REVIEW OF RESEARCH
IMPACT FACTOR : 5.7631(UIF) UGC APPROVED JOURNAL NO. 48514 ISSN: 2249-894X
VOLUME - 8 | ISSUE - 7 | APRIL - 2019

EFFECT OF SPECIFIC WORKOUT PROTOCOL ON SELECTED PSYCHOLOGICAL AND PERFORMANCE VARIABLES OF TRIBAL VOLLEYBALL PLAYERS OF BANKURA DISTRICT

Dr. Sumalya Roy
Assistant Professor and Head, Dept. of Physical Education,
Chatra Ramai Pandit Mahavidyalaya (Affiliated to Bankura University),
West Bengal, India.

ABSTRACT

This study investigates the impact of a specific workout protocol on the skill performance of Volleyball and psychological parameters of tribal male volleyball players, aged between 18-22 years of Bankura District, West Bengal. Thirty male tribal volleyball players were randomly assigned equally to experimental (n_1=15) and control (n_2=15) groups. The experimental group underwent a structured workout protocol regimen for a set period of six weeks. Pre- and post-intervention assessments were conducted for each of two volleyball performance variables, namely passing-reception accuracy and serving accuracy and for a psychological parameter termed self-confidence. Statistical analysis revealed significant enhancements in passing-reception accuracy, whereas serving accuracy was not significantly affected by the protocol. Furthermore, a notable increase in self-confidence was documented in the experimental group. The findings highlight that specific workout protocol not only fosters technical skill development for tribal volleyball players of Bankura District but also contributes positively to their confidence levels, underscoring the value of overall volleyball playing ability.

KEYWORDS: *Workout Protocol, Self-confidence, Tribal.*

INTRODUCTION

Bankura district is located in the western part of the Rar region of West Bengal, adjacent to Purulia district. It has a significant population of tribal people who have their own folk games, but most of their youth are particularly fond of football and volleyball. Volleyball is a high-intensity team sport that requires the proper application of all the components of physical fitness; on the other hand, correct demonstration of the various techniques used in the game situation in the right context is essential for success for overall excellence in the game. Psychological parameters are also an important factor in the success rate of competitive sports. Only a combination of physical fitness, proper application of techniques and psychological parameters can sustain success for a long time. Tribal people have their own unique specialities; their behaviours, practices, and customs are slightly different from others, which are completely consistent with their own culture. In the present era, sports facilities, competitive sports and modern technological sports equipment are gradually becoming available among the people belonging to this tribal community. Many tribal players lack access to structured training, which affects their competitive edge. However, there is limited research focusing on tribal populations, so this study aims to address that gap by implementing and assessing a tailored training programme focused on enhancing performance variables relevant to volleyball in the tribal populations.

The objective of the study was to determine the effect of a specific workout protocol on selected psychological and performance variables of tribal male Volleyball players of Bankura district. The

present study was delimited to a selected psychological variable, namely self-confidence, which holds a crucial role in determining sports performance. Among the numerous psychological constructs associated with athletic success, self-confidence was purposefully selected owing to its profound influence on an individual's performance, academic achievement, and overall career development. In terms of performance variables, passing accuracy, and serving accuracy were selected as they represent the most fundamental and relevant technical skills in volleyball. These variables play a pivotal role in establishing synchronisation and effective coordination among players during gameplay and enhancing the overall rhythm and flow of the game. The work protocol, which was applied to the treatment group also further delimited to six weeks for the feasibility of the study. Control over the daily life-habits, lifestyle and other individualised factors of tribal populations, which might have affected the result of the study, was considered as a limitation of the study.

METHODOLOGY:

The present investigation employed an experimental research design utilizing a pre-test–post-test with experimental and control group design to examine the effects of the intervention. For the purpose of this study, subjects were selected from various clubs and colleges in the Bankura district of West Bengal. A total of thirty male tribal volleyball players, aged between 18 and 22 years, who had participated in at least one district-level volleyball tournament, were recruited as subjects for the study. The subjects were randomly and equally assigned to two groups: the Experimental Group ($n_1 = 15$) and the Control Group ($n_2 = 15$). A pre-test was administered to both groups prior to the implementation of the specific workout protocol. The criterion measures included performance variables, Passing Accuracy, and Serving Accuracy, which were assessed using the AAHPER Volleyball Passing Test (1969), and AAHPER Volleyball Service Test (1969), respectively. On the other hand, the psychological variable Self-Confidence was measured by the Hardy and Nelson Self-Confidence Questionnaire (1992). Following the pre-test, the experimental group underwent a specific structured workout protocol for a duration of six weeks, comprising five workout sessions per week, each lasting ninety minutes. Specific work protocol which was designed with the combination of various types of exercises, yoga and game practice, with variation to avoid boredom in practising protocol. Table -1 refers to details about the work protocol with the time duration.

Table -1
Six-week work protocol

	15 min	**30 Minute**			**20 Min**	**15 Minutes**	**10 Min**
	General	*Specific*	*1st ,3rd ,5th week*	*2nd,4th ,6th week*	*Technique*	*Specific*	*General*
MON	Warm-up & stretching	Ladder Drills	Zig-zag Step	In-In-Out-Out	Game Practice	Meditation : i) Focused Attention Meditation ii) Mindfulness Meditation	Cooling down
			Lateral High Knees	Icky Shuffle			
			Ball Toss During Drill	Crossover Steps			
TUE	Warm-up & stretching	Plyometric Exercises	Squat Jumps	Lateral Bounds	Game Practice	Relaxing Yogasana i) Balasana ii) Paschimottanasana iii) Setu Bandha Sarvangasana iv) Makarasana	Cooling down
			Box Jumps	Tuck Jumps			
			Depth Jumps	Split Lunge Jumps			
WED	Warm-up & stretching	Balance Drill	Static Balance Drills	Reactive Balance Drills	Game Practice	Meditation: i) Visualisation Meditation ii) Mantra Meditation	Cooling down
			Dynamic Balance Drills	Core Balance Drills			
			Transitional Balance Drills	Proprioceptive Balance Drills			

THU	Warm-up & stretching	Wall Setting & Target Drill	Basic Continuous Wall Setting Drill	Side-to-Side & Front to Back Wall Setting	Game Practice	Relaxing Yogasana i) Viparita Karani ii) Marjariasana – Bitilasana iii) Supta Matsyendrasana iv) Baddha Konasana	Cooling down
			Target Zone Setting Drill	One-Hand Wall Setting Drill			
			Alternating Wall Setting Drill	Seated Wall Setting Drill			
FRI	Warm-up & stretching	Weight Training	Leg Press	Close-Grip Bench Press	Game Practice	Pranayama i) Nadi Shodhana Pranayama ii) Anulom Vilom Pranayama iii) Bhramari Pranayama	Cooling down
			Barbell Bicep Curl	Barbell Hip Thrusts			
			Good Mornings	Upright Row			

In contrast, the control group did not follow any assigned workout protocol and continued with their regular lifestyle and daily activities as usual. Upon completion of the experimental intervention, a post-test was administered to all subjects after a period of six weeks. To assess the effects of the workout protocol on the selected performance and psychological variables, a paired t-test was applied for statistical analysis, with the level of significance set at 0.05 ($p<0.05$).

RESULT AND ANALYSIS:

The results derived from the statistical analysis were systematically tabulated and presented in Table 2.

Table -2

Variables	Groups	Test	Mean	Standard Deviation	SEM	Mean Difference	't' Ratio
Passing Accuracy	Experimental	Pre	29.20	6.89	1.78	3.40	**5.38***
		Post	32.60	7.12	1.84		
	Control	Pre	29.60	5.82	1.50	0.07	0.37
		Post	29.67	5.67	1.46		
Serving Accuracy	Experimental	Pre	27.40	3.81	0.98	1.20	1.91
		Post	28.60	4.31	1.11		
	Control	Pre	26.20	3.10	0.80	0.20	0.48
		Post	26.40	2.50	0.65		
Self-Confidence	Experimental	Pre	18.67	1.88	0.48	1.86	**4.80***
		Post	20.53	1.96	0.51		
	Control	Pre	19.07	2.28	0.59	0.66	0.56
		Post	19.13	2.33	0.60		
		Tab t (14) = 2.14					

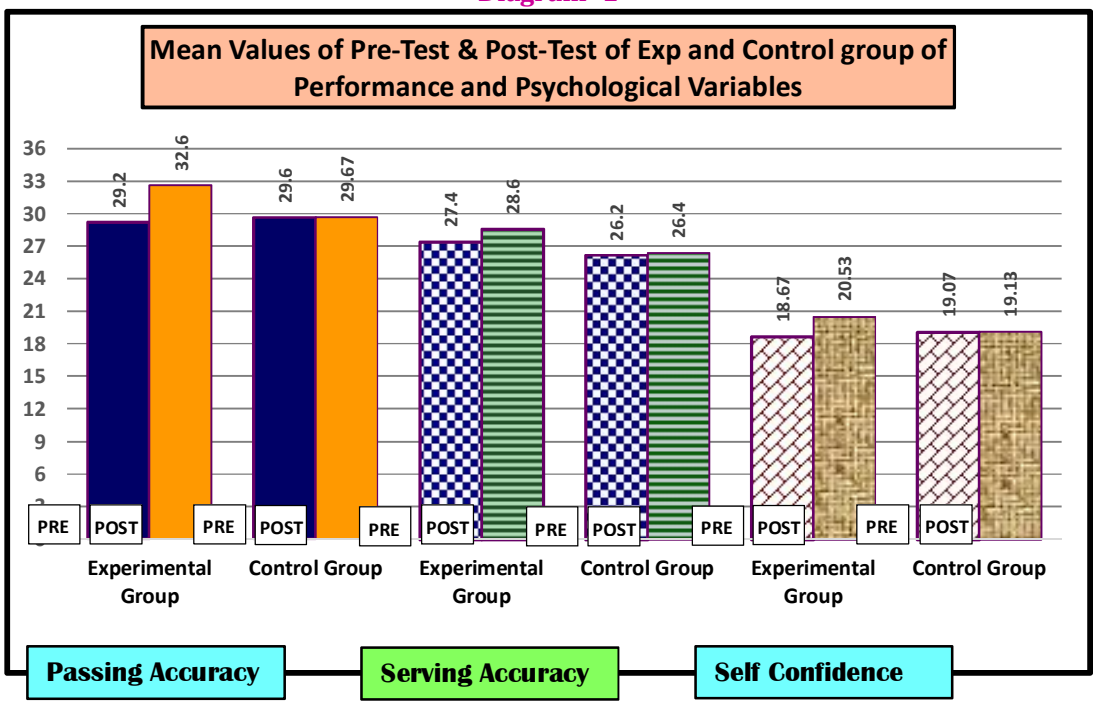
* Significant at 0.05 level of significance

Table 2 demonstrates that the obtained t-ratio of 5.38 for passing accuracy in the experimental group was statistically significant at the 0.05 level, as it is higher than the critical tab t-value of 2.14 required for significance. This finding indicates a substantial improvement in passing accuracy following the intervention. In contrast, the control group's t-ratio of 0.37 was below the critical threshold value of 2.14, suggesting no significant change in passing accuracy over the same level of significance. Similarly, the obtained t-ratios of 1.91 and 0.48 for serving accuracy in the experimental

and control groups, respectively, were both lower than the critical tab t-value of 2.14, indicating that the mean differences observed were not statistically significant at the 0.05 level. However, a significant positive effect of the intervention on self-confidence was observed in the experimental group, as evidenced by the obtained t-ratio of 4.80, which is greater than the tabulated t-value of 2.14. whereas the control group exhibited no significant change in self-confidence level, with a t-ratio of 0.56 falling below the threshold for significance.

A graphical representation in Diagram 1 also clearly represents the mean value of Pre-Test and Post-Test of Experimental and Control group of Passing Accuracy, Serving Accuracy and Self-Confidence variables, which helps to reveal the effect of the work protocol on selected performance and psychological variables more easily.

Diagram -1



DISCUSSION AND INTERPRETATION:

The results of the study clearly indicate that the 6-week Specific Work Protocol produced a significant positive effect on passing accuracy and self-confidence, whereas serving accuracy remained unaffected. This divergence can be explained by the differing motor demands of the two skills. Passing accuracy in volleyball is a complex motor ability that depends on the coordination of multiple body segments, postural stability, and efficient kinetic chain functioning. The protocol, which combined ladder drills, plyometric exercises, balance training, weight training, and yogic practices, effectively targeted the motor fitness components most relevant to passing performance—namely, agility, power, coordination, and balance. Consistent with previous research, balance drills enhance proprioceptive control and postural stability, thereby supporting more precise ball handling and movement efficiency. Likewise, weight training strengthens the core musculature and joint stabilizers, promoting improved neuromuscular control and directional accuracy. The inclusion of Yogasana and Pranayama further contributed to improved autonomic regulation, respiratory efficiency, and fatigue management, enhancing recovery and sustaining performance. Plyometric and resistance training induced neuromuscular adaptations such as increased motor unit recruitment and synchronization, which are critical for the explosive actions characteristic of volleyball. From a psychological perspective,

meditation and pranayama enhanced focus, emotional stability, and stress regulation, fostering mental clarity and confidence—factors essential for the execution of precise and consistent passing. The cognitive engagement involved in wall-setting and target drills likely refined anticipation, visual–spatial processing, and reaction time, further improving technical accuracy. Additionally, the lifestyle and socio-cultural context of the tribal athletes in rural Bankura—characterized by early rising, regular outdoor activity, and close contact with nature—likely created an optimal internal environment for physiological and psychological adaptation. Such habits are associated with strong circadian regulation, hormonal balance, restorative sleep, and overall well-being, which may have facilitated efficient training adaptation and performance enhancement. It can therefore be hypothesized that the integrated physical, physiological, psychological, and socio-cultural components of the 6-week Specific Work Protocol collectively contributed to the improvements in passing accuracy and self-confidence observed in this study. Conversely, the absence of significant improvement in serving accuracy may be attributed to the highly technical nature of the serve, which requires consistent ball toss control, arm-swing mechanics, and precise timing. These fine motor and biomechanical elements were not directly emphasized in the current mixed-method training program, thereby limiting transfer of general fitness gains to this specific skill.

REFERENCES:

1. Pradhan, K. (2016). Performance indicators of inter-university volleyball players in terms of their playing positions. In Scientific Culture in Physical Education & Sports. Patiala: Twenty-first Century Publications, Patiala, Punjab,147002. pp. 651-656
2. Kumar, A. (2012). Impact of specific drills on volleyball skills performance. ***International Journal of Physical Education***, 5(2), 35–39.
3. Palanisamy, M., & Arumugam, C. (2014). Isolated and Combined Effect of General and Specific Fitness Training Packages on Selected Psychological Variables and Skill Performance of Volleyball Players. ***International Journal of Scientific Research***, 3(5), May 2014, 515-516. DOI: https://doi.org/10.36106/ijsr
4. Jayakumar, S., & Vairamani, S. (2015). The effect of three different training methods on motor and psychological variables among men volleyball players***. International Journal of Applied Engineering Research***, 10(12), 31727–31738.
5. Gabbett, T. J., Georgieff, B., Anderson, S., Cotton, B., Savovic, D., & Nicholson, L. (2006). Changes in skill and physical fitness following training in talent-identified volleyball players. ***Journal of Strength & Conditioning Research***, 20(1), 29–35. DOI: https://doi.org/10.1519/00124278-200602000-00005
6. Saravanan, N., & Veeramani, S. (2016). Effect of specific drill training programme on playing ability among volleyball players. ***International Journal of Physical Education, Fitness and Sports,*** **5(4),** 1–3. DOI: https://doi.org/10.26524/1641
7. Veeramani (2015), Effect of package of low-impact plyometric exercise on selected performance-related fitness variables among volleyball players**.** ***International Journal of Physical Education*****,** Volume. 2(1), pp. 20-22.
8. Bala Krishna, D. (2016), Effects of skill training and plyometric training on selected skill performance variables (service) among school volleyball players. ***International Journal of Physical Education, Sports and Health*** Vol. 3 Issue 2, Part D.