
A COMPARATIVE STUDY OF PSYCHOLOGICAL CHARACTERISTICS OF NATIONAL, STATE AND DISTRICT LEVEL SHOOTERS

Suchita Gorakhnath Dhamale¹ (Research Scholar)

Dr. Nilesh Bansode² (Professor)

^{1,2}Department of Physical Education, Swami Vivekanand University, Sagar, MP

ABSTRACT

Shooting is a target sport that comprises Rifle, Pistol, Trap, Skeet, and Running Target events for both men & women. They all use different guns and ammo. The main aim of the study is to give a comparison between national, state and district level shooters of Maharashtra state in terms of their psychological characteristics. The current research was involving 150 rifle shooters from Maharashtra. Players were divided into three groups based on their objectives: district (50), state (50), and national (50) rifle shooting players. In current study the psychological variables used such as self confidence, social adjustment, locus of control and self concept. The research concluded that district rifle shooting players are more self-assured than national and state rifle shooting players. National rifle shooting players are more socially adaptable in terms of emotional adjustment and social maturity than state and district rifle shooting players. In compared to state and district rifle shooting players, national players have a strong sense of self. State rifle shooting players have an average self concept, whereas district rifle shooting players have a low self concept.

Keywords: Shooters, psychological Variables (self confidence, adjustment, locus of control & self concept), Maharashtra National, State & District Players

INTRODUCTION

Shooting sports have grown in popularity in India, with over 2,700 competitors competing in 2013 national championships. In comparison, most countries' national championships would draw only a few hundred contestants at most. The Indian shooting team's results have improved substantially over last decade, transforming country into one of world's leading forces in shooting. In shooting, India won gold and silver medals at Commonwealth Games in 2006 & 2010, an Olympic silver medal in 2004 Olympic Games, its first individual gold medal at 2008 Olympic Games, & silver & bronze medals at 2012 Olympics. There is little doubt that India has emerged as a shooting powerhouse, and it seems prepared to climb much higher in the future years.

In this paper, we will look at some of psychological aspects that have led to Indian shooters' worldwide success. Both writers have offered psychological assistance to the Indian shooting squad at various times and have seen firsthand the development that has been accomplished. They have also worked for many years with foreign shooters from Australia, Italy, United Kingdom, Ireland, Iran, Malaysia, & Singapore. We document assistance given to Indian shooting squad & analyze the psychological elements that impact shooting performance. To add credibility to these experiences, we have faithfully copied shooters' own perspectives, in their own words when feasible, to describe psychology of sport shooting.

Self-esteem, self-confidence, chutzpah, inner-happiness, and self-belief are all important. Whatever you choose to name it, it's one of most significant things any person can have. Unfortunately, self-esteem is not something that can be purchased or restored with medication. Self-esteem is something you either have or strive for, which is where expression "poor self-esteem" comes in. If you have poor self-esteem, you are prone to thoughts of worthlessness as well as periods of worry and despair. Low self-esteem sufferers are more prone to use drink or drugs to increase their confidence or cover their sadness, & they are less likely to be in pleasant relationships, job settings, or financial situations. Although it is easy to dismiss 'self-esteem' as a bogus psychological concept, fact is that it is a vital component of anyone's inner pleasure.

Personal growth helps people to flourish through bettering themselves. Personal development is more than simply self-help; it also includes aiding others, such as a teacher or mentor. The advice in this article will assist you in starting your personal development journey in order to better yourself & others.

If you are experiencing physical & emotional signs of depression, do not be afraid to seek confirmation and help from your support system. Try to describe your feelings in depth. This will assist your loved ones in understanding how depression affects you. Depression frequently causes people to distance themselves from ones they care about most. If this has occurred to you, know that your loved ones are always willing to assist you.

Modern physical educators & coaches have realized that active engagement in physical education & sports in general represents a unique sort of adjustment. More specifically, athletic performance shows a favorable link with social adjustment. Sperling (1942) investigated the association between personality adjustment & achievement in physical education & games among athletes & non-athletes and discovered substantial disparities in social adjustment in favor of athletes.

The locus of control is concerned with how people understand the reasons that impact their behaviour. Individuals with an internal locus of control believe they have control over their behaviour and have the skills, abilities, and experience to influence events, whereas those with an external locus of control believe events are the result of forces beyond their personal control and that the environment is under external control. Rotter established locus of control theory (1966).

Locus of Control is a cognitive style or personality trait described by a generalised expectation about relationship b/w behaviour & subsequent reinforcement (1) in form of reward & punishment. People who have an internal locus of control feel that their circumstances are the consequence of chance, luck, fate, or the actions of powerful outsiders. A range of intermediate cognitive types exists between these two extremes. Rotter also developed the internal external scale, which he referred to as internal external regulation of reinforcement.

The whole of an individual's attitudes, judgements, and values pertaining to his conduct, talents, and attributes is referred to as self-concept, according to the encyclopedia of psychology.

In general, self-concept refers to the perceptions, beliefs, attitudes, & feelings that an individual regards as being qualities of himself. It is his own perception of his physical & mental health, intellectual talents, mental health, habits & behavior, emotional inclinations, & socioeconomic standing, among other things.

PSYCHOLOGICAL DEMANDS OF SHOOTING SPORTS

Shooting is one of most mentally demanding sports, necessitating a degree of precision & consistency that borders on perfection in order to compete for medals at world level. To score a 10 in air rifle event, for example, you must hit an area with a diameter of only 0.5 mm (approximately 0.02 inches) from a distance of 10 m. Men have achieved maximum 600 points from 60 shots five times in international competition, including twice by Indian shooter Gagan Narang. Women have achieved the maximum 400 from 40 shots on 15 separate times, with Indian shooter Suma Shirur among them.

The International Shooting Sport Federation organizes 15 shooting events at the Olympic Games, with five events each for rifle, pistol, & shotgun (ISSF). All events competed in Olympic Games, World Championships, World Cup Series, & other ISSF-endorsed championships have their competition format and regulations available. In terms of unique psychological problems, the different shooting competitions differ significantly. For example, pistol & standing rifle competitions need, above all, capacity to stay still, with stable body posture but differentiated muscle tone, in which shooter maintains tension in some muscle groups while relaxing in others. Because the accuracy inherent in these events is so high, even a heartbeat causes a discrepancy b/w weapon and target, shooting b/w heartbeats is the norm.

Shotgun events are far more dynamic than rifle and pistol events, requiring the shooter to operate the gun quickly but gracefully in order to strike a fast moving target. As a result, when shotgun shooters yell "pull" to release clay target, they need perfect physical control and empty mind that all shooting competitions require, but they should also have a hunter's spirit about them, ready to follow & "kill" the clay. All shooting competitions need control over both physical & mental processes. Excessive stress, unpleasant emotions, and odd thoughts are all shooter's enemies. Thinking too much & over-analyzing a pretty basic operation is a big and all-too-common problem for many shooters. As shooting psychologists, we spend a lot of effort developing ways to minimize cognitive activity, attempting to help shooters keep their minds clear of useless ideas, excessive analysis, & self-recrimination. We frequently wish shooters' minds had an on/off switch. The list of items that frequently distract shooters appears to be unlimited.

LITERATURE REVIEW

Pukhraj Singh (2013) conducted a study to compare college and university level archers and shooters in terms of psychological variable self-concept. Forty (N=40) male inter-college level archers and shooters players were chosen for this purpose. They were then separated into two groups of N = 20 each (i.e., N1=20; N2=20 for inter-college). To achieve the study's aims, the purposive sampling approach was applied. After being briefed about the study's purpose and methodology, all subjects provided their consent and volunteered to participate in it. To establish the significant differences between inter-college male archers and shooters, the students' t -test was used for independent date, & the unpaired t-test was utilized for date analyses. The threshold of significance was established at 0.05 to test hypothesis.

Amte Snehal Shekhar and Mistry Hetal M (2014) investigate the influence of pranayama on rifle shooter performance by assessing factors such as breath holding duration,

lung functional capacity, and shooting performance. The study found that all five variables, shooting performance (in mm), BHT, PEFR, RR, and PR, improved significantly with p values of 3.62E-05, 2.78E-07, 1.31E-09, 0.013, and 3.40E-04, respectively. As a result, it can be stated that pranayama is effective for improving rifle shooter performance & should be incorporated in their training regimen.

Charak Singh Ajay, Choudhary Payal, and Daljeet Singh (2018) investigate the effect of a six-week yoga program on the aggressiveness of state-level air pistol shooters. Physical aggression had a calculated 't' value of 14.057, Verbal aggression had a value of 7.751, Anger scale had a value of 10.562, Hostility had a value of 8.750, and Indirect aggression had a value of 6.804. At the 0.05 level, all estimated values for corresponding aggressiveness components were determined to be statistically significant ($p=0.001$). Based on the findings, a six-week yoga practice was successful in reducing the hostility of state level air pistol shooters.

Anshul Singh Thapa (2019) compares female pistol shooters from Delhi and Patiala in terms of self-confidence and shooting effectiveness. Materials and Procedures: The research included 100 female shooters ranging in age from 18 to 25 years. All topics chosen for sample competed at the national or international level, & fifty players were chosen from Dashmesh Rifle Club, Badal, District Mukatsar Sahib (Punjab), & fifty players were chosen from Dr. Karni Singh Shooting Range, Delhi (UT). The conclusion indicates that female national pistol shooters from Punjab & female national pistol shooters from Delhi had comparable levels of self-confidence & shooting efficiency in match performance & shooting efficiency in single series. Shooting is regarded as one of the activities that may be pursued by anybody, regardless of age or gender, for both professional and recreational purposes.

C. Englert, A. Dziuba, W. Wolff, and L. S. Giboin (2020) evaluated the hypothesis that degree of self-reported self-control strength declines throughout the course of a 1-hour shooting task measured twice over a standard training day and separated by a 2-h break. According to our assumptions, perceived state self-control decreased with number of rounds fired, & perceived state self-control might explain shooting performance. Furthermore, these findings might explain disparity in shooting performance b/w elite & sub-elite athletes. The findings imply that perception of self-control strength is critical for good shooting performance. The ramifications for practice are examined.

Nadav Goldschmied et al. (2021) evaluate empirical studies on FTS performance under pressure with a social-psychological perspective. This critical assessment includes 44 empirical research published between June 2020 and June 2021. We begin by evaluating the importance of FTS in basketball and researching historical patterns. The unique psychological aspects of FTS are then discussed. Following that, historical game studies and tests on the undermining effects of pressure are rigorously analysed. We conclude with a look at performance in terms of expertise & threat sources. The report highlights existing research gaps and gives recommendations for future theoretical and practical research.

Moreira da Silva et al. (2021) attempted to discover which factors were significant from the standpoint of the shooters. Eight of the best shooters in the world were interviewed. The following categories were established using qualitative methods: significance of PT; anxiety & competition relationship; mental preparation; PPS; stress during training; psychological impacts of injuries; & coach's influence. PT is critical for shooter performance, with PPS being

a major factor. Furthermore, anxiety levels are essential, rising before competition and fluctuating during it. Furthermore, shooters rated the coach's emphasis on training as more effective than their own. As a result, the coach is crucial. Surprisingly, injuries had little effect on shooters' psychological well-being or competitive performance. We conclude that combining PPS with shooter competition experience and suitable coach training can lead to enhanced Olympic shooting performance.

DATA ANALYSIS

COMPARISON OF SELF-CONFIDENCE OF NATIONAL, STATE AND DISTRICT RIFLE SHOOTING PLAYERS

Table 1 show the results of a one-way analysis of variance in self-confidence

TABLE 1 ANALYSIS OF RIFLE SHOOTING PALYERS ON SELF-CONFIDENCE LEVEL

SOURCE OF VARIANCE	DEGREE OFFREEDOM	SUM OF SQUARES	MEAN SQUARE	F VALUE
Between Group	(r-1) = 2	7678.84	3839.42	137.57*
Within Group	(N-r) = 147	8292.18	27.92	
Total	149	15971.02		

*Significant at .05 level Tab F .05 (2, 147) = 4.71

Table 1 shows that the self-confidence of national, state, and district rifle shooting players differs substantially, as the derived F value of 137.57 is much higher than the tabulated F 0.05 (2, 147) = 4.71.

Because the F-ratio was determined to be significant, the Least Significance Difference (L.S.D.) test of Post-Hoc comparison was used to investigate the significance of differences between national, state, and district rifle shooting participants, and the results are shown in Table 2.

TABLE 2 SIGNIFICANCE OF DIFFERENCE BETWEEN THE ORDERED PAIRED MEANS OF NATIONAL, STATE AND DISTRICT RIFLE SHOOTING PLAYERS ON SELF-CONFIDENCE LEVEL

NATIONAL	STATE	DISTRICT	MEAN DIFFERENCE	CRITICAL DIFFERENCE
17.46	24.78		7.32*	1.47
17.46		29.78	12.32*	
	24.78	29.78	5.0*	

*Significant at 0.05 level

Table 2 shows that there is a significant difference in self-confidence between national and state players, national and district players, and state and district players at the 0.05 level, since the mean differences of 7.32, 12.32, and 5.0 are more than the critical difference of 1.47. As a result, the null hypothesis is rejected, and it was demonstrated that national players exhibit stronger self-confidence than state and district players.

COMPARISON OF SOCIAL ADJUSTMENT OF NATIONAL, STATE AND DISTRICT RIFLE SHOOTING PLAYERS

Table 3 show the results of a one-way analysis of variance of social adjustment.

TABLE 3 ANALYSIS OF RIFLE SHOOTING PALYERS ON SOCIAL ADJUSTMENT LEVEL

SOURCE OF VARIANCE	DEGREE OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F VALUE
Between Group	(r-1) = 2	48712.14	24356.07	62.61*
With in Group	(N-r) =147	115556.55	389.08	
Total	149	164268.69		

*Significant at .05 level Tab F .05 (2,147) = 4.71

Table 3 shows that the social adjustment of national, state, and district rifle shooting participants differs greatly, as the obtained F value of 62.61 is much greater than the tabulated F 0.05 (2,147) = 4.71.

Because the F-ratio was determined to be significant, the Least Significance Difference (L.S.D.) test of Post-Hoc comparison was used to investigate the significance of differences between national, state, and district rifle shooting participants, and the results are shown in Table 4.

TABLE 4 SIGNIFICANCE OF DIFFERENCE BETWEEN THE ORDERED PAIRED MEANS OF NATIONAL, STATE AND DISTRICT RIFLE SHOOTING PLAYERS ON SOCIAL ADJUSTMENT LEVEL

NATIONAL	STATE	DISTRICT	MEAN DIFFERENCE	CRITICAL DIFFERENCE
169.13	150.10		19.03*	5.65
169.13		138.40	30.73*	
	150.10	138.40	11.7*	

*Significant at 0.05 level

Table 4 shows that there is a significant difference in the social adjustment between national and state players, national and district players, and state and district players at the 0.05 level, as the mean difference of 19.03, 30.73, and 11.7 is greater than the critical difference of 5.65. As a result, the null hypothesis is rejected, and it was demonstrated that national players have stronger social adjustment than state and district players.

COMPARISON OF LOCUS OF CONTROL OF NATIONAL, STATE AND DISTRICT RIFLE SHOOTING PLAYERS

Table 5 provide a one-way analysis of variance of the locus of control.

TABLE 5 ANALYSIS OF RIFLE SHOOTING PALYERS ON LOCUS OF CONTROL LEVEL

SOURCE OF VARIANCE	DEGREE OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F VALUE
Between Group	(r-1) = 2	1029.18	514.59	74.91*
With in Group	(N-r) = 147	2040.59	6.88	
Total	149	3069.77		

*Significant at .05 level

Tab F .05 (2,147) = 4.71

Table-5 shows that the locus of control of national, state, and district rifle shooting players differs greatly, as the derived F value of 74.91 is much greater than the tabulated F 0.05 (2,147) = 4.71.

Because the F-ratio was determined to be significant, the Least Significance Difference (L.S.D.) test of Post-Hoc comparison was used to investigate the significance of difference between national, state, and district rifle shooting participants, and the results are provided in Table 6.

TABLE 6 SIGNIFICANCE OF DIFFERENCE BETWEEN THE ORDERED PAIRED MEANS OF RIFLE SHOOTING PLAYERS ON LOCUS OF CONTROL LEVEL

NATIONAL	STATE	DISTRICT	MEAN DIFFERENCE	CRITICAL DIFFERENCE
7.68	10.43		2.75*	0.73
7.68		12.18	4.5*	
	10.43	12.18	1.75*	

*Significant at 0.05 level

Table 6 shows that there is a significant difference in the locus of control between national and state players, national and district players, and state and district players at the 0.05 level, as the mean difference of 2.75, 4.5, and 1.75 is greater than the critical difference of 0.73. As a result, the null hypothesis is rejected, and it was demonstrated that national players had greater locus control than state and district players.

COMPARISON OF SELF-CONCEPT OF NATIONAL, STATE AND DISTRICT RIFLE SHOOTING PLAYERS

Table 7 show the results of a one-way analysis of variance of self-concept.

TABLE 7 ANALYSIS OF RIFLE SHOOTING PALYERS ON SELF-CONCEPT LEVEL

SOURCE OF VARIANCE	DEGREE OF FREEDOM	SUM OF SQUARES	MEAN SQUARE	F VALUE
Between Group	(r-1) = 2	333163.77	16581.89	49.24*
Within Group	(N-r) = 147	100021.62	336.78	
Total	149	433185.39		

*Significant at .05 level Tab F .05 (2,147) = 4.71

Table 7 shows that the self-concept of national, state, and district rifle shooting participants differs substantially, as the derived F value of 49.24 is much greater than the tabulated F 0.05 (2,147) = 4.71.

Because the F-ratio was determined to be significant, the Least Significance Difference (L.S.D.) test of Post-Hoc comparison was used to investigate the significance of differences between national, state, and district rifle shooting participants, and the results are shown in Table 8.

TABLE 8 SIGNIFICANCE OF DIFFERENCE BETWEEN THE ORDERED PAIRED MEANS OF RIFLE SHOOTING PLAYERS ON SELF-CONCEPT LEVEL

NATIONAL	STATE	DISTRICT	MEAN DIFFERENCE	CRITICAL DIFFERENCE
199.68	182.78		16.9*	5.09
199.68		174.40	25.28*	
	182.78	174.40	8.38*	

*Significant at 0.05 level

Table 8 shows that there is a significant difference in self-concept between national and state players, national and district players, and state and district players at the 0.05 level, as the mean differences of 16.9, 25.28, and 8.38 are greater than the critical difference of 5.09. As a result, the null hypothesis is rejected, and it has been demonstrated that national players have a greater self-concept than state and district players.

DISCUSSIONS

Data analysis revealed a significant difference in self-confidence levels among national, state, and district school rifle shooting participants. The resulting F-value of 137.57 is substantially higher than the tabulated value $F_{0.05}(2,147) = 4.71$, indicating that national, state, and district school rifle shooting participants varied significantly in the self-confidence test. The mean differences of 7.32, 12.32, and 5 are all greater than the critical difference of 1.47, indicating that there is a significant difference in aggressiveness levels between national and state, national and district, and state and district players at the 0.05 level. As a result, the null hypothesis is rejected, and it was demonstrated that district rifles shooting players had better self-confidence than national and state rifles shooting players.

Data analysis revealed a significant variation in the social adjustment level of national, state, and district school rifle shooting participants. The calculated F-value of 62.61 is much higher than the tabulated value $F_{0.05}(2,147) = 4.71$, indicating that national, state, and district school rifle shooting participants varied significantly in the Social Adjustment exam. The mean difference of 19.03, 30.73 and 11.7 is greater than the critical difference of 5.65, indicating that there is a significant difference between national and state; national and district; and state and district players on the social adjustment level at the 0.05 level. As a result, the null hypothesis is rejected, and it was demonstrated that national players had superior social adjustment than state and district rifles shooting players.

Data analysis revealed a significant variation in the locus of control level across national, state, and district school rifle shooting participants. The calculated F-value of 74.91 is much higher than the tabulated value $F_{0.05}(2,147) = 4.71$, indicating that national, state, and district school rifle shooting participants varied significantly in the locus of control test. The mean difference of 2.75, 4.5, and 1.75 is more than the critical difference of 0.73, indicating a significant difference in locus of control between national and state, national and district, and state and district players at the 0.05 level. As a result, the null hypothesis is rejected, and it was demonstrated that district players had a stronger locus of control than national and state rifles shooting players.

Data study revealed a significant difference in self concept level amongst national, state, and district school rifle shooting participants. The resultant F-value of 49.24 is substantially more than the tabulated value $F_{0.05}(2,147) = 4.71$, indicating that national, state, and district school rifle shooting participants varied significantly in the self concept test. At the 0.05 level, it is clear that there is a substantial difference between national and state; national and district; and state and district players on self concept, as the mean differences of 16.9, 25.28, and 8.38 are greater than the critical difference of 5.09. As a result, the null hypothesis was rejected, and it was demonstrated that national players have a stronger self-concept than state and district rifles shooting players.

CONCLUSIONS

District rifle shooting players are more self-assured than national and state rifle shooting players. State rifle shooting players have medium self-confidence, whereas national rifle shooting players have poor self-confidence. National rifle shooting players are more socially adaptable in terms of emotional adjustment and social maturity than state and district rifle shooting players. District rifle shooting players have a stronger locus of control than state and national rifle shooting players. External locus of control is low among state and national rifle shooting competitors. In compared to state and district rifle shooting players, national players have a strong sense of self. State rifle shooting players have an average self concept, whereas district rifle shooting players have a low self concept.

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