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## The Mediating Effect of Coping Styles on the Optimism Athletic Performance Relationship among Track and Field Athletes

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### INTRODUCTION:

Spot participation powers all aspects of an individual's make up and help him/her in accomplishing composure, balance and courage. It also helps the individual in inspiring his spirits, rejuvenating inner sources of faith, mastering the skills and meeting the challenges of modern life with ease and calmness. Even though many factors are found to affect athletic performance, no study has clearly shown which factor better predicts performance, which is a clear indication of some mediating factors affecting sport performance.

The history of sports in India dates back to the Vedic era. Even though Indian athletics has witnessed improvements in terms of facilities and infrastructure, the general standard of competition still has scope for a lot of improvement. At this juncture comes the role of sport psychology. Many Psychological factors influence an individual's participation in sports. Some of them have a direct effect while some others act as mediators or moderators. An insight into how all these psychological constructs function in sport and physical activity is much important to sports psychologists. Generating such knowledge will have practical implications for coaches, players and trainers.

Athletic performance is an expression that is distinct from many of the broader sports science concepts, such as health, fitness, or longevity. Athletic performance describes the efforts made by an athlete to attain specific performance objectives over a period of time. The natural talent or fitness of the athlete will impact the level of performance. "Athletic performance is operationally defined as Carrying out of specific physical routines or procedures by one who is trained or skilled in physical activity, influenced by a combination of physiological, psychological, and socio-cultural factors". All athletes ultimately measure performance by their own standards. Performance is usually regarded as an aggregation of individual results, such as performance over a month, or a season of competition, as opposed to a single or isolated activity. Athletic performance includes not only the assessment of a particular result, but also the concept of recovery;

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how quickly an athlete can return to the regular training or routine is an important performance factor, as recovery will dictate how the athlete is able to prepare for the next event.

Athletes are forced to cope with the stresses that arise from competing head-on with others in activities that are important to the athletes and to others, such as parents, coaches, and peers. Some athletes learn to cope successfully with these stresses, and for them sports are enjoyable and challenging. Others who are unable to cope find sport participation to be a stressful and threatening experience. Coping is defined as an individual's cognitive, emotional, and action tendency efforts to manage specific external and/or internal demands. (Crocker, Kowalski & Graham, 1998; Lazarus, 1999). According to Lazarus & Folkman (1984) "coping" should be viewed as a process which is dynamic, depending upon the individual's evaluation of a given situation. But inappropriate and unproductive coping styles have been found to have a variety of harmful outcome, such as adjustment difficulties and health problems on the athlete (Nicolotti, Elsheikh and Whiteson, 2003). The sub variables in coping styles in this study include both positive and negative coping strategies. Carver, Scheier, and Weintraub (1989) have found a positive association between acceptance and optimism and self-esteem . A disposition or tendency to look on the more favorable side of events or conditions and to expect the most favorable outcome. Individuals with an optimistic explanatory style consistently outperform those with a pessimistic explanatory style. [Seligman, (1990); Hanrahan & Grove (1990)]. Evidences indicate that optimism enhances motivation, persistence and performance (Carver & Scheier, 2002b). Gordon and Kane (2001) found a highly significant positive relationship between optimism and performance. They also found that people with an optimistic attribution style not only try harder, but may actually enhance their performance after receiving negative feedback.

A study by Parnabas, Mahmood, and Ampofo-Boateng (2009) on cognitive, somatic and negative coping Strategies among Malaysian athletes examined the relationship between competitive anxiety and coping strategies among athletes of different levels of representation in Malaysian sports. The results showed that national athletes used the highest level of cognitive strategies and district level athletes used the highest level of negative coping strategies. There was also a negative correlation between cognitive coping strategies, and cognitive anxiety. Athletes, who used the highest levels of cognitive, somatic or negative coping strategies, achieved the highest performance in sports. Kraaij, Garnefski and Schroevers (2009) in their article on coping, goal adjustment and positive/negative affect reported that, positive ways to handle stress, were related to positive affect, while negative ways to deal with stress were related to negative affect. Cognitive coping strategies seemed to have a stronger influence on affect than the behavioral coping strategies. Anshel and Gangyan (2008) in the article "Coping Styles Following Acute Stress in Sport Among Elite Chinese athletes" lent support to the transactional coping theory that coping style is a

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function of the type of stressful event. Jani and Daroji (2005) examined coping strategies responses employed by school athletes to manage stress. Findings indicated that males use higher percentage of coping strategies in both emotion-focused and problem-focused coping than females in managing stress. It was found that the subjects have little knowledge or skills in managing stress. The results imply that coaches at schools should handle a psychological skills training programme and identify the sport specific nature of coping stress that will be useful for developing athletes performance.

Prakash and Koplun (2003) in their article on “Shy Skaters Shyness, Coping, and Adjustment Outcomes” revealed that shyness was associated with increased somatic (physiological) anxiety prior to competitive performance. The results revealed that coping style acts as a protective factor against the potential negative outcomes associated with shyness in the realm of athletics.

Goyen and Anshel (1998) examined different sources of acute stress and related coping processes following stressful events in competitive sport. Males used problem-focused coping and females used emotion focused coping after the stress. Therefore there is a need for coaches and parents to be careful in their communication style when providing critical feedback on performance. In addition, since younger athletes use maladaptive coping skills more often than older competitors, they are more susceptible to both acute and chronic forms of stress in sport.

Evidences indicate that optimism enhances motivation, persistence and performance (Carver & Scheier, 2002b). People who view desired outcomes as attainable continue to exert efforts at attaining those outcomes, even when doing so is difficult. When outcomes seem sufficiently unattainable, people reduce their efforts and eventually disengage from the pursuit of goals. From this notion, outcome expectancies between two different types of behavior develop. Evidence indicated that optimism enhances motivation, persistence and performance and the ability to strive for success and persistence in the face of failure is associated with many forms of achievement motivation (Carver & Scheier, 2002a). Problem-focused coping and emotion-focused coping capture individual differences in characteristic ways of dealing with stress. They are also known as ways of coping or styles of coping and they have implications for performance outcomes (Skinner & Zimmer-Gembeck, 2007).

At the team level, Gordon and Kane (2001) conducted a study analyzing optimism and performance in the game of soccer. The results revealed a highly significant positive relationship between optimism and performance. The performance of pessimistic soccer players varied as a function of the teams’ performance (i.e., when the team was winning these players performed well, but their performance was worse in losing matches). The results supported the hypothesis that people with an optimistic attributional style not only try harder, but may actually enhance their performance after receiving negative feedback.

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Seligman, Nolen-Hoeksema and Thornton (1990) in studying swimmers, showed optimistic swimmers used the negative feedback to motivate their actions and swim significantly faster on their second trial, whereas pessimistic swimmers used the negative feedback to further depress their actions, resulting in slower times. They also found that pessimistic swimmers achieved more unexpected poor performances during competition than optimistic swimmers and pessimistic swimmers who performed less well than expected on the first trial, performed worse on additional trials. Optimistic swimmers who performed less well than expected, performed significantly better on additional trials. Gordon and Kane (2002) examined how attributional style affects motivation, and subsequent athletic performance. Kane (2002) found positive relationship between optimism and athletic performance. Their data also suggest that optimists maintain motivation and performance during losing games, whereas pessimists' performance deteriorates under such circumstances. Rudski (2004) found optimism to be positively and pessimism to be negatively related to religiosity. Pessimism was also positively related to the superstitious beliefs.

Optimism is a style of reasoning about cause (Buchanan & Seligman, 1995). Optimists attribute good events with permanence (likely to recur), pervasiveness (the 'goodness' will extend to other future events) and internality (I caused it and can cause it again). Researches suggests that optimism is important in coping with difficult life events. Optimism has been linked to better responses to various difficulties, from the more ordinary transition to college (Brissette, Scheier, & Carver, 2002) to the more severe coping with missile attacks (Zeidner & Hammer, 1992). Optimism appears to play a protective role, assisting people in coping with unusual trying incidents. Also, optimism has been found to correlate positively with life satisfaction and self-esteem (Lucas, Diener, & Suh, 1996). Segerstrom and Sephton (2010) found that changes in optimism would predict changes in positive affect. Optimists are also able to recover from disappointments more quickly by attending to positive outcomes to a greater extent than negative ones. Litt and colleagues (1992). Optimists are also more likely to engage in problem solving when faced with difficulties, which is itself associated with increased psychological well-being (Taylor et al., 1992). Optimists also tend to accept the reality of difficult situations while also framing them in the best possible light (Carver et al., 1993). Aspinwall & Taylor (1992) found that Optimism at the beginning of college predicted a smoother, psychologically healthier transition to college life, as well as larger groups of new friends. Tamara & osin (2013) after studying optimistic attributional style found that optimism mediated the relationship between academic achievement and self esteem and success expectations predicted actual performance. Success expectations, in turn, were predicted by optimistic attributional style for positive events.

These reviews support the hypothesis that people with an optimistic attributional style not only try harder, but may actually enhance their performance after receiving negative feedback, whereas pessimists perform worse than optimists.

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### **Need and significance**

The present study focuses on adolescent athletes as its target group. Youth, in any society, is the future of that society. The lessons taught to the youth of today will be with them for the rest of their lives. Competition teaches more than just how to win and lose, it teaches a person how to win with class and at the same time be gracious in defeat. It promotes respect for opponent and teammates. All of these traits can be beneficial in every aspect of life, not just in the sporting arena. Therefore focusing on young adults has a high relevance in facilitating national development.

Coping Skills play a very important role in the athlete's future performance. Obtaining information about the nature and application of coping strategies used by athletes has special appeal for practitioners in sport psychology because it offers a foundation for interventions. An optimist is someone who "finds opportunity in every difficulty." This principle is particularly true in athletics. Much research has shown that athletes and teams that have an optimistic interpretation of their performance (especially after losing) will consistently outperform those who view their performance and losses from a negative, pessimistic perspective.

Researchers need to explore main, interaction and mediation effects to produce one or more complete models for performance enhancement. In sports, hundredths of a second or tenths of an inch is important for the athlete because it separates the champions from the mediocre athletes. Therefore athletes and coaches need to understand how these variables affect athletic performance and these variables need to be given attention in developing training strategies, so that they take their game to the next level and further improve performance standards.

### **AIM**

The present study aims to explore the relation between the variable Optimism, Athletic performance, and Positive coping. This study also verifies the mediating effect of positive coping on the relationship between Optimism and athletic performance.

### **METHODOLOGY**

The methodology part outlines the way the research problem has been formulated and the procedures adopted to verify the problem.

**Sample :** The sample included 148 athletes randomly chosen from different schools and colleges in Kerala participating in district state and national levels under the age range of 16-19.

**Athletic performance** – This was measured by converting the obtained data to standard t scores. Some of the events (Sprint events) were measured in terms of time and Jump and throw events were measured in terms of distance. Hence the obtained raw scores were converted to

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standard t scores and when the improvement was in terms of reduction in time, the obtained score was reversed to make it positive.

**Tools used for the study-** The Life Orientation test Revised, developed by Scheier, Carver, & Bridges, (1994). The test retest reliability ( $r = .68$ ) and the internal reliability (Cronbach's alpha = .78) are sufficient for the uni-dimensional use of LOT-R. Correlations between the LOT-R and related measures were found to be not too strong.

The Cognitive emotion regulation Questionnaire Nadia Garnefski, Vivian Kraaij and Philip Spinhoven (2001). All nine coping strategies were measured by four items on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always). Research indicated that the reliability and validity coefficients of the scale ranged from 0.81 to 0.85, except for catastrophizing which had an alpha-coefficient of 0.64.

Statistical analysis- The analysis was done using SPSS version 20. The main analyses used were Regression analysis for finding predictor variables and Sobel test was done as a confirmatory test.

### RESULTS AND DISCUSSION

Through the present study the investigator tried to verify the mediating effect of coping style on Optimism performance relationship. The obtained data were scored and analyzed properly to draw a meaningful inference. The found results are discussed in the following sessions. In order to test the mediation effects proposed in this study, Baron and Kenny's (1986) linear regression method was used. To verify the existence of a mediation effect, the following conditions were satisfied. The predictor variable should affect the mediator variable in the first regression equation, the predictor variable should be affected by the dependent variable in the second equation and the mediator variable should affect the dependent variable in the third regression equation.

Table 1 : *Hierarchical regression Predicting performance from Optimism and Positive coping*

Model	Predictors	$\beta$	$R^2$	$\Delta R^2$	$F$	$\Delta F$
1	Optimism	.328*	.108	.108	17.594*	17.594*
2	Optimism	.174	.171	.064	15.002*	11.182*
	Positive coping	.296*				

\*  $p < .01$

Results of the regression analysis presented in the table 1 indicate that Optimism is found to be a significant predictor of performance in the first hierarchy,  $\beta = .328$ ,  $p < .01$ , Model 1. But, the significance of optimism  $\beta = (.174$ ,  $p > .05$ , Model 2) was reduced while including Positive coping ( $\beta = .296$ ,  $p < .01$ , Model 2) as another significant predictor in the second hierarchy. Introduction of positive coping explain an additional contribution of 6.4 percentages of changes in the performance ( $\Delta R^2 = .064$ ). This change indicates a possibility of medication effect of Positive coping on the relationship among Optimism and performance.

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Further Confirmation of mediation effect was done testing the present model using Sobel test (Sobel, 1982). The purpose of this test is to verify whether a mediator carries the influence of an independent variable to a dependent variable. The reason for complementing this analysis with this methodology is that it permits evaluating more directly the indirect effects, and may be regarded as a complementary analysis of the mediation steps proposed by Baron and Kenny (1986). Sobel Test is also characterized as being a restrictive test, and as so, assures that the verified results are not derived from collinearity issues.

Table 2: Table indicating the 'z' value obtained from the Sobel test

	Coefficient	Standard error	'z' value
Effect	0.668	0.221	3.023*
* P < .05			

In the present study, the test value verified was ( $Z= 3.023$ ;  $p=0.002$ ) significant at 0.01 level. This indicates a perfect significant mediation effect of coping style on optimism- performance relationship.

Optimism is a disposition or tendency to look on the more favorable side of events or conditions and to expect the most favorable outcome. Individuals with an optimistic explanatory style consistently outperform those with a pessimistic explanatory style. [Seligman, (1990); Hanrahan & Grove (1990)]. Optimism enhances motivation, persistence and performance (Carver & Scheier, 2002b). People who view desired outcomes as attainable continue to put in efforts to attain those outcomes, even when doing so is difficult. Fry (1995) found that optimists appraised daily hassles differently than did pessimists and optimistic women expected gain or growth from such events reflecting the use of positive coping strategies.

According to Lazarus & Folkman (1984) "coping" should be viewed as a process which is dynamic, depending upon the individual's evaluation of a given situation. An optimist always evaluates the situation in a more favorable manner and use positive strategies to cope with the situation. Evidences also indicate that people with an optimistic attributional style not only try harder, but may actually enhance their performance after receiving negative feedback (Gordon and Kane, 2001). Positive Coping styles are predictive of lower levels of worry, anxiety, and stress, which, help the person in attaining personal growth (Carver et al., 1989) and are positively associated with self-esteem, and negatively related to anxiety (Garnefski et al., 2001). people who are optimistic may take active steps to ensure the positive quality of their future. This would be much the same as engaging in problem-focused coping, except there is no particular stressor threatening the person. Therefore it is possible that a person with an optimistic explanatory style makes use of positive coping strategies which leads to better performance.

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### CONCLUSION

Positive coping styles are found to mediate the Optimism Performance relationship. Which means that when individuals are optimistic they tend to use positive coping strategies which indirectly results in better performance.

### IMPLICATIONS

This study implies that people who are optimistic tend to use positive coping strategies like acceptance, positive refocusing, positive reappraisal and refocus on planning more frequently. The cumulative effect of using positive coping strategies in a range of problem situation would lead to better athletic performance. An important foundation of this study relates to the proposition that optimism and coping styles could be taught in a more direct fashion than personality or intelligence. Hence interventions to enhance optimism and to teach positive coping skills at an early age should be done so that athletes instead of using maladaptive coping skills make use of positive coping skills. This could reduce susceptibility to both acute and chronic forms of stress in sport. Coaches also need to identify the sport specific nature of coping mechanisms, which will be useful for developing the athlete's performance.

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