Effects of Supportive Coaching Style on Technical Skill and Mental Preparation of National Badminton Players

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Abstract

The researchers made an effort to determine the effects of a supportive coaching style on the technical skills and mental preparation of national badminton players (40 males and 20 females, aged 18 to 30 years) from Punjab, Pakistan. The research design is a quantitative, cross-sectional survey with a non-probability sampling strategy that draws a sample from the population using the Rao Soft formula. Researchers used an adopted tool for data collection of the independent variable "Autonomy-Supportive Coaching Style Scale by Williams and Deci (1991) with 14 questions to examine badminton players' opinions of autonomy-supportive coaching styles demonstrated by their primary sport's coach. For data collection of the dependent variable "technical skill and mental preparation," participants indicated each item using a 5-point Likert scale. Cronbach's alpha equals 0.901. We used the appropriate statistical methods to test the hypotheses, such as mean, SD, regression, ANOVA, and correlation analysis, using SPSS 17. National badminton players appreciate supportive instruction in terms of technical ability and mental preparedness. Coaches should be aware of the acquisition and exchange of knowledge among badminton players.

Keywords: Supportive coaching style, technical skill, mental preparation, Mental Preparation, Athlete Perceptions

Introduction

In the world of sports today, the concept of technical skill and mental preparation among players seems to be regulated by several factors ranging from self-confidence, self-efficacy, competence, level of sports skill, coping strategies, supportive coaching style, motivation, and sports behaviour. However, this work is geared towards examining the effects of supportive coaching styles on the technical skills and mental preparation of national badminton players. Ntoumani & Thogersen Ntoumani (2021) say that supportive coaching "enhances the player's self-determined motivation and technical skills because it contributes to

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the satisfaction of their psychological l needs." The behaviours of our coaches and players seem to be creating a lot of psychological problems for teammates and opponents. Coaching is a training or developmental process in which an individual is supported while achieving a specific personal or professional competence result or objective Clutterbuck (2022). Ryan, R.M., & Connell created a model in 1989 that provides a framework for examining the athlete's reaction to the way coaches behave. The basis of this framework is how the coach behaves, how to coach satisfies the athlete, how to prepare an athlete for an upcoming activity, how the athlete perceives their behaviors, and the recall on the evaluation of the reaction between the athlete and the coach. Kavussanu, M., & Boardley defined the coaching style in 2009 as a psychological method adopted by coaches to enhance desirable performance among the players. Coaching is the art and practice of inspiring and facilitating learning and developing the performance of the player. Mehr, A.H.N., & Kazem, D.S. (2012. Greif defined coaching in 2007 as the question-based, enlightening, and inspirational process by a coach to orient a player to the realities of a situation to help the player achieve desired goals. Hodge et al. (2021; Grolnick, W.S. et al. 1991). Autonomy-supportive coaching style is recognized by a coach offering justifications and explanations for their decisions while allowing autonomy over decisions. Bartholomew et al., (2021); An autonomy-supportive coaching style is considered optimal when reducing the pressures players have to deal with, whether internal or external. Lonsdale and Hodge (2021) argue that the supportive coaching style is favoured for promoting psychological well-being and fostering positive behaviour in athletes' sports performances. Hodge et al. state that in 2011, the autonomy-supportive autonomy style had a positive relationship with autonomous motivation. Also, it is imperative to understand that there may be situations whereby a controlling approach may be required for the benefit of the individual or the team. Empirical evidence about the relationship between coaching style and sports behaviour will better understand the challenges facing sports performance for future intervention and development. Colman, (2023): Mental preparation like motivation is defined as a driving force or forces responsible for the initiation, persistence, direction, and vigour of goal-directed behaviour. Ntoumanis, N., & Standage, M. (2018) view mental preparation as an internal or external state that energizes a behaviour, maintains it, directs behaviour and directs behaviour and directs behaviour and directs behaviour towards a goal so that equilibrium is attained. Two major types of motivation posit player behaviour or performance, which can be extrinsically or intrinsically motivated and mentally prepared for any sports activity (Nathalic & Marc, 2019). Mentally prepared players engage in an activity purely for the pleasure and satisfaction derived from doing the sports activity. Deci, (2018);

Luc, Michelle, Kima, & Marc, (1995). When players are mentally prepared for an activity and motivated, they perform well and show behavior voluntarily, in the absence of material rewards or external constraints (Deci & Ryan, 2018). Mentally satisfied players will do something because that person has considered the act necessary for personal development (Nnachi, 2003). Ryan et al. reported that in 1997, players' initial mental preparation, whether it is intrinsic preparation participating in sport for enjoyment or extrinsic motivation, Motivation and satisfaction in participating in sports to gain rewards usually predict the athlete's attendance and adherence to those particular sports. Gould & Horn indicated in 1984 that mentally prepared badminton players had several motives for their sports participation: improved skill or fitness level, perceived excitement, being together with or making new friends, and winning or perceived success. Most research on coaching style, motivation, and sports behaviors on athlete sports performance was conducted in Pakistan with little or no technical skill and mental preparation of badminton players. Therefore, this study tends to bridge this gap by examining the effects of supportive coaching styles on badminton players' technical skills and mental preparation in Punjab, Pakistan.

Due to this, the following statement about the problem is raised

- Does a supportive coaching style play a significant role in the technical skill and mental preparation of badminton players?
- Does a supportive coaching style significantly influence badminton players' technical skills and mental preparation?

Objectives of the Study

1. To find out the effects of a supportive coaching style on the technical skill and mental preparation of national badminton players.
2. To determine the relationship among coaching style, technical skill, and mental preparation of national badminton players.

Due to the foregoing literature, the following hypotheses are stated:

Ho1- There will be no statistically significant relationship among supportive coaching style, technical skill, and mental preparation of national badminton players.

Ho2- There will be statistically significant effects of supportive coaching style, technical skill, and mental preparation of national badminton players.

Methodology

The cross-sectional quantitative research study was conducted with 60 competitive respondents. 40 male and 20 female national badminton players from Punjab, Pakistan, aged between 18 and 30 years, were selected as a sample for research. The sample is drawn from the population using the Rao Soft formula with a non-probability sampling technique. The adopted tool used for data collection was the independent variable "Autonomy-supportive coaching style

scale" by Williams and Deci (2016) with 14 items. The researcher assessed badminton players' perceptions of autonomy-supportive coaching styles exhibited by the coach in their major sport. Participants responded to each item using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). For data collection of the dependent variable "technical skill and mental preparation, we used a self-designed questionnaire (involved subdomains) with 32 items. Players responded to each item using a 5-point scale (1 = never, 5 = always). The reliability score is valid. Cronbach's $\alpha = 0.901$. All participants included in this study had participated in a game on the day of data collection, and all participants were literate and able to understand the English language. It took 1 hour for proper completion of the questionnaire during their sports activity day, after which data was collected from the participants for statistical analysis. The appropriate statistical methods used to test the hypotheses, such as mean, SD, regression, ANOVA, and correlation analysis through SPSS 17.

Results

Table 1: Means score (X) and standard deviation (SD) of the group levels of autonomy-supportive coaching style, technical skill, and mental preparation of national badminton players.

Variables	Means (X)	Standard Deviation (SD)
Autonomy supportive Coaching style:	4.82	1.63
Technical skill:		
Performance and achievement	4.40	1.55
Teamwork	3.84	1.14
Footwork technique	3.40	1.03
Mental preparation:		
Concentration	3.50	1.45
Conflict	2.61	0.24
Psychological need satisfaction	4.14	1.85
Motivation	3.09	1.20
Player demographics:		
Experience	4.10	1.03
Age	28.05	09.05

The results, as shown in Table 1 above, showed that the mean autonomy autonomy-supportive coaching style scores of participants (X = 4.82) SD = 1.6. On the other hand, the result also showed that technical skill domain performance

and achievement had a higher mean score of (X=4.40) SD= 1.55 than the teamwork mean score is (X=3.84) SD=1.14, footwork technique mean score of (X=3.40) SD=1.03 participant. Similarly, the result indicated that the mean score of mental preparation had a mean score of concentration of (X = 3.50, SD = 1.45) which is greater than the mean score of conflict of (X= 2.61 SD = 0.24), psychological need satisfaction mean score of (X=4.14) SD=1.85 and Motivation mean score of (X=3.09) SD=1.20 participants.

Table 2: **Regression, ANOVA, and correlations analysis of autonomy-supportive coaching scale, technical skill, and mental preparation**.

Variables	R	R^2	F ratio	DF	Sign
A	0.812	0.731	758.122	1	*
B	0.847	0.630	32.61	1	*
C	0.739	0.548	29.07	1	*
A x B			3.19		0.002
A x C			1.76		0.010
A x B x C			3.90		0.003

P< 0.001 *= Significance, A= Autonomy supportive Coaching style, B= Technical skill, C= Mental preparation.

Discussion

To examine the previous study hypotheses that achieve the goals of this study, the appropriate statistical methods to test the hypotheses, such as mean, SD, regression, ANOVA, and correlation analysis, are used to test the hypothesis using SPSS 17. Table 2 shows that the results of the ANOVA and regression analysis of the effect of supportive coaching style on technical skill and mental preparation of national badminton players showed a statistically significant correlation between supportive coaching style, technical skill, and mental preparation of participants. The result also showed that there was a statistically significant correlation between autonomy-supportive coaching style and technical skill with, respectively, f ratio = 3.19 P< 0.002, autonomy-supportive coaching style and mental preparation F ratio = 1.76, P< 0.010, autonomy-supportive coaching style, technical skill, and mental preparation f ration = 3.90 P< 0.003 of national badminton players., Deci, 1991; Luc, Michelle, Kima & Marc, 1995 study results match my study results, Mentally prepared players engage in an activity purely for the pleasure and satisfaction derived from doing the sports activity. Results indicate that there is a statistically significant effect of supportive coaching style on technical skill and mental preparation, as indicated by the correlation coefficient (R = 0.812), which indicates a statistically

significant correlation relationship between the independent variable (supportive coaching style) and the dependent variable (technical skill and mental preparation). Moreover, it has been shown that the value of the determining coefficient (R2 = 0.724) indicates that the supportive coaching style has explained 72.0% of the variation in technical skill and mental preparation, while other variables' results are included in Table 2. These results agree with Ryan, R.M., and Connell's (1989) model of a supportive coaching style that provides a framework for players to examine who to prepare for an upcoming activity and evaluate the reaction between the athlete and the coach. The study's results showed that coaches' coaches give feedback and advice for correcting technical errors, correcting and improving technique, and using verbal and visual examples to show how a skill should be done. Coach advises on staying positive, focused, confident about abilities, and performing under pressure. Coaches make sure that the players understand the strategies being taught.

Conclusions

Supportive coaching positively affects national badminton players for technical skills and mental preparation. Coaches should be aware of the acquisition and sharing of knowledge between badminton players, and e motivation, and support of optimal resources, with technical skill for inspiring and satisfying players.

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