



## REVIEW OF LITERATURE ON COMPARISON OF CO-ORDINATIVE ABILITIES, ADJUSTMENT AND SELF-CONCEPT OF VOLLEY BALL PLAYERS AT DIFFERENT LEVELS OF PERFORMANCE

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**Abstract:** In case of differentiation ability, no significant difference was found because Differentiation ability has a direct bearing on the performance game of Volleyball, Basketball and Handball. Differentiation ability enables the sportsman to perceive micro- differentiation regarding the temporal, dynamic, spatial aspect of movement execution and the differentiation can be in regard to an implement or movement like serve, movement serve, water feeling, etc. (Shondell Donald Stuart, 1972), and in these three-sports Differentiation ability is more or less same because as in case of Volleyball players have to pass the ball to other court so it the players have to ensure that they possess high degree of accuracy and economy of separate body movements and movement phases so that the energy is preserved till the game finishes. In games of Basketball and Handball also they have to score the basket or goal by aiming towards the target so it requires a great amount of accuracy and control that is why researcher get an insignificant result in Differentiation ability among these three sports. In case of Orientation ability significant difference was found in means of Volleyball, Basketball and Handball players. And it was also found that the difference of Basketball and Handball players have better Orientation ability than Volleyball players. It is because of the nature of the game as in Basketball and Handball players have to score and come back for defense and Orientation ability permits the sportsman to determine the position and movement of his own body and /or of a moving object (opponent, partner) with regard to space. (Shondell Donald Stuart, 1972) but in Volleyball players moves little as compare to Basketball and Handball that is why researcher found these results in Orientation ability.

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### Introduction:

The focus of attention's effects on motor performance and learning has been one of the main interests for sport psychologists, coaches and athletes. The majority of studies have shown that the performer's focus of attention has an important influence on the performance and learning of motor skills. Over the past 15 years, research on focus of attention has consistently demonstrated that an external focus (i.e., on the movement effect) enhances motor performance and learning relative to an internal focus (i.e., on body movements) (Wulf, 2013). At the highest levels of men's volleyball, the most crucial aspect of the game lies in a team's ability to serve effectively and receive the opposing team's serve successfully (Papageorgiou & Spitzley, 2003). There are many psychological variables such as cognitive strategies that can affect the server's performance in naturalistic volleyball environment. For instance, the attentional focusing such as serving to the

target zone, specific player, performing with 50,80 or 100 % of his/her power, or just send the ball on opponent court are strategies mostly used by coaches and athletes. Therefore, it seems to be necessary to study attentional strategies in volleyball jump serve.

The aim of this study was to examine the effects of different attentional focus on the performance of volleyball jump serve in the highly skillful players. The main finding was that in all used measures, far external focus of attention has important and more facilitative effects on performance. There has been extensive discussion into the issues of being both a researcher with knowledge of the participants and a participant in the research process (Atkinson and Hammersley, 1998). Additionally, there were some advantages of far external focus rather than non-instructional condition in terms of self-perception of the performance. The important thing to give a player is a level of success and confidence in

order to keep the player motivated (Lewthwaite and Wulf, 2010).

According to the nature of the volleyball jump serve, the accurate and effective serve requires more eye-hand coordination, efficient intra and intermuscle coordination, and greater force production. Jumping performance is supported by findings showing increased EMG activity under internal focus and control condition (Marchant, et al, 2006). An external focus has been shown to result in the increased accuracy and reduced EMG activity in basketball free-throw shooting (Zachry, et al, 2005), increased force production in a force production task (Marchant, et al, 2009), and eye-hand coordination in a speeded aiming task (Carpenter, et al, 2013) compared to internal focus. Some have questioned the value of an internal focus and suggest it may actually hinder performance (McNevin et al., 2003).

#### **Review of Literature:**

Reconnoitering the possibilities of Coordinative abilities, the mystery of body and mind has long occupied researchers within fields such as phenomenology, psychology and cognitive science. Coordination is the ability to repeatedly execute a sequence of movements smoothly and accurately. Co-ordinative abilities are also needed for maximum utilization of conditional abilities, technical skills and tactical skills. In Volleyball, technical and tactical skills, anthropometric characteristics and individual physical performance capacities are most important factors that contribute to the success of a team in competitions (Hakkinen, 1993). Coordinative abilities are the generalized psychometric performance prerequisites having the functions of movement control and regulation. Coordinative abilities enable the sportsman to do a group of movements with better quality and effect. (Pramanick P., 2011). The Coordinative ability is the core of ability, which is considered the "Spine of Motiveness" (Epuran M., 1996). Coordinative abilities are needed for maximal utilization of conditional abilities, technical and tactical skills (Singh 1991). The coordinative abilities to a great extent determine the maximum limits to which sport performance can be improved in several sports which depend largely on technical and tactical factors (Ruhel et al., 2010)

Motor learning process, continuous refinement and modification of sport skills to a large extent depends on the level of coordinative abilities. Amateur players in particular still have to invest most of their training time in technical and tactical training as well as in endurance and strength training, whereas coordinative training is not encouraged so much (Gstottner et al. 2009). A player's coordinative mastery over a sport technique can make him compete efficiently and effectively. Coordinative abilities become effective in movements only through the motor abilities and actively determined drives and cognitive processes (Hirtz 1985). In different

sports requirement of coordinative abilities differ and these abilities ensure higher economy of movement, whereas in some sports events they help in higher frequency of movement with high explosiveness and force application. In strength sports they help in putting maximum effort in a short time and at the right time. But, where the technique dominates the event, these abilities help in better learning, stabilization, variability and autoimmunization. Apart from performance improvement, in team games coordinative abilities ensure an effective use of tactical abilities in the continuous changing situations. (Lothar Kalb, 1979).

In a few studies, the effectiveness of different external focus of attention on performance has been examined (McNevin, et al., 2003; Bell and Hardy, 2009; MacKay & Wulf, 2012; Banks, 2012; Portrer, Anton, & Wu, 2012). McNevin et al (2003), was the first one who demonstrated the advantage of distal external focus by increasing the distance of the external focus from the body to markers on the stabilometer platform. They argued that a more distal focus made the movement effect more easily distinguishable from the body movements that create the facilitate effect more than a proximal focus. The results of follow-up studies confirmed this initial finding. For example, Bell and Hardy (2009) compared the effectiveness of three different focuses (internal, proximal external, and distal external) on pitch shots of skilled performers. Their results demonstrated greater accuracy in hitting balls when the focus was on the ball trajectory and landing point (distal) compared to the club (proximal). The results of Porter et al (2012) also showed that participants jumped farther when they focus on jumping as close as possible to a target (distal) than when they focused on jumping as far past the start lines as possible (proximal). McKay and Wulf (2012) examined the effectiveness of distal (the target) versus proximal (the flight of the dart) external foci of attention as a function of performers' preferences for a certain focus in novice dart throwing performance. Their study demonstrated that dart throwing accuracy was generally enhanced when participants adopted a distal focus, regardless of focus order or preference.

Handball demands and develops high degree of muscles coordination and skills, speed of feet, good vision and great agility. Coordinative abilities serve the formation of the overall movement from partial movements in a consistent and coordinated way. If these movements are coordinated, we can achieve the highest level of general motor coordination needed for the performance of motor skills, as they are considered general motor and psychological conditions for sports achievements through which an individual can control motor performances in all sports activities. (Ikeda Namiko, 1960). Basketball is a sport played between two teams normally consisting of five or more players. Each team

has five players on the Basketball court at any given time. The objective is to score more points than the other team, with points being scored by shooting a ball through a Basketball hoop (or basket), which is located ten feet above the ground. The two teams shoot at opposite goals. In order to move while in possession of the ball, a player must be dribbling, or bouncing the ball. The number of points awarded a player for successfully shooting the ball through his team's goal varies according to the circumstance. Volleyball is a complex game of simple skills. There are several contributing factors for getting Excellency in Volleyball game. The pattern of play in Volleyball demands high energetic body because of the nature of the movements performed in the game greatly dependent upon the agility, explosive power, endurance and well coordinative approach to show its best in the execution of Volleyball skills. Volleyball players require well-developed muscular strength, power and endurance, speed, agility, and flexibility, and have a high level of jumping ability, fast reaction time and swift movements (She, 1999).

Differentiation ability enables the sportsman to perceive micro- differentiation regarding the temporal, dynamic, spatial aspect of movement execution and the differentiation can be in regard to an implement or movement like serve, movement serve, water feeling, etc. Orientation permits the sportsman to determine the position and movement of his own body and /or of a moving object (opponent, partner) with regard to space. Better developed Coordinative ability provides an essential base for faster and effective learning, stabilization and variation in technique and their successful execution in game situation (Singh 1991). Therefore, researcher feel worthwhile to examine the differences in coordinative abilities among male Volleyball, Basketball and Handball players.

Gortsila, Eugenia (2013) conducted a study to find out the effect of training surface on agility and passing skills of prepubescent female volleyball players. To achieve this purpose, 45 prepubescent girls aged between 11 and 12 years were selected at random and they were divided into three equal groups namely Group S, Group I and Group C of 15 subjects each. Group S and I consisted of volleyball players and Group C (control group) consisted of girls that had no volleyball training experience. All the three groups participated in 10weeks ( three days/a week) of volleyball training programme that included of technical and passing skill exercises.

Sharma, Rajkumar (2013) conducted a study to find out the effect of sand training on jumping abilities of junior volleyball players. For this purpose, 30 volleyball players aged between 16 and 19 years from S.A.I. training centre, Rajnandgaon, Chhattisgarh were selected and they were divided into two equal groups of 15 subjects each. Groups-A underwent six weeks of sand training and Group-B acted as control groups.

Control group only practised technical and tactical skills of volleyball. Pre and post tests were conducted on selected dependent variables such as block jump (BJ), Spike Jump (SJ) and standing broad jump (SBJ) prior and immediately after the training respectively. Mean, standard Deviation and 't' test were used as a statistical techniques and significant was set at 0.05 level of confidence. The study was concluded that six weeks of sand training would significantly improve on vertical block jump, spike jump and standing broad jump among junior volleyball players

Karver, Alical Anne (2012) conducted a study on sand jump training versus ground jump training for volleyball players. For this purpose, 21 volleyball players aged between 14 and 18 years were selected from Northern California Volleyball club (NCVC), Rocklin, California. The subjects randomly assigned into two groups namely sand training group and ground training group. Sand training group underwent six weeks (two session/a week) training of various jumping exercises on sand court along with a grass surface. Ground training group underwent the same training on ground surface. Pre test and post test were taken on vertical jump prior and immediately after the six weeks of training. Two-tailed independent t-test was used to compare differences between the groups and two-tailed paired t-test was used to compare differences within the group. The study was concluded that six weeks of jump training programme significantly improved the vertical jump of participants in both sand and ground training groups and there were no significant differences between the groups.

**Conclusion:** The research reviews relevant to the sand training, offshore training, selected motor fitness, physiological and performance variables of this study were categorized and presented in this chapter. The above literature proves that there was a significant change in motor fitness, physiological and performance variables due to sand and offshore training. From the review of related literature, it was found that there was a scope for research in isolated and combined sand and offshore training on selected motor fitness, physiological and performance variables among inter collegiate football players.

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