DOI 10.26773/jaspe.231003

Journal of Anthropology of Sport and Physical Education

ORIGINAL SCIENTIFIC PAPER

Co-occurance of aggression and frustration and its relationship with handball players' sports performance

Lator Chukwuma Sunday[1]

[1]Department of Human Kinetics and Sports Science, Faculty of Education, University of Benin, Benin City Edo State

Abstract

This study investigates the co-occurrence of aggression and frustration and its relationship with handball players' sports performance. Five research questions were raised, tested at 0.05alpha level. The descriptive survey research design was adopted for the study. The population of the study was the registered 99 handball players in Delta State Sports Commission. The research instrument for the study was a self-constructed questionnaire. The instrument's validity was exposed to scrutiny and the cronbach alpha statistics was used to ascertain its reliability. The correlation coefficient was 0.73 indicating that the instrument was reliable. The data were analyzed with Pearson correlation and multiple regression. Results revealed that there was no significant relationship between aggression and sport performance; there was a significant relationship between frustration and sport performance; there was a significant relationship between aggression and frustration in sports among handball players; there was no significant relationship between aggression and gender on sports performance; and there was a significant relationship between frustration and gender on sports performance among handball players. In conclusion, proper training, good tolerance levels among the athletes, coaches and sports organizers, would go a long way in reducing aggression and frustration in sports, thus, enhancing sports performance.

Keywords: *aggression, frustration, sports performance, handball players, sports*

Introduction

Aggression in sport is an unprovoked physical or verbal assault and aggressiveness as the purpose is to commit such an assault (Singh & Singh, 2016). Aggression is an open vocal or physical act which can emotionally or physically injure another athlete or oneself (Krishnaveni & Shahin, 2014). Sometimes, sports players or athletes display aggressive behaviour towards their opponents in a bid to instill fear in them, so as to be in a vantage position as to defeating/winning them. According to Krishnaveni and Shahin (2014) sports aggression involve harm-causing behaviour having no association to the competitive goals of sports, and connect, thus, to incidents of uncontrolled aggression outside the rules and regulations of sports, rather than highly competitive behaviour within the rule boundaries. Aggressive and violent actions are criminal and illegal in certain sports such as, basketball, football and cricket.

Simpson (2001) found evidence about the role of testosterone and its effect on aggression. Alterations in hormone concentration can have impact on individual mood and behaviours. It is a well known fact that aggressive behaviour on the part of an athlete will create a disruption and end in a low performance. This act would likely be distracting to the teams also as a whole. Studies have shown, for instance, that the poorer a team is in performance, the more likely it would engage in aggression (Krishnaveni & Shahin, 2014). They also found out more aggressiveness occur as there is a huge difference between scores or points. However, with the cooperation of all concerned parties, sports aggression can be minimized. Angry feelings and behaviour, being a precursor to aggressions can be modified through proper anger management training and role play.

Apart from aggression, frustration also impacts or influences

Correspondence:

LATOR, Chukwuma Sunday (Ph.D)
Department of Human Kinetics and Sports Science, Faculty of Education, University of Benin, Benin City Edo State
E-mail: chukwuma.lator@uniben.edu

sports performance. Thus, the frustration-aggression hypothesis states that aggression is a result of frustration. This aligns with the instinct theory which suggests that aggression occurs as a result of an inherent drive like hunger, taste, frustration, anger, and so on (Sarah Mae Sincero, 2012). In suggesting a reformulation of the frustration–aggression hypothesis, Berkowitz (1989) claimed that the involvement of vexation, frustration or aversive stimuli tends to cause adverse effects that the individual interpret as anger leading to aggression. Frustration, though does not necessary culminates in aggressive behaviour, create an inclination for aggression through resentment, hostility, or other undesirable feelings (Mentovich & Jost, 2017). Anger has the tendency to affect performance by either unsettling or improving the focus of devotion, information-processing and decision-making, execution and control of action (Jones, 2003). For instance, dysfunctional anger can be provoked in a rugby player as a result of a rival's unlawful and deliberate act. The upset player may then sidetrack the concentration of his attention from the mission at hand to the offender for revenge with the drive of inflicting harm. Anger is therefore dysfunctional as it culminates in wasted energy, reduced accomplishments, and unlawful acts of violence. On the other hand, the player may use his anger instrumentally to direct more energy towards the legitimate, functional, and assertive behaviours of tackling and shoving in order to block the opponent's attack. Hence, anger can disorganise and ruin performance or, contrariwise, energise and consolidate behaviour towards the accomplishment of a task.

Ruiz and Hanin (2004a, b) and Ruiz (2004) also scrutinized the content of anger conditions using a multiplicity of procedures, comprising metaphoric reports, sensation profiling and open-ended questions. The observed functional impact of anger on performance specified that athletes can use anger in training for or during competition. The facilitative impacts of anger were linked to positive feelings of increased inspiration, confidence and powerful skill execution, while the debilitative impacts were related with pressure, low self-esteem and perceived failure to manage the condition. According to the Individual Zones of Optimal Functioning (IZOF) concepts of energy mobilisation and utilisation (Hanin, 2000), the experience of the facilitative or debilitative effect of anger, fretfulness or other adversely toned feelings would depend on an individual's opinion of the energising or de-energising impacts of these feelings, and the right use or misuse of these energies. Hanin (2004) has lately suggested the concept of meta-emotion, or meta-experience, to account for knowledge, attitudes, beliefs and inclinations for (or rejection of) a feeling that athletes develop through a range of successful and less than successful performances. For example, an athlete who observes that anger indicators are typically related with feeling powerful, vigorous and alert, can deduce this state as a pointer of eagerness to achieve a task. Meta-experiences are also influenced by culturally resolute principles of performers concerning the expected outcome of specific emotions on performance and the guidelines of expression or suppression of emotions in a specific context (Hanin, 2004).

Sport performance is the mode in which sports participation is measured. Sports performance is an intricate fusion of biochemical function, emotional factors and training methods. Performance in an athletic perspective has a common meaning of signifying the quest of distinction or achievement (Encyclopedia.com, 2019). Sports performance has six distinct aspects: neuromuscular factors, musculoskeletal system, mental control, psychological factors, environmental conditions, coaching and external support for athletes. With definite penalties used as a degree of aggression, two groups of male college ice hockey players were matched for differences in goals and assists (McCarthy et al, 1978). Those rated high in aggression scored significantly more goals than those low in aggression. The bearing of differences in assist was same but did not reach significance. When the same groups were matched for shots on goals, significant differences were established, favoring the high aggressive group (McCarthy et al, 1978). Meanwhile, aggression and frustration are seen as abnormal behavior in sports, although not in all cases.

Statement of the Problem

Aggressive behavior is displayed at different level of sports. Aggression and frustration in sports has been made to the public on regular basis by the mass media. Serious efforts are being made to minimize negative use of aggression in sports, ranging from setting up of committee to checkmate the disposition on the field of play, as well as enactment of tiles and policies to guide the sporting events.

Athletes who are unable to manage the feeling of anger or aggression and frustration in contact sports attract to themselves various sanctions such as paying fines, match bans and so on. While those who are unable to utilize the anger feeling, aggressive feeling of frustrating feelings can earn themselves prizes or rewards that are worthwhile such as medals and social recognition. However, most athletes do not seem to know this. Therefore, this study aimed to investigate the co-occurence of aggression and frustration on sport performance among handball players.

Research Questions

1. What is the relationship between aggression and sport performance among handball players in Delta State?
2. What is the relationship between frustration and sport performance among handball players in Delta State?
3. What is the relationship between aggression and frustration in sport among handball players in Delta State?
4. What is the relationship between aggression and sport performance based on gender?
5. What is the relationship between frustration and sport performance based on gender?

Methodology

The population of the study was made up of 99 registered handball players making up the handball team in the Delta State Sports Commission who have been duly screened, cleared and consistent in the sport. The test instrument (See Appendix I) used for the study was a self-constructed questionnaire used to measure the psychological variables as well as sports performance. The test instrument was validated by three (3) experts in Human Kinetics and Sports Science, University of Benin, Benin City.

Data Analysis

The data analysis for the research questions were carried out using Pearson correlations and multiple regression.

Research Question 1: Is there a relationship between aggression and sport performance among handball players in Delta State?

Table 1: Descriptive characteristics and correlation between aggression and sports performance

	N	Mean	SD	R	p-value
Aggression	99	12.76	2.330	0.108	0.288
Performance	99	15.12	2.309		

The data in Table 1 showed that there is no significant association between aggression and sports performance (r=0.108, p=0.288).

Research Question 2: Is there a relationship between frustration and sport performance among handball players in Delta State?

Table 2: Descriptive characteristics and correlation between frustration and sports performance

	N	Mean	SD	R	p-value
Performance	99	15.12	2.309	0.251	0.012
Frustration	99	12.55	1.593		

The data in Table 2 showed that there is a significant association between frustration and sports performance (r=0.251, p=0.012).

Research Question 3: Is there a relationship between aggression and frustration on sport performance among handball players in Delta State?

Table 3: Descriptive characteristics and correlation between frustration and aggression

	N	Mean	SD	R	p-value
Frustration	99	12.55	1.593	0.426	<0.0001
aggression	99	12.76	2.330		

The data in table 3 showed that there is a significant association between frustration and aggression (r=0.426, p=0.000).

Research Question 4: Is there a relationship between aggression and sport performance based on gender?

Table 4: Multiple regression statistics on relationship between aggression and sports performance based on gender among handball players

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df 1	df 2	Sig. F Change
0.111	0.012	-0.008	2.319	0.012	0.601	2	96	0.550

Analysis of Variance (Anova[b])

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Regression	6.459	2	3.229	0.601	**0.550**	Ho is accepted
Residual	516.087	96	5.376			
Total	522.545	98				

The R value is 0.111 meaning that there is a weak relationship between aggression and gender on sports performance. The R square value of 0.012 showed that both aggression and gender contribute 1.2% (0.012) to the variance of sport performance.

The data in the ANOVA table showed df=2, 96; F=0.601, p=0.550. Hence, with a p-value that is greater than the alpha level of 0.05, there is no significant relationship between aggression and gender on sports performance.

Research Question 5: Is there a relationship between frustration and sport performance based on gender?

Table 5: Multiple regression statistics on relationship between frustration and sports performance based on gender among handball players

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df 1	df 2	Sig. F Change
0.256	0.065	0.046	2.256	0.065	3.356	2	96	**0.039**

Analysis of Variance (Anovab)

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Regression	34.144	2	17.072	3.356	**0.039**	Ho is rejected
Residual	488.402	96	5.088			
Total	522.545	98				

The R value is 0.256 which meant that there is a weak relationship between frustration and gender on sports performance. The R square value of 0.065 showed that both frustration and gender contribute 6.5% (0.065) to the variance of sport performance.

The data in the ANOVA table showed the F value is 3.356, df is 2, 96. The p-value is 0.039 which is less than 0.05, meaning that there is a significant relationship between frustration and gender on sports performance among handball players.

Discussion

The findings of research question 1 showed that there is no relationship between aggression and sports performance. Howev-

er, this is not in line with the findings of Krishnaveni (2014) who found that the poorer a team is in performance, the more likelihood it will engage in aggression. This is because as the game gets more intense, hostility levels after the game are significantly higher.

The findings of research question 2 showed that there is a positive weak relationship between frustration and sports performance. This aligns with the assertion of Tripathy (2019) who reported that in sporting sense when injury occurs to a sports person, he can get frustrated.

The findings of research question 3 showed that there was a positive moderate relationship between frustration and aggression in sports among handball players. This follows the finding of Dollard, Miller, Doob, Mowrer and Sears (1939) and Freud (1950), Breuer and Elson (2017) who theorized that a player becomes aggressive when the goal is blocked thus leading to frustration in the player and ultimately aggression. They stated that frustration will continuously lead to aggression and aggression is at all times caused by frustration.

Findings in research question 4 revealed no significant association between aggression and gender on sports performance. In line with this finding, White and Kowalski (1994) stated that if women played the same collision sports as men, they would display same aggression intensities due to the same sport socialization processes. In fact, given same circumstances, women have presented to be just as aggressive as men. Nonetheless, women and men have been shown to differ on their acceptance of sport aggression in relation to sport type participation (Gardner & Janelle, 2002).

Findings of research question 5 showed that there is no significant relationship between frustration and gender on sports performance. However, Tripathy (2019) suggested that it seems that participation in sport, such as handball can serve as a good device for enhancing the psychological characteristics such as frustration tolerance. Moreover, this can be beneficial for male and female players.

Conclusion

Proper training, good tolerance levels on the part of athletes, coaches, sports organizers would go a long way in reducing aggression and frustration in sports, thus, enhancing sports performance.

Acknowledgments

The researcher is profoundly grateful to Professors Samuel Ovenseri Aibueku, Samuel Monikhe Adodo, and Dr. Unity Oriakhi who validated the research instrument used for this study.

Received: 14 February 2023 | **Accepted:** 27 August 2023 | **Published:** 15 October 2023

References

Berkowitz, L. (1989). Frustration-aggression hypothesis: Examination and reformulation. *Psychological Bulletin*, 106,59–73.

Breuer, J. & Elson, M. (2017). *Frustration-Aggression Theory*. In P. Sturmey (Ed.). The Wiley Handbook of Violence and Aggression, 1-12. Chichester: Wiley Blackwell. https://doi.org/10.1002/9781119057574.whbva040. Open Access Repository www.ssoar.info

Dollard, J., Miller, N.E., Doob, L.W., Mowrer, O.H. & Sears, R.R. (1939). *Frustration and Aggression*. New Haven, CT: Yale University Press

Encyclopedia.com (2019). *Sports Performance.* Retrieved from https:// www.encyclopedia.com/sports/sports-fitness-recreation-and-leisure-magazines/sport-performance

Hanin, Y. L. (2004). *Emotions in sport: An individualized approach.* In C. D. Spielberger (Ed.), Encyclopedia of Applied Psychology, 1, 739–750. Oxford, UK: Elsevier Academic Press.

Jones, M. V. (2003). Controlling emotions in sport. *The Sport Psychologist*, 17, 471–486.

Krishnaveni, K. & Shahin, A. (2014). Aggression and its Influence on Sports performance. *International Journal of Physical Education, Sports and Health (IJPESH)*, 1(2), 29-32

Mentovich, A. & Jost, J. T. (2017). *Frustration-aggression hypothesis*. Britannica. com/science/frustration-aggression-hypothesis

Ruiz, M. C. (2004). *Anger and optimal performance in karate: An application of the IZOF model*. Unpublished Ph.D.thesis. Jyväskylä University of Jyväskylä

Ruiz, M. C. & Hanin, Y. L. (2004a). Idiosyncratic description of anger states in skilled Spanish karate athletes: An application of the IZOF model. *Revista de Psicología del Deporte*, 13, 75–93.

Ruiz, M. & Hanin, Y. (2004b). Metaphoric description and individualized emotion profiling of performance states intop karate athletes. *Journal of Applied Sport Psychology*, 16, 258–273.

Sarah Mae Sincero (2012). *Instinct Theory of Motivation.* Retrieved Feb. 17, 2023 from Explorable.com https://explorable.com/instinct-theory-of-motivation

Simpson, K. (2001). The Role of Testosterone in Aggression. Vol. 6, *Mc Gill Journal of Medicine, Canada*.

Singh, M. K. & Singh, A. (2016). *A Comparative Study of Sports Aggression of Boxers among Different Weight Categories.* Physical Education Yogic & Allied Sciences, M.G.K.V.P. Varanasi