial factor is an athlete's psychological well-being, which includes stress management and emotional development. There has been little research into emotional maturity in basketball players (Mohammad, 2021). Understanding the behavior and mental qualities of the players might be beneficial in sports psychological management (Barker et al., 2016).

Although some existing literature discusses psychological differences among athletes and non-athletes, young women and adults, or based on educational levels (Bayram & Bilgel, 2008; Di Fronso et al., 2022; Shearman et al., 2011), there is a significant gap when it comes to examining psychological well-being specifically stress management and emotional maturity in relation to employment status. In the Indian context, employment plays a vital role not only in financial independence but also in shaping one's psychological outlook and perceived social identity (Tamvada et al., 2022). Employment can provide structure, social support, and a sense of purpose all of which are factors that influence stress coping mechanisms and emotional regulation (Madazimova & Mambetalina, 2024). Conversely, unemployment may exacerbate psychological vulnerability, particularly among sportswomen who face additional pressures balancing athletic aspirations with life responsibilities. As a result, the purpose of the holistic exploration of this study uniquely explores the relationship between stress management and emotional maturity in sportswomen, as well as to compare unemployed and employed sportswomen. Furthermore, the impact of stress management on emotional maturity and its subscales in sportswomen was investigated.

MATERIAL AND METHODS

Study design

The present study employed a quantitative, cross-sectional, comparative-correlational design. A cross-sectional design was used as data were collected at a single point in time from a sample of employed and unemployed sportswomen across Kerala to explore the associations and differences between emotional maturity and stress management. This design is suitable for identifying patterns, correlations, and group differences without manipulating the variables (Anguera et al., 2018). The comparative component aimed to examine whether there were significant differences in emotional maturity and stress management between employed and unemployed sportswomen. The correlational component explored the strength and direction of the relationship between emotional maturity and stress management within the total sample, as well as within the two subgroups (employed

and unemployed). This type of design is commonly used in behavioural sciences when analysing naturally occurring differences and associations between variables (Ato et al., 2013).

Participants

The required sample size was determined a priori using G*Power version 3.1.9.7 (Faul et al., 2007) to ensure sufficient statistical power for the study. Based on prior literature (Braga-Pereira et al., 2025), a medium effect size was assumed $f^2 = 0.15$ for multiple linear regression. The significance level (α) was set at 0.05, and the desired power ($1 - \beta$) was set at 0.90, which yielded a minimum required sample size of 99 participants. However, to increase the statistical power and generalizability of the findings, 146 participants were recruited (Age=23.42 ± 2.41 yrs.). A post hoc power analysis confirmed that with this sample size and $\alpha = 0.05$, the achieved power was 0.98, indicating strong statistical reliability.

Inclusion and Exclusion Criteria

Participants were selected through a purposive sampling technique. Inclusion criteria required that all participants be female basketball players from Kerala with a minimum of six years of playing experience. The sample included both employed and unemployed sportswomen. The unemployed group consisted of 70 sportswomen (mean age = 21.84 ± 1.91 years) who had participated in the Inter-University Basketball Tournament between 2021 and 2023, representing various universities in Kerala. The employed group included 76 sportswomen (mean age = 24.86 ± 1.86 years) who were working professionals actively playing for various departmental basketball teams across Kerala. Participants were excluded if they had less than six years of competitive playing experience.

Instruments

Prior to the collection of data, the information and objective of the study and questionnaire provided through Google form were sent via email, and messaging apps such as Telegram, and WhatsApp. These Google forms consist of participant's informed consent, it was explained to them that their response would be treated with confidentiality and would secretly maintain personal anonymity and their voluntary participation. The data was collected using a Google form-based questionnaire from those who were given voluntary consent to participate in this research. The doctoral research committee of the Department of Physical Education and Sports at Pondicherry University, India approved the process concerning the research, which followed the declaration of Helsinki guidelines (Tyebkhan, 2003; World Medical Association, 2000) and complied with the Standards of Ethics in Research in Sport and Exercise Science (Harriss et al., 2017). Stress management was assessed using a standard questionnaire created by Dr. Vandana Kaushik and Dr. Namrata Arora Charpe and emotional maturity was assessed using a standard questionnaire created by Dr. Yashvir Singh and Dr. Mahesh Bhargava.

Stress Management Questionnaire: this was assessed using a standard questionnaire created by Dr. Vandana Kaushik and Dr. Namrata Arora Charpe (Bharadwaj, 2020; Harshad & Ghosh, 2022). The stress management scale talks about 36 items. Which, half of the items have been randomly selected and worded as negative statements, while the remaining statements are worded as positive ones. To measure the responses of these items, the Likert scale which ranges from zero to five was considered. Zero stands for strongly disagree, one stands for disagree (high),2 stands for disagree (low), 3 stands for agree(low), 4 stands for agree (high) and five stands for strongly agree. Now, when scoring the positively worded items, higher scores will be given for agreement and lower scores for disagreement. On the other hand, when it comes to the negatively worded statements, the scoring pattern was reversed. To assess the reliability of the stress management scale, a test-retest analysis was conducted and the results showed a reliability estimate of 0.87 and split half method reliability shows 0.91.

Emotional maturity Questionnaire: Singh and Bhargava developed a scale called the Emotional Maturity Scale to gather data on emotional maturity (Jobson, 2020; Jose & Swamy, 2022; KiranSaimons et al., 2016). This scale is made up of 48 items that are divided into five main categories: emotional stability, emotional progression, social adjustment, personality integration, and independence. It's a five-point scale where individuals report their own

emotions. The scoring system is as follows: very much receives a score of 5, much gets 4, undecided 3, probably 2, and never receives a score of 1. The higher the score on the scale, the greater the level of emotional maturity (KiranSaimons et al., 2016). To assess the reliability of the Emotional Maturity Scale, a test-retest analysis was conducted and the results showed a reliability estimate of 0.75. Additionally, the validity of the scale was assessed by comparing it to the Adjustment Inventory developed by Singh and Bhargava in 1980, with a validity score of 0.46. The students participating in the study completed the questionnaires within a time frame of 30 minutes. All the scoring sheets were then collected for further analysis of the gathered data.

Statistical analysis

The SPSS software version. 25 was used to analyze the data for this study, and Microsoft Excel was used for data tabulation. The Shapiro-Wilk test was used to establish normality (Table 1). Following that, the analysis concentrated on the use of the independent t-test, which is a type of inferential statistics. The t-test was used to see if there was a significant difference in means between two groups of players: unemployed and employed sportswomen. Cohen's d was used to determine the magnitude of the difference. A small difference is interpreted as d=0.0 - 0.2, a medium difference as d= 0.3 - 0.5, and a large difference as d > 0.6 (Cohen, 1988). Pearson product movement correlation and regression analysis were used to assess the relationship between the measures and sub-measures. The magnitude of correlation was classified as trivial (r < 0.1), small (r = 0.1-0.3), moderate (r = 0.3-0.5), large (r = 0.5-0.7), very large (r = 0.7-0.9), and nearly perfect (r > 0.9) (Kemarat et al., 2022). These statistical analyses shed light on the relationship between stress management, emotional maturity, and their respective sub-scales.

RESULTS

For all participants, descriptive and comparisons between the groups are shown in Table 2. The results of the current study reveal that stress management was no significant difference between unemployed and employed sportswomen with a small effect (t=1.08, p=0.283, d=0.18). However, the employed sportswomen had higher emotional maturity scores compared to unemployed sportswomen with medium effect (t=3.02, p=0.003, d=0.50). As same as emotional maturity; some of the subscales namely social adjustment with large effect (t=4.14, p<.001, d=0.68), personality integration with medium effect (t=2.87, p=0.005, d=0.47), and independence with the medium effect (t=2.85, p=0.005, d=0.47) also shows higher score compared to unemployed sportswomen. The rest of the sub-scales of emotional maturity namely emotional stability and emotional progression have not shown significant difference. Figure 1 provides a graphical representation of the means.

Table 1
Test of normality

	Shapiro-Wilk		
Variables	**Statistic**	**df**	**Sig.**
Stress management	0.986	146	0.162
Emotional maturity	0.984	146	0.097
Emotional stability	0.984	146	0.089
Emotional progression	0.984	146	0.081
Social adjustment	0.982	146	0.058
Personality integration	0.983	146	0.073
Independence	0.983	146	0.065

For the correlation analysis of total sportswomen Table 3, depicts a significant relationship between emotional maturity and five sub-scales of emotional maturity with stress management. Among these; emotional maturity had

a moderate negative correlation with stress management (r = -.374, p<0.01) whereas the sub-scales of emotional maturity namely emotional stability (r = -.393, p<0.01), personality integration (r = -.337, p<0.01) and independence (r = -.301, p<0.05) indicates moderate negative correlation with stress management. And emotional progression (r = -.225, p<0.01), and social adjustment (r = -.194, p<0.05) indicates small negative correlation with stress management.

Table 2

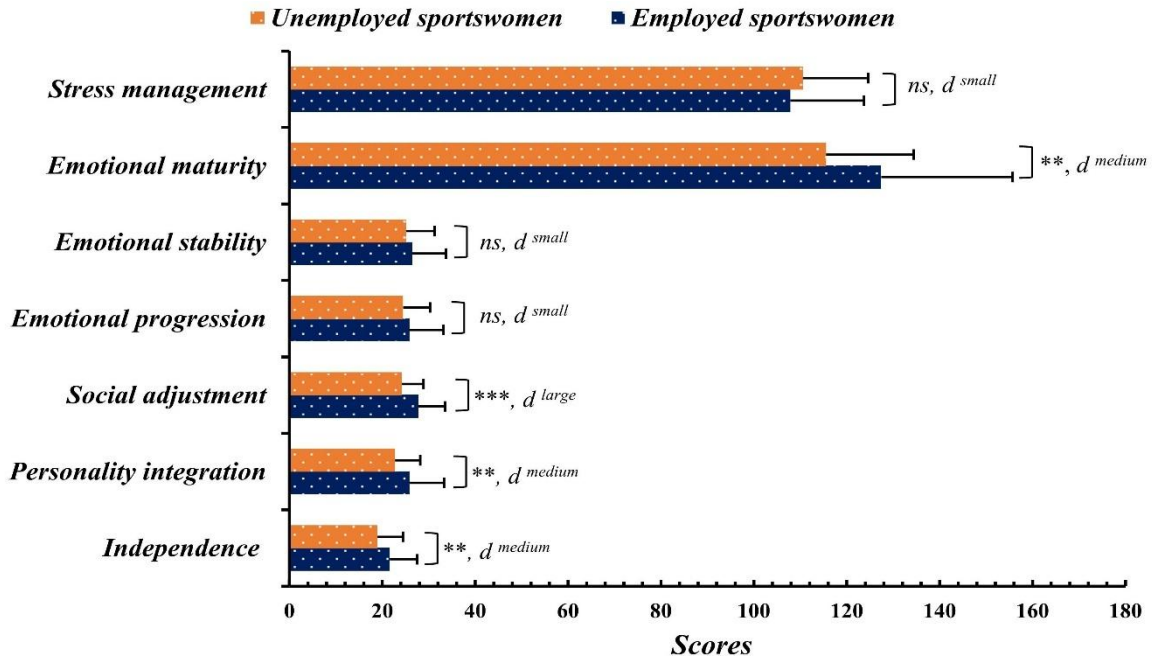
Comparisons of stress management and emotional maturity between unemployed and employed sportswomen.

Variables	Unemployed sportswomen (n=70)	Employed sportswomen (n=76)	t	p	Cohen's d
	Mean (SD)	Mean (SD)			
Stress management	110.54(14.08)	107.87(15.83)	1.08	0.283	0.18
Emotional maturity	115.56(18.83)	127.43(28.28)	3.02	0.003**	0.50
Emotional stability	25.16(6.08)	26.41(7.32)	1.38	0.257	0.19
Emotional progression	24.48(5.81)	25.83(7.34)	1.24	0.217	0.20
Social adjustment	24.16(4.70)	27.73(5.76)	4.14	0.000***	0.68
Personality integration	22.75(5.43)	25.83(7.48)	2.87	0.005**	0.47
Independence	18.96(5.50)	21.63(5.85)	2.85	0.005**	0.47

**p<0.01, ***p<0.001.

Figure 1

Graphical representation of means and Cohen's d.



For the correlation analysis of unemployed sportswomen, Table 4 depicts a significant relationship between emotional maturity and three sub-scales of emotional maturity with stress management.

Table 3
Relationships between stress management and emotional maturity in total sportswomen (n = 146).

Variables	2	3	4	5	6	7	Mean (SD)
1. Stress management	-.374**	-.393**	-.225**	-.194*	-.337**	-.301*	109.26(14.95)
2. Emotional maturity		.787**	.850**	740**	.831**	.682**	121.21(24.45)
3. Emotional stability			.661**	.466**	.537**	.349**	25.76(6.71)
4. Emotional progression				.576**	.621**	.425**	25.12(6.59)
5. Social adjustment					.508**	.388**	25.86(5.51)
6. Personality integration						.546**	24.22(6.64)
7. Independence							20.23(5.81)

** Correlation is significant at the 0.01 level.
* Correlation is significant at the 0.05 level.

For the correlation analysis of unemployed sportswomen, Table 4 depicts a significant relationship between emotional maturity and three sub-scales of emotional maturity with stress management. Among this emotional maturity had a small negative correlation with stress management ($r = -.241$, $p<0.05$) whereas the sub-scales of emotional maturity namely emotional stability ($r = -.361$, $p<0.01$), show a moderate negative correlation with stress management and personality integration ($r = -.249$, $p<0.05$) and independence ($r = -.232$, $p<0.05$) shows small negative correlation with stress management. Except for the emotional progression (r=100) and social adjustment(r=080) subscale, which did not show any significant relationship with stress management.
For the correlation analysis of employed sportswomen Table 5 depicts a significant relationship between emotional maturity and five sub-scales of emotional maturity with stress management. Among this emotional maturity had a moderate negative correlation with stress management ($r = -.450$, $p<0.01$) whereas the sub-scales of emotional maturity namely emotional stability ($r = -.411$, $p<0.01$), emotional progression ($r = -.462$, $p<0.01$), personality integration ($r = -.384$, $p<0.01$) and independence ($r = -.342$, $p<0.05$) shows moderate negative correlation with stress management. However, the social adjustment ($r = -.251$, $p<0.05$) sub-scale indicated a small negative correlation.

Table 4
Relationships between stress management and emotional maturity in unemployed sportswomen (n = 70).

Variables	2	3	4	5	6	7	Mean (SD)
1. Stress management	-.241*	-.361**	.100	-.080	-.249*	-.232*	110.54(14.08)
2. Emotional maturity		.697**	719**	.673**	.786**	.535**	115.56(18.83)
3. Emotional stability			.425**	.377**	.399**	.109	25.16(6.08)
4. Emotional progression				.440**	.405*	.156	24.48(5.81)
5. Social adjustment					.436**	.124	24.16(4.70)
6. Personality integration						.458**	22.75(5.43)
7. Independence							18.96(5.50)

** Correlation is significant at the 0.01 level.
* Correlation is significant at the 0.05 level.

Table 5
Relationships between stress management and emotional maturity in employed sportswomen (n = 76).

	Variables	2	3	4	5	6	7	Mean (SD)
1.	Stress management	-.450**	-.411**	-.462**	-.251*	-.384**	-.342**	107.87(15.83)
2.	Emotional maturity		.856**	.940**	.754**	.840**	.768**	127.43(28.28)
3.	Emotional stability			.827**	.526**	.622**	.536**	26.41(7.32)
4.	Emotional progression				.674**	.752**	.630**	25.83(7.34)
5.	Social adjustment					.494**	.524**	27.73(5.76)
6.	Personality integration						.576**	25.83(7.48)
7.	Independence							21.63(5.85)

** *Correlation is significant at the 0.01 level.*
* *Correlation is significant at the 0.05 level.*

Multiple linear regression analysis in Table 6, determines the stress management with the percentage of prediction 13.4 for total sportswomen with regard to emotional maturity. Emotional maturity had a significant negative effect on stress management (β=-.374, p< 0.001). Moreover, when considering the unemployed sportswomen's emotional maturity, it is seen that stress management with a prediction percentage of 4.5, Emotional maturity had a significant negative effect on stress management (β=-.241, p= 0.036). Finally, employed sportswomen emotional maturity, it is seen that stress management with percentage a prediction percentage of 19, Emotional maturity had a significant negative effect on stress management (β=-.450, p< .001).

Table 6
Multiple linear regression analysis on stress management and total emotional maturity.

	Variables	B(95%CI)	SD. Error	β	t	p
Total sportswomen (n=146)	**constant**	136.98(-)			23.41	0.000**
R=0.374, Adjusted R^2 =0.134, F=23.35, P< 0.001	Emotional maturity	-.228(-.322, -.135)	0.047	-.374	-4.83	0.000**
Unemployed sportswomen (n=76)	**constant**	131.39(-)			13.28	0.000**
R=0.241, Adjusted R^2 =-0.045, F=4.56, P= 0.036	Emotional maturity	-.180(-.348, -.012)	0.084	-.241	-2.13	0.036*
Employed sportswomen (n=70)	**constant**	139.93(-)			117.69	0.000**
R=0.450, Adjusted R^2 =0.190, F=17.22, P<0.001	Emotional maturity	-.252(-.373, -.131)	0.061	-.450	-4.15	0.000**

a. Dependent variable: Stress management
b. Independent: (constant), Emotional maturity

Multiple linear regression analysis in Table 7 exhibits all sub-scales of emotional maturity with the percentage of prediction on stress management for total sportswomen, unemployed, and employed sportswomen. Among the five-sub scale, Emotional maturity had a significant negative effect on stress management with a percentage of prediction at 18.1 for total sportswomen. The table reveals that Emotional stability had a significant negative effect on stress management (β=-.377, p< 0.001). The unemployed sportswomen all the sub-scales of emotional maturity explain stress management with a percentage of prediction 21.8. Among the five-sub scale, only Emotional stability (β=-.438, p< 0.001), and emotional progression (β=-.362, p= 0.004) had a significant negative effect on stress management. From this table, it is found that the beta value of emotional stability is significantly higher than the beta value of emotional progression. Therefore, emotional stability had a higher prediction in stress management when compared to all sub-scales of emotional maturity for employed sportswomen. Finally, when considering the

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employed sportswomen, Emotional maturity had a significant negative effect on stress management with a percentage of prediction at 17 for all five sub-scales.

Table 7

Multiple linear regression analysis on stress management and sub-scales of emotional maturity.

	Variables	B(95%CI)	SD. Error	β	t	p
Total sportswomen (n=146)	**constant**	136.53(-)			22.70	0.000**
	Emotional stability	-.842(-1.30, -.389)	0.229	-.377	-3.67	0.000**
R=0.457, Adjusted R^2 =0.181, F=7.40, P< 0.001	Emotional progression	.419(-.100,.938)	0.262	.185	1.60	0.112
	Social adjustment	.072(-.439,.583)	0.258	.026	.277	0.782
	Personality integration	-.393(-.871,.086)	0.242	-.175	-1.62	00.107
	Independence	-.416(-.879,.048)	0.234	-.162	-1.77	.078
Unemployed sportswomen (n=76)	**constant**	130.88(-)			14.11	0.000**
	Emotional stability	-1.02(-1.57, -.469)	0.276	-.438	-3.70	0.000**
R=0.520, Adjusted R^2 =0.218, F=5.18, P< 0.001	Emotional progression	.879(.292,1.47)	0.295	.362	2.99	0.004*
	Social adjustment	.033(-.692,.758)	0.363	.011	.091	0.928
	Personality integration	-.378(-1.07,.315)	0.347	-.146	-1.09	0.280
	Independence	-.442(-1.03,.147)	0.296	-.174	-1.50	0.139
Employed sportswomen (n=70)	**constant**	132.61(-)			14.12	0.000**
	Emotional stability	-.160(-1.01,.686)	0.423	-.074	-.377	0.707
R=.480, Adjusted R^2 =.170, F=3.83, P= .004	Emotional progression	-.825(-1.95,.303)	0.564	-.382	-1.46	0.149
	Social adjustment	.337(-.494,1.17)	0.416	.123	.810	0.421
	Personality integration	-.123(-.842,.597)	0.360	-.058	-.340	0.735
	Independence	-.250(-1.04,.543)	0.397	.092	.630	0.531

a. Dependent variable: Stress management
b. Independent: (constant), Emotional stability, Emotional progression, social adjustment, Personality integration, and Independence

DISCUSSION

Comparison of emotional maturity and stress management between unemployed and employed sportswomen.

The study found that employed sportswomen scored higher on emotional maturity than unemployed sportswomen. They scored higher in social adjustment, personality integration, and independence. This suggests that the working environment influences the emotional maturity of these athletes. The diverse experiences, independence, self-reliance is required in the workplace. In employed sports women, they are frequently faced with challenges and make independent decisions and handle pressure independently, which might contribute to their higher social adjustment, personality integration, and independence scores. These findings are in line with the previous research (Boyd Jr & Huffman, 1984; Dhillon, 2013; Kashi, 2015; Kiranben Vaghela, 2014; Kshirsagar & Jaiswal, 2019; Singh, 2015). The study by Kiranben Vaghela, (2014) exploeres that the working women had highere emotional meturity when compared to non-working women. Dhillon (2013) reveals that postgraduate athletes had better emotional maturity than graduate athletes. Kashi (2015) suggests that sports have a positive effect on social and emotional maturity in female students. Kshirsagar & Jaiswal (2019) say that sports college students highlight better emotional maturity and sub-scales as compared to non-sports college students. The findings by Boyd Jr & Huffman (1984) females had more emotional maturity than males in similar age groups and Boyd Jr & Huffman, 1984 suggest that age is the factor that differs the emotional maturity. The study by D. Singh (2015) compares the emotional maturity between district, state, and national-level female basketball players. These levels of players did not show any significant change in emotional maturity. Some of the studies are not in line with the current study results (Rathee & Salh, 2010; M. Singh & Singh, 2014). Rathee & Salh (2010) suggest that higher-level handball

players had higher levels of emotional maturity and males had higher emotional maturity. M. Singh & Singh (2014) reveal that medal winners had better emotional maturity as compared to non-medallist football players, and M. Singh & Singh (2014) say that the different levels of players such as school, college, and club players did not show any significant change in emotional maturity. The complex nature of the professional sporting environment could explain the lack of significant differences in emotional maturity between university and professional players. Professional athletes, in contrast to the relatively controlled and supportive structure of university life, frequently face a slew of challenges, both on and off the field (Conti et al., 2019). Competitive pressures, extensive travel schedules, endorsement commitments, and increased public scrutiny may all combine to create a distinct set of stressors that necessitate a distinct type of emotional adaptation.

The study found that the lack of a significant difference in stress management between unemployed and employed sportswomen suggests that both groups may experience comparable levels of stress. This finding emphasizes the importance of implementing stress management interventions tailored to the specific needs of female basketball players (Vidic et al., 2017; Volgemute et al., 2025), regardless of competitive level (Di Fronso et al., 2022). While the study found no significant difference in stress management between the two groups, it is important to note that the experience of stress and the effectiveness of coping strategies may differ among individual players. The study by Tasaddoghi (2012) suggests that gender is an effective factor in using the stress-coping method; however, it is unclear whether these differences are due to gender or other variables such as competency level, individual ability, and culture. Some of the previous studies line with current study findings (Abedi, 2010; Shearman et al., 2011; Valsaraj, 2011). The study by Abedi (2010) reveals that there were no changes in stress based on gender or based on the role of physical activity in students. The study by Valsaraj (2011) reveals that female basketball players had better stress control compared to same age female volleyball players. Shearman et al. (2011) exposes that the high-level optimistic athletes had low level of stress compare with high level of optimistic non-athletes.

Association between emotional maturity and stress management

It is found in the current study, that significant negative relationship between emotional maturity and stress management among total sportswomen, unemployed, and employed sportswomen. Some of the research papers are in consonance with current study results (Archana & Sudhakaran, 2020; Kumar & Kayalvizhi, 2022; Nicholls et al., 2015; Shah & Mistry, 2020). The study by Shah & Mistry, (2020) explores that perceived stress and emotional maturity had moderate and weak negative correlations in teenagers and young adults. Similarly, Kumar & Kayalvizhi (2022) assessed in teaching students. Archana & Sudhakaran (2020) expose that emotional maturity is moderately associated with perceived stress among corporate workers. Nicholls et al. (2015) suggest that emotional maturity has a positive path with coping effectiveness. Emotional maturity was believed to limit coping. In theory, less emotionally mature individuals may have difficulty controlling their emotions and responding to stressful situations (Amirkhan & Auyeung, 2007).

In the research study with regard to subscales of emotional maturity; five subscales showed a significant negative relationship with stress management of total sportswomen and unemployed sportswomen. For employed sportswomen, the subscales of emotional maturity; emotional stability, personality integration, and independence show a significant negative relationship with stress management. The study results are in consonance with some of the previous research (Archana & Sudhakaran, 2020; Manlunas et al., 2021). Manlunas et al. (2021) explore that emotional stability and stress management had a weak positive correlation in senior high school students during COVID-19. Archana & Sudhakaran (2020) found that emotional instability, emotional regulation, and personality disintegration had moderate positive association with stress management.

From the multiple regression analysis, in the current study, it is found that emotional maturity has minimal effect on stress management in total sportswomen (β=-.361) and unemployed sportswomen (β=-.492). In consideration of emotional maturity sub-scales of total sportswomen, emotional stability could predict the changes in stress management with 18.3%. and for emotional maturity subscales in employed sportswomen, the emotional stability and emotional progression could predict the changes in stress management with 21.6%. from these two sub-scales, emotional progression (β=.481) had a higher prediction compared to emotional stability (β=-.404) in stress

management of employed sportswomen. The study is in consonance with the present study (Raj, 2017). Where the study by Raj (2017) explores that 12 % of predictions on emotional maturity and stress were significantly related to management students.

Limitations

There are a few limitations to the current investigation. Because of time restrictions, the study was conducted with a small sample size, and the representation of women in sports was restricted to basketball players who were actively involved in sports. We do not gather data on working women who are not actively being played. Finally, we restricted our sample set to Kerala alone. Future researchers in the specific field of research might address the limitations recognized in the current investigation by expanding the participants numbers to include a more varied representation of sportswomen, beyond just basketball players, and integrating data from working women who are actively involved in sports. Moreover, increasing the geographical scope beyond Kerala might improve the generalisability of the findings.

CONCLUSIONS

The findings of the current study showed that unemployed and employed sportswomen had no comparable deference in stress management and unemployed sportswomen had significantly higher levels of emotional maturity. However, looking into the consideration of subscales of emotional maturity, unemployed sportswomen had significantly higher levels of social adjustment, personality integration, and independence. Stress management was significantly correlated with the emotional maturity of total sportswomen, unemployed, and employed sportswomen. Among the emotional maturity subscales had a negative correlation with stress management in total sportswomen and unemployed sportswomen. Among these subscales; emotional stability, personality integration, and independence had a negative correlation with stress management in employed sportswomen. Finally, emotional maturity showed minimal negative effects on stress management in total sportswomen, unemployed, and employed sportswomen. With regard to the subscales of emotional maturity, all the sub-scales could predict the changes in stress management of 18.1% for total sportswomen, 17% for unemployed sportswomen, and 21.8% for employed sportswomen. Among the subscales only emotional stability showed a minimal negative effect on stress management in total sportswomen. Emotional stability and emotional progression had shown minimal negative effects on stress management in employed sportswomen. From the two subscales; emotional stability had a higher prediction with stress management. Therefore, it is predicted that emotional stability is found to be dominating which supports the employed sportswomen in stress management.

PRACTICAL APPLICATIONS

The study suggests that integrating emotional maturity training and stress management tactics into sports coaching and training regimens, with an emphasis on enhancing emotional stability and emotional growth, could be advantageous. Finally, the study emphasizes the role of emotional maturity in the transition and adaptation process of sportswomen.

ACKNOWLEDGEMENTS

Authors would like to thank all participants in this study

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