

Precompetitive Mood Among Futsal Players in Relation to Team Performance

Jay Carlo S. Bagayas ¹

{jaycarlobagayas@gmail.com ¹}

Mindanao State University-Iligan Institute of Technology, Iligan City, Philippines ¹

Abstract. This study determined the relationship between Precompetitive Mood Among Futsal Players In Relation To Team Performance. The participants in the SPEAR 108 Futsal Tournament at Mindanao State University in Marawi City were the subjects of the study. The questionnaire consisted of three (3) main parts, namely: the demographic profile of the Futsal players such as age, gender, ethnicity. Second is the Profile Mood States (POMS) Questionnaire by McNair et al. (1971). The questionnaire contains a 65-item inventory designed to measure a person's mood states on six subscales: anger, depression, fatigue, confusion, vigor, tension and Total Mood Disturbance. Team performance was determined based on their overall ranking. It reveals that the majority of the players who participated in the SPEAR 108 Futsal tournament attained high levels of precompetitive mood or were affected by the total mood disturbance. Furthermore, it is concluded that teams' performance is not influenced by their precompetitive mood.

Keywords: Precompetitive Mood, Futsal, Team Performance.

1 Introduction

The curiosities of human beings led to the creation of things which brought forth importance and provided greater impact on our daily living. The human body thrives on movement, which brings pleasure and stimulates creativity. Physical exercise stimulates blood flow and tissue growth in muscle and bone. Exercise should be considered an important tool for the prevention and treatment of disease. However, the capacity for free, comfortable movement is a foundation of well-being that most healthy people take for granted. A person must have to be physically fit and mentally active for them to survive and cope up with nature. Sport can be regarded as the most universal aspect of popular culture which has captivated participants and consumers from all over the world. Football is the world's most popular sport with approximately 4.1% of the world's population playing the game professionally. In 1930 the sport "Futsal" was played for the first time in Uruguay. "Futsal" is another sport derived from Football which also had almost the same rules and played only by five players on the pitch or court. The popularity and commercialization of futsal has led to numerous research topics related to football. Within the medical and scientific world of futsal, there has been a focus on

physical and performance related aspects. However, studies have shown that elite sportspeople have higher levels of depression and different moods that affect their performance. There are many sports that exist, before it started requiring only two participants, though to those with numerous participants, it could also be in teams or individuals. It is usually governed by a set of rules or costumes, to ensure fairness in competition, and to allow a clear declaration of winners. According to Coackley (1978), sport is an institutionalized competitive activity that involves vigorous physical exertion and mental skills by individuals whose participation is motivated by a combination of intrinsic and extrinsic satisfaction or reward earned through participation. It implies that many have engaged in sport because it is one of the means by which excellence or outstanding accomplishment can be sought and can even attain. In sports there are a lot of factors that affect the athlete's performance. One of those is the mood state of an athlete. Mood state is believed to be a situation specific, somewhat transient. It is also said to be a psychological response to an environmental stimulus (Cox, 1941). Mood is a state of emotion. People typically speak of being in a good or bad mood. Clinical depression and bipolar disorder are considered mood disorders which indicate long term disturbances. Mood is also an internal state but sometimes it can be seen from posture and other behaviors. But this study focuses on precompetitive mood in Football in relation to athletic performance. Precompetitive mood is defined as an athlete's mood immediately before a competitive event (Cox, 1941). Athletes are exposed to many types of stress during the athletic event itself (14,49) that are accompanied by psycho-physiological changes, if not controlled, may become negative factors reducing the athletes' performance. Studying the pre-competitive mood of athletes in Football can be possible if this will be conducted in May during entitled "Precompetitive Mood Among Futsal Players In Relation To Team Performance". The researcher tries to study the athlete's mood before an event would happen to know whether mood affects an athlete's performance or somehow alter the athlete's way of playing. This study is important especially for the athletes. By knowing the results of an athlete's behavior before their competitions, maybe viewers of the game would possibly guess the results of their game whether they lose or win for example.

2 Methods

This study uses the descriptive-correlational type of research that aims to determine the relationship between precompetitive mood of Futsal players as the independent variable and team performance as the dependent variable. Furthermore, it also aims to determine the possible effect of the moderating variables age, gender and years of playing

experience towards main variables. This study was conducted among the Futsal players played in the SPEAR 108 Futsal Tournament at Mindanao State University-Main Campus, Marawi City. The research instrument questionnaire was used as a primary tool. The questionnaire consisted of three (3) main parts, namely: Part1- Demographic Profile of the respondents. This part determines the age, ethnicity, years of playing experience of the respondents. Part 2- Pre competitive mood as an independent variable of this study, POMS(Profile of Mood States) questionnaire will be used as developed by McNair, Lorr and Droppleman(1971). The questionnaire contains a 65-item inventory designed to measure a person's mood states on six subscales: anger, depression, fatigue, confusion, vigor, and tension. The respondents should answer the questionnaire whether: Not at all (0), A little (1), Moderately (2), Quite a Lot (3),

and Extremely (4). Except for the two adjectives: “relaxed” and “efficient”, these are to be scored in reverse. Not at all (4), A little (3), Moderately (2), Quite a Lot (1), and Extremely (0). The questionnaire was valid for male and female age 20 to 59 years with a reliability of 0.779-0.926. Athletic performance was determined at the end of their games whether they won or lost. The POMS has 6 subscales: Tension, Depression, Anger, Fatigue, Confusion, and Vigor. For tension, its total score was determined by adding the scores for tense, shaky, On Edge, Panicky, Relaxed, uneasy, Restless, Nervous, and Anxious. The total score for Depression was by adding the scores for unhappy, sorry for things done, sad, blue, hopeless, unworthy, discouraged, lonely, miserable, gloomy, desperate, helpless, worthless, terrified and guilty. Total score for anger was determined by adding the scores for anger, peeved, grouchy, spiteful, annoyed, resentful, bitter, ready to fight, rebellious, deceived, furious and bad tempered. For fatigue, it was determined by adding the scores for worn out, listless, fatigue, exhausted, sluggish, weary and blushed. For confusion was by adding the scores for confused, unable to concentrate, muddled, bewildered, efficient, forgetful, and uncertain, about things and for the Vigor the total score was determined by adding the scores for lively, active, energetic, cheerful, alert, full of pep, carefree and vigorous. Part 3- Team performance was determined at the end of their games based on their specific places or rankings by asking the results of the team’s games in the Tournament manager. Pearson r was used to determine the significant relationship between the variables.

3 Results

The descriptive-correlational research design was employed in this study to determine the relationships between anger, confusion, depression, tension, fatigue, vigor, and precompetitive mood or total mood disturbance as the independent variable and team performance as the dependent variable. Furthermore, it determined the relationship between age, years of playing experience and ethnicity as moderating variables and anger, confusion, depression, tension, fatigue, vigor and precompetitive mood or total mood disturbance as the independent variable and team performance as the dependent variable, and the relationship between age, years of playing experience and ethnicity as moderating variables and team performance as the dependent variable.

Profile of the Respondents

This section intends to provide answers to the problem’s question no. 1 regarding the demographics of the respondents “What is the profile of the respondents in terms of the following: 1) Age, 2) Ethnicity 3) Years of playing experience,” The answers are presented in tabular form and arranged as stated in the statement of the problem.

Age

The data implies that the majority of the respondent’s ages 23-28 were actively participating in the Futsal tournament. The age bracket of 23-28 years old had the most number of frequencies in terms of participating in the tournament and revealed that athletes at that age still played actively despite the age gap with their fellow athletes.

Table 1. Frequency and Percentage Distribution of the Respondents According to Age

Age (in years)	Frequency	Percent
11-16 years old	7	15.20
17-22 years old	9	19.60
23-28 years old	19	41.30
29-34 years old	8	17.40
35-41 years old	3	6.50
Total	46	100

Ethnicity

The results are based on the athlete's ethnicity participating in the Futsal tournament and it means that there are no any ethnic discrimination in the game. In addition, most of the participating teams were integrated.

Table 2. Frequency and Percentage Distribution of the Respondents According to Ethnicity

Ethnicity	Frequency	Percent
Meranao	25	54.30
Non-Meranao	21	45.70
Total	46	100.00

Years of Playing Experience

The results indicate that a large number of athletes have played for 7-11 years which means that they are already equipped and experienced to play Futsal.

Table 3. Frequency and Percentage Distribution of the Respondents According to Playing Experience

Playing Experience(Years)	Frequency	Percent
2-6 Years	11	23.90
7-11 Years	18	39.10
12-16 Years	9	19.60
17-21 Years	6	13.00
22-26 Years	2	4.30
Total	46	100.00

Subscales of Precompetitive Mood

Anger

Anger is an emotion characterized by antagonism toward someone or something a person feels has deliberately done him wrong. In addition, excessive anger can cause problems. In relation to the facts stated above, it showed that most of the athletes displayed a low level of anger and very low level of anger. In playing Football and Futsal teamwork and respect has been the center or aim of the game that leads the players to compete in a friendly way. The athletes needed to remain calm and emotionally controlled when playing Futsal especially because it is a physical game.

Table 4. Frequency and Percentage Distribution of the Respondents According to Anger

Anger (Score Range)	Qualitative Description	Frequency	Percent
0-8	Very Low	14	30.40
9-18	Low	22	47.80
19-28	Average	8	17.40
29-38	High	2	4.30
39-48	Very High	0	00.00
Total		46	100.00

Confusion

The results showed that most of the athletes experienced a low level of confusion. Implies that most athletes are not confused but rather were mentally focused prior to competition.

Table 5. Frequency and Percentage Distribution of the Respondents According to Confusion

Confusion (Score Range)	Qualitative Description	Frequency	Percent
0-4	Very Low	9	19.60
5-10	Low	30	65.20
11-16	Average	5	10.90
17-22	High	2	4.30
23-28	Very High	0	00.00
Total		46	100.00

Fatigue

The results denote that the respondent's level of fatigue ranges from very low to average. It implies that athletes in Futsal are able to sustain the physical and mental rigors when playing the tournament.

Table 6. Frequency and Percentage Distribution of the Respondents According to Fatigue

Fatigue (Score Range)	Qualitative Description	Frequency	Percent
0-4	Very Low	14	30.40
5-10	Low	24	52.20
11-16	Average	8	17.40
17-22	High	0	00.00
23-28	Very High	0	00.00
Total		46	100.00

Depression

Based on the displayed results, more than half of the total numbers of respondents have a very low to low levels of depression which means that respondents felt emotionally uplifted or hopeful that they might win in each game during the tournament and they remain optimistic to win.

Table 7. Frequency and Percentage Distribution of the Respondents According to Depression

Depression (Score Range)	Qualitative Description	Frequency	Percent
0-10	Very Low	29	63.00
11-22	Low	13	28.30
23-34	Average	3	6.50
35-47	High	1	2.20
48-60	Very High	0	00.00
Total		46	100.00

Tension

As presented in the table, most of the athletes experience a very low to average level of tension. Based on the results of the study, it is noticeable that most of the athletes are not tense before their games.

Table 8. Frequency and Percentage Distribution of the Respondents According to Tension

Tension (Score Range)	Qualitative Description	Frequency	Percent
0-5	Very Low	8	17.40
6-12	Low	27	58.70
13-20	Average	10	21.70
21-28	High	1	2.20
29-36	Very High	0	00.00
Total		46	100.00

Vigour

Based upon the results, half of the overall population displayed a high level of vigor and some got average and very high levels of vigor. It implies that most athletes are energetic and active physically and mentally before the start of the games.

Table 9. Frequency and Percentage Distribution of the Respondents According to Vigor

Vigour (Score Range)	Qualitative Description	Frequency	Percent
0-4	Very Low	0	00.00
5-11	Low	0	00.00
12-18	Average	17	37.00
19-25	High	23	50.00
26-32	Very High	6	13.00
Total		46	100.00

Total Mood Disturbance

According to the result in Table. 4.G, majority (33 out 46) of the respondents or 59.5% attain a TMD score ranging between 14 – 59 which means high mood disturbance, 11 respondents or 23.90% whose total mood disturbance ranges between 69 – 106 which indicates an average total mood disturbance, only 1 respondent or 2.20% have very high level of total mood disturbance that ranges between -32 -13, only 1 respondent or 2.20% has a low level of total mood disturbance which ranges between 107 – 153 and none of the respondents have a very low level of total mood disturbance. Based on the data, a great majority of the respondents displayed a very high to average level of total mood disturbance, which ranged between -32 – 13, 14 – 59, 60 – 106, respectively. The result is supported by the scoring of the Profile of

Mood States questionnaire that a lower score is an indication of people with more stable mood profiles.

Table 10. Frequency and Percentage Distribution of the Respondents According to TMD

TMD (Score Range)	QualitativeDescription	Frequency	Percent
-32 - 13	Very High	1	2.20
14-59	High	33	71.70
60-106	Average	11	23.90
107-153	Low	1	2.20
154-200	Very Low	0	0.00
	Total	46	100.00

Team Performance

The performance of the athletes are determined based on their places in the tournament. As show in the Table 5, 8 or 17.40% of the respondents have been eliminated, 7 or 15.20% respondents ended as fifth runner up, 5 or 10.90% of the respondents were able to finished as fourth runner up and third runner up, 7 or 15.20% of the respondents were able to finished second runner up, first runner up and champion. The results implies that more than half of the total respondents were able to make it to the semi- finals until the championship. In addition, the frequency is well distributed.

Table 11. Frequency & Percentage Distribution of the Respondents According to Team Performance

Team Performance	Frequency	Percent
Eliminated	8	17.40
Fifth Runner Up	7	15.20
Fourth Runner Up	5	10.90
Third Runner Up	5	10.90
Second Runner Up	7	15.20
First Runner Up	7	15.20
Champion	7	15.20
	46	100.00

Correlation Between Variables

Correlation between variables of age, ethnicity and years of experience; the independent variable of anger, confusion, depression, fatigue, tension, vigour , total mood disturbance (TMD) and team performance is presented in the following tables.

The correlation can be significant (*) when the p-value result is lesser than or equal to 0.05 and can also be very significant (**) when the p – value is lesser than or equal to 0.01 level of significance. However, if p – value is greater than 0.05, then the correlation is considered not significant (NS).

There are two possible relationship outcomes as follows: positive and negative. Positive relationship arises when the sign of the r – value is positive, while a negative relationship takes place if the r – value sign is negative.

Moderating Variables of Age, Ethnicity, Playing Experience and Independent Variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD

All the moderating variables have no significant relationship to the independent variables because all the resulting p – values exceeded the set 0.05 level of significance and accept H01 for these exclusive findings.

Table 12. Results of the Test Statistics Between Moderating Variables of Age, Ethnicity, Playing Experience and Independent Variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD

Age and the Independent Variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD

The relationship between age and variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD was investigated using the Pearson product-moment correlation coefficient. In the Table 6 there was a negligible correlation between age and the variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD as shown by the r-values and p-values (r= -0.109, p= 0.471; r= -0.048, p= 0.750; r= 0.226, p= 0.131; r= 0.223, p=0.137; r= 0.005, p= 0.976; r= 0.042, p= 0.076; r= 0.076, p=0.0614)suggesting no relationship between these variables.

Ethnicity and Independent Variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD

To test the differences between ethnicity and the different independent variables, Mann-Whitney U test was used. As seen in the results, the p-values is not less than or equal to 0.05, the results are not significant. Therefore, there is no statistically significant difference in the different mood states and the TMD of both the Meranao and Non-Meranao.

Playing Experience and Independent Variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD

The relationship between playing experience and variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD was investigated using the Pearson product-moment correlation coefficient. In the Table 6 there was a negligible correlation between age and the variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD as shown by the r-values and p-values (r=-0.130, p= 0.390; r= -0.034, p= 0.821; r= 0.139, p= 0.356; r= 0.138, p=0.708; r= 0.057, p= 0.708; r=-0.033, p= 0.828; r= 0.044, p= 0.773)suggesting no relationship between these variables.

Independent Variables	Moderating Variables					
	Age		Ethnicity		Playing Experience	
	r-value	p-value	Z-value	p-value	r-value	p-value
Tension	-0.109	0.471	-0.044	0.965	-0.130	0.390
Depression	-0.048	0.750	-0.166	0.868	-0.034	0.821
Anger	0.226	0.131	-1.836	0.066	0.139	0.356
Fatigue	0.223	0.137	-1.562	0.118	0.138	0.708
Confusion	0.005	0.976	-0.200	0.841	0.057	0.708
Vigour	0.042	0.076	-1.109	0.267	-0.033	0.828
TMD	0.076	0.0614	-0.838	0.402	0.044	0.773

Legend: If p-value is < 0.05, Significant If p-value is > 0.05, Not Significant

Moderating Variables of Age, Ethnicity, Playing Experience and Dependent Variable of Team Performance

In Table 13 it reveals the test results on the significant relationships between the moderating variables of age, and playing experience and dependent variable of Team performance. Significant difference between ethnicity and Team performance was also taken into consideration.

Table 14 Results of the Test Statistics Between Moderating Variables of Age, Ethnicity, Playing Experience and Dependent Variable of Team Performance

Age and Dependent Variable of Team Performance

The relationship between age and team performance was investigated using the Pearson product-moment correlation coefficient. Table 7 showed positive, moderate correlation between age and team performance as shown by the r-values and p-values ($r= 0.354$, $p= 0.016$; $r= 0.373$, $p= 0.011$), older respondents associated with high levels of Team performance.

Ethnicity and Dependent Variable of Team Performance

To test the differences between ethnicity and team performance, Mann-Whitney U test was used. As seen in the results, the z-value is -2.018 with a significance level of $p=0.044$. The p-value is less than 0.05, therefore the result is significant. There is a statistically significant difference in the team performance of the Meranao and Non-Meranao.

Moderating Variables	Dependent Variable		
	Team Performance		
	r-value	z-value	p-value
Age	0.354*		0.016
Ethnicity		-2.018*	0.044
Playing Experience	0.373*		0.011

Legend: If p-value is < 0.05, Significant If p-value is > 0.05, Not Significant

The cross-tabulation in Table 15 shows that more Non-Meranao players won in the said tournament.

Team Performance	Ethnicity		Total
	Meranao	Non-Meranao	
Eliminated	8	0	8
Fifth Runner Up	0	7	7
Fourth Runner Up	5	0	5
Third Runner Up	2	3	5
Second Runner Up	7	0	7
First Runner Up	1	6	7
Champion	2	5	7
Total	25	21	46

Playing Experience and Dependent Variables of Team Performance

The relationship between playing experience and team performance was investigated using the Pearson product-moment correlation coefficient. Table 7 showed positive, moderate correlation between playing experience and team performance as shown by the r-values and p-values ($r= 0.373$, $p= 0.011$). The results implies that more years of playing experience means more likely to win in the tournament.

As shown in Figure 1, players whose playing experience ranged between 22-26 years were 1st runner up and 2nd runner up. Majority of those players whose playing experience ranged between 12-16 years were in the top three spots or places.

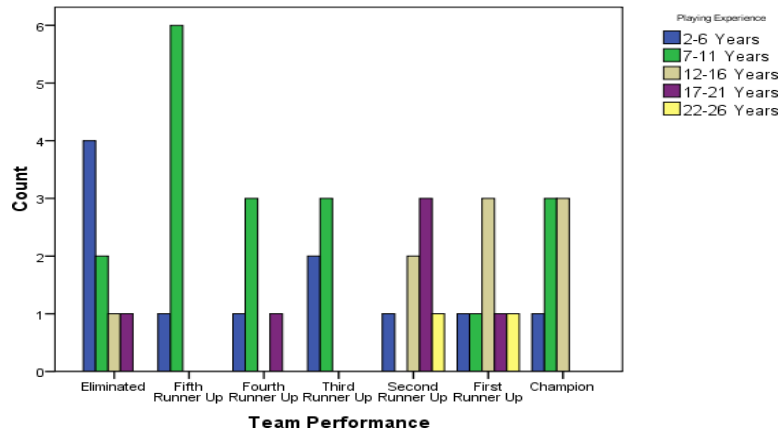


Figure 1. Bar Graph of Team Performance and Playing Experience

Independent Variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD and Dependent Variable of Team Performance

The relationship between the variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, TMD and Team Performance was investigated using the Pearson product-moment correlation coefficient. In the Table 8 there was a negligible correlation between Team Performance and the variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD as shown by the r-values and p-values ($r=-0.046$, $p=0.764$; $r=-0.005$, $p=0.976$; $r=0.027$, $p=0.859$; $r=0.008$, $p=0.958$; $r=-0.087$, $p=0.565$; $r=0.100$, $p=0.509$; $r=-0.015$, $p=0.922$;) suggesting no relationship between these variables.

Table 16 Results of the Test Statistics Between Independent Variables of Tension, Depression, Anger, Fatigue, Confusion, Vigour, and TMD, and Dependent Variable of Team Performance.

Independent Variables	Dependent Variable Team Performance	
	r-value	p-value
Tension	-0.046	0.764
Depression	-0.005	0.976
Anger	0.027	0.859
Fatigue	0.008	0.958
Confusion	-0.087	0.565
Vigour	0.100	0.509
TMD	-0.015	0.922

Legend: If p-value is < 0.05, Significant If p-value is > 0.05, Not Significant

4 Discussion

The purpose of this study was to assess teachers' mental health during blended learning in Thailand from June to July 2022. The purpose of this study is to better understand how we can assist teachers during this time so they can continue to provide valuable educational services to our learners.

First, we expected to find the mental health assessment of teachers in Thailand to experience moderate levels of emotional symptoms (degree of well-being, level of anxiety, and level of depression). These findings are pioneer data that measure, analyze, and organize the emotional distress due to blended learning in Thailand.

In addition, this study proves that "blended learning is the integration of face-to-face and online learning" ranks first, with 196 out of 221 respondents saying they are familiar with it.

In sum, our findings suggest that we need to positively influence the teachers in terms of mental health so they can be effective educators by giving emotional support and balance, and life satisfaction. These can be protective factors for further research.

5 Conclusion

This research is the first of its kind in Thailand in terms of blended learning and mental health. First, our findings in the study sample may not be generalizable to the general population because of the distribution of data, which is through an online survey. The researcher also believes that the uneven sample size in terms of gender is another limitation of the study as it may affect the overall result of the study. In future research, the researcher would like to include mixed methods (qualitative and quantitative data) in order to compare and contrast the information about teachers' mental health.

6 References

- [1] Athletic Performance: Two meta-analyses. *Journal of Applied Sports Psychology*, 12, 49-68.
- [2] Bandura, A. Perceived Self-Efficacy in the exercise of personal agency. *Journal of Applied Sport Psychology*, 2, 128-163.
- [3] Beedie, C. J., Terry, P. C., Lane, A. M. (2000). The Profile of Mood States
- [4] Cerin, E., & Barnett, A. (2011). Predictors of Pre- and Post-competition affective states in male

- martial artists: a multilevel interaction approach. *Scandinavian Journal of Medicine Science in Sports*, 21 (1), 137-150.
- [5] Covassin, T., Pero, S. (2004). The relationship between self-confidence, mood state, and anxiety among collegiate tennis players. *Journal of Sport Behavior*, 27(3), 230-242.
- [6] Carlson, Neil R. (2002). *Foundations of Psychology Fifth Edition*. Allyn and Bacon A Pearson Education Company.
- [7] Chaabene H, Hellara I, Ghali FB et al. Physiological stress and performance analysis to karate combat. *J Sports Med Physiology Fitness* 2016;56(10): 1125-1131
- [8] Coackley, Jay. (1978.). *Sport Society 5th Edition*. Missouri: Mosby-Year Book Incorporated.
- [9] Cox, Richard H. (1941). *Sports Psychology Concepts and Application 5th Edition*. Hassmen, P., & Blomstand E. (1995.). *The Sport Psychologists*.
- [10] Dris, H. (2003). Types of sports. Available: [Http://en. Wikipedia.org/wiki/Sport](http://en.wikipedia.org/wiki/Sport)
- [11] Graham, Jones Sheldon, Hanton. pp. 385-359. Pre-competitive feeling States and Directional Anxiety Interpretations
- [12] Gray S. (2014). Team Sports Available: [Http://en. Wikipedia.org/wiki/Team_Sport](http://en.wikipedia.org/wiki/Team_Sport) Hassmen, P., Koivula N, Hansson T, 1998 Jun; 86 (3 Pt 2) : 1443-57. Precompetitive Mood States and Performance Of Elite Male Golfers: do trait characteristics make a difference?
- [13] Millar M. and Dillman D, 2009 <https://www.jstor.org/stable/41288383>
- [14] Lane, A. M., & Terry, P. C. (2000). The nature of mood: Development of a conceptual model with a focus on depression. *Journal of Applied Sport Psychology*, 12, 16-33.
- [15] Neufeldt, Victoria and Guralnik, David. (1991.). *Webster's New World Dictionary 3rd Edition*. New York: Simon and Schuster..
- [16] Simons J. *Combative sports* Available: [Http://www.combatsports.com.ed](http://www.combatsports.com.ed)
- [17] Robert W. McGown, Edgar F. Pierce, and David Jordan (1992). Differences in Precompetitive Mood States Between Black-Belter Ranks. *Perceptual and Motor Skills: Volume 75, Issue*, pp. 123-128.
- [18] Wolfram, Inga A., Shearman, Jeremy and Dominic, Micklewright (2009). *Journal of Applied Sports Psychology*. Informa UK Limited, Informa Group Company.
- [19] Yokoyama K, Araki S, Kawakami N, Tkakeshita T. (1990). Production of the Japanese edition of Profile of Mood States (POMS): assessment of reliability and validity.
- [20] P. C. Terry and A. M. Lane, "Normative values for the profile of mood states for use with athletic samples," *Journal of Applied Sport Psychology*, vol. 12, no. 1, pp. 93-109, 2000.
- [21] Martens, R., Burton, D., Vealy, R.S., Bump, L.A., & Smith, D. (1990). Development and validation of the competitive state anxiety inventory-2, *Competitive anxiety in sport* (pp. 117-190). Champaign, IL: Human Kinetics.
- [22] Pears, D. (2007). Cognitive component of competitive state anxiety in semi professional soccer. *Journal of Sports Science and Medicine*, Suppl. 10: 153-154
- [23] Shojaei, H., Ghasem, A. (2007). Motivational traits of Iranian elite soccer players. *Journal of Sports Science and Medicine*. Suppl. 10. 152.
- [24] Murphy, S., & Tammen, V. (1998). In search of psychological skills. In Duda, J. (Ed.), *Advances in sport and exercise psychology measurement* (pp. 195-209). Morgantown, WV: Fitness Information Technology.
- [25] Rowley, A. J., Landers, D. M., Kyllö, L. B., & Etnier, J. L. (1995). Does the Iceberg Profile discriminate between successful and less successful athletes? A meta-analysis. *Journal of Sport and Exercise Psychology*, 16, 185-199.