

A Comparative Study of Span of Attention between Elite and Sub-elite Male Soccer Players

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Abstract: The objective of the present study was to comparatively assess the span of attention in elite and sub-elite male soccer players. To conduct the study, 50 elite male soccer players were selected. These elite players were chosen based on specific criteria: they had to be part of the top three ranked teams in the national level tournament. The age range for the selection of elite male soccer players was set between 18 and 25 years old. Similarly, 50 sub-elite male soccer players were selected from the bottom three ranked teams in the same tournaments. The process of selecting these players involved purposive sampling. The span of attention in male soccer players was evaluated through a Falling Door Tachistoscope. reveals that elite male soccer players got higher mean score on span of attention as compared to sub-elite male soccer players. The mean difference between two groups is 0.98 and the t-value was 2.29 giving evidence that elite male soccer players possess significantly ($p < 0.05$) longer span of attention as compared to sub-elite male soccer players. Based on results, it was concluded that the span of attention in elite male soccer players was significantly greater as compared to sub-elite male soccer players, thereby enabling elite male soccer players to keep track of movements in the field more meaningfully and able to execute tactical measures smoothly.

Keywords: Span of attention, soccer, elite, sub-elite

INTRODUCTION

James (1890) defined attention as a selective process in which a person focuses on some specific information and omits other stimuli, thereby enabling superior cognitive processing and its resulting actions. Attention also requires integration of sensory information so that accurate perception about the environment can be formed (Taghizadeh et al., 2015). Attention has been the central core of cognitive psychology since the advent of the Stroop effect (1930). Attention is crucial in planned motor movements, which require accurate formation of mental representations (Prinz, 1990). In sports settings, irrespective of its nature, attentional focus is key to performance, especially in motor skills, in which attention affects acquiring a skill and then retaining it to perform complex motor skills. Hence, attention is crucial in performance

outcomes, i.e. expertise in motor skills (Moran, 1996). Schefke & Gronek (2010) consider attention as a cognitive process which directs focus to a specific situation or stimulus. They also give a word mental flexibility, which means shifting attention across different situations, actions or stimuli.

In sport, attentional focus is considered an important factor in motor skill learning and has been widely recognised as a key contributor to optimal performance (Wulf, 2013). Accordingly, attentional focus is regarded as a meaningful variable for enhancing the acquisition of complex motor skills and improving performance, particularly in youth athletes.

Sustained attention is a critical skill in soccer because it enables players to maintain concentration, awareness, and performance throughout the entire match. It supports decision making, tactical execution, anticipation, defensive reliability, and offensive effectiveness. Players who can sustain attention despite fatigue and pressure are more likely to perform consistently and contribute positively to team success.

In soccer, the role of cognitive abilities on performance has been analysed extensively but span of attention in elite male soccer players has not been studied so far, hence the present study was planned.

REVIEW OF LITERATURE

Gumusdag et al. (2025) studied the importance of attention, memory and ability to pinpoint the relevant information on decision-making in athletes. It was found that attention and memory aid athletes to prioritize tasks and help in making decisions. Memory recall was instrumental in dealing with complex situations during play. It was concluded that cognitive functions are key to athletic success in making informed decisions.

Singh and Anil Kumar (2024) compared the cognitive performance of strikers and midfielders from intercollegiate soccer teams. The study concludes that cognitive abilities across playing positions in soccer remain the same.

Ghasemzadeh and Saadat (2023) synthesized a decade-long work on the application of cognitive psychology in sports. Major databases were screened to select peer-reviewed research articles. They concluded that applying cognitive psychology is a highly effective way to elevate athletic performance to new heights.

Lundgren et al. (2018) in their study of elite and successful soccer players, reported that elite players employ a specific visual search strategy which comes from superior creativity, and this enables them to assess the situation more meaningfully.

Roca et al. (2018) reported that soccer players with stronger cognitive abilities are more capable of directing their attention toward important game-related cues while filtering out irrelevant distractions.

Lopez et al. (2016) in this study reported that skilled martial artists demonstrate superior sustained attention, showing faster, more effective allocation of attentional resources during early cognitive processing compared to novices.

OBJECTIVE OF THE STUDY

The objective of the present study was to comparatively assess the span of attention in elite and sub-elite male soccer players.

HYPOTHESIS

H₁ Elite male soccer players will demonstrate significantly greater span of attention compared to sub-elite male soccer players.

METHODOLOGY

Sample :

To conduct the study, 50 elite male soccer players were selected. These elite players were chosen based on specific criteria: they had to be part of the top three ranked teams in the national level tournament. The age range for the selection of elite male soccer players was set between 18 and 25 years old. Similarly, 50 sub-elite male soccer players were selected from the bottom three ranked teams in the same tournaments. The process of selecting these players involved purposive sampling.

Tools

Span of Attention Test

The span of attention in male soccer players was evaluated through a Falling Door Tachistoscope. It was originally devised by Volkmann in 1959, and its modified version is used

in this study. With the help of this instrument, the span of attention is assessed through words and letters. 20 meaningful and 12 non-meaningful are shown to the players. As soon as the card is displayed, the subject needs to report it immediately. Number of correct responses were noted and gives span of attention score of the subject. This test is highly reliable and valid.

Procedure

A total of 100 national-level male soccer players were selected using purposive sampling from a national tournament. The elite group consisted of 50 players drawn from the top three ranked teams, while the sub-elite group included 50 players from the bottom three ranked teams of the same competition. The Span of Attention Test was administered to assess the players' performance, and their responses were scored quantitatively. Based on the obtained scores, the players were categorized into three levels of decision-making ability—high, average, and low. These normative classifications were established using the Mean \pm 1 Standard Deviation criterion. The results are presented in Table 1.

RESULT AND DISCUSSION

Table 1: Comparative Data on Span of Attention of Elite and Sub Elite Male Soccer Players

Groups	Span of Attention		Mean Diff.	't'
	Mean	S.D.		
Elite Male Soccer Players (N=50)	13.82	2.19	0.98	2.29 (p<0.05)
Sub-Elite Male Soccer Players (N=50)	12.84	2.08		

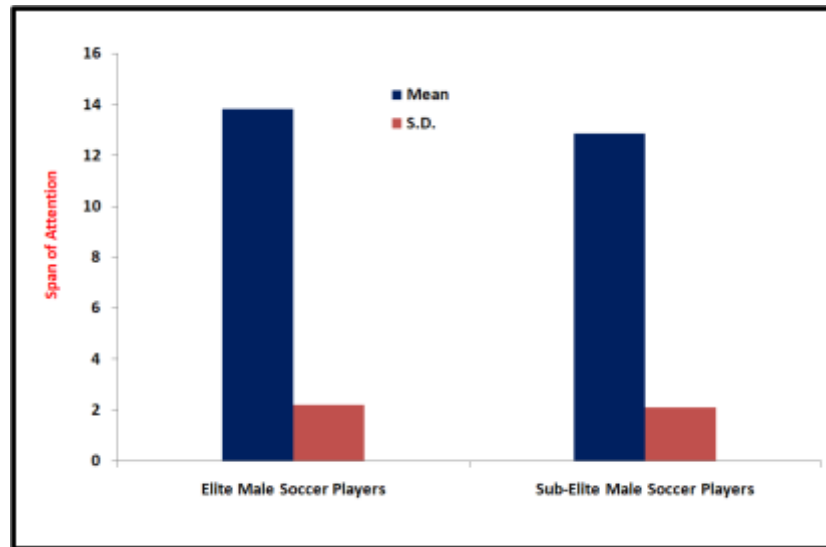


Figure 1: Comparative Bar Chart Showing Span of Attention in Elite and Sub-elite Male Soccer Players

The results given in Table 1 reveals that elite male soccer players got higher mean score on span of attention as compared to sub-elite male soccer players. The mean difference between two groups is 0.98 and the t-value was 2.29 giving evidence that elite male soccer players possess significantly ($p < 0.05$) longer span of attention as compared to sub-elite male soccer players. In soccer, the span of attention determines how many moving variables/objects (ball, space between players, opponents, teammates) an athlete's brain can process simultaneously without losing focus on the ball. Hence, a soccer player with a greater span of attention can track a ball while simultaneously keeping track of players comes within his peripheral vision. Lopez et al. (2016) also reported superior sustained attention in skilled martial art athletes.

CONCLUSION

Based on results, it was concluded that the span of attention in elite male soccer players was significantly greater as compared to sub-elite male soccer players, thereby enabling elite male soccer players to keep track of movements in the field more meaningfully and able to execute tactical measures smoothly.

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