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Effects of Aggression and Motivation on the Sports Performance of Athletes

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Abstract: *This study examines the effects of motivation and aggression on the sports performance of athletes aged 16 to 22 in the district of Okara, Pakistan. Sampled from Government Boy's College, 300 participants were chosen through simple random sampling. Logistic regression analysis revealed that aggression doesn't significantly impact sports performance ($p = 0.907$), while motivation does ($p = 0.001$). These findings emphasize the importance of motivation in enhancing sports performance among youth in district Okara, urging the promotion of motivational strategies for athletes.*

Key Words: Motivation, Aggression, Sports Performance, Athletes

Introduction

Sports performance is a complicated and diverse thing that is affected by various psychological, physiological, and environmental factors. Among these factors, aggression and motivation are particularly important, as they can affect the intensity, direction, and persistence of behavior in sports contexts. Aggression means doing something that hurts another person who doesn't want to be hurt (McClure, 2019). Motivation is when we start, control, and continue doing things that we want to achieve (Ryan & Deci, 2000). Both aggression and motivation can have positive or negative effects on sports performance, depending on how they are expressed and regulated.

Previous studies have shown that aggression and motivation are related to sports performance in different ways. Some studies have suggested that aggression can enhance sports performance by increasing arousal, competitiveness, and persistence. A study by Kjærviik (2023) found that anger induction improved the running speed of slower runners by activating an approach-related motivational state. However, other studies have indicated that aggression can impair sports performance by increasing stress, anxiety, and impulsivity. Another study by Bartlett & Abrams (2019) found that trait anger was negatively associated with golf performance by interfering with attentional control.

Motivation can either help or harm sports performance, depending on the kind and origin of motivation. Certain research has indicated that when a person enjoys an activity and does it for personal satisfaction, it can help them perform better in sports. This is because they feel more interested, excited, and in control. A study by Mulvenna et al. (2020) found that intrinsic motivation was positively related to basketball performance by fostering optimal functioning and well-being. However, other research has shown that if someone is motivated by outside rewards or pressures, it can actually make their sports performance worse by taking away their independence, skill, and connection to others. Another study by Van Biesen & Morbee (2023) found that extrinsic motivation was negatively related to swimming performance by undermining self-regulation and psychological needs.

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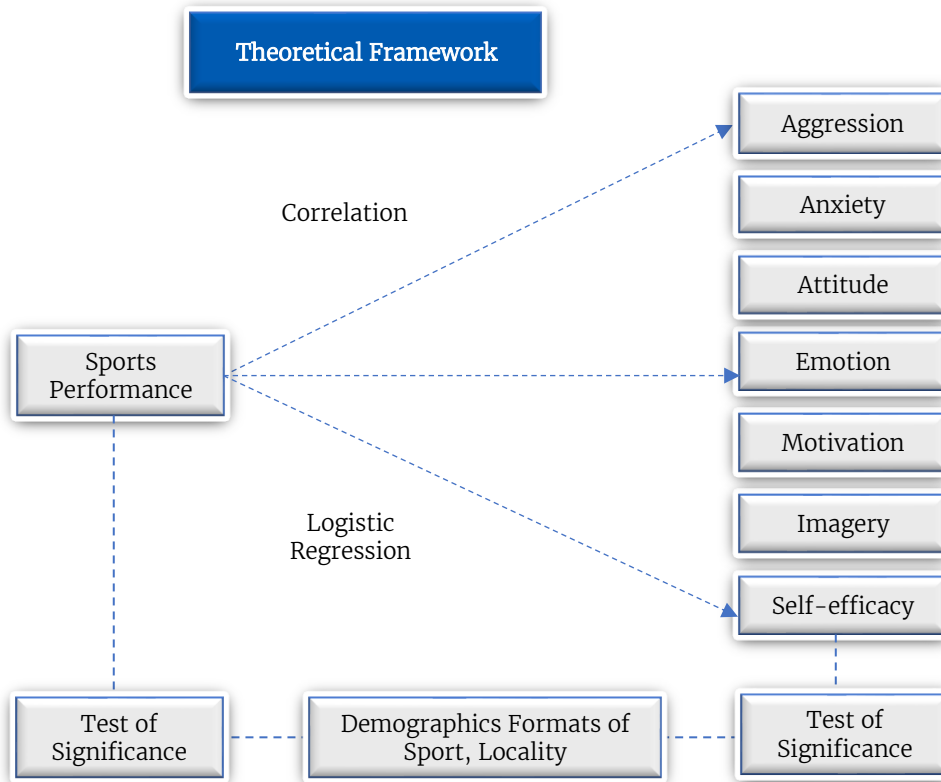
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Numerous literature reviews have examined the interplay between aggression, motivation, and sports performance. Empirical investigations have demonstrated that motivation exerts a substantial and favorable influence on employee performance, as exemplified by the research of Fahmi and Lima in 2021. Furthermore, a wealth of evidence indicates that employee motivation is positively correlated with employee performance across diverse industries and geographical contexts, as evidenced by the work of Hemakumara in 2020. Intrinsic and prosocial motivation have been identified as important factors in understanding the relationship between motivation and performance (Bruno et al., 2017). Leadership, communication, and motivation have all been found to have a positive and significant effect on employee performance (Safitri & Patricia, 2019). In the context of EFL writing, motivation has been found to have a positive relationship with student performance, with higher intrinsic or extrinsic motivation leading to better writing performance (Gazioğlu, 2019). Overall, these literature reviews highlight the importance of motivation in influencing performance outcomes in various domains.

The purpose of this study is to examine the effects of aggression and motivation on the sports performance of athletes in district Okara, Pakistan, aged 16–22 years. District Okara is a rural area in Punjab province, with a population of about 3 million people. Sports and physical activities, especially cricket, hockey, football, and athletics, are popular among the youth in this district. However, there is a lack of research on the psychological aspects of sports performance in this region. Therefore, this study aims to fill this gap by exploring how aggression and motivation influence the sports outcomes of young athletes in district Okara.

Research Methodology

The research adopted a descriptive approach and employed a survey design to investigate the sports performance of college athletes between the ages of 16 and 22. The central focus of this study was to explore the interplay and impact of various psychological factors on the athletic performance of individuals enrolled in seven government colleges in Okara. To elucidate the association between the dependent and independent variables, the study utilized binary logistic regression analysis.



The Population of the Study

In this specific research investigation, the population of interest encompassed all-male student-athletes from the government boys' colleges in District Okara who actively participated in sports during the period from 2019 to 2020.



Target Population

The target population for this study was defined as all student-athletes aged between 16 and 22 years, hailing from the government boys' colleges in District Okara, and engaged in sports activities from 2019 to 2020. To facilitate this research, a sample of 300 players was thoughtfully chosen via the simple random sampling method. This sample was drawn from the pool of students attending government boys' colleges in District Okara who actively participated in sports during the years 2019 to 2020.

Pilot Testing

The pilot test was employed to check the authenticity of the questionnaire. Through the pilot testing, the researcher can change the questionnaire because it provides an opportunity for the researcher to make changes to questions that are not understandable to the respondents. In the present study, through pre-testing, 30 players were interviewed. These players were other than the sampled respondents of the study. Pilot testing helped the researcher change some questions.

Data Analysis

SPSS software and MS Excel for the analysis and interpretation of the data with the help of the computer.

Table 1

Classification of the students concerning their age

Age in years	Frequency	Percentage
16-17	104	34.7
18-19	78	26.0
20-21	118	39.3
Total	300	100

Mean= 18.26 S.D. = 1.62

The above table reveals that almost 35% of sampled students were 16-17 years of age, around one-fourth (26.0%) were 18-19 years of age, and 39.3% of the students were 20-22 years of age. The mean age of the students was 18.26, with a standard deviation of 1.62.

Performance

Table 2

Classification of the students concerning their favorite sports

Response	Frequency	Percentage
No	83	27.7
Yes	217	72.3
Total	300	100.0

The above table shows that a big proportion (72.3%) of respondents usually practiced sports activities. However, around one-fourth (27.7%) of respondents never regularly practiced sports activities. Similar findings were presented by Watts (2019). The majority of the students participate in sports activities.

Table 3

Classification of the students concerning their favorite sports

Favourite Sport	Frequency	Percentage
Cricket	187	62.3
Football	52	17.3
Hockey	35	11.7
Volleyball	17	5.7
Other	9	3.0
Total	300	100.0

The above table shows that a large number of the respondents (62.3%) reported that their favorite sport is cricket. However, other respondents said that their favorite sport is Football (17.3%), Hockey (11.7%), Volleyball (5.7%) and others (3.0%). These findings confirmed that Cricket is the favorite sport in the study area. The above findings are also supported by Watts (2019). They found that thirty-six percent of the study population was interested in cricket games, while almost 15% & 14.1 % were playing badminton and volleyball, respectively.

Aggression

Table 4

Classification of the students concerning their views about fear affect performance

Response	Frequency	Percentage
No	87	29.0
Yes	213	71.0
Total	300	100.0

The above results of the study reveal that the majority (71.0%) of students had thought that fear affected their performance. However, 29.0 percent never believed this thinking.

Table 5

Classification of the students concerning their views about anger harms their performance

Response	Frequency	Percentage
No	73	24.3
Yes	227	75.7
Total	300	100.0

The study outcome specifies that a large part (75.7%) of students thought anger harms performance. However, 24.3 percent never believed this view.

Table 6

Classification of the students concerning their views about sadness harms performance

Response	Frequency	Percentage
No	76	25.3
Yes	224	74.7
Total	300	100.0

The study outcome specifies that a bulky proportion (74.7%) of students thought that sadness harms performance. However, 25.3 percent never believed this view.

Motivation

Table 7

Classification of the respondents concerning their thinking about motivation is always to create a positive impact on athletes.

Response	Frequency	Percentage	Mean	Standard Deviation
Disagree	52	17.3		
No Opinion	47	15.7		
Agree	201	67.0	2.50	.77
Total	300	100.0		

Scale: 1 = Disagree, 2 = No opinion, 3 = Agree

It was noted that a large part (67.0%) of students thought that motivation is always to create a positive impact on athletes. However, 15.7 percent had no opinion about this view, and 17.3 percent denied this



viewpoint (Table 7). Below is a graphical presentation. The mean value ($2.50 \pm .65$) fell among the no opinion and agree with classes but more inclined to agree with class.

Table 8

Classification of the students concerning their views about motivation have Some negative impact on athletes

Response	Frequency	Percentage
No	53	17.7
Yes	247	82.3
Total	300	100.0

A large part (82.3%) of the sampled students assumed that motivation has some negative impact on the athlete. However, 17.7 percent never agreed with the viewpoint (Table 8).

Table 9

Classification of the respondents concerning their thinking about motivation communication between team members effectively

Response	Frequency	Percentage	Mean	Standard Deviation
Disagree	20	6.7	2.72	.58
No Opinion	43	14.3		
Agree	237	79.0		
Total	300	100.0		

Scale: 1 = Disagree, 2 = No opinion, 3 = Agree

It was noted that a considerable number (79.0%) of students thought that motivational communication between team members was effective. However, 14.3 percent had no opinion about this viewpoint, and 6.7 percent were denied this viewpoint. Below is a graphical presentation. The mean value ($2.72 \pm .58$) fell amongst the no opinion and agree with classes but more tending to agree with class.

Table 10

Respondents' thinking about motivation develops a relationship of mutual respect between coach and athlete

Response	Frequency	Percentage	Mean	Standard Deviation
Disagree	47	15.7	2.53	.75
No Opinion	48	16.0		
Agree	205	68.3		
Total	300	100.0		

Scale: 1 = Disagree, 2 = No opinion, 3 = Agree

It was noted that a ponderous proportion (68.3%) of students had thought that motivation develops a relationship of mutual respect between coach and athlete. However, 16.0 percent had no opinion about this viewpoint, and 15.7 percent denied this viewpoint (Table 10). Below is a graphical presentation. The mean value ($2.53 \pm .75$) fell amongst the no opinion and agree with classes close to agree with class.

Table 11

Classification of the respondents concerning their thinking about motivation Develop leadership skills

Response	Frequency	Percentage	Mean	Standard Deviation
Disagree	52	17.3	2.51	.77
No Opinion	42	14.0		
Agree	206	68.7		
Total	300	100.0		

Scale: 1 = Disagree, 2 = No opinion, 3 = Agree

It was observed that a laborious proportion (68.7%) of students had thought that motivation develops a relationship skill. However, 14.0 percent had no opinion about this viewpoint, and 17.3 percent were denied of this viewpoint (Table 11). Below is a graphical presentation. The mean value ($2.51 \pm .77$) fell amongst the no opinion and agree with classes but closer to agree with class.

Table 12

Students' views about motivation create criticism between coach and athlete

Response	Frequency	Percentage
No	27	9.0
Yes	273	91.0
Total	300	100.0

The above table specifies that a huge proportion (91.0%) of the students viewed that motivation creates criticism between coach and athlete. However, 9.0 percent never agreed with the viewpoint.

Table 13

Classification of the students concerning their thinking about motivation develops guilt in front of the coach if they fail to achieve specific tests

Response	Frequency	Percentage
No	122	40.7
Yes	178	59.3
Total	300	100.0

The above table depicts that almost 59% of the students thought that motivation develops guilt in front of the coach if they fail to achieve a specific test. However, 40.7 percent never agreed with the viewpoint.

Table 14

Classification of the students concerning hard workers

Response	Frequency	Percentage
No	65	21.7
Yes	235	78.3
Total	300	100.0

The above table shows that almost 78% of the students were hard workers. However, 21.7 percent never agreed with the viewpoint.

Table 15

Classification of the students concerning diligence

Response	Frequency	Percentage
No	83	27.7
Yes	217	72.3
Total	300	100.0

The above table depicts that almost 72% of the students were diligent. However, 27.7 percent of students were not diligent.

Table 16

Classification Table^{a,b}

Observed			Predicted		Percentage Correct
			Are you good at game performance?		
			No	Yes	
Step 0	Are you good at game performance?	No	0	94	.0
		Yes	0	206	100.0
Overall Percentage					68.7

a. Constant is included in the model.

b. The cut value is .500

Table 16 shows the classification of the table, which measures the overall precision of the classification of the table. It is the association between the observed number of cases and the predicted number of cases.



After getting the percentage, we get an overall percentage value of 68.7%, indicating that there is good precision in this classification. It also specifies good prediction of dependent variables.

Table 17

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	257.231 ^a	.320	.450

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

In Table 17, we see that the -2 Logs likelihood statistic is used for comparing dissimilar models for the analysis of a good-fitting model, but its number is not useful. Cox & Snell R Square and Nagelkerke R Square are called pseudo-Square. These statistics measure how poorly the model predicts the decision. The value of Cox & Snell R Square is 0.320, and the value of Nagelkerke R Square is 0.450, which shows us a forecast model is a good fit for the data.

Table 18

Contingency Table for Hosmer and Lemeshow Test

		Are you good at game performance? = No		Are you good at game performance? = Yes		Total
		Observed	Expected	Observed	Expected	
		Step 1	1	28	27.173	
	2	17	19.777	13	10.223	30
	3	17	14.273	13	15.727	30
	4	10	10.755	20	19.245	30
	5	9	8.061	21	21.939	30
	6	6	5.507	24	24.493	30
	7	3	3.656	27	26.344	30
	8	2	2.481	28	27.519	30
	9	2	1.578	28	28.422	30
	10	0	.739	30	29.261	30

Table 18 states how many cases of good in-game performance are observed as 0 (which means they do not have a good performance in the game), and its expected game performance is 0 at the ratio of 10% of the data. How many cases of good in-game performance are observed to be 1 (means they have good performance), and it's expected to be game performance is one observed and expected in 10% of the data. Overall, the table shows us the association between observed and expected frequencies of the data. 2nd and 3rd indicate the least difference between the observed and expected frequency for not good performance. 8th, 9th, and 10th indicate a maximum difference between the observed and expected frequency for having good in-game performance. On the other hand, 2nd and 3rd indicate the least difference between the observed and expected frequency for having no good in-game performance, and 1st indicates a maximum difference for having no good game performance.

Table 19

Classification Table^a

Observed		Predicted		Percentage Correct	
		Are you good at game performance?			
		No	Yes		
Step 1	Are you good at game performance?	No	50	44	53.2
		Yes	20	186	90.3
	Overall Percentage				78.7

a. The cut value is .500

Table 19 shows how many cases are correctly predicted to be 0 or 1 and how many cases are not correctly predicted to be 0 or 1. There are 53.2% (n=50) cases observed to be 0 and are correctly predicted to be 0 and 90.3% (n=186) cases are observed to be one and are correctly predicted to be 1. 46.8% (n=44) cases are observed to be 0 and are not correctly predicted to be 0 but correctly predicted to be 1 and 9.7% (n=20) cases are correctly observed to be one and are not correctly predicted to be one but correctly predicted to be 0. In this case, we specified the fall model, as we can see that the percentage has been increased from 10% for our null model to 78.7 %for the fall model

Table 20

Variables in the Equation

	B	Wald	Sig.	Exp(B)
Aggression	-.022	.014	.907 ^{NS}	.979
Self-efficacy	.714	22.806	.000**	2.042
Attitude	.224	2.395	.122 ^{NS}	1.251
Step 1 ^a Emotion	.371	6.926	.008**	1.449
Motivation	.329	10.831	.001**	1.390
Imagery	.467	23.983	.000**	1.596
Anxiety	-.135	2.958	.085 ^{NS}	.874
Constant	-10.406	51.402	.000**	.000

Table 4.69 β 's are the values of parameters for the logistic regression equation for the prediction of the dependent variable from the explanatory variables. The general equation of odds is as follows,

$$\text{Log} = + + + + \dots +$$

These estimates show the association between the dependent and independent variables where the dependent variable is on the logit scale. These estimates predict a log odd of having good in-game performance is equal to 1 as a one-unit change in the independent variables.

The value of constant = -10.406 indicates the value of the log-odds game performance when all the predictor variables come to zero. It means that if all variables are excluded, then its effect on performances is negative. In most cases, it is not an interesting factor because zero is not a useful value for all variables to obtain.

Aggression

In the variable aggression for one unit increase in the model, we expect a - 0.022 decrease in the Log odds in the presence of sports performance, taking all the other predictor variables that held constant. As in the above table, the p-value of the aggression factor is 0.907, which is larger than the 5% level of significance. So, it shows that aggression has no significant effects on sports performance.

Motivation

In the above equation of logistic regression variable motivation for one unit increase, we expect a .329 decrease in the log odds in sports performance by taking all other explanatory variables held as constant. As in the above table, the p-value of the motivation factor is 0.001 which is smaller than the level of significance of 0.05. So, it shows motivation factors have significant effects on sports performance.

Discussion

The research investigated the influence of motivation and aggression on sports performance among athletes aged 16 to 22 in the district of Okara, Pakistan. The findings revealed that while aggression did not significantly impact sports performance ($p = 0.907$), motivation played a crucial role ($p = 0.001$). These results contribute to the understanding of psychological factors affecting athletes' performance and carry implications for sports training and development.

The non-significant effect of aggression on sports performance contrasts with some prior studies, such as Sofia and Cruz (2017), Krishnaveni and Shahin (2014), and Kimble et al. (2010), which have explored



aggression's connection to sports outcomes. This discrepancy could arise from the study's specific demographic or regional differences, as well as variations in measurement methods, as indicated by Makarowski (2013). Nevertheless, the findings emphasize the need to consider additional factors beyond aggression in explaining sports performance.

Conversely, the significant influence of motivation aligns with previous literature like Merrett and Tincknell-Smith (2018), Hemakumara (2020), and Bruno et al. (2017), highlighting the central role of motivation in driving performance. This underscores the importance of intrinsic motivation, as discussed by Ryan and Deci (2000), as athletes internally driven by their passion and goals tend to exhibit enhanced sports performance.

Recommendations for enhancing athletes' performance in district Okara include the incorporation of motivation-enhancing strategies into training programs. Drawing from the systematic review by Rareș-Mihai et al. (2021), goal-setting interventions can be utilized to bolster motivation and consequently elevate sports performance. Additionally, considering the influence of approach states on performance, as explored by Giles et al. (2020), might offer insights into manipulating athletes' emotional states to improve performance.

In conclusion, this study underscores the significance of motivation as a determinant of sports performance among young athletes in district Okara. While aggression demonstrated limited impact, the insights gained from this research can guide coaches, trainers, and sports psychologists in tailoring interventions to harness athletes' motivation effectively and foster optimal performance outcomes.

Recommendations

1. **Motivational Training:** Implement motivational training programs that tap into intrinsic motivation, drawing inspiration from the literature on motivation-enhancing interventions like goal-setting strategies.
2. **Emotional State Management:** Explore approaches to manipulate athletes' emotional states, considering the impact of approach states on performance, as suggested by Giles et al. (2020).
3. **Holistic Approach:** Take a holistic approach to athlete development, integrating psychological components such as motivation with technical and physical training.
4. **Longitudinal Studies:** Conduct longitudinal studies to track the long-term effects of motivation and aggression on sports performance, considering potential changes over time and across different phases of an athlete's career.
5. **Contextual Factors:** Investigate contextual factors that may influence the relationships between motivation, aggression, and sports performance, taking into account cultural, environmental, and social aspects.

By integrating these recommendations into athlete training and development programs, coaches and practitioners can optimize athletes' performance and contribute to the advancement of sports performance research.

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