

Mediating Role Of Motivation In Linking Coaching Behavior And Psychological Performance Of National Level Badminton Players Of Pakistan

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Abstract: *The present study aimed to check the effects of coaching behavior on player's performance and assessing the role of motivation as a mediator. The current study was quantitative and descriptive with cross-sectional in nature. The study was conducted all over Pakistan. All the national level male and female badminton players were the population of the study. According to the data taken from Pakistan Badminton Federation (PBF) the population of the study was 140 (Male 94 and Female 46). Researcher carried out the study on whole population ignoring application of sampling. The researcher collected primary data via structured questionnaires adopted from earlier studies on comparable topics. General Demographic Questionnaire, CBS-S, SMS, and Sports Motivation Scale was use. The collected data statistically analyzed by using MS Excel and SPSS¹ Version 24. The results showed that, there is a high positive significant relationship between coaching behavior and psychological performance. Coaching behavior has positive significant effect on psychological performance of badminton players. Motivation has mediation effect in linking coaching behavior and psychological performance. Furthermore, male reported higher scores in coach behavior and motivation effects on their performance than female. Psychological performance reported higher scores in female because female players were reported more worried, nervous, and depressed as compared to male players.*

Keywords: *Coaching Behavior, Psychological Performance, Sports Motivation.*

Introduction: Coaches play such an important role in player's sports career and encouraging them to participate in training programs. Coaches push players to lower their stress levels and raise their expectations through experience and competence. The coach must be familiar with the participants' sporting events, their knowledge and skills. Motivation is something related to the player passion and desire for success and satisfaction. Motivation is a way of inspiring players to carry out the responsibilities appropriately that they have accepted, and to play an effective role in the team. An important step in the coaching process is psychological training. Analyzing players' concentration, effort, and other work-rate variations helps coaches obtain information from performance analyzers. It is critical for player's mental health to adopt tactics taught in psychological training to get rid of tension and stress. Players may be unaware of the effects of their mental health on their ability to perform. The study was to look at the link between coaching behavior and psychological performance of national level badminton players. The researcher attempted to demonstrate the role of coach motivation as a mediating

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variable in the link between coaching behavior and psychological performance of national badminton players. The researcher chose some of the most significant aspects of the mediating variable in connecting the predictor and outcome variables, and compared the results of male players with female players.

Objectives:

1. To determine the relationship between coaching behavior and psychological performance of national level badminton players of Pakistan.
2. To analyze the effect of coaching behavior on psychological performance of national level badminton players of Pakistan
3. To explore the mediating role of motivation in linking coaching behavior and psychological performance of national level badminton players of Pakistan.
4. To compare the results of male national level badminton players with female national level badminton players of Pakistan.

Hypotheses:

1. **H_{0.1}**. There will be no significant positive relationship between Coaching Behavior and Psychological Performance of National Level Badminton Players. (**Correlation analysis**)
2. **H_{0.2}**. There will be no significant positive effects of coaching behavior on psychological performance of national level badminton players. (**Correlation analysis**)
3. **H_{0.3}**. There will be no significant positive role of motivation in linking coaching behavior and psychological performance of national level badminton players. (**Mediating analysis**)
4. **H_{0.4}**. There will be no significant difference between the results of national level male and female badminton players. (**T-test**)

Literature Review: A coach is an identifiable individual that works with athletes to help them develop their physical and mental capabilities for competition. The development of an athlete's physical, social, emotional, cognitive, and mental aspects is all strengthened through coaching. Coaches generally concentrate on four key areas: risk management, technical proficiency, mental readiness, and goal-setting (Ullah et al., 2020). The previous study's findings indicate that coaching behavior lead to a variety of negative consequences, including lower performance, compromised physical and psychological well-being, and even sport withdrawal (Mellano et al., 2022). A player's success or failure totally based on the coach and his or her coaching style. Alamgir Khan et al. (2022) was investigate the influence of various coaching approaches on sports performance. Participants in the study were drawn from registered hockey clubs, and 128 registered players from all clubs were chosen for the study using the available sampling technique. Based on data analysis, the researcher determined that coaching styles had a significant influence on hockey player performance. Furthermore, the study discovered that supportive coaching strategies had a greater positive influence on hockey player performance. Youngtaek Oh (2023) investigates the association between autonomy support coaching, interpersonal skill, and disruption desire as emotional factors among current Korean taekwondo players. The autonomy coaching, personality traits and disruption motive of 217 professional and university athletes analyzed. Such results can lay the groundwork for players to participate in sports in a mature way while also promoting beneficial changes in sports culture. A controlling coach, according to Mertens (2018), wants their players to appear or perform in manners that are congruent with the coach's requirements and desires. A controlling coach will typically ignore underperforming athletes while praising them when they perform well,

manipulate athletes' behavior with rewards, evaluate athletes using comparisons with others, encourage athletes to succeed more by giving them excessively negative evaluations, force athletes towards conformity through power-possessed approaches, and take actions to influence the athletes' lives outside of sports (Barkoukis et al., 2020). According to Asghar et al.'s (2020) study's findings, enhancing one's physical and mental health is essential for doing better in sporting competitions. For quick competitive outcomes, psychological and physical variables must be adequately recognized and dealt with. Athletes had a typical stress level, a moderate level of anxiety, and the targeted sample had mild depression. Sengupta (2021) investigates the perceived autonomy support and sport motivation of three groups of badminton players aged 17–35 years. 31 players were selected from different categories, such as established players, potential players, and recreational players. According to the study's findings, the setting is most autonomy-supportive for recreational players, and potential players benefit more than experienced players. Potential players are more gradually motivated than experienced players.

Methodology: The current study was quantitative and descriptive, with a cross-sectional nature.

Population: All the Pakistani national level male and female badminton players were the population of the study. According to the data taken from Pakistan Badminton Federation (PBF) the population of the study was 140 (Male 94 and Female 46).

Data Collection Tools: The researcher collected primary data via structured questionnaires adopted from earlier studies on comparable topics. Coaching Behavior Scale for Sports, Depression Anxiety Stress Scale and Sports Motivation Scale used for data collection.

Data Analysis Procedure: In the first part the researcher used descriptive statistics (Frequency, Percentage, Mean and Standard Deviation) and in the second part used inferential statistics (Correlation, Regression, Mediating Analysis and T-test). The collected data statistically analyzed by using MS Excel and SPSS Version 24.

Results:

	Table 1: Units of Participants in study		
	Gender		
Unit	Male	Female	Total
WAPDA	20	17	37
Army	18	7	25
KP	14	0	14
Punjab	10	4	14
SNGPL	4	3	7
Sindh	4	6	10
HEC	4	5	9
Railway	3	0	3
Police	3	0	3
KPL	3	0	3
Islamabad	2	0	2
Baluchistan	2	1	3
Total	87	43	130

In the table above, total 130 participants out of 140 like 87 (66.92%) male and 43 (33.07%) female nation-level badminton players from 12 different units were the participants of the study. 07 players did not respond and 03 excluded due to missing data.

Table 2: Descriptive Statistics and Analyses (Coaching Behavior)							
Coaching Behavior Scale for Sports							
Domains	Male		Female		Overall		P-Value
	Mean	S.D±	Mean	S.D±	Mean	S.D±	
Physical training and conditioning	5.305	1.308	4.611	0.807	5.075	1.208	0.00
Technical skill	5.061	1.252	4.988	0.603	5.037	1.079	0.02
Mental preparation	5.786	1.680	5.688	1.466	5.754	1.60	0.00
Goal setting	5.281	1.537	4.949	1.046	5.171	1.39	0.00
Competition strategies	4.911	1.258	5.305	1.169	5.041	1.23	0.01
My Head coach	3.794	1.050	3.747	0.729	3.779	0.95	0.00

The Table No: 2, shows the comparison between male and female players. Mean ±SD and P-Value. All the domains of coaching behavior show significant P-Value.

Table 3: Descriptive Statistics and Analyses (DASS)							
Depression Anxiety Stress Scale							
Domain	Male		Female		Overall		P-Value
	Mean	S.D±	Mean	S.D±	Mean	S.D±	
Depression	2.848	0.412	1.915	0.52	2.856	0.60	0.00
Anxiety	2.251	1.540	1.512	0.137	2.982	1.512	0.02
Stress	2.312	0.513	2.351	0.471	2.535	0.495	0.00

The Table No: 3, shows the comparison between male and female players on psychological performance with Mean, ±SD and P-Value separately and combine.

Table 4: Descriptive Statistics and Analyses (sports motivation)							
The Sports Motivation Scale							
Domain	Male		Female		Overall		P-Value
	Mean	S.D±	Mean	S.D±	Mean	S.D±	
Intrinsic Motivation	3.243	1.350	2.874	1.125	3.084	1.272	0.01
Extrinsic Motivation	3.097	0.950	3.170	0.670	3.172	0.822	0.03
Amotivation	2.016	1.895	2.776	1.478	2.590	1.214	0.00

The Table No: 4, shows the comparison between male and female players on sports motivation with Mean ±SD and P-Value separately and combine.

Table 5: Descriptive Statistics (Male and Female results)

Male	Female
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Variable	N	Mean	S.D±	N	Mean	S.D±
CBS-s	87	3.417	0.127	43	2.578	0.325
DASS	87	2.125	1.416	43	2.298	1.113
SMS	87	3.791	0.792	43	3.161	0.031

The Table No: 5, shows the mean and SD± of independent, dependent and mediating variable.

Table 6: Inferential Statistics (Independent Samples T-Test)

		F	Sig.	T	Df	Sig. (2-tailed)
Coaching Behavior	EVA	21.321	.000	3.812	161	.000
	EVNA			3.174	80.17	.000
Psychological Performance	EVA	12.739	.000	1.247	109	.003
	EVNA			1.281	99.81	.000
Sports Motivation	EVA	18.809	.000	3.932	143	.000
	EVNA			3.119	81.53	.001

Equal variances assumed= "EVA" and Equal variances not assumed= "EVNA".

Table No. 6 shows that males reported higher scores with motivation and coach behavior than females, except for the dependent variable. Psychological performance reported higher scores in females because female players are more worried, nervous, and depressed as compared to male players.

Table 7: Inferential Statistics (Relationship between Coaching Behavior and Psychological Performance)

Correlations			
		CB	PP
Coaching Behavior	Pearson Correlation		0.76
	Sig.(2-tailed)		0.00
	N		130
Psychological Performance	Pearson Correlation	0.76**	
	Sig. (2-tailed)	0.001	
	N	130	

**, Correlation is significant at the 0.01 level (2-tailed).

Table No. 7 shows that the correlation analysis indicates that there is a high positive significant correlation (Person Correlation = 0.76) between the independent variable coach behavior and the dependent variable psychological performance. The P-value is <0.01, which means the relationship is statistically significant.

Table 8: Inferential Statistics linear regression analyses (coaching behavior effects on psychological performance)

D-V	I-V	R	R ²	F	T	B	Sig
DASS	CBS-s	0.76	0.58	31.08	12.14	0.89	0.00

D-V=Dependent variable (coaching behavior), **I-V**=Independent variable (**r**=Correlation,**r**²=CorrelationCoefficient/variation,**F**=FRatio,**T**=Calculated,**β**=Un-standardizedBetaand**Sig**=Significantvalue* <0.05)

Table No. 8 shows the regression analysis that the R2 value shows independent variable coaching behavior causes a 58% change in the dependent variable psychological performance. The beta value shows that if one level increases in the independent variable then the 0.89 level increases in the dependent variable. Furthermore, the beta value is positive, which indicates that coaching behavior has a positive effect on psychological performance.

Table 9: Inferential Statistics (PROCESS model type 4Mediating analysis)

Paths	Effect	SE	T-value	P-Value	LLCI- ULCI
a: Effect of X-M	0.523	0.071	7.641	0.000	0.896-2.103
b: Effect of M-Y	0.496	0.096	4.994	0.000	0.292-0.669
c': Direct effect of X-Y	0.176	0.105	1.688	0.085	-0.034- 0.384
Paths	Effect size	Boot SE	Significant		LLCI- ULCI
ab: Indirect effect of X-Y	0.259	0.073	Sig		0.153-0.432
Paths	Effect size	SE	T-value	P-value	LLCI- ULCI
c=ab+c': Total effect of X-Y	0.435	0.176	8.179	0.000	0.211-0.653

Note: "X" coaching behaviour, "Y" psychological performance, "M" sports motivation.
 "LLCI" lower limit of confidence interval, "ULCI" upper limit of confidence interval, "SE" standard error. "Boot SE" bootstrapped standard error. Level of significance: * $p<0.05$, ** $p<0.01$ and *** $p<0.001$.

Table No. 9 shows that coaching has a favorable and significant effect on motivation ($\beta = 0.523$, $p< 0.001$). Sports motivation significantly improves psychological performance ($\beta = 0.496$, $p<0.001$). However, the direct effect of coaching behavior on psychological performance is not significant ($\beta = 0.176$, P-value 0.085). These values are the initial predictors of mediation; thus, investigate both the indirect and total effects of coaching conduct on psychological performance. The mediation study indicates that coach behavior has a valuable indirect effect ($\beta = 0.259$) on psychological performance (bootstrapped 95% confidence interval LLCI = 0.153 and ULCI = 0.432). Motivation plays a full mediation role in linking coaching behavior and psychological performance.

Discussion: The findings of the study in hand are at par and matching with the prior literature mentioned below related to coach behavior in which results of current study revealed that supportive coaching style had a greater influence on player performance than a dominating method. Mertens (2018) and Alamgir Khan et al., (2022) support this emerging concept, concluded that supportive coaching strategies have a greater positive influence on player performance. Autonomy-supportive coaching behavior has a more beneficial impact on athlete youth sport performance than controlling climate coaching behavior. Controlling coach will typically ignore underperforming athletes while praising them when they perform well, manipulate athletes' behavior with rewards, evaluate athletes using comparisons with others, encourage athletes to succeed more by giving them excessively negative evaluations, force athletes towards conformity through power-possessed approaches, and take actions to influence

the athletes' lives outside of sports. In line with this conclusion, a study authored by Kathleen T. (2022) revealed that coaching behavior lead to a variety of negative consequences, including lower performance, compromised physical and psychological well-being, and even sport withdrawal. The results of the study in hand are not at par and did not match with the results of the study referred above relating to coaching behavior. Youngtaek Oh (2023) provided the framework for athletes to engage in sports in a responsible manner and encouraged beneficial modifications in sports culture. Intrinsic motivation in sport has a greater impact on an athlete's sport performance than extrinsic motivation in sport performance because it has self-motivated and not induced by external factors like incentives and rewards (Sengupta 2021, Mbam et al., 2015). The current study's findings also suggested that coach motivation is essential for athlete performance. Coach provides encouragement to a player's success with a conducive learning atmosphere. It is a well-known fact that coaches always foster a positive environment and motivate players to overcome challenges that stand in the way of their achievement of their goals. This was accomplishing through their knowledge, experience, and talents. The result of the study in hand at par and matching with the research mentioned above related to intrinsic motivation. Players are becoming intrinsically motivated and feel in living exciting experiences, discovering new training techniques, improving some of weak points, learning innovative training methods that never explored before and discovering new performance strategies.

Conclusions: The result of the current study reveals that significant positive relationship and effect between coaching behavior and psychological performance. Motivation plays a full mediating role in linking coaching behavior and psychological performance. Furthermore, psychological performance reported higher scores in females because female players are more worried, nervous, and depressed as compared to male players.

Recommendations:

1. Coaching behavior has a significant role in developing player performance. To achieve the desired results, coaches must encourage their players to implement training tactics effectively.
2. The coach's interaction with players is important. Coaches must motivate players to enhance their knowledge and skills in order to provide favorable results in terms of achieving desired goals.
3. Players' consistency and communication skills are necessary in managing coaches' attitudes and behaviors in order to build trust and a motivating environment. Wherein coaches are able to interact quickly with players to achieve positive and required outcomes.
4. The players must create short- and long-term goals with the help of their coaches and work effectively with their coaches to reach those goals.

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