ROLE OF SPORTS IN THE DEVELOPMENT OF SELECTED MOOD PROFILE: A COMPARATIVE STUDY OF ATHLETES HAVING DIFFERENT DEMOGRAPHIC ATTRIBUTES

Syed Asif Abbas[1], Salahuddin Khan[2], Muhammad Safdar Luqman[3]

Abstract

Background: *Role of sports in the development of mood states or association between sports participation and different mood state is a topic debate for decades (Vitale, La Torre, Baldassarre, Piacentini, & Bonato, 2017). The main purpose of the study was role of sports in the development of selected mood profile: a comparative study of athletes having different demographic attributes. The hypotheses of the study were there is significant gender wise difference of athletes in selected mood profile, there is significant coaching style wise difference of athletes in selected mood profile, there is significant playing environment wise difference of athletes in selected mood profile and there is significant individual vs. team sports difference in selected mood profile of athletes.* ***Methods:*** *Total 1430 elite athletes were entertained using available sampling technique. Modified version of profile of mood states (POMs) was used as an instrument.* ***Results:*** *The researcher found that female score significantly better than male athletes in tension, depression anger, fatigue and confusion but not in vigor as well as athletes having supportive coach score better in total mood disturbance than athletes having controlling coach.* ***Conclusions:*** *The researcher concluded that the athlete who practicing in hot environment score better in total mood disturbance than athletes who played in cool environment. As well as the athletes from individual sports score better in total mood disturbance than team sports participant. The researcher recommended that the athletes should get special attention from the coach with special reference to psychological management of the athletes. The athletes should participate in individual sports to*

[1-3] Department of Sports Sciences and Physical Education, Gomal University Dera Ismail Khan-Pakistan syedasifabbasshah@gmail.com, drsalahuddinkhan@yahoo.com , safdarkhan821@gmail.com

avoid tension depression and other psychological problems.

Keywords: Total Mood Disturbance, tension, depression anger, fatigue and confusion, vigor and demographic attributes

Introduction

Role of sports in the development of mood states or association between sports participation and different mood state is a topic debate for decades (Vitale, La Torre, Baldassarre, Piacentini, & Bonato, 2017). Yogi Berra's famous quotes Sports is 90% mental and 10% physical is a very popular statement but after debates and discussion no one reached at the established fact, but it is found by the many researcher of the world that mental aptitude of athletes and physical abilities strongly related to the success in sports and athletics (Perez, et al., 2015). It is also topic of discussion that sports performance strongly related to the persons mood state (Beedie, Terry, & Lane, 2000). Before going to depth in this topic in hand it is essential and better to know about mood and different aspects of mood. The mood state is a psychological term, actually mood is a temporary state of mind or feeling which switched suddenly according to the existing situation for the persons (Henry, M'bailara, Mathieu, Poinsot, & Falissard, 2008). The mean of setting created one's mood for example surroundings, attitudes and description or the variable which may influence the mood state of a person (Luomala & Laaksonen, 2000). Because the mood is an affective state and contrast to different feelings and emotions of a person therefore, one can not specify the mood in one time because it fluctuates due to changing of surrounding situation (Siemer, 2005). As well as person's humor, temper, or disposition at a particular time is also known as mood (Price & Drevets, 2010). Mood is different from temperament and personality traits because the characteristics of personality traits are long-lasting (Lara, Pinto, Akiskal, & Akiskal, 2006). However, some of the researcher said that the personality traits optimism and neuroticism influence the certain types of human mood state (Neff, Rude, & Kirkpatrick, 2007). Clinical

depression and bipolar disorder are considered when the mood disturbance is long lasting (Yatham, et al., 2018).. There are two types of mood i.e. positive mood and negative mood (Cardi, Leppanen, & Treasure, 2015). Many different surroundings, situations and aspects of human life triggered positive mood, positive mood considered a situation or state of human mind which nobody knows that why the mood is good even the person having good mood cannot identify that why my mood is good (Price, Lane, Gates, Kraynak, Horner, Thase, & Siegle, 2017). The positive mood observed when the person have clean state, appropriate and good night sleep and no feelings of stress in their life (Waldman, 2018). positive mood has been found to enhance creative problem solving and flexible yet careful thinking, free thinking, creative thinking, strong and positive imaginations, brainstorming, heavy thinking, on the other hand some studies suggested that, positive also harmful for cognition and it may distract the person from right to wrong decisions (Li, Zha, Zhang, Shangguan, Wang, Lu, & Zhang, 2020). Like positive moods, negative moods have important implications for human mental and physical wellbeing (Hollis, Konrad, Springer, Antoun, Antoun, Martin, & Whittaker, 2017). Negative mood is a specific and rudimentary psychological state which can be cause suddenly due to some sudden event (Borsboom, 2017). Negative moods have been connected with depression, anxiety, aggression, poor self-esteem, physiological stress and decrease in sexual arousal (Chidester, 2017). Lack of sleep, nutrition and facial expressions considered the main general factors which influence the mood state (Brandt, Bevilacqua and Andrade, 2017) argue that between the comparison of athletes and non-athletes and sleeping habits/sleep quality and mood states the athletes perform better in both variables with the theory of iceberg profile where the athletes have had higher level of vigor and low level of mental confusion, fatigue, anger, depression and tension.

Literature Review

The Wald test revealed that sleep, anger, tension, and vigor predicted athletes' performance. It was also observed during the investigation that, higher tension is main reason behind the low performance of athletes as compare to low vigor and anger, as well as low vigor and anger negatively influence the athletes performance (Chidester, 2017). Brandt et al. (2017) concluded that mood state and quality of sleep significantly correlated with each other's which cumulatively, positively and negatively influence the athletes performance. Madhurima, Subhra, Swapan (2019) found that there is positive relationship between positive eating behavior and total mood disturbance. Andrade, Bevilacqua, Casagrande, Brandt and Coimbra (2019) observed in investigation that 84% of athletes which were included that study were poor sleep quality than regional level athletes. Greater vigor was also observed in International level athletes with good sleep quality. The level of fatigue, depression, and confusion was higher in National athletes with poor sleep quality. Thus, mood and competitive level are factors associated with sleep quality. Confusion, fatigue, and tension impair sleep, and vigor reduces the likelihood of poor sleep. Hobold, Flores, Miarka, and Andrade (2019) found that male and female were different in fatigue and vigor in judo and female Brazilian JiuJitsu. and in fatigue, confusion, vigor, and tension of male judo and male Brazilian jiujitsu was also found significantly different. Female judo and female Brazilian jiujitsu athletes showed significant differences in depression and vigor. The researcher Hobold et al. (2019) also found that higher levels of anger and tension increased athletes' chances of performing well judo and male Brazilian jiujitsu. Depression was also the main factor (when higher) which harm the ideal performance of elite athletes. Overall, we observed a significant relationship between mood state and sports performance. Two way repeated measures study was initiated by the Lane, Thelwell and Davnport, (2009) to see the relationship and effect of mood state and emotional intelligence with ideal sports performance and found positive

relationship between dysfunctional and ideal performance with good mood state memories and emotional intelligence as well as emotional intelligence was also highly correlated with memories of good mood state. Wong; Thung and Pieter (2006) found that fatigue and tension is higher in depressed Karate female athetles as well as tension and anger was very higher in male karate athletes when investigate in mood subscale. Wong et al. aldo found that there is huge association between the male tension, anger and fatigue in male karate male when they become depressed during competition. The female achievers in Karate also show greater and higher anger in comparison to male karate athletes when the influence of depression on anger was investigated (Wong, Thung & Pieter, 2006). Lane and Jarrett (2005) found that after the 18-hole of golf the aging players increased in anger, depression and fatigue and decrease in vigor and energy but it was also similar with the young athletes, the main factor behind the unpleasant mood state in gold game was distance covered by the gold athletes which was observed 10.21 ± 1.11 but following the overall results of full mood state profile the results were positive that why, gold is a game which is recommended by the physicians and psychologist for elderly golfers.

Problem Statement

There are two main approaches to investigate the study in hand i.e. the role of sports in different selected mood states and role of mood states in sports performance. The research decided to conduct the study under the title "role of sports in selected different mood states" as well the researcher also decided to investigate that which kind of different demographic variables can influence the mood state in athletics and sports.

Objectives of the study

1. To determine the gender wise difference of athletes in selected mood profile

2. To assess the coaching style wise difference of athletes in selected mood profile
3. To measure the playing environment wise difference of athletes in selected mood profile
4. To analyze the individual vs. team sports differences in selected mood profile of athletes

Hypotheses of the study

1. There is significant gender wise difference of athletes in selected mood profile
2. There is significant coaching style wise difference of athletes in selected mood profile
3. There is significant playing environment wise difference of athletes in selected mood profile
4. There is significant individual vs. team sports difference in selected mood profile of athletes

Research Methodology

The way, ideas, methods, approaches, subjects through which the researcher collect the data to reach at facts and figures is known as research methodology. The researcher used cross sectional approach in this normative survey. The descriptive method was used to achieve the objectives and aim of the study. Following research methodology adopted for the purpose to reach at altitude of the objectives.

Population

All the athletes playing at national, international, and domestic level was the population of the study the total number of athletes were 14300 the number of total athletes were determine from the sports complex Islamabad, and all the Sports officers of Districts.

Sample and Selection sample

Table 1: *Detail description of the sample*

Demographics	Category	Frequency	Percent
Gender	Male	875	61.2
	Female	555	38.8
Ind: vs Team	Individual	654	45.7
	Team	776	54.3
Coaching Style	Supportive Coach	885	61.9
	Controlling coach	545	38.1
Playing environment	Hot Environment	867	60.6
	Cold Environment	562	39.3
	Total	1430	100

Total respondents (athletes) of the study were 1430, four different demographic attributes were entertained i.e. gender, individual vs. team sports, coaching style (the coaches style who give training to the athletes) and playing environment. In respect of gender 61.2% were male and 38.8% were female, as well as total 45.7% athletes were participating in individual sports on the other hand 54.3% were participate in team sports. In respect of coaching style the athletes who took training under supportive coach were 61.9% and controlling coach trainee were 38.1%. the sample athletes who were playing in hot environment were 60.6% and from cold environment training were 39.3%. The sample was collected using non-probability sampling techniques i.e. available sampling technique due to disperse nature of the population. The research follow the sampling suggestions of Gay (2003) and took 10% sample from whole population.

Instrument and instrumentation (validity & reliability)

Number of standardized questionnaires was found in market (literature review) but the language and difficulty level of the items was very tough. Majority of the athlete does no better understand with psychological

specific terms which were used in the questionnaire. Therefore, the researcher adapted Profile of Mood States (POMS) having 65 different items. The researcher changes the items accordingly. The six different sub variables were also entertained in the questionnaire the negative variables were tension, depression, anger, fatigue and confusion and positive variable was vigor. In the early stage of the instrument development the researcher develops 70 items but the 40 experts of the field suggest reducing 5 items. The POMS have had five different options i.e. Not at all, a little, moderately, quit a lot, extremely ranging from 0-5 respectively. The researcher used content and construct validity as well as concurrent validity was also used the statistics of concurrent validity was appeared as .897 which was very good and acceptable. The Cronbach's alpha reliability alpha reliability method was used to unearth the reliability of the instrument which was appeared as .776 which was very strong and acceptable. The final version of the questionnaire has had 65 items with 6 different sub variables. The total mode disturbance was determine by subtracting the vigor score from the sum of tension, depression, anger, fatigue and confusion i.e. TMD = [TEN+DEP+ANG+FAT+CON] –[VIG].

Procedure

The first plan of the researcher for the data collection was to visit personally to the respondents but after the outbreak of COVID-19 outbreak in Pakistan the researcher face many difficulty in questionnaire distribution. Therefore, the researcher gets help from the new modern technologies i.e. social media. The researcher first of all found the most experienced taekwondo player who have had different athletes group at Whatsapp which makes easy very difficult task of data collection. The researcher send his questionnaire in different elite athletes Whatsapp groups and give them one week to return back response on the Whatapp. The collected data was put into SPSS version-24 in the form of data matrix for data analysis.

Data analysis

The researcher used number, mean, standard deviation, t-test to test the hypotheses. The researcher made the decision about the acceptance and rejection of hypotheses on the basis of alpha level .05. The researcher also put calculated t value in each category for better understanding of the results. When the sigma value is greater than the alpha level then it would be considered acceptance of the null hypothesis and vice-versa.

Results and Discussion

H1: There is significant gender wise difference of athletes in selected mood profile

Table 2: *Gender wise difference of athletes in selected mood profile*

Testing Variables	Gender	N	Mean	Std. Deviation	t	Sig.
Tension	Male	875	20.0069	3.769	1.601	.110
	Female	555	19.6739	3.930		
Depression	Male	875	37.0937	5.305	2.941	.003
	Female	555	36.2252	5.651		
Anger	Male	875	31.7583	1.763	1.921	.055
	Female	555	31.5788	1.653		
Vigor	Male	875	31.2320	2.387	10.199	.000
	Female	555	29.0559	5.554		
Fatigue	Male	875	21.7943	6.223	.666	.506
	Female	555	21.5586	6.974		
Confusion	Male	875	22.1189	7.029	2.012	.044
	Female	555	21.3171	7.809		
Total Mood Disturbance	Male	875	22.3340	2.712	4.721	.000
	Female	555	21.5682	3.380		

Table 2 shows that in tension score the male and female were same (t= 1.601, .110 > .05), on the other hand in depression score female score better than male (t= 2.941, .003 < .05), similarly, in anger score the mean of both gender was same (t= 1.921, .055 > .05). On the other hand, male

score better in vigor than female (t= 10.199, .000 < .05) on the other hand male and female were same in fatigue score (t= .666, .506 > .05). On the other hand, in confusion score bother gender were same (t= 2.012, .044 < .05). the total mood disturbance score was measured by data analysis and found that female score less than male score which is considered that female score better in total mood disturbance than male elite level athletes. Hence the hypothesis H1: There is significant gender wise difference of athletes in selected mood profile is hereby accepted.

H1: There is significant coaching style wise difference of athletes in selected mood profile

Table 3: *Coaching style wise difference of athletes in selected mood profile*

Testing Variables	Coaching Style	N	Mean	Std. Deviation	t	Sig.
Tension	Supportive Coach	885	19.8000	3.84478	-.975	.330
	Controlling coach	545	20.0037	3.81897		
Depression	Supportive Coach	885	36.8463	5.45374	.792	.429
	Controlling coach	545	36.6110	5.46371		
Anger	Supportive Coach	885	31.8521	1.70575	4.602	.000
	Controlling coach	545	31.4232	1.72037		
Vigor	Supportive Coach	885	31.3650	2.19190	12.150	.000
	Controlling coach	545	28.8000	5.62609		

Fatigue	Supportive Coach	885	21.9548	6.57038	1.863	.063
	Controlling coach	545	21.2936	6.43220		
Confusion	Supportive Coach	885	21.8678	7.29482	.394	.694
	Controlling coach	545	21.7101	7.44368		
Total Mood Disturbance	Supportive Coach	885	22.2810	2.87167	3.927	.000
	Controlling coach	545	21.6403	3.18872		

Table 3 shows that in tension score the athletes having supportive coach and the athletes having controlling coach were same (t= -.975, .330 > .05), on the other hand in depression score athletes having supportive coach and the athletes having controlling coach were same (t= .792, .429 > .05), on the other hand, in anger score of athletes having controlling coach is better than athletes having supporting coach (t= 4.602, .000 < .05). On the other hand, athletes having supportive coach score better than the athletes having controlling coach in vigor score (t= 12.150, .000 < .05) on the other hand athletes having supportive coach and the athletes having controlling coach were same in fatigue score (t= 1.863, .063 > .05). in the same way, in confusion score bother groups having supportive coaches and controlling coach were same (t= .394, .694 > .05). the total mood disturbance score was measured by data analysis and found that athletes having controlling coach score less than athletes having supportive coach score which is considered that athletes having controlling coach score better in total mood disturbance than elite level athletes having supportive coach. Hence the hypothesis H1: There is significant coaching style wise difference of athletes in selected mood profile is hereby accepted.

H0: There is no significant playing environment wise difference of athletes in selected mood profile

Table 4: *Playing Environment wise difference of athletes in selected mood profile*

Testing Variables	Playing Environment	N	Mean	Std. Deviation	t	Sig.
Tension	Hot Environment	867	19.6782	3.81791	-2.419	.016
	Cold Environment	562	20.1797	3.84570		
Depression	Hot Environment	867	36.5098	5.59081	-2.066	.039
	Cold Environment	562	37.1192	5.21396		
Anger	Hot Environment	867	31.5272	1.67878	-4.460	.000
	Cold Environment	562	31.9407	1.76233		
Vigor	Hot Environment	867	31.4002	2.04175	12.279	.000
	Cold Environment	562	28.8238	5.63468		
Fatigue	Hot Environment	867	21.4798	6.86881	-1.594	.111
	Cold Environment	562	22.0427	5.94763		
Confusion	Hot Environment	867	21.3195	7.62596	-3.100	.002
	Cold Environment	562	22.5498	6.84370		

		N	Mean	Std.	t	Sig.
Total Mood Disturbance	Hot Environment	867	21.9858	3.01122	-.757	.449
	Cold Environment	562	22.1093	3.01220		

Table 4 shows that in tension score the athletes training in hot environment score better than athletes training in cold environment (t= -2.419, .016 < .05), on the other hand in depression score athletes training in hot environment score better than athletes training in cold environment (t= -2.066, .039 < .05), similarly, in anger score the mean of athletes training in cold hot environment score better than those athletes who do their training in cold environment (t= -4.460, .000 < .05). in the same way, in vigor score the athletes from hot environment score better than athletes from cold environment (t= 12.279, .000 < .05) on the other hand, athletes from hot environment and athletes from cold environment score significantly same in fatigue score (t= -1.594, .111 > .05). On the other hand, in confusion score bother environmental categories were same (t= -3.100, .002 < .05). the total mood disturbance score was measured by data analysis and found that athletes from hot environment and athletes from cold environment where same in total mood disturbance. Hence the hypothesis H0: There is no significant playing environment wise difference of athletes in selected mood profile is hereby accepted.

H0: There is no significant individual vs. team sports difference in selected mood profile of athletes

Table 5: *Individual vs. team sports differences in selected mood profile of athletes*

Testing Variables	Individual Vs Team	N	Mean	Std. Deviation	t	Sig.
Tension	Individual	654	19.5994	3.78945	-2.523	.012
	Team	776	20.1121	3.85968		

Depression	Individual	654	36.5000	5.68622	-1.634	.103
	Team	776	36.9729	5.24969		
Anger	Individual	654	31.6069	1.69538	-1.647	.100
	Team	776	31.7575	1.74474		
Vigor	Individual	654	31.4220	1.85192	9.070	.000
	Team	776	29.5155	5.09976		
Fatigue	Individual	654	21.3945	7.09617	-1.642	.101
	Team	776	21.9626	5.99138		
Confusion	Individual	654	21.1850	7.81119	-2.949	.003
	Team	776	22.3325	6.89855		
Total Mood Disturbance	Individual	654	21.9513	3.11894	-.986	.325
	Team	776	22.1089	2.91794		

Table 5 shows that in tension score the athletes individual sports score better than athletes participating in team sports (t= -2.523, .012 < .05), on the other hand in depression score athletes from individual sports and team sports score significantly same (t= -1.634, .103 > .05), similarly, in anger score the mean of individual and team sports athletes were significantly same (t= -1.647, .100 > .05). In the same way, in vigor score the athletes from individual sports score better than athletes from team sports (t= 9.070, .000 < .05) on the other hand, athletes from individual sports and athletes from team sports score significantly same in fatigue score (t= -1.642, .101 > .05). On the other hand, in confusion score individual sports athletes score better than team sports athletes (t= -2.949, .003 < .05). The total mood disturbance score was measured by data analysis and found that athletes from individual sports and team sports were same in total mood disturbance score. Hence the hypothesis H0: There is no significant individual vs. team sports difference in selected mood profile of athletes is hereby accepted.

Findings

Following findings extracted from data analysis

1. The researcher found that in tension score the male and female were same, the researcher also found that in depression score female score better than male, similarly, in anger score the mean of both gender was same. The researcher found that, male score better in vigor than female on the other hand male and female were found same in fatigue score. On the other hand, in confusion score bother gender were same. The researcher found that female score less than male score which is considered that female score better in total mood disturbance than male elite level athletes. Hence the hypothesis H1: There is significant gender wise difference of athletes in selected mood profile is hereby accepted.

2. The researcher found that in tension, fatigue, confusion and depression scores the athletes having supportive coach and the athletes having controlling coach were significantly same the researcher found that in anger score of athletes having controlling coach is better than athletes having supporting coach. Data analysis also found that athletes having supportive coach score better than the athletes having controlling coach in vigor score. the total mood disturbance score was measured by data analysis and found that athletes having controlling coach score less than athletes having supportive coach score which is considered that athletes having controlling coach score better in total mood disturbance than elite level athletes having supportive coach. Hence the hypothesis H1: There is significant coaching style wise difference of athletes in selected mood profile is hereby accepted

3. The researcher found that in tension score the athletes playing in hot environment score better than athletes training in cold environment, the data analysis found that in depression score athletes training in hot environment score better than athletes

training in cold environment, similarly, in anger score the mean of athletes training in cold hot environment score better than those athletes who do their training in cold environment. in the same way, in vigor score the athletes from hot environment score better than athletes from cold environment. The researcher also found that athletes from hot environment and athletes from cold environment score significantly same in fatigue score. The researcher found that in confusion score both environmental categories were same. The researcher found that athletes from hot environment and athletes from cold environment were same in total mood disturbance. Hence the hypothesis H0: There is no significant playing environment wise difference of athletes in selected mood profile is hereby accepted.

4. The data analysis found that in tension score the athletes individual sports score better than athletes participating in team sports the researcher found that in depression score athletes from individual sports and team sports score significantly same, similarly, in anger score the mean of individual and team sports athletes were significantly same. The data analysis found that in vigor score the athletes from individual sports score better than athletes from team sports. The researcher found that the athletes from individual sports and athletes from team sports score significantly same in fatigue score. The data analysis found that in confusion score individual sports athletes score better than team sports athletes. The researcher found that athletes from individual sports and team sports were same in total mood disturbance score. Hence the hypothesis H0: There is no significant individual vs. team sports difference in selected mood profile of athletes is hereby accepted.

Discussion

The researcher found that female score significantly better than male athletes in tension, depression anger, fatigue and confusion but not in vigor as well as athletes having supportive coach score better in total mood disturbance than athletes having controlling coach. The researcher also reached at the facts that the athlete who practicing in hot environment score better in total mood disturbance than athletes who played in cool environment. As well as the athletes from individual sports score better in total mood disturbance than team sports participant. The results of the present study in supported by the study of Lane et al (2005) who found that when the athletes perform on altitude the fatigue, depression and anger increased, which clearly indicated that altitude is not suitable to maintain good or positive mood state for athletes, athletes experience negative mood state on altitude. Covassin, Tracey and Pero Suzanne (2004) investigated the tennis players at collegiate level to see the association between mood state, anxiety and self-confidence and found that the winner tennis players have had higher self-confidence, lower total mood disturbance and lower somatic anxiety level than losing players. Furthermore, these results suggest that mental state prior to the start of a tennis match plays a crucial role in overall success or failure. Brandt, Bevilacqua, Coimbra, Pombo, Miarka, and Lane, (2018) stated that, the martial arts athletes who rapid loss their weight for their required weight category showing greater total mood disturbance as compare to those martial arts athletes who did not rapidly loss their weight as well as negative effects of rapid loss weight strategy was recorded on the performance of rapid weight loss marital arts athletes. Crush, Frith, and Loprinzi, (2018) assessed the mood profile using POMS survey and concluded that exercise irrespective of 10 minute to one hour exercise have had positive and promising effect on profile of mood state. Research study, conducted by Talbott, Talbott, Stephens, and Oddou, (2019) indicated that, a significant relationship between microbiome balance and various parameters of psychological wellbeing.

Additionally, the same study, revealed a positive influence of the use of supplementation on the various parts of Gut-brain axis, which improve mental wellness in healthy stressed adults. Another study, found a significant role of psychological intervention in improving the mood states of athletes. Moreover, results of the study revealed that psychological intervention has produced positive results in preparing athletes participating in the game Wushu, which has affirmed by both coaches and players (Li, 2020). Another study indicated that, mood state and binge eating behavior inversely related to the mindfulness in eating of university students studying health-related subjects.

Conclusions

The main purpose of the study was to determine the Role of Sports in the development of selected mood profile. The study was comparative in nature which was based on the demographic attributes of the elite athletes of Pakistan. The researcher used modified version of Profile of Mood States (POMs) to determine the total mood disturbance or profile of mood state. On the basis of findings and data analysis the researcher concluded that There is significant coaching style wise difference of athletes in selected mood profile because in all sub variables of POMs the researcher observed that the athletes having controlling coach score better in tension, depression, confusion, fatigue, anger and vigor. The researcher also concluded that There is no significant playing environment wise difference of athletes in selected mood profile which was based on the total mood disturbance the on the other hand in respect of sub variables of POMs the researcher reached at the fact that the elite athletes from hot environment score better than athletes playing in cold environment. The researcher also concluded that There is no significant individual vs. team sports difference in selected mood profile of athletes on the other hand the researcher also observed that the athletes participating in individual sports score better than athletes playing in team sports in sub variables of POMs tension, depression, confusion,

fatigue, anger and vigor. The researcher also concluded that female score better than male elite athletes in total mood disturbance as well as in all sub variables of profile of mood states tension, depression, confusion, fatigue, anger and vigor.

Recommendations

On the basis of findings following recommendations made by the researcher

1. The elite athletes may prefer to participate in individual sports instead of team sports because individual sports help in controlling total mood disturbance and maintain anger and vigor.
2. The male elite athletes may revisit their sporting activities and training routine to maintain their total mood disturbance i.e caring about nutrition, exercise time, location to find out the main factors which were responsible for their lower performance in total mood disturbance than female elite athletes.
3. The athletes form cold environment and that coaches of elite athletes who were playing in cold environment may change their training and playing program to level the total mood disturbance with those elite athletes who are performing their sporting activities in hot environment.
4. The supportive coaches may revisit their strategies about training and their attitudes because the findings of the study in hand the elite athletes having supportive coach score lower score in total mood disturbance than elite athletes having controlling coach.
5. The present study was conducted on elite level athletes further studies may be conducted at local level athletes to measure the total mood disturbance from gross root level.

Limitations

The study was limited to those respondents who have had online and mobile facilities due to COVID-19 spread in Pakistan. The result of the

study only generalized on the coaching styles, gender, different environment and playing mood. The respond ration was the limitation of the researcher. The use of limited statistical tool was the limitation of the researcher.

References

Andrade, A., Bevilacqua, G., Casagrande, P., Brandt, R., & Coimbra, D. (2019). Sleep quality associated with mood in elite athletes. *The Physician and sportsmedicine*, *47*(3), 312-317.

Beedie, C. J., Terry, P. C., & Lane, A. M. (2000). The profile of mood states and athletic performance: Two meta-analyses. *Journal of applied sport psychology*, *12*(1), 49-68.

Borsboom, D. (2017). Mental disorders, network models, and dynamical systems. In *Philosophical Issues in Psychiatry IV: Psychiatric Nosology DSM-5 (International Perspectives in Philosophy and Psychiatry)* (pp. 80-97). Oxford University Press New York.

Brandt, R., Bevilacqua, G. G., & Andrade, A. (2017). Perceived sleep quality, mood states, and their relationship with performance among Brazilian elite athletes during a competitive period. *Journal of strength and conditioning research*, *31*(4), 1033-1039.

Brandt, R., Bevilacqua, G. G., Coimbra, D. R., Pombo, L. C., Miarka, B., & Lane, A. M. (2018). Body weight and mood state modifications in mixed martial arts: an exploratory pilot. *The Journal of Strength & Conditioning Research*, *32*(9), 2548-2554.

Cardi, V., Leppanen, J., & Treasure, J. (2015). The effects of negative and positive mood induction on eating behaviour: A meta-analysis of laboratory studies in the healthy population and eating and weight disorders. *Neuroscience & Biobehavioral Reviews*, *57*, 299-309.

Chidester, A. W. (2017). *The Associations of Vigor, Anger, and Depression with Conversational Argument Behavior* (Doctoral

dissertation, The University of Utah).

Crush, E. A., Frith, E., & Loprinzi, P. D. (2018). Experimental effects of acute exercise duration and exercise recovery on mood state. *Journal of affective disorders*, *229*, 282-287.

Giannopoulou, I., Kotopoulea-Nikolaidi, M., Daskou, S., Martyn, K., & Patel, A. (2020). Mindfulness in eating is inversely related to binge eating and mood disturbances in university students in health-related disciplines. *Nutrients*, *12*(2), 396.

Henry, C., M'bailara, K., Mathieu, F., Poinsot, R., & Falissard, B. (2008). Construction and validation of a dimensional scale exploring mood disorders: MAThyS (Multidimensional Assessment of Thymic States). *BMC psychiatry*, *8*(1), 82.

Hobold, E., Flores, L. J., Miarka, B., & Andrade, A. (2019). Comparisons of Mood States Associated With Outcomes Achieved by Female and Male Athletes in High-Level Judo and Brazilian Jiu-Jitsu Championships: Psychological Factors Associated With the Probability of Success.

Hollis, V., Konrad, A., Springer, A., Antoun, M., Antoun, C., Martin, R., & Whittaker, S. (2017). What does all this data mean for my future mood? Actionable analytics and targeted reflection for emotional well-being. *Human–Computer Interaction*, *32*(5-6), 208-267.

Lara, D. R., Pinto, O., Akiskal, K., & Akiskal, H. S. (2006). Toward an integrative model of the spectrum of mood, behavioral and personality disorders based on fear and anger traits: I. Clinical implications. *Journal of Affective Disorders*, *94*(1-3), 67-87.

Li, H. (2020). Study on the Influence of Psychological Intervention on Mood State and Coping Styles for High-Level Athletes: A Case Study for Wushu Sport in China. *SAGE Open*, *10*(3), 2158244020932519.

Li, Z., Zha, J., Zhang, P., Shangguan, C., Wang, X., Lu, J., & Zhang, M. (2020). Negative life events and mood states: Emotional

resilience as mediator and moderator. *Social Behavior and Personality: an international journal*, *48*(5), 1-12.

Luomala, H. T., & Laaksonen, M. (2000). Contributions from mood research. *Psychology & Marketing*, *17*(3), 195-233.

Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of research in personality*, *41*(4), 908-916.

Perez, M. B., Subramaniam, C., Dean, S. S., Bernaudo, M. J., Cortez, M. A. C. M. A., Crozier, P. M. J. M. J., ... & Juarez, M. D. J. M. D. (2015). Voices of Compton Voices of Compton.

Price, J. L., & Drevets, W. C. (2010). Neurocircuitry of mood disorders. *Neuropsychopharmacology*, *35*(1), 192-216.

Price, R. B., Lane, S., Gates, K., Kraynak, T. E., Horner, M. S., Thase, M. E., & Siegle, G. J. (2017). Parsing heterogeneity in the brain connectivity of depressed and healthy adults during positive mood. *Biological psychiatry*, *81*(4), 347-357.

Roy, M., Chatterjee, S., & Dey, S. K. (2019). Interrelationship of stress, body image, negative mood state and susceptibility to abnormal eating behaviour among game specific female athletes: an exploratory approach. *European Journal of Physical Education and Sport Science*.

Siemer, M. (2005). Moods as multiple-object directed and as objectless affective states: An examination of the dispositional theory of moods. *Cognition & Emotion*, *19*(6), 815-845.

Talbott, S. M., Talbott, J. A., Stephens, B. J., & Oddou, M. P. (2019). Effect of coordinated probiotic/prebiotic/phytobiotic supplementation on microbiome balance and psychological mood state in healthy stressed adults. *Functional Foods in Health and Disease*, *9*(4), 265-275.

Vitale, J. A., La Torre, A., Baldassarre, R., Piacentini, M. F., & Bonato, M. (2017). Ratings of perceived exertion and self-reported mood

state in response to high intensity interval training. A crossover study on the effect of chronotype. *Frontiers in Psychology*, *8*, 1232.

Waldman, A. (2018). *A really good day: how microdosing made a mega difference in my mood, my marriage, and my life*. Anchor Books.

Yatham, L. N., Kennedy, S. H., Parikh, S. V., Schaffer, A., Bond, D. J., Frey, B. N., ... & Alda, M. (2018). Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) 2018 guidelines for the management of patients with bipolar disorder. *Bipolar disorders*, *20*(2), 97-170.