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## An investigation on aggression levels among elite women football players

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### Abstract

**Background:** To compete at the greatest level on the global stage in a sporting event, psychological balance is as crucial as physical condition. Many uncontrolled actions among athletes, such as physical aggressiveness, hostility, hostile and verbal aggression, are common these days.

**Objectives:** Both men and women bear equal responsibility. As a result, the purpose of this study is to analyse the amount of violence in Manipur's elite women football players. For this study 17 national level women footballers (age  $23 \pm 1.52$  years, height  $161 \pm 3.2$  cm and body weight  $54 \pm 4.3$  kg) has been participated.

**Material and Methods:** The Buss-Perry Aggression Questionnaire (BPAQ) was used to collect data. The study's findings revealed that all of the participants were aggressive. 53% of the individuals were extremely aggressive. 6% were aggressive, whereas 41% were less aggressive.

**Conclusion:** It was discovered that hostile and anger were highly connected with the players' behaviour among the aggressiveness factors (physical aggression, anger, hostile, and verbal aggression). As a result of the findings, it is possible to conclude that psychological training is critical for controlling aggression on the playing field and maintaining game ethics.

**Keywords:** Aggression, anger, hostile, buss-perry aggression questionnaire, physical aggression, verbal aggression

### Introduction

Coaches and sports enthusiasts work together to shape a nation's dreams. But, if the ethics of the sporting spirit are on the verge of disaster, how can a nation's ideal be realised? Today's society solely depicts an athlete and a sportsperson attempting to win the cup by whatever means possible. This is one of the most significant challenges our civilization faces. This is become history when sportsman respected their sport and their team mates above all the ethics. (Menon *et al.*, 2022) <sup>[10]</sup>. Nowadays, every team and its members strive to outperform their opponents. In order to do so, they must have sufficient physical strength as well as psychological balance. Most athletes at the high level of sport performance stage have the same level of physical fitness. (Gonzales *et al*, 2022) <sup>[5]</sup>. Though players have nearly the same degree of required physical characteristics, their psychological state differs depending on the situation on the pitch. In that peak performance level, winning or losing might be characterised by the athlete's ability to control psychological aspects. Among various of these psychological factor's aggression is one of the important factors. Aggressive behaviour is often showed up in a sporting event in spite of many positive aspects. Baron and Ricardson (1994) <sup>[11]</sup> defined aggression in sports as a motivated behaviour directed towards the goal of harm or injure other living being. With this type of behaviour, the violent individual merely wishes for the victim to suffer. Aggressive behaviour might take the shape of physical aggressiveness, verbal aggression, hostile condition, or anger. There are several sporting events where physical contact occurs often during play. Football is another sport in which physical contact between players occurs often (Gumusdag *et al*, 2011) <sup>[7]</sup>. So here aggression become one of psychological behaviour along with the others variables which can be major issue today for the ethics of the game. (Ikeler, 1993) <sup>[8]</sup>. According to Kiper (1984) <sup>[9]</sup> in the field of social psychology aggressive behaviour can be only found in an experimental environment while in a sporting environment it provides that natural environment with the minimum factors that can emerge aggression.

So, in the field of sport, it is critical to control aggression during play in order to protect the safety of the players as well as the morale of the team and to avoid violence or sportsmanlike behaviour. Because, while aggression can have a positive influence on winning, in most cases, it has a negative effect on performance.

In this present study the researcher targeted the Manipur state, which is one of the undisputed football hubs of India. In article published by Samon (2022) [13] highlighted that how Manipuri Girls is dominating the football of this nation. In this recent U-17 FIFA World Cup seven (7) Manipuri girls appeared in the international stage. Out of 21 players these seven Manipuri girls able to overcome every hurdle that they are challenging on their way. Poor economic background was one of the major challenges for them. While talking about the senior Manipuri team, they have conquered their 4<sup>th</sup> National Title in the 36<sup>th</sup> National Games, Gujarat. They have overcome the Odisha state with 2-0 victory. From these state eight (8) players are also part of the Indian senior national team including a one of the finest goal keeper of the state.

It was observed that men footballer and women footballer both may show aggressive behaviour during the play. In study done by Eagly & Stefen found that men are having significantly higher aggression level then the female. Many studies have been conducted on the factors affecting male football players. However, there have been a few research conducted purely on women's psychological conditions, particularly on Indian women footballers, and many more studies are still to be published. So, in order to shed light on at least one aspect of the psychological status of female football players, this study was conducted with the intention to find out the overall aggression level among the senior women national footballers.

## Materials and Methods

### Selection of samples

Specifically target population and its sample generated through purposive sampling. Total 17 female national level players (age  $23 \pm 1.52$  years, height  $161 \pm 3.2$  cm and body weight  $54 \pm 4.3$  kg) were selected from the Young Welfare Club (YWC) Langthabal, Manipur. An orientation program was conducted one day prior to data collection and consent from each participant were collected. The consent from the respective club authority were collected from the Club and also from All Manipur Football Association (AMFA). Competition circumstances are made up of numerous known and unknown psychological and physiological characteristics. These characteristics are frequently altered during critical game circumstances. Researchers also revealed that during the game, players' mental components fluctuated significantly, whereas physiological components were noticed from the start. Because of certain dimensional fluctuation researcher closely observed and focuses on aggressive behaviour and its different components, namely anger, physical aggression, verbal aggression, hostility, and considered them as independent variables. The data were collected soon after completing the league match.

### Procedure for data collection

The researcher employed the "Buss-Perry Modified Aggression Questionnaire (BPMAQ)" of Buss and Perry (1992) to collect data. At the time of construction, the overall reliability of the questionnaire was 0.89. This questionnaire has a total of 29 items. It also contained with four sub division which are anger (7 items), physical aggressiveness (9 items),

verbal aggression (5 items) and hostility (8 items). Each item has to be rated on a scale of 1 to 7 on a 7-point scale.

## Statistical Analysis

Since the data that was collected for the study were asymmetric in nature, alternative synthetic indicator (ASI) has been used for the different classification of data for the current study. As asymmetric nature indicates that the use of mean is negligible for the classifications of the data set, hence data was based on the on the mean deviation (as a dispersion) and preferred median as a measure of central tendency. (Roy *et al*, 2022) [12].

This ASI has been represented as a linear combination of a standardised of the respective data set. The general standardisation value  $g_i$  for the  $i$ th variable is

$$g_i = \frac{x_i - \text{median}(x)}{\text{MD}(x)} \quad (1)$$

Where, MD(x) is the measure of mean deviation of the data set. And  $x_i$  is the value of  $i$ <sup>th</sup> variable ( $i=1,2, 3, n$ )

A composite dimension index (CDI) proposed by Roy *et al* (2022) [12] is also calculated for each factor (physical aggression, verbal aggression, hostile and anger) of the aggression to measure which is more possessed by the women football players of Manipur.

$$CDI = \sum_{k=1}^s \frac{\partial_{kj}}{v} \quad (\text{for } j = 1,2, 3,) \quad (2)$$

Where  $s$  = number of aggression factors,  $v$  = total number of items.

And

$$\partial_{kj} = \frac{x_{kj} - x_{k(1)}}{x_{k(n)} - x_{k(1)}} \quad (3)$$

Where  $X_{kj}$  =  $j$ <sup>th</sup> observed value of corresponding data set  
 $X_{k(1)}$  = minimum value corresponding data set  
 $X_{k(n)}$  = maximum value of corresponding data set.

## Results

The following tables address the general aggression level among Manipur's female football players, as well as the various levels that affect their performance. Because various reviews have revealed that hostility has varied effects during and after the game, the table below will help to clarify which aggression component hinders performance variation.

**Table 1:** Classification of overall aggression level based on Generalised Synthetic Indicator (GSI) among the female football players of Manipur

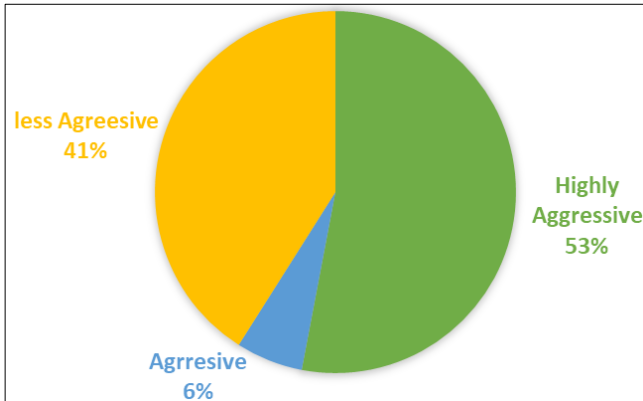
Class es	Methods of calculation	Class Ranges	Characteristics of class	Responde nts
I	$z_i \geq \bar{z} + \sigma_i$	$z_i \geq 0.031$	Highly Aggressive	53%
II	$\bar{z} \leq z_i < \bar{z} + \sigma_i$	$0 \leq z_i < 0.031$	Aggressive	6%
III	$\bar{z} - \sigma_i < z_i < \bar{z}$	$-0.031 < z_i < 0$	Less aggressive	41%
IV	$z_i \leq \bar{z} - \sigma_i$	$z_i \leq -0.031$	Non aggressive	Nil

Here in table 1 researcher have classified the sample groups into 4 classes. In which class I, class II, class III and class IV are highly aggressive, aggressive, less aggressive and non-aggressive respectively. It was found that among the senior women footballers of sample group 53% of were highly aggressive, 6% were aggressive and 41% were less aggressive in nature. Since there were none of them classified

under the class IV (non-aggressive) hence it could be interpreted that all of them possessing aggressiveness.

**Table 2:** Level of Aggression percentage observed among the female football players of Manipur

Level of Aggression	Percentage
Highly Aggressive	53%
Aggressive	6%
Less Aggressive	41%



**Fig 1:** Graphical presentation on the percentage observed on the aggression among the female football players of Manipur

According to the above table 2 and fig. 1, the current study found that 53% of participants were extremely aggressive, 41% were less aggressive, and 6% were only aggressive. Even though some authors assert that women are less aggressive than men, the outcome elevates the observation of aggression in sport. In every match, practically all players display aggression when pursuing their goals, regardless of the game scenario.

**Table 3:** Composite Dimensional Index (CDI) aggression factors among the female football players of Manipur

Parameters (subscale)	Mean Score	Standard Deviation	Range	CDI	Rank
Hostile	41.88	5.01	31-50	1.00	1
Anger	21.58	3.36	16-60	0.69	2
Physically Aggressive	38.65	3.46	28-40	0.65	3
Verbally Aggressive	15.17	4.32	7-24	0.34	4

The researcher appraised the aggressive component in table 3 using the Composite Dimensional Index (CDI). According to table 3, the aggressive CDI score is 1, rage is scored at 0.69, physical aggression is scored at 0.65, and verbal aggression is scored at 0. Since anger (0.69), physical aggression (0.65), verbal aggression (0.65), and hostile (1.0) all have the highest CDI scores, this indicates that hostile is the most dominant element (0).

**Discussion**

Sports aggression is like a double-edged sword. It may occasionally produce the desired outcome or it may occasionally result in a decline in performance. Nobody can instantly turn off psychological influences to just better performance as a human being. Therefore, the only means of balancing the psychological component of the activity is through control.

Generally, players possess this emotion called as an aggression in their behaviour despites of their gender. The present study clearly revealed that the aggression level in a different scale was possessed in their behaviour. Most of the

women players selected for the study were highly aggressive (53%). Similar studies reported that the aggression arose due to inability of controlling their own psychological state along with genetic determination of their ancestors (Gronek *et al*, 2015) [6]. Further Archer (1996) [19] found that women have higher level of aggression because of social status and cultural difference between male and female.

The aggression scale, on the other hand, comprises various subscales that define the various aggression levels of a player. For instance, among the participants, hostility, rage, and physical aggressiveness were the most prevalent traits. A review paper by Denson *et al*. (2018) [3] that was used to support this study noted that women displayed more indirect forms of aggressiveness than males did. Though women are less likely than men to engage in direct hostility, doing so could make them more hostile. Bettercourt and Miler (1996) [2] discovered that women are less violent when unprovoked in their study. However, if the situation changes, both men and women will exhibit hostility on an equal footing.

A player's career will include a lot of high-stress circumstances when they must manage numerous pressures. These can range from situational stressors like team dynamics to psychological stressors like worry and anxiety. Finding stressors in a team situation is crucial because much study on stress in sport has concentrated on golf and figure skaters. (Gould, Jackson & Finch, 1993) [14]. Stress has been demonstrated to have a negative effect on performance and potentially raise the risk of damage. (Blackwell & McCullagh, 1990) [15]. Australian football players were investigated by Noblet and Gifford in 2002, who focused on the various pressures they face. They discovered that persistent performance pressure, bad behaviour, and high expectations were the main sources of stress for the players. In addition, players had to strike a balance between their sport and other activities. This study may be crucial for psychologists in their work with athletes who are dealing with aggression. Organizational stress has been the primary type of stress investigated in top sport. Organizational stress is "work related social psychological stress," according to Shirom (1982) [16]. Among their study of organisational stress among elite athletes, Woodman and Hardy (2001) [17] identified four primary stressors: personal, team, leadership, and environmental. Tension among athletes was a significant source of stress when it came to team concerns. In a related study on organisational stress done by Fletcher and Hanton (2003) [18], they discovered that the tension between coaches and athletes was a significant contributing factor. Therefore, harsh criticism and coaching can have a variety of effects on performance.

Players must figure out how to deal with aggression since they must discover solutions to these issues. The coping mechanisms of elite athletes have not received much attention from sport psychology studies. Sport psychologists have just recently become interested in it, and in order to better our understanding, it needs to be studied in greater detail. We can better understand how young elite players respond to pressure-filled circumstances by taking a closer look at their coping mechanisms.

**Conclusion**

Every sporting event had its own set of physical and psychological requirements. Athletes who can resist this are the ones who win. Previously, athletes, coaches, and trainers were primarily concerned with the physical abilities required for the event. However, athletes are gradually learning to balance their own psychological condition. In the high-



performance condition, a fraction of a second delay in decision making or undisciplined actions on the pitch might result in forfeiture. As a result, knowing the psychological status of the athlete on the training field, before the game, during the game, and after the game is critical today. Women are more likely than males to be impacted by this psychological state. This is related to tradition and their historical standing in society. As a result, knowing the psychological status of the athlete on the training field, before the game, during the game, and after the game is critical today. Women are more likely than males to be impacted by this psychological state. This is related to tradition and their historical standing in society. As a result, it is critical to train female players to balance their psychological states so that they can equally represent their country on the international stage.

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### Conflict of interest

The authors declare no conflict of interest.

### Author contribution

All authors have contributed equally to the study design, data analysis, presentation of results, drafting and revising of the original manuscript. All authors have read and approved the final sort of the manuscript.

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### Data availability

Data are available upon request to the corresponding author. Informed consent all participants were informed in detail about the study protocol, the potential risk and benefits, and prior to participate in the study they signed the consent statement.

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