

The Effect of Coach-Athlete Relationship on the Stress and Mindfulness among Athletes

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Abstract

This study investigates the effect of coach-athlete relationship on the stress and mindfulness among athletes. Employing a quantitative research design, data was gathered from 129 participants aged between 18-35 years through online surveys. Measures included the Coach-Athlete Relationship Questionnaire (CART-Q), Perceived Stress Scale (PSS-10) and Mindfulness Attention Awareness Scale (MAAS). The findings revealed a significant positive correlation between coach-athlete relationship and mindfulness, a significant negative correlation between stress and mindfulness and no significant correlation between stress and mindfulness although a weak negative correlation was found. These findings suggest that as the quality of the coach-athlete relationship improves, the mindfulness of athletes tend to increase and as the mindfulness increases, stress levels tend to decrease and vice versa. Although the correlation was not significant between coach-athlete relationship and stress, a notable finding demonstrates that supportive and healthy social environments can help reduce stress levels. This study highlights the significance and importance of a coach-athlete relationship in the lives of athletes to manage stress levels and enhance mindfulness.

Keywords: coach, athlete, coach-athlete relationship, stress, mindfulness

1. Introduction

The coach-athlete relationship is crucial in sports psychology, impacting athletes' performance, motivation, and well-being (Jowett, 2017). It is characterized by commitment, communication, and mutual trust (Jowett et al., 2016). A coach-centred or athlete-centred approach can limit effectiveness, while a coach-athlete-focused perspective fosters growth and success (Cassidy et al., 2010). Coaches influence athletes' cognitive-affective experiences, which can affect mental and physical health (Gustafsson et al., 2017).

Athletes' interpersonal perceptions shape their psychological responses. Wylleman (2000) proposed a framework of acceptance-rejection, dominance-submission, and socioemotional aspects in the coach-athlete dynamic. Positive social environments improve athletic performance (Bianco et al., 2001). Effective coaching relationships, characterized by closeness, commitment, and complementarity, contribute to athlete success (Jowett et al., 2000a; Lyle, 1999). Research identifies three key aspects of the coach-athlete relationship which are trust, cooperation, and power dynamics, influencing personal and athletic development (Philippe et al., 2011).

Interpersonal conflict within the coach-athlete relationship affects performance and well-being. Issues such as power struggles and communication breakdowns lead to dissatisfaction and stress (Scanlan et al., 1991). Greenleaf et al. (2001) found that elite athletes often struggle with coach-imposed authority. Such conflicts can diminish self-confidence and motivation, negatively impacting performance (Poczwardowski et al., 2002).

Coaches shape athletes' psychological well-being by creating environments that support autonomy and motivation (Blanchard et al., 2009). Self-determination theory emphasizes the importance of autonomy-supportive coaching in fostering well-being and resilience (Deci et al., 2008). Athletes with strong coach relationships report higher self-efficacy and commitment (Nicholls et al., 2016).

Stress in sports can lead to burnout, negatively affecting performance and mental health (Gustafsson et al., 2017). Poor communication between coaches and athletes contributes to stress-related injuries (Van Wilgen et al., 2012). The stress-injury model highlights the role of cognitive, behavioural, and environmental stressors in athlete injuries (Andersen et al., 1988). Coping strategies like mindfulness and relaxation techniques help mitigate stress and enhance performance (Mansell et al., 2023).

Mindfulness-based interventions, such as Mindful Sport Performance Enhancement (MSPE), improve focus and emotional regulation (Kaufman et al., 2016). Mindfulness enhances athletes' ability to manage stress, fostering resilience and improved performance (Gardner et al., 2007). Research supports its effectiveness in reducing anxiety and promoting optimal functioning in sports (Noetel et al., 2019). By integrating mindfulness and positive coaching strategies, the coach-athlete relationship can enhance performance, well-being, and long-term athletic success.

1.1 Aim and Objectives of the Study

The study aims to investigate the effect of coach-athlete relationship on the stress and well-being among athletes.

Following are the objectives of the study:

1. To understand the relationship between the coach-athlete relationship and the stress levels of athletes
2. To understand the influence of coach-athlete relationship in enhancing mindfulness in athletes
3. To understand the connection between stress and mindfulness in athletes

1.2 Research Hypotheses

H1: There is a significance relationship between the coach-athlete relationship and the stress levels of athletes

H2: There is a significance relationship between the coach-athlete relationship and mindfulness of athletes

H3: There is a significant relationship between stress and mindfulness in athletes

1.3 Significance of the Study

The significance of the study is to enhance athletic performance, improve the psychological well-being mainly pertaining to stress and enhancing mindfulness and informing coaching practices as to how coach exhibits a prominent role in the overall well-being and performance of the athlete. The study will also add to the literature of sports psychology by exploring the influence of coach-athlete relationship on the stress and mindfulness among athletes.

2. Method

2.1 Research Design

The study applied a correlational research design, a quantitative research approach to find the relationship

between coach-athlete relationship on the stress and mindfulness among athletes.

2.2 Participants

The target population of this study are athletes who have been training under a coach for at least a period of six months. The participants must be residing in India and should be between the age of 18-35 years. The population would consist of both males and females and the must have a basic understanding of English language.

2.3 Sampling

2.3.1 Technique Used

Data is collected through purposive sampling since the population being studied is a specific group of individuals.

2.3.2 Inclusion Criteria

- Athletes who play a sport at any level
- Athletes should be between the age of 18-35 years
- Athletes who are unmarried
- Athletes training under a coach for at least a period of 6 months

2.3.3 Exclusion Criteria

- Athletes who do not have basic knowledge in English
- Athletes who are presently on/taking a break
- Athletes with any physical disability
- Athletes participating in recreational sports

2.4 Tools

2.4.1 Coach-Athlete Relationship Questionnaire (CART-Q)

The Coach-Athlete Relationship Questionnaire was given by Sophia Jowett and Nikos Ntoumanis in 2003. It is a tool which is employed to determine the quality of the relationship between an athlete and a coach. The 11-item questionnaire consists of three parts which are Closeness, Commitment and Complementarity. Every item on the scale is rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores on the scale depicts a positive coach-athlete relationship. Cronbach's alpha coefficients values for commitment was 0.82, closeness was 0.87 and complementarity was 0.88 which therefore implied that the reliability was acceptable.

2.4.2 Perceived Stress Scale (PSS-10)

Perceived Stress Scale was developed by Sheldon Cohen, Thomas Kamarck and Robin Mermelstein in 1983. This is a 10-item questionnaire that assesses the stressful life events and circumstances that may trigger distress or arouse anxiety. Participants are asked to denote their agreement on a 5-point Likert scale ranging from 0 (never) to 4 (very often). Scores ranging from 0 to 13 would demonstrate low stress, 14-26 would indicate moderate stress, 27-40 would demonstrate high perceived stress. This test has shown to have a good internal consistency in both adults and students ranging from 0.78 to 0.91 across various studies and population. The test-retest reliability was assessed in four studies and met the criterion of greater than 0.70 in all cases and therefore was found to be adequate in adults over a two week and a four-week period. The criterion validity was strongly correlated with the measures of anxiety and depression and the mental component of health status.

2.4.3 Mindfulness Attention Awareness Scale (MAAS)

The Mindfulness Attention Awareness Scale was developed by Kirk Warren Brown and Richard M. Ryan in 2003. This tool evaluates an individual's level of mindfulness keeping the focus on the presence or absence of attention to and awareness of what is happening in the here and now. This is a 15-item questionnaire each rated on a 6-point Likert scale ranging from 1 (almost always) to 6 (almost never). The items in the test are reversed-score, so a greater score indicates greater mindfulness. It holds a good internal consistency of more than 0.82 and a good test-retest reliability of 0.81. The predictive validity of this tool has been shown to predict various psychological outcomes such as lower levels of stress, anxiety and depression and higher levels of better well-being and greater self-regulation.

2.5 Procedure

The study aims to explore the effect of coach-athlete relationship on the stress and mindfulness among athletes. The scales used were the Coach-Athlete Relationship Questionnaire (CART-Q), Perceived Stress Scale (PSS-10) and Mindfulness Attention Awareness Scale (MAAS) which were circulated online via google forms. The participants were asked the basic demographic details and the screening questions to assess which participant does not fit in with the inclusion criteria. The researcher personally went up to athletes in person and through online platforms to get the responses. The collected data was coded using Microsoft Excel and analyzed using Jamovi for Pearson's correlation coefficient.

2.6 Data Analysis

2.6.1 Descriptive Statistics

Descriptive statistics were used to determine the characteristics (age, gender, country residing, sport and the duration of the sport) of the sample.

2.6.2 Inferential Statistics

Pearson's correlation coefficient was implemented to find if a linear correlation exists between the coach-athlete relationship and stress, coach-athlete relationship and mindfulness, and stress and mindfulness.

2.7 Research Ethics

Ethical considerations were prioritized by ensuring informed consent, confidentiality and minimizing harm to participants. The written consent form was obtained from participants after providing them clear information about the study. Their privacy was protected by maintaining confidentiality and anonymity of the data collected. Cultural sensitivity was considered by adapting methods to be culturally appropriate.

3. Results and Discussions

The data was gathered with the help of Google forms from 129 athletes residing in India, between 18 and 35 years old and analyzed using Microsoft Excel and Jamovi.

Table 1: Sociodemographic characteristics of the participants

Sample Characteristics	n	% / <i>M, SD</i>
Gender		
Male	80	62.0%
Female	49	38.0%
Age		20.4, 2.73
Coach-Athlete Relationship		61.5, 10.5

Stress		18.7, 5.80
Mindfulness		3.83, 0.94

Note. N = 129

Table 1 provides the sociodemographic details of the participants. The sample size for this study was 129 with an age range of 18-35 years and a mean age of 20.4 and standard deviation of 2.73. Gender distribution shows that 80 participants were males (62.0%) and 49 participants were females (38.0%). The mean for coach-athlete relationship is 61.5 and standard deviation is 10.5. The mean of 61.5 suggests that on an average, the athletes rated the quality of their relationship with their coach relatively high on the Coach-Athlete Relationship Scale. The standard deviation of 10.5 indicates moderate variability suggesting that while most athletes rated the relationship positively, individual scores still varied within the sample. The mean for stress is 18.7 and standard deviation is 5.80. The mean of 18.7 falls in the moderate range of the Perceived Stress Scale suggesting that athletes experience a moderate level of stress and the standard deviation of 5.80 indicates moderate variability in stress levels suggesting that athletes' stress levels vary moderately around the mean of 18.7. Mindfulness shows a mean of 3.83 and a standard deviation of 0.94. The mean of 3.83 on the Mindfulness Attention Awareness Scale indicates that athletes rated themselves moderately high for mindfulness and the standard deviation of 0.94 indicates low variability in mindfulness scores suggesting that the athletes' mindfulness scores are fairly consistent aligning closely to the mean.

Islaqam (2018) states that, a random size of $n > 30$ drawn from an infinite population, the sample mean approaches a normal distribution. This study has 129 sample size which is > 30 based on Central Limit Theorem, so for testing the correlation of the variables parametric test will be performed.

Table 2: Pearson Correlation

Variables	n	M	SD	1	2	3	4
1. Coach-athlete relationship	129	61.5	10.5	-			.146
2. Stress	129	18.7	5.80	-0.13	-		-
3. Mindfulness	129	3.83	0.94	0.44**	-0.35**	-	-

Note. $p < .05$, $p < .01$

The Pearson correlation coefficient (r) between the coach-athlete relationship and stress levels is -0.13 as seen in table 2 which indicates a weak negative correlation suggesting that as the nature of the coach-athlete relationship improves, the stress levels of athletes tend to decrease slightly. The p-value for this correlation is 0.142 which implies that this relationship is not statistically significant at the 0.05 level rejecting the alternate hypothesis and accepting the null hypothesis. Therefore, there is not enough evidence to support the hypothesis of a significant relationship between the coach-athlete relationship and the stress levels of athletes.

Although the correlation is weak and not statistically significant, it associates with the notion that supportive and healthy social environments can help reduce stress levels (Arnold, Fletcher & Daniels, 2013). Nonetheless, other factors like personal coping mechanisms, external pressures and individual

differences can also have a major impact in influencing athletes' stress levels. In order to create a more encouraging atmosphere that may indirectly support in stress management, coaches should continue to work to keep the connections with athletes positive (Pensgaard et al., 2018). The results are in some ways consistent with other studies showing that social support can be helpful in stress management, but the benefits can be complicated and impacted by a number of circumstances (Gustafsson et al., 2015).

The Pearson correlation coefficient (r) between the coach-athlete relationship and mindfulness is 0.44 as seen in table 2 which indicates a moderate positive correlation suggesting that as the quality of the coach-athlete relationship improves, the mindfulness of athletes tend to increase. The p -value of less than 0.001 suggests that this relationship is statistically significant at 0.05 level accepting the alternate hypothesis and rejecting the null hypothesis. Therefore, there is strong evidence to support the hypothesis that there is a significant relationship between coach-athlete relationship and mindfulness of athletes.

According to prior studies, a healthy coach-athlete relationship inclusive of mutual respect, trust, and commitment can foster a supportive environment that supports mindfulness. This finding confirms that positive interpersonal relationships in sports settings can improve psychological outcomes, including mindfulness. Active listening, constant feedback, and genuine care for athletes' well-being are all ways that coaches may cultivate strong and supportive connections with their athletes and help them become more mindfulness. The findings are in alignment with a study by Iwasaki et al., (2021), which discovered that athletes who are in a supportive, task-involving environment are more coachable and mindful.

The Pearson correlation coefficient (r) between stress and mindfulness is -0.35 as seen in table 2 which indicates a moderate negative correlation suggesting that as mindfulness increases, stress levels tend to decrease. On the other hand, as the stress levels increase, mindfulness tends to decrease. The p -value of less than 0.001 signifies that the relationship between stress and mindfulness is statistically significant at the 0.05 level which rejects the null and accepts the alternate hypothesis. Therefore, indicated strongly to back up the alternate hypothesis that there is a significant relationship between stress and mindfulness in athletes.

This finding contributes to the idea that practicing mindfulness could assist in alleviating stress. Athletes can mitigate the effects of stress by practicing mindfulness, which keeps them focused on the here and now. Athletes could benefit from implementing mindfulness training programs to lower stress and improve general wellbeing. Sports psychologists and coaches have to think about adding mindfulness activities to the training programmes. The results are in compliance with a substantial amount of research that has demonstrated the benefits of mindfulness in athletes' psychological well-being and stress reduction (Gross et al., 2018; Sappington et al., 2015).

The results' analysis sheds important light on the relationships between stress, mindfulness, and the coach-athlete connection. Although mindfulness is greatly increased by a solid coach-athlete relationship, it is unclear how this relationship directly affects stress. Nonetheless, the strong inverse relationship between stress and mindfulness emphasizes how mindfulness exercises may improve athletes' wellbeing. The overall goal of enhancing athletic performance and mental well-being can be continued by using these findings to guide coaching methods and athlete support programs.

4. Conclusion

This study added significant knowledge to the body of literature on sports psychology by examining the connections between athletes' mindfulness, stress, and the coach-athlete relationship. Stronger, healthier connections with coaches may raise athletes' mindfulness levels, according to findings that show a

somewhat favourable link between mindfulness and the coach-athlete relationship. It inclines towards the study that emphasizes the value of supportive interpersonal interactions for encouraging attentional awareness and psychological well-being (Gardner et al., 2004; Jowett, 2017).

However, the correlation between stress and the coach-athlete relationship was not statistically significant, despite having a minor negative correlation. This suggests that although having a good connection with a coach may have some stress-reduction benefits, it could not be sufficient on its own to dramatically lower stress levels. The substantial inverse relationship between stress and mindfulness supports the notion that greater mindfulness can serve as a stress-reduction strategy. This finding is consistent with other research that emphasizes mindfulness as a crucial stress-reduction strategy for athletes (Brown et al., 2003; Gross et al., 2018).

All things considered, the study emphasizes how crucial it is to promote positive coach-athlete interactions and mindfulness exercises in the sporting setting. These elements may improve athletes' performance and resilience in high-stress sporting situations in addition to promoting their mental health.

In summary, this study enhances knowledge of the complex relationships of stress, mindfulness, and the coach-athlete relationship. It offers a starting point for more study and useful applications that can improve the mental and emotional health of athletes. Athletes may attain maximum potential on and off the field with the help of coaches, sports psychologists, and athletic organizations who cultivate strong coach-athlete relationships and integrate mindfulness techniques into training.

The results emphasize how crucial it is to develop positive and encouraging interactions between coaches and athletes. Training that emphasizes developing mutual respect, trust, and open communication with athletes may be beneficial to coaches as it can foster a good atmosphere that promotes mindfulness and may even lower stress levels. Improving relationship-building and emotional intelligence skills may be essential to improving coaches' influence on athletes.

Considering the strong inverse relationship between stress and mindfulness, it may be quite advantageous to incorporate mindfulness training into sports programs. Athletes may learn techniques like body scans, breathing exercises, and mindfulness meditation to help them focus on the here and now, manage stress, and enhance their emotional control. Athletes' performance and resilience may be improved by such training, particularly in high-stakes, high-stress situations (Sappington et al., 2015).

The results highlight how important it is for sports organizations to have mental health support networks. Even while physical fitness is frequently given priority, mental health is just as important for peak performance. Support networks that prioritize mental and physical health may help athletes develop in a balanced way. This study backs up the increasing focus on holistic athlete development, which include coping mechanisms and mental health in addition to performance measurements and physical skills.

This study opens the door for more investigation into the psychological effects of the coach-athlete interaction. Forthcoming studies might investigate the long-term influence of various coaching philosophies, such as autonomy-supportive vs controlling techniques, on stress and mindfulness. A deeper comprehension of the all-encompassing benefits of coaching may also be possible by investigating how the quality of the coach-athlete relationship affects other psychological outcomes inclusive of motivation, self-esteem, and resilience.

The correlational design of this study restricts the capacity to draw conclusions about causality. Although the study found relationships between the factors, it was unable to determine whether a healthy coach-athlete relationship directly improves mindfulness or lowers stress. To investigate these interactions over time and comprehend causative processes, longitudinal research is required.

The results may not be as applicable to athletes from different cultural backgrounds because the sample was limited to athletes who lived in India. Cultural variations can affect how stress is perceived as well as how coach-athlete interactions work. A more thorough knowledge of these processes in various cultural contexts could be possible with more research with a variety of people.

Although the coach-athlete relationship, stress, and mindfulness were the main focus areas of this study, additional elements including the personality features of the athlete, coping mechanisms, and peer and familial social support may also be important. Future studies that incorporate all of these variables may be able to paint a more complete picture of the variables affecting athletes' stress levels and mindfulness.

By encouraging feedback, keeping lines of communication open and honest, and devoting attention to their athlete's problems and ideas, coaches should concentrate on building strong connections with their athletes. Establishing trust and respect is essential, and coaches may do this by really caring about their athletes' wellness on and off the field. Since acknowledging athletes' efforts and accomplishments may greatly increase their drive and confidence, it is also crucial to provide them with ongoing support and encouragement.

Athletes may enhance their awareness and stress management by including mindfulness exercises into their training regimens. Regular practice sessions might incorporate breathing techniques, body scans, and mindfulness meditation by coaches. Coaches could also provide an example of mindfulness by being composed, present, and controlling their emotions under pressure. Coaches' relationship abilities may be improved by cultivating emotional intelligence through training and workshops, which will help them better control their emotions and relate to athletes.

By offering resources for assistance with mental health, such as availability of sports psychologists and mindfulness professionals, sports organizations may work to provide a positive atmosphere. It might also be helpful to plan training sessions on mindfulness, stress management, and fostering a good relationship between coaches and athletes. It is essential to create holistic development programs that take into account the mental, emotional, and physical components of athletes' performance.

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