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A study on analysis of mood profiles and competitive anxiety levels of male university athlete's

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Abstract
This study investigates the mood profiles and competitive anxiety levels of male university athletes from Mangalore and Mysore universities in Karnataka. Utilizing the Profile of Mood States (POMS) and the Sports Competitive Anxiety Test (SCAT), the research aims to assess how mood and anxiety influence athletic performance. A total of 100 male athletes, aged 19 to 25, participated in the study, with 50 players from each university. The findings reveal that Mangalore university players exhibited an average level of sport competition anxiety (mean score of 20.44), while Mysore university players had a slightly lower average (mean score of 19.52). Statistical analysis indicated significant differences in anxiety levels between the two groups, leading to the rejection of the null hypothesis. Additionally, mood profiles, particularly vigor, were assessed, showing that Mangalore university players had higher mean scores in positive mood variables compared to their counterparts from Mysore University. The study concludes that there are significant differences in both anxiety levels and mood profiles between the athletes from the two universities. Understanding these differences is essential for optimizing training and enhancing athletic performance. The findings underscore the necessity for tailored psychological interventions to manage anxiety and improve mood among athletes, ultimately contributing to better performance outcome.

Keywords: Anxiety, mood assessment, Mysore, Mangalore, universities

1. Introduction
Psychology is a scientific discipline focused on understanding mental states, processes, and behaviors in humans and other animals. It comprises a large professional practice as well as a growing field of scientific inquiry into mind, brain, and social behavior. While these areas have distinct goals, training, and methods, some psychologists integrate both approaches. Psychology studies human cognition, emotions, relationships, and personality, forming the foundation for various forms of mental health treatment, especially psychotherapy, influencing our behaviors, emotions, relationships, personality, anxiety, and mood.
A mood profile for a sports person is a tool used to assess and understand the emotional and psychological states that can influence their performance. It involves evaluating various mood states such as happiness, anxiety, confidence, tension, and motivation. By identifying patterns in mood fluctuations, athletes and coaches can gain insights into how emotions affect performance and well-being. This profile helps in optimizing training, enhancing focus, and managing stress or anxiety, ultimately contributing to better overall athletic performance and mental health. Understanding a sports person's mood profile is essential for maximizing both psychological and physical outcomes in their career.

Mood Assessment Measures
In this section, we explore two widely used mood assessment tools: the Profile of Mood States (POMS; McNair *et al*., 1971, 1992) [12] and the Brunel Mood Scale (BRUMS; Terry *et al*., 1999; Terry, Lane *et al*., 2003) [13, 14], both of which are self-report instruments. The BRUMS, a 24-item scale, is based on the POMS and includes six subscales for measuring mood: Tension, Depression, Anger, Vigour, Fatigue, and Confusion. Understanding these tools is crucial as they form the foundation for mood measurement in this research.

The Profile of Mood States (POMS)

Initially developed in 1971 to assess psychological distress in psychiatric populations, the POMS took up to 20 minutes to administer in clinical settings, which was considered burdensome (LeUnes & Burger, 2000) [10]. To address this, several shorter versions were created, including the 11-item Brief POMS (Cella *et al*., 1987) [11], the 6-item Incredibly Short POMS (ISP), the 30-item POMS (Curran *et al*., 1995) [15], the 27-item POMS-C, and the 24-item BRUMS (formerly POMS-Adolescents, or POMS-A; Terry *et al*., 1999; Terry, Lane, *et al*., 2003) [13, 14].

Although originally developed for non-sporting populations, the POMS became widely used in sport psychology due to its strong validation and the limited availability of sport-specific mood measures. The POMS was popularized by Morgan (1980) [16], who introduced the concept of the "iceberg" mood profile, where successful athletes typically show high levels of vigour and low levels of anger, confusion, depression, fatigue, and tension. This "iceberg" profile has since been widely observed in athletes. Further research, including meta-analyses, indicated that while the POMS is useful for predicting performance in athletes of similar standards, mood profiles alone are not sufficient to distinguish athletes by level of competition. As a result, researchers have called for broader explorations beyond the iceberg profile and performance. Meta-analyses by Beedie and colleagues (2000) provided further evidence of the POMS' effectiveness in predicting performance among athletes of comparable levels.

The term "anxiety" is derived from the Indo-Germanic root "Augh," which in Greek and Latin means to press tightly, strangle, or weigh down with grief, burden, or trouble. Anxiety is characterized by a sense of apprehension, uneasiness, and foreboding, from which the individual feels unable to escape. It is often accompanied by a feeling of helplessness, as the anxious person perceives themselves as blocked or unable to overcome challenges. While anxiety arises from fear and worry, it differs from them in several key ways.

Objective of the study

The purpose of this study was to compare the Sports Competitive Anxiety and profile mood of between Male university players.

Delimitations

1. The present investigation was confined to the selected anxiety and mood profile
2. The subjects were confined to the players or athletes participated at inter university level or intercollegiate level.
3. The study was delimited to anxiety and profile mood assessments of SCAT and POMS positive profile mood (VIGOUR) questionnaires.
4. The age of the subjects was confined to the range of 18 to 25.
5. The present studies is delimited to universities belong to Karnataka state only.
6. The presents study delimited only two Karnataka universities: Mysore University, Mangalore Universities

Limitations

1. The environmental pressure of the subject in present study during the collection of data was not taken in to account.
2. The influence of individual motivation structure and their socio-economic conditions subjects were consideration as limitation of the present study. 3. The topography influences in the present study considered as the limiting factor.

Hypotheses

1. It is hypothesized Mangalore and Mysore university players' increased positive mood in other selected university players in Profile of Mood States of vigour.
2. It is hypothesized average level anxiety Mangalore university players and Mysore University in sports competitions anxiety test.

2. Materials and Methods

Selection of Subjects

For this study, the researcher selected male university athletes from two universities in Karnataka who participated in the All India Inter University or Inter-Collegiate Tournament for Men during the 2023-2024 academic year. A total of 100 players volunteered, with 25 players from each university. The participants' ages ranged from 19 to 25 years.

Selection of Variables

The ability to manage anxiety and mood is crucial for athletes to perform well under competitive pressure. Athletes may interpret pressure differently depending on how they perceive competition demands. Coping with anxiety involves both cognitive and behavioral efforts to handle stress. High physiological arousal can negatively affect performance. To assess anxiety and mood during the 2023-2024 All India Inter-University or Inter-Collegiate Championship, the State-Trait Anxiety Inventory (SCAT) and the Profile of Mood States (POMS) were selected as key variables for this study.

Test Administration

The researcher personally administered the questionnaires to the participants. To ensure full cooperation, the purpose of the study was clearly explained to the athletes in the presence of their coaches. The subjects were seated, and the questionnaires were distributed. The researcher provided clear instructions from the test booklet, and all questions were addressed to ensure understanding. Participants were asked to complete the Sports Competitive Anxiety Test (SCAT) and the Profile of Mood States (POMS) questionnaires an hour after the competition.

Sports Competitive Anxiety Test (SCAT): The SCAT, developed by Martens (1977), measures athletes' competitive anxiety. It includes 15 items, 10 of which assess anxiety symptoms, while five items are not scored to prevent bias. The scores are summed, with higher scores indicating greater anxiety. The anxiety levels are categorized as follows:

- **Less than 17:** Low anxiety
- **17 to 24:** Average anxiety
- **More than 24:** High anxiety

Profile of Mood States (POMS)

The POMS, developed by McNair *et al.* (1971) [12], includes items that measure mood states, including vigor. Vigor is assessed through statements indicating energy, alertness, and enthusiasm. Scores for vigor are calculated from items 7, 15, 19, 38, 51, 56, 60, and 63. Each item is scored from 0 ("Not at all") to 4 ("Extremely"), with two reverse-scored items for specific affect subscales.

Statistical Techniques

The study used Mean and Standard Deviation to analyze the data. The mean provides the average score, while the standard deviation measures the variability from the mean. Analysis of Variance (ANOVA) was applied to assess anxiety (SCAT) and positive mood states (POMS) among male players from four universities in Karnataka. Significant interaction effects were reported with the mean ± SD of observations, and statistical significance was set at $p < 0.05$.

3. Results and Discussion

After data collection, the next legitimate step is to analyze the data statistically and interpret the findings at both statistical and theoretical levels. Collected data has been presented in a table form after calculating basic statistical factors like mean, median, standard deviation, etc. The aim behind calculating the basic statistical factors is to see the normal distribution of the data. The results are shown in tables under the heading of statistical properties. In this chapter, statistical technique employed in order to analysis of the data, findings, discussion of findings and discussion of the hypothesis have been presented.

3.1 Analysis of Data

The present study was designed to compare anxiety (SCAT) and positive mood profile (vigour) male university players of selected universities in Karnataka. The obtained data were statistically analysed by using descriptive statistical method by using SPPSS-28 version packages software. The level of significance was set at 0.05 level.

3.2 Findings

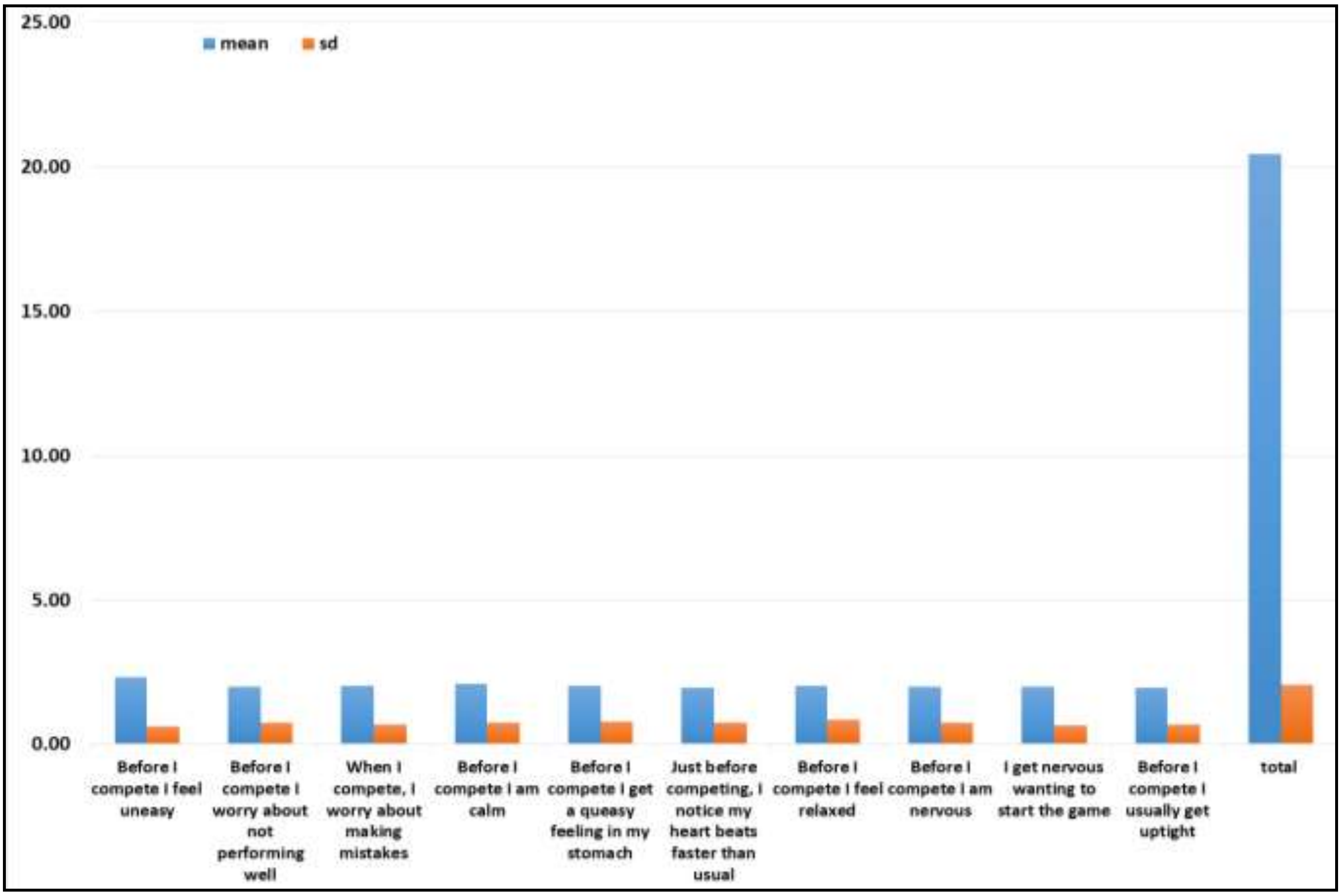
The value of descriptive statistic of comparative study anxiety (SCAT) and positive mood profile (vigour) male university players of selected universities in are presented in table 4.1 to 4.6.

3.1 Analysis of Anxiety

Table 3.1: Mean response of the level of sport competition anxiety trait among Mangalore university male players (n=25)

Statement	Mean	SD
Before I compete I feel uneasy	2.32	0.627
Before I compete I worry about not performing well	2.00	0.764
When I compete, I worry about making mistakes	2.04	0.676
Before I compete I am calm	2.08	0.759
Before I compete I get a queasy feeling in my stomach	2.04	0.790
Just before competing, I notice my heart beats faster than usual	1.96	0.735
Before I compete I feel relaxed	2.04	0.841
Before I compete I am nervous	2.00	0.764
I get nervous wanting to start the game	2.00	0.645
Before I compete I usually get uptight	1.96	0.676
Total	20.44	2.063

*SCAT score: Less than 17 = low level of anxiety; 17 to 24 = average level of anxiety; More than 24 = high level of anxiety.



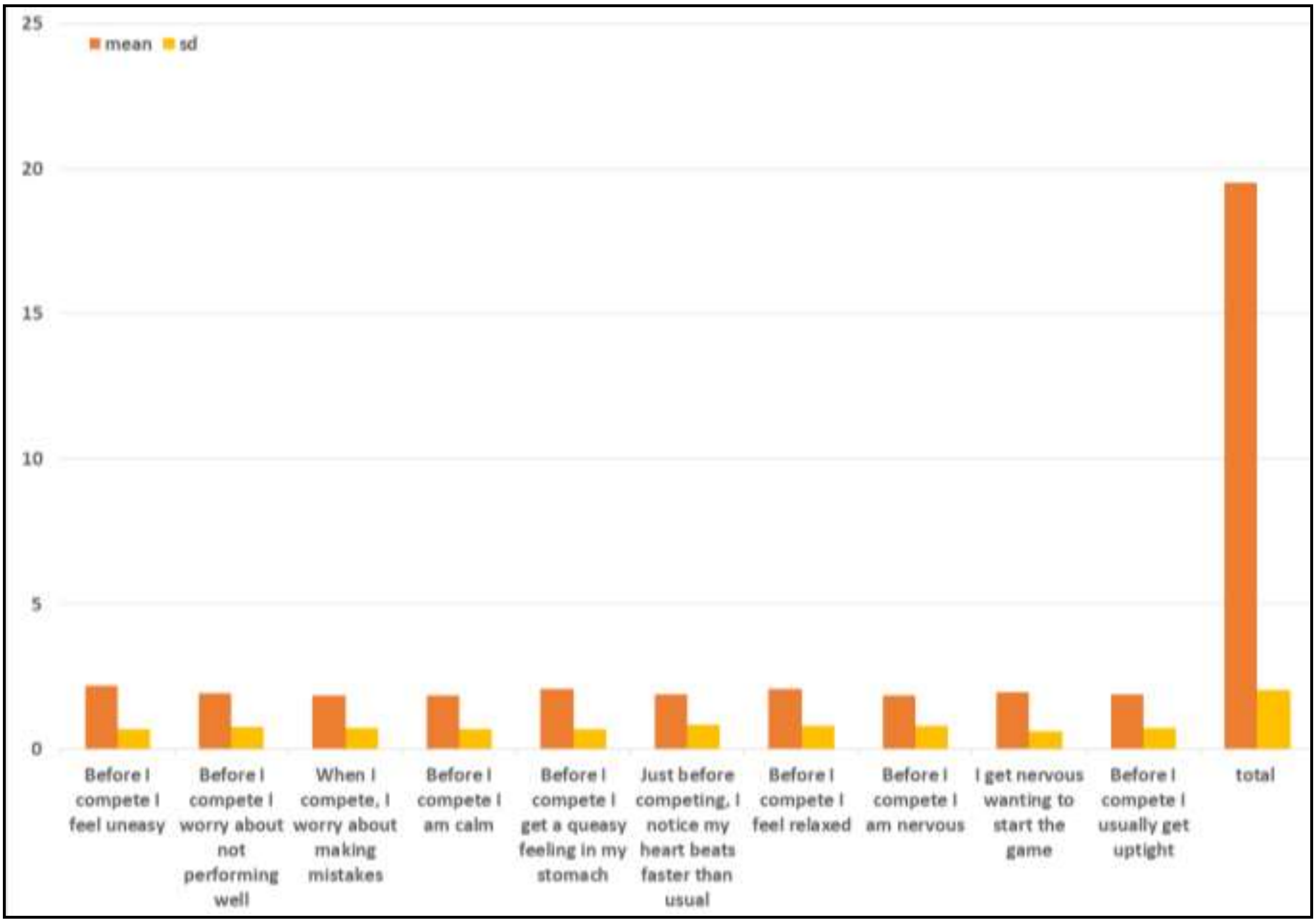
Graph 3.1: Mean response of the level of sport competition anxiety trait among Mangalore university male players (n=25)

Table and Graph 3.1 shows that male Mangalore university players had a total mean Sport Competition Anxiety of 20.44. SD is 2.063 respectively. Considering the total players ' score as recommended by the SCAT designers, male Mangalore university players of selected university in Karnataka had an average level of anxiety while participating in sport competition.

Table 3.2: Descriptive statistics for sport competition anxiety trait among Mysore university male players (n=25)

Statement	Mean	SD
Before I compete I feel uneasy	2.2	0.707
Before I compete I worry about not performing well	1.92	0.759
When I compete, I worry about making mistakes	1.84	0.746
Before I compete I am calm	1.84	0.688
Before I compete I get a queasy feeling in my stomach	2.08	0.702
Just before competing, I notice my heart beats faster than usual	1.88	0.833
Before I compete I feel relaxed	2.08	0.812
Before I compete I am nervous	1.84	0.800
I get nervous wanting to start the game	1.96	0.611
Before I compete I usually get uptight	1.88	0.726
Total	19.52	2.023

*SCAT score: Less than 17 = low level of anxiety; 17 to 24 = average level of anxiety; More than 24 = high level of anxiety



Graph 3.2: Descriptive statistics for sport competition anxiety trait among Mysore university male players (n=25)

Table and Graph 3.2 shows that male Mysore university players had a total mean Sport Competition Anxiety of 19.52. SD is 2.023 respectively. Considering the total players ' score as recommended by the SCAT designers, male Mysore university players of selected university in Karnataka had an average level of anxiety while participating in sport competition.

Table 3.3: Comparison Analysis of variance of anxiety level of the male players of selected universities in Karnataka

Source of Variation	SS	DF	MS	F	P-value
Between Groups	1011.47	3.00	337.16	102.48	8.1380
Within Groups	315.8	96.0	3.3		
Total	1327.3	99.0			

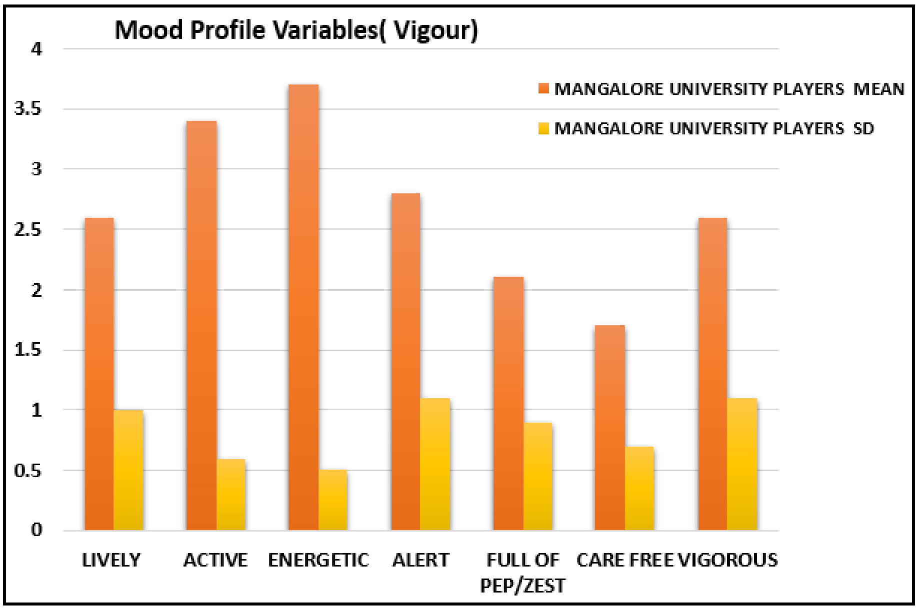
Significant at 0.05 level

From table-3.3 it was reveal that the calculated f- value (102.48) was greater than the tabulated value (2.69), so there was significant difference between the mean values of anxiety level of male university players. There for we will reject null hypothesis and conclude that is not same level in all four selected universities in Karnataka.

3.4. Analysis of mood profile (Vigour)

Table 3.4.1: Mean, standard deviation of mood profile (vigour) of the male Mangalore university players

Mood Profile variables(vigour)	Mangalore University Players		
	Sample	Mean	SD
Lively	25	2.6	1
Active	25	3.4	0.6
Energetic	25	3.7	0.5
Alert	25	2.8	1.1
Full of pep/zest	25	2.1	0.9
Care free	25	1.7	0.7
Vigorous	25	2.6	1.1



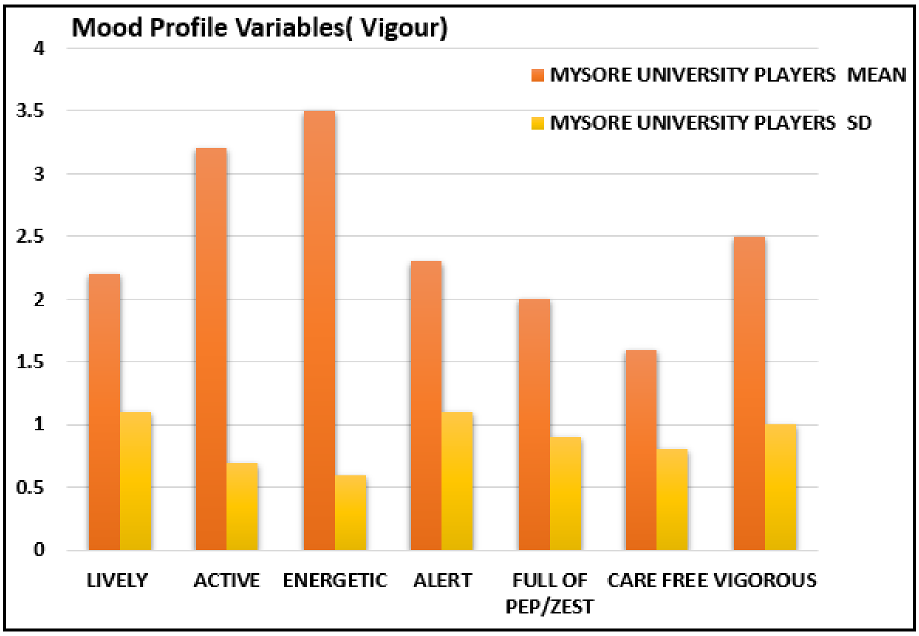
Graph 3.4.1: Mean, standard deviation for of mood profile (Vigour) of the male Mangalore university players

The above graph and table-3.4.1 revealed the statistical description of the mean scores of male Mangalore university players. A total of twenty-five (25) selected as subject. From table 3.4.1, it is evident that the statistical description of the mean scores of seven positive mood profile variables of male Mangalore university players were the mean value of lively is 2.6, SD value is 1, the mean value of active is 3.4, SD value is 0.6, the mean value of energetic is 3.7,SD value is 0.5, the mean value of alert is 2.8, SD value is 1.1, the mean value of Full of PEP/zest is 2.1, SD value is 0.9, the mean value of care free is 1.69, SD value is 0.67, the mean value of vigor is 2.6,SD value is 1.1 respectively. The mean score for total mood profile was slightly higher for male Mangalore University than the others selected universities in Karnataka.

The above graph and table-3.4.2 revealed the statistical description of the mean scores of male Mysore university players. A total of twenty-five (25) selected as subject. From table 3.4.2, it is evident that the statistical description of the mean scores of seven positive mood profile variables of male Mysore university players were the mean value of lively is 2.2, SD value is 1.1, the mean value of active is 3.2, SD value is 0.7, the mean value of energetic is 3.5,SD value is 0.6, the mean value of alert is 2.3, SD value is 1.1, the mean value of Full of PEP/zest is 2, SD value is 0.9, the mean value of care free is 1.6, SD value is 0.8, the mean value of vigor is 2.5,SD value is 1, respectively. The mean score for total mood profile was slightly lower for male Mysore University than the Mangalore University and slightly higher than others Nitte and yenepoya universities in Karnataka.

Table 3.4.2: Mean, Standard Deviation of mood profile (vigour) of the Mysore University Players

Mood Profile Variables (Vigour)	Mysore University Players		
	Sample	Mean	SD
Lively	25	2.2	1.1
Active	25	3.2	0.7
Energetic	25	3.5	0.6
Alert	25	2.3	1.1
Full of pep/zest	25	2	0.9
Care free	25	1.6	0.8
Vigorous	25	2.5	1



Graph 4.4.2: Mean, Standard Deviation of mood profile (Vigour) of the male Mysore University Players

Table 3.4.3: Analysis of variance of vigor total mood profile of the male players of selected universities in Karnataka

Source of Variation	SS	DF	MS	F	P-value	F crit
Between Groups	85.48	3	28.49333	7.334	0.00018	2.699
Within Groups	372.96	96	3.885			
Total	458.44	99				

Significant at 0.05 level

From table-3.4.3.it was reveal that the calculated f- value (7.33) was greater than the tabulated value (2.69), so there was significant difference between the vigor mood profiles and. There for we will reject null hypothesis and conclude that the vigour profile mood is not same level in two selected universities in Karnataka.

Summary of Findings

Discussing psychology as a scientific discipline that studies mental states, processes, and behaviors in humans and animals. It emphasizes the importance of understanding mood profiles in athletes, which can significantly influence their performance and well-being. Two primary mood assessment tools are highlighted: the Profile of Mood States (POMS) and the Brunel Mood Scale (BRUMS). These self-report instruments are essential for measuring various mood states, including tension, depression, anger, vigor, fatigue, and confusion. The findings indicated that:

- Mangalore university players had an average level of sport competition anxiety (mean score of 20.44).
- Mysore university players also exhibited an average level of anxiety (mean score of 19.52).
- There was a significant difference in anxiety levels between the players from the two universities, leading to the rejection of the null hypothesis.
- Mood profiles (Specifically vigor) were also assessed, revealing that university players had a slightly higher mean score in positive mood variables compared to Mysore university players.

Conclusions

The study concluded that:

- There are significant differences in both anxiety levels and mood profiles between male university players from Mangalore and Mysore universities.
- Understanding these differences is crucial for optimizing training and enhancing athletic performance.
- The findings support the need for tailored psychological interventions to manage anxiety and improve mood among athletes, which can ultimately lead to better performance outcomes.

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