

Innovations

Effect of determinants on Pre game conditions and coaching performance: in case of Hadiya zone football clubs, south Ethiopia

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Abstract

Background: Many factors laid serious effect on the overall coaching performance of football clubs, even though coaches did not recognize how much it affect pre-game conditions of the players. Psychosocial factors include social support, loneliness, marriage status, social disruption, work environment, social status, and social integration (Stansfeld & Rasul, 2007). Environmental conditions, beyond match location, strength of team, and match outcome, is one of the most important influencing variables that affect the physical activity of players in football matches of high competition level (Sarmiento H, et,al 2012). **Objective:** To assess the effect of determinants on pre-game conditions and coaching performance: in case of Hadaya zone football clubs, south Ethiopia. **Methods:** The study used analytical cross sectional study design research methodology to achieve the stated goal. Data were collected by using questionnaire. Subjects of the study were select 92 from 120 players by using sampling size determination formula and coaches were selected by purposive sampling technique. Frequency, percentage and multiple regression models were used to analyse the predictor factors and dependent variable data. P-values ≤ 0.05 were considered statistically significant. **Result:** - The result show that from psychological factors lack of motivation 27 (29.3%) were the most factors affecting player's performance during before game situations. Social integration 32(34.8%) were the most factors that affect football players socializations and coaching performance. Players preferred in during before game situations were snake 28(30.4%) from the rest food types. Pollution, vibration and noise were major environmental factors that limits player's performances. In model summery result show that ($R^2=0.84$) and the predictor's accounts 84% variance on coaching performance. Psychological, environmental, social and nutritional factors statically significant at (P-value <0.05) **Conclusion:** There is a consensus that the effect of determinants of pre-game situation on coaching performances serious challenges to athletes due to poor dissipation of their coaching performances. Psychological, environmental, social and nutritional factors were significant factors affecting coaching performances. Educating and supporting coaches and players in psychological diagnostics and cooperating with sport psychologists could promote higher quality standards with respect to psychological and social diagnostics.

Key words: Factors, pre-game, Football, Club, coaching performance

1. Introduction

Football is the world's most popular form of sport, being played in every nation without exception. Sport has become a popular past time among the people. Above all, interest in football has been growing in

the country over the years. The rapidly increasing popularity of football has also need a demand of excellent performance.

Many factors laid serious effect on the overall coaching performance of football clubs, even though coaches did not recognize how much it affect pre-game conditions of the players.

Social factors include general factors at the level of human society concerned with social structure and social processes that impinge on the individual. Psychosocial factors include social support, loneliness, marriage status, social disruption, work environment, social status, and social integration (Stansfeld & Rasul, [2007](#)). Psychosocial factors mostly affect football clubs coaching performance. When football players cannot manage marriage status and social integration easily affect as gradual decrease of their performance.

There are many factors which are associated with successful athletic performance in different athletic contests. Career orientation and paths of an elite athlete is constructed by the socialization process in which socialization agents (significant others), socio-cultural influences, the self and the environment have significant roles to play (Stevenson, 1990; Philips, 1993). Environmental conditions, beyond match location, strength of team, and match outcome, is one of the most important influencing variables that affect the physical activity of players in football matches of high competition level (Sarmiento H, et,al 2012).

Environmental factors or features that arise from the surroundings (i.e., illumination and temperature) and mechanical features of the workplace (i.e., noise and vibration) that could be encountered at work and affect behaviour. The ability of an athlete to thermo regulate adequately depends on his or her body type. Athletes with a smaller body size will produce and store less heat than their heavier counterparts (Marino et al., 2000).

Exercising in the cold environment has been found to influence performance as well. One major concern of exercising in the cold is the effect cold air has on the pulmonary system. Exercised induced bronchospasm can lead to a higher ventilation rate due to the constriction of the airways as a result of the dry and cold air being breathed in. This leads to a higher exertion and a decrease in performance (Lindberg, Malm, Hammarström, Oksa,&Tonkonogi, 2012).

One of the most common sources of pollution is car exhaust. Nitrogen oxide and carbon monoxide are the largest by-products of motor vehicles, although nitrogen oxide has not been shown to have a significant effect on exercise (Bonini et al., 2006). Carbon monoxide, however, has a significantly greater affinity for binding with haemoglobin in the blood than oxygen does. With an increased concentration of carbon monoxide in the blood, oxygen is not able to be sufficiently transported and released to the working muscles. Lack of oxygen reduces the volume and intensity of exercise an athlete is able to achieve. Other performance effects caused by an increase in carbon monoxide levels include an increase in submaximal heart rate, an earlier onset of angina, and a decrease in maximal exercise time. Compared to other pollutants, carbon monoxide had the most negative effect on athletic performance (Frykman, 1988).

Gambling and alcohol consumption play major role factor that affect player's pre-game condition and coaching performance. Wardle and Gibbons (2014) reports show that 25% of respondents thought they were encouraged to gamble by teammates and 31% that they were encouraged by gambling companies. Moreover, social factors including the environment's expectation of gambling participation and recurring discussions of gambling could contribute to higher prevalence. Associated with factors such as gambling as part of the social networks of young players, high salaries, spare time, gambling as a shared leisure pursuit, and the competitive and emotional challenges of the game. Most of the time in our country players use gambling as leisure time activity. After a time it increase enormously and structured in the form of gambling companies like betting the act of gambling money on outcome of game.

Those determinants affect pre game condition and coaching performance like game formations, techniques and tactics which affect football clubs found in Hadiya zone such as Hadiya-Hosanna, Hadiya-Hosanna "B" and Hadiya-Lemo football players. Means of improving the performance of football players is by quality

training, introducing new techniques of instructions as well as innovative methods of coaching and intervention mechanism to tackle social, psychological, nutritional and environmental factors. However, the need to raise the standard of football pose the question of how to prepare players, in managing Pre game conditions and coaching performance in their clubs, and to attain pick performance. Therefore, this study will attempt to suggest some attainable alternatives of developing the performance by investigating the effect of determinants on Pre game conditions and coaching performance: hosanna town football clubs, south Ethiopia.

Hypothesis of the study

H0: There is no significant effect of determinant factor on pre-game conditions and coaching performance in Hadaya zone football clubs.

H1: There is significant effect of determinant factor on pre-game conditions and coaching performance in Hadaya zone football club.

2. Objective

2.1. General objective

- To examine the effect of determinants on Pre game conditions and coaching performance.

2.2. Specific objects

- To assess the magnitude of determinant factor on pre-game conditions and coaching performance in Hadiya zone football clubs.
- Identifying the determinants situations that affect pre-game conditions and coaching performance in Hadiya zone football clubs.
- To indicate the effect of determinants factors on pre-game conditions and coaching performance in Hadiya zone football clubs
- To show association between determinant factors, pre-game conditions and coaching performance of Hadiya zone football clubs.

3. Methodology

3.1. Study area

Hadiya (also transliterated Hadiyya) is a zone in the **Southern Nations, Nationalities, and Peoples' Region** of **Ethiopia**. This zone is named after the **Hadiya** of the **Hadiya Kingdom**, whose homeland covers part of the administrative division. The administrative centre of Hadiya is **Hosaena**. Shone is one of woreda in Hadiya zone, which is 67 km far from Hosanna town. Gimbichu is one of woredas in Hadiya zone. It is 32 km far from Hossana town.

3.2. Study design

The study used analytical cross sectional study design research methodology to achieve the stated goal, and it make survey the risk factors of pre-game and coaching performance outcome are measured simultaneously.

3.3. Study population

The study population was found Hadiya zone football club, which include shone kenema, Jajurakenema, Hadiya-Hosanna and Hadiya-Lemo FC.

Table 1. Study population of Hadiya zone football clubs

No	Football club	Players	Coach	Total
1	Hadiya-Hosanna	30	4	34
2	Hadiya-Lemo	30	2	32
3	Jajurakenema	30	2	32
4	Shone kenema	30	2	32
	Total	120	10	130

3.4. Sample Size and Sampling Techniques

To determine sample size of football clubs was players (n=120), coaches (n=10) and totally 130 study populations.

$$n = \frac{N}{(1 + Ne^2)}$$

Where

n= corrected sample size, N = population size, and e = Margin of error (MoE), e = 0.05 based on the research condition.

Let's assume that the population is 10,000. At 5% MoE, the sample size would be:
 $10000(1+10000(.052))$

$$n = \frac{120}{(1 + 120(.05^2))}$$

$$n = \frac{120}{1.3}$$

=92.30~92

Hence the corrected size is 92 football players were selected although for research purposes. Systematic simple random sampling technique were used to select 92 players from football clubs. Purposive sampling technique were used to select coaches from each football clubs. The number of purposively selected coach were (n=10).

3.5. Subject of the study

The study's subjects were include Hadiya –Hosanna, Ginbchu, Shone, Hadiya-Lemo, and Hadiya –Hosanna, 'B' football club players, coaching staff.

3.6. Source of data

Primary source of data were used to collect data from players and coaching staff. To meet observational research design data were collected directly observed from respondents to meet stated objectives.

3.7. Data collection instrument

Questionaries' were mainly data collection instrument. The study were include psychometric liker scale and close ended type of questioners and used as data collection tools. Questioners were handed out questionnaires and supplied to respondents.

3.8. Data collection procedures

The questionnaires were distributed by using data collectors. Respondents were assisted in completing out their forms by the data collector. Respondents were encouraged to fill in their own opinions. The surveys

were gathered from the respondents at the conclusion of the time period allocated. Pilot study were used to check reliability of questionnaires. Cronbach's Alpha =0.954 (out of 30 questions in the survey). Cornbrash's Alpha more than 0.7 considered is reliable, so this study pilot study showed reliable.

3.9. Method of data Analysis

The data was analysed by using descriptive statistics means, frequencies, and percentages used to present categorical variables. Multivariate analyses were conducted to examine the effects of determinants factors on pre-game conditions and coaching performance of players.

3.10 Ethical consideration

The study was carried out in accordance with Wachemo University's norms, policies, and code of conduct governing research activities and ethical issues, as well as Wachemo University's research directorate's approval.

4. Result and Discussions

4.1 Result

Table 2. Demographic information of respondents

No	Variables	Frequency	%
	Age		
1	18-24	28	30.4
2	25-34	54	58.6
3	35 and above	10	10.8
	Total	92	100.0
	Sex		
7	Male	87	94.5
8	Female	5	5.43
	Total	92	100.0
	Marital status		
9	Unmarried	45	48.9
10	Married	38	41.3
11	Divorced	9	9.75
	Total	92	100.0
	Educational status		
12	Diploma	12	13.0
13	Primary school	20	21.7
14	Degree	18	19.5
15	Masters	6	6.52
16	High school	36	45.0
	Total	92	100.0
	Body mass index		
19	Under weight	0	0.0
20	Normal	87	94.5
21	Overweight/obesity	5	5.43
	Total	92	100.0

Socio-demographic information of the respondents explain in above (Table 1) most of the respondent's age accounts (62.7%) were age range 25-34. Male respondents constitute 87(94.5%), female respondents were 5(5.43%). Marital status of the respondent's unmarried respondents 45(41.3%), married 38(41.3%) and divorce 9(9.75%). Educational status of the respondents were diploma 12(13.0%), primary school 20(21.7%), degree holders 18(19.5%), master's degree holders 6(6.52%), high school 36(45%). Body mass index of the respondents were those who are underweight not registered, normal body weight 87(94.5%) and those who are overweight accounts 5(5.43%).

Table 3 Social factors affecting in before-game situation of football players

		Frequency	Percent
What social factors mostly affect pre-game situations of football players?	loneliness	29	31.5
	marriage status	16	17.4
	social disruption	15	16.3
	social integrations	32	34.8
	Total	92	100.0

Social factors that affecting players before game situations were explain in above (Table 3) that social factors mostly affect players were social integration 32(34.8). Football player's life out of game lack of social interaction with society. Another factor affect players pre game situations were loneliness 29(31.5%) outside of game situations most players feel alone because football players for the sake of keeping their conditions stay alone. This leads to wanting human contact but feeling alone and affect their coaching performances. Marriage status 16 (17.4%) and social disruption 15 (16.3%) also affect football player's performances in holds their attention to social attributes than giving concentration to upcoming game.

Table 4 psychological factors affecting in pre-game situation of football players

		Frequency	Percent
What psychological factors mostly affect in pre-game situations of football players?	Lack of self confidence	27	29.3
	Anxiety	12	13.0
	Lack of concentrations	20	21.7
	Lack of motivations	33	35.9
	Total	92	100.0

Psychological factors affect football players out of the game situation were shown in (Table 4) different factors marriage conditions, misbehaviour and social disruption players face psychological factors lack of motivation 33(35.9%), lack of self-confidence 27(29.3%) and feeling anxiety 12(13.0%) appears when they return to game situations. This is significantly decrease coaching performances of the players.

Table 5 Football players used food menu during pre-game situations

		Frequency	Percent
Can you follow coach diet guidance during pre-game situations?	Always	8	8.69
	Some time	12	13.04
	Seldom	22	23.9
	Never	50	54.3
	Total	92	100.0

The status of players used food menu guided by nutritionist or coaches in pre-game situations were shown in (Table 5) above that players outside of game situations irregular using of food out of the coach guidance, players who were not used food menu 50(54.3%) and those who were used rarely 22(23.9%), sometime 12(13.04%) and those who were used usually 8(8.69%) were too small, so the result indicate that players ignore used coach diet guidance during pre-game situations and this affect the whole coaching performance.

Table 6 Players participating misbehaviour during pre-game situations

		Frequency	Percent
In which misbehavior you participate during pre-game situations?	Gambling	40	43.4
	Drinking alcohols	23	25
	Stealing	12	13.04
	Cheating	10	10.8
	Aggression and fighting	7	7.60
	Total	92	100.0

Misbehaviour was one of the main factors affect players during before game situations. Different types of miss behaviour affect football players were shown (Table 6). Gambling 40(43.4%) was the most factors that affect the mental ability of the players and develop aggression behaviours. Players used excess drinking alcohol 23(25%) during out of game situations, this habit leads to players absent in their training and game days. Stealing 12(13.0), cheating 10 (10.8) and aggression and fighting 7(7.60%) were appearing during pre-game situations and affect performances.

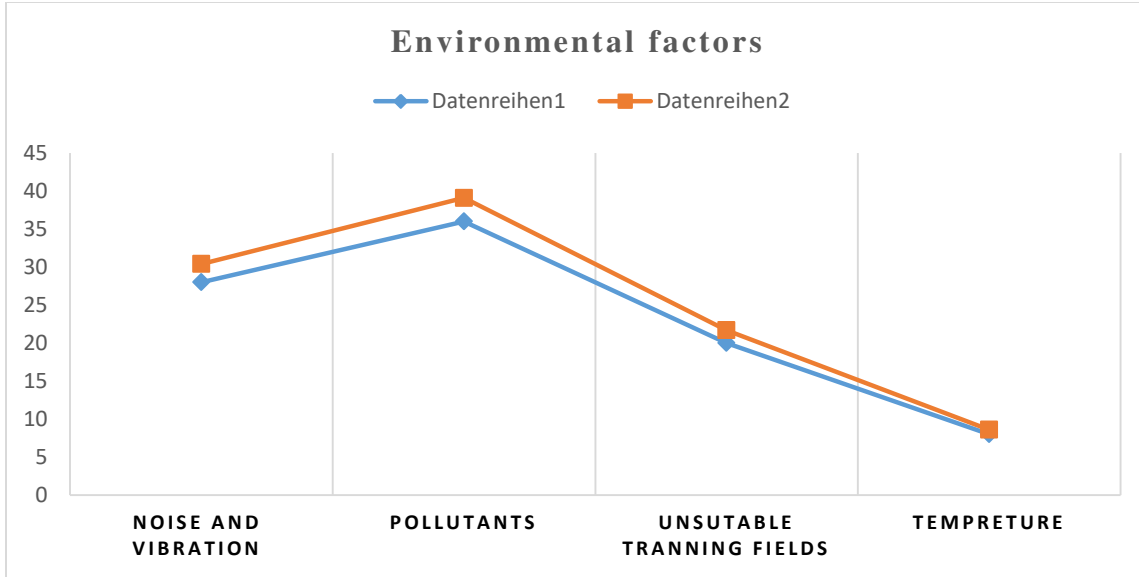


FIG- I

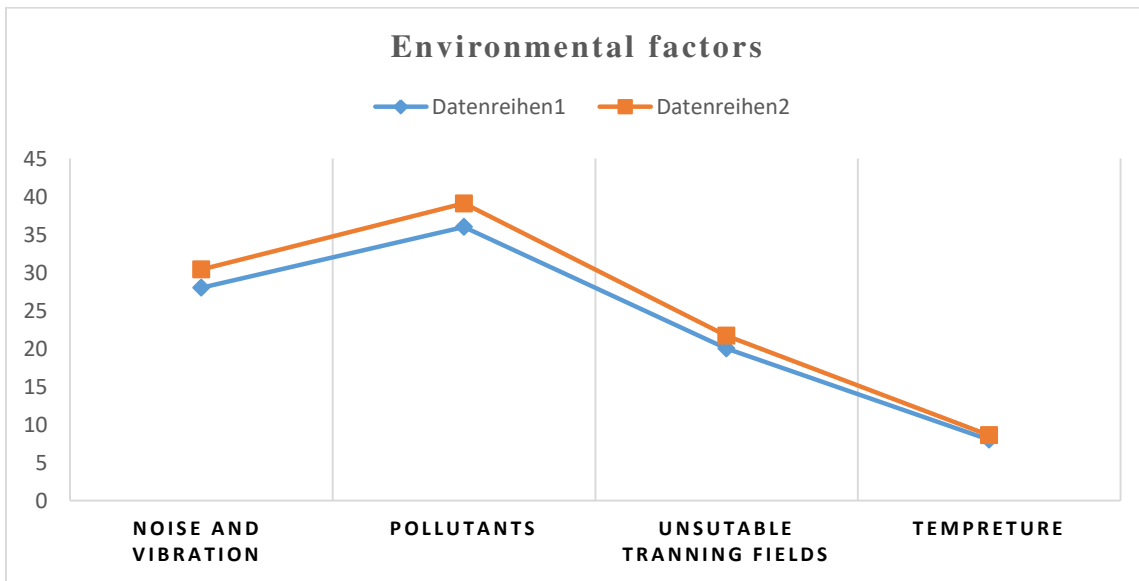


FIG -II

Environmental factors affect in pre-game situation of the football players

(Fig 2) explain that different environmental factors are major factors affect players coaching performances. The most environmental factors limit players were pollutions, noise and vibrations. Football players has not well organized living dorms. Players were living between towns and not free from pollution, vibrations and noise like vehicle and excess sound noise. Players exposed to viral and bacterial disease, so this major tackling effect on players health and performance.

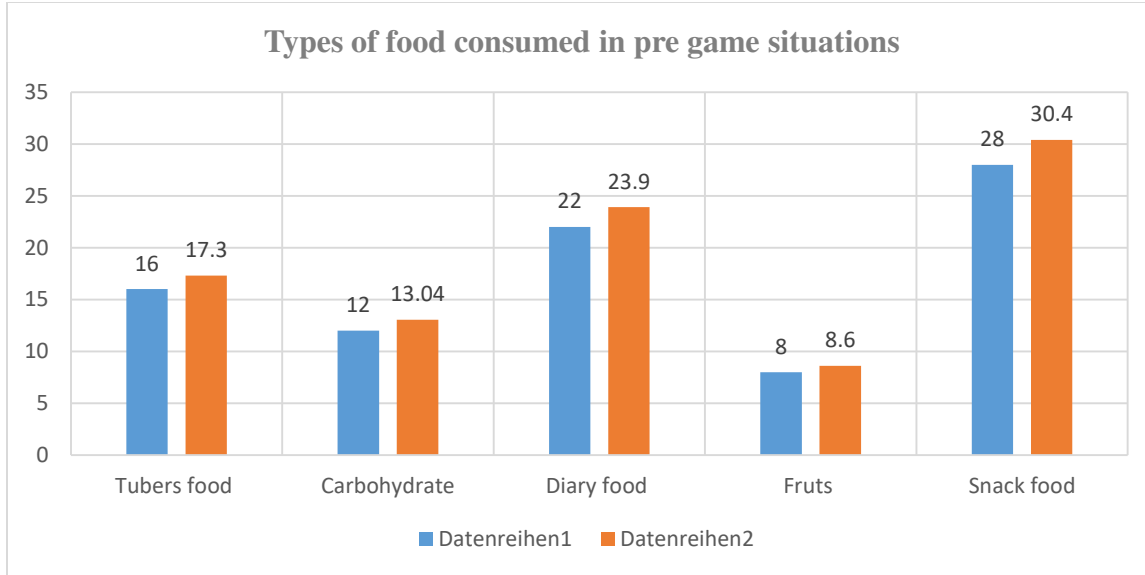


FIG -III

Types of food that players consumed during pre-competitions situations

Nutritional factors that affect pre game situations of the football players shown in (Fig 1).Football players nutritional habit before game situations were mostly focused on snack foods 28(30.4%),diary food 22(23.9%) and tubers food16(17.3%). This types of food contain high amount of fat and significantly decrease player’s performance. In another side the result show that outside of game situations player used fruits 8(8.6%) and carbohydrate type of food 12(13.04%) in small amount. Fruit and carbohydrate food is very crucial and play great role in enhancing performance, so coaches nutritional guidance affected by when players in pre-game situations.

4.1.1 Multiple Regration analysis

Table 8 Model summery

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922 ^a	.849	.843	55.15531

a. Predictors: (Constant), Nutritional factors , Environmental factors, Psychological factors, social factors

In above table 7 model summery explain that good fit of the model and the predictors nutritional, social, environmental and psychological factors accounts 84% of the variance in coaching performances. Those factors are major limitation of football players during before game situations.

Table 9 ANOVA

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1493757.779	4	373439.445	122.757	.000 ^b
	Residual	264663.439	87	3042.108		
	Total	1758421.217	91			

a. Dependent Variable: Coaching performance
 b. Predictors: (Constant), Nutritional factors , Environmental factors, Psychological factors, social factors

In above (Table 8) explain that the test using ($\alpha=.05$). The overall regration model was significant $F(4, 87) = 67.9, P < 0.05, R^2 = .84$. So a predictors account statically significant

Table 10 Coefficient

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	252.218	41.476		6.081	.000
	Psychological factors	-54.683	9.641	-.425	-5.672	.000
	Environmental factors	.733	.244	.244	3.001	.004
	social factors	.673	.274	.201	2.462	.016
	Nutritional factors	1.648	.262	.428	6.296	.000
a. Dependent Variable: Coaching performance						

In above coefficient (Table 9) tests each predictors at $\alpha=0.05$. Psychological factors was significant (sig.0.000, $P < 0.05$). Environmental factors was significant (sig.0.004, $P < 0.05$), social factors significant at (sig.0.16, $P < 0.05$) and nutritional factors shows significant at (sig.0.000, $P < 0.05$). Psychological, environmental, social and nutritional factors have unique a predictors for coaching performances account for statically significant $P < 0.05$.

4.2 Discussions

This study explored effect of determinants on pre-game conditions and coaching performance. Determinants factors were common in limiting player’s performance in pre-game situations. The study revealed that team cohesion, athlete self-confidence and social support were amongst the most important factors. Both self-confidence and social support have been found in numerous studies to be key psychological factors to top-level performance by both coaches and athletes. The result of the study supported by another study by Gould et al (2002b) conducted research on coaches’ perceptions of successful participation in elite sport. Surveys completed by coaches revealed that team cohesion, athlete self-confidence and social support were amongst the most important factors.

Further to the research conducted by Woodman and Hardy (2003) conducted a meta-analysis examining the impact of cognitive anxiety and self-confidence on sport performance. Findings revealed that cognitive anxiety and self-confidence are distinct constructs and should not be viewed as opposite ends of the same continuum. In other words, an athlete displaying high self-confidence can also display high cognitive anxiety. The analysis also indicated that the effect of self-confidence on performance was greater than that of cognitive anxiety. Therefore, athletes who experience high levels of both factors will still perform to a high level as their high self-confidence can counteract or buffer the negative effect of cognitive anxiety. Low or high level of arousal (anxiety) is not a healthy behaviour in terms of learning. While a high level of arousal and excitement negatively affect the motivation to learn, not wanting to go to school or indifference appears as a low level of arousal state (Bradley, Codispoti, Cuthbert, & Lang, 2001).

A person who is not motivated will not be inclined to show up for training sessions, and will not train hard. An athlete cannot expect to win if they do not push themselves, and so motivation becomes one of the main things that separate the winners from the losers. In a study by Ruiz-Tendero and Salinero Martin (2012), the researchers found that coaches and athletes equally regarded dedication as the most influential factor of motivated success.

The result of the study revealed in above (Fig.2) that pollution was the most factor that limit player's performance and in above (Table .9) explain that environmental factors were significant factor on coaching performances. Environmental temperature is known to affect athletic performance due to the changes in the core temperature of an athlete in action. Increased temperature has been correlated with decreased athletic performance as a result of excessive fluid loss and in extreme cases, impaired thermoregulation (Siegel &Laursen, 2012). Warm environment causes a greater rise of core temperature in addition to higher rate of perspiration and dehydration (Özgül et al., 2010). The rise of core temperature particularly is offset by negative feedback mechanism of the body to prevent the exceedance of critical temperature and consequently, causes potential slow-down of an athlete where a decrease of about 2-3% in performance is likely (Dugas, 2010). Özgül et al. (2010) also revealed a 15% reduction in the distance covered by soccer players in a controlled study with an increase of air temperature to 49o C and water vapor pressure. Athletes playing in humid and hot environment often find it more challenging than in dry and hot environment as humidity could impair the dissipation of heat from the body by slowing down the evaporation of sweat. In a typical hot and humid environment, temperatures are usually greater than 18o C and the air contains sufficient water vapor to hamper effective evaporation of water from surfaces (Hue, 2011). In above (Fig.1) result explain that pollution was the most significant effect of coaching performances. This result supported by different scholars (Tang, 2020d) explains that pollution is a common concern in metropolitans and the presence of large amounts of air pollutants can adversely affect athletic performance.

Air pollutants are known to impact pulmonary and cardiovascular functions, leading to decreased performance (Rundell, 2012). Vehicular exhaust is the main source of nitrogen oxides and carbon monoxide. There is currently a lack of studies on the effect of nitrogen oxides on athletic performance. However, carbon monoxide, with its ability to bind to haemoglobin, impairs the transport of oxygen by blood to muscles (Tang, 2020f). Without sufficient oxygen supply, the endurance and strength of an athlete are significantly affected. An increase in carbon monoxide level has also been associated with increased submaximal heart rate, decreased maximal exercise time and an earlier onset of angina. Exposure to carbon monoxide has demonstrated more deleterious effects on athletic performance than other pollutants (Rundell, 2012). Particulate matter comprising solid or liquid particles suspended in the air also poses threat to athletic performance.

The result in above (Table.3) explain that social integrations was the most factor affect coaching performance during pre-game situations. Social interactions aimed at inducing positive outcomes, or social support (Bianco&Eklund, 2001), represent a positive athlete social experience. Negative social interactions—characterized by unwanted, intrusive, unhelpful, unsympathetic or insensitive, or rejecting or neglecting behaviors (Newsom, Rook, Nishishiba, Sorkin, & Mahan, 2005)—represent a negative athlete social experience. Social support and negative social interactions represent distinct, yet related social experiences that together have potential to impact athlete perceptions of ill- and well-being within the environment of competitive sport.

In above (Table.9) explain that nutritional factors was a unique predictors and factor limit coaching performances. Similar study examines that nutritional factor which does not really fit into either physical, social or organizational dimensions of athletic performance has the potential to influence strength, endurance and recovery of an athlete, as well as his or her inherent health conditions (Peeling et al., 2018). It is undeniable that some athletes are equipped with certain traits to excel in certain sports due to genetic potential. These traits also determine the athletic ability of the athlete (Ostrander et al.2009).

Recommendation and conclusion

There is a consensus that the effect of determinants of pre-game situation on coaching performances serious challenges to athletes due to poor dissipation of their coaching performances. Psychological, environmental, social and nutritional factors were significant factors affecting coaching performances. Psychological factors like lack of self-confidence, anxiety, lack of concentration and lack of motivation affect player's performance

in pre-game situations and the effect is transferred to during game situations. The effect of self-confidence on performance was greater than that of cognitive anxiety. Overly cold environment, however, could stress the respiratory system, affect muscle power and cause fatigue. Global warming is foreseen to exacerbate the effects of heat and humidity on athletic performance especially in the tropics while it could make certain cold environment more conducive for athletes. Pollution is a negative influencer of athletic performance and increasing pollution in metropolitans will continue to exert additional pressure on athletes. Increasing altitude produces different effects on different types of sport with beneficial effects on sprints and negative effects on aerobic activities such as marathon. In other factors negative social interactions—characterized by unwanted, intrusive, unhelpful, unsympathetic or insensitive, or rejecting or neglecting behaviours represent a negative athlete social experience.

The result indicate that nutritional habit of the football players mostly ignoring to follow food menu, so players eating food as they want this habit has significantly affect players performances. For athletic performance, the contributing factors often act in tandem, for instance, good nutrition leads to better health and better athletic ability, rather than in isolation. As result snack food mostly used by players during pre-game situations and it is fat content, so this type of food significant factors affecting player's performances.

- Football federations and universities should have to educating and supporting coaches in psychological diagnostics and cooperating with sport psychologists could promote higher quality standards with respect to psychological diagnostics in talent development programs.
- Coaches, therapists and sport medicines' should have to proposed pre-cooling of athletes to increase the time taken to reach critical temperature thus sustaining athletic performance and preventing heat stress. Pre-cooling could be achieved with ice baths, ice jackets and drinking cold water. These pre-cooling strategies have been shown to enhance athletic performance in warm environment.
- Coaches should have to give attention to more challenging environment for athletes in the future and highlights the importance of acclimatization, evaluation of environmental risks in sports and development of effective strategies to regulate the body.
- Coaches should have to invite psychologists to council and follow up stress coping method from social factors like loneliness, problem related to marriage status and lack of social interactions.
- Football players must have to follow coach food guidance and food menu during pre-game situations.
- Coaches should invite sport nutritionist to give possible awareness and knowledge about nutrition and sport performances.

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