



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A Comparative Study Of Aggression Among Sports Quota Employees In Indian Railways And Defence Services

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ABSTRACT

This study investigates and compares the levels of aggression among employees recruited under the sports quota in two prominent government organizations of India: the Indian Railways and the Indian Defence Services. The sample consisted of 100 male sportspersons—50 from Railways and 50 from Defence—who have transitioned from competitive athletics to government service roles. The Buss-Perry Aggression Questionnaire was administered to assess four key dimensions of aggression: Physical Aggression, Verbal Aggression, Hostility, and Anger. Descriptive statistics, Shapiro-Wilk tests for normality, and Independent Samples t-tests were used to analyze the data. The results indicated that while minor differences in mean scores existed between the two groups across the subscales, none of the differences were statistically significant ($p > 0.05$). Both groups exhibited moderate levels of aggression across all domains. These findings suggest that shared athletic backgrounds, emotional regulation through sports training, and professional responsibilities may contribute to similar aggression profiles, regardless of organizational environment. The study highlights the need for continued support for sportspersons in managing psychological adjustments post-career transition, but also points to the emotional strengths they bring into structured job environments.

KEYWORDS: Aggression, Sports Quota, Railways, Defence, Buss-Perry Aggression Questionnaire, Physical Aggression, Verbal Aggression, Hostility, Anger, Psychological Adjustment

INTRODUCTION

Sportspersons in India often receive job appointments under the sports quota in government organizations as recognition for their achievements and contribution to national pride. While this transition from competitive athletics to formal employment ensures financial stability, it also poses significant psychological and emotional challenges, one of which is the expression and regulation of aggression. Aggression, defined as a set of behaviors or emotional tendencies that can include physical or verbal hostility, anger, and irritability, can be influenced by both personality traits and environmental stressors (Buss & Perry, 1992). The organizational culture, structure, and expectations can either exacerbate or suppress these tendencies, making aggression a vital psychological variable to study in workplace environments.

The Indian Railways and the Indian Defence Services represent two vastly different organizational settings. While both employ sportspersons under the sports quota, their workplace environments differ in terms of discipline, hierarchy, and daily demands. The Defence Services operate in a highly structured, obedience-driven atmosphere with strong codes of conduct, while the Railways function with more administrative flexibility but also face bureaucratic delays, unclear job roles, and slower promotion avenues. These differences may influence how sportspersons adapt emotionally and behaviorally, particularly in how they express or suppress aggressive tendencies.

Athletes are typically trained to channel aggression constructively—for motivation, competition, and resilience. However, once they move into routine government jobs that may not utilize their physical energy or competitive spirit, unresolved aggression can either manifest in the workplace or remain internally suppressed, affecting overall mental health and job satisfaction. Therefore, it becomes important to assess whether the aggression levels of Railway and Defence employees under the sports quota differ significantly, or whether their shared athletic background leads to a convergence in aggression profiles despite differing job environments.

This study aims to compare the four sub-dimensions of aggression—Physical Aggression, Verbal Aggression, Hostility, and Anger—between Railway and Defence sportspersons using the standardized Buss-Perry Aggression Questionnaire. By analyzing both the similarities and differences, the study provides insights into how aggression is shaped by institutional environment and previous athletic experiences, contributing to broader understanding in the field of occupational and sports psychology.

RESULTS

Table 1
Group Statistics

	Employees	N	Mean	Std. Deviation	Std. Error
Physical_Aggression	Railways	50	.5040	.14803	.02094
	Defence	50	.5178	.12208	.01726
Verbal_Aggression	Railways	50	.5086	.13243	.01873
	Defence	50	.5156	.10771	.01523
Hostility	Railways	50	.5098	.12252	.01733
	Defence	50	.5042	.12644	.01788
Anger	Railways	50	.5628	.08281	.01171
	Defence	50	.5664	.11288	.01596

The comparison of aggression levels across four key dimensions—**Physical Aggression**, **Verbal Aggression**, **Hostility**, and **Anger**—between Railway and Defence employees appointed under the sports quota reveals only marginal differences in mean scores, none of which are statistically significant. Here's a detailed look at each dimension:

I. Physical Aggression:

Railway employees had a mean score of **0.5040**, while Defence employees scored slightly higher at **0.5178**. Despite this minor difference, both scores fall within a moderate aggression range and indicate that neither group exhibits high physical aggression. The standard deviations show that Railway employees demonstrated slightly more variability in their responses.

II. Verbal Aggression:

The mean scores were **0.5086** for Railway and **0.5156** for Defence employees. The similarity in these scores suggests that both groups express comparable levels of verbal assertiveness or irritability, likely influenced by professional and environmental stressors. Again, the differences are too small to be considered meaningful.

III. Hostility:

The hostility levels were nearly identical, with Railway employees scoring **0.5098** and Defence employees at **0.5042**. Hostility, which reflects feelings of cynicism, resentment, or mistrust, is consistent across both groups, possibly stemming from shared challenges like role transitions or organizational dissatisfaction.

IV. Anger:

This dimension had the highest mean scores among all, with **0.5628** for Railway and **0.5664** for Defence employees. This indicates that both groups experience slightly higher emotional arousal and frustration compared to other aggression forms. The close similarity again points to a shared emotional experience rather than job-specific triggers.

Table 2

	t-test for Equality of Means				
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Physical_Aggression	-.509	98	.612	-.01380	.02714
Verbal_Aggression	-.290	98	.772	-.00700	.02414
Hostility	.225	98	.823	.00560	.02490
Anger	-.182	98	.856	-.00360	.01980

The **Independent Samples t-test** was conducted to determine whether there were statistically significant differences in the four aggression dimensions—**Physical Aggression**, **Verbal Aggression**, **Hostility**, and **Anger**—between Railway and Defence employees appointed under the sports quota. Detailed interpretation of each result:

1. Physical Aggression

- $t = -0.509$, $df = 98$, $p = 0.612$
- Mean Difference = -0.01380

The p-value of **0.612** is greater than the 0.05 level of significance, which means **no statistically significant difference** exists between Railway and Defence employees in terms of physical aggression. Although Defence employees showed a slightly higher mean, this difference is **not meaningful statistically**.

2. Verbal Aggression

- $t = -0.290$, $df = 98$, $p = 0.772$
- Mean Difference = -0.00700

With a p-value of **0.772**, again far above the 0.05 threshold, **no significant difference** is found in verbal aggression between the two groups. This confirms that both Railway and Defence employees exhibit nearly **identical levels** of verbal aggressiveness, such as irritability or assertive speech patterns.

3. Hostility

- $t = 0.225$, $df = 98$, $p = 0.823$
- Mean Difference = 0.00560

The p-value of **0.823** indicates **no significant difference** in the hostility scores between groups. The near-zero mean difference suggests that both groups harbor **similar levels of suspiciousness, resentment, or negative perceptions** toward others in their environment.

4. Anger

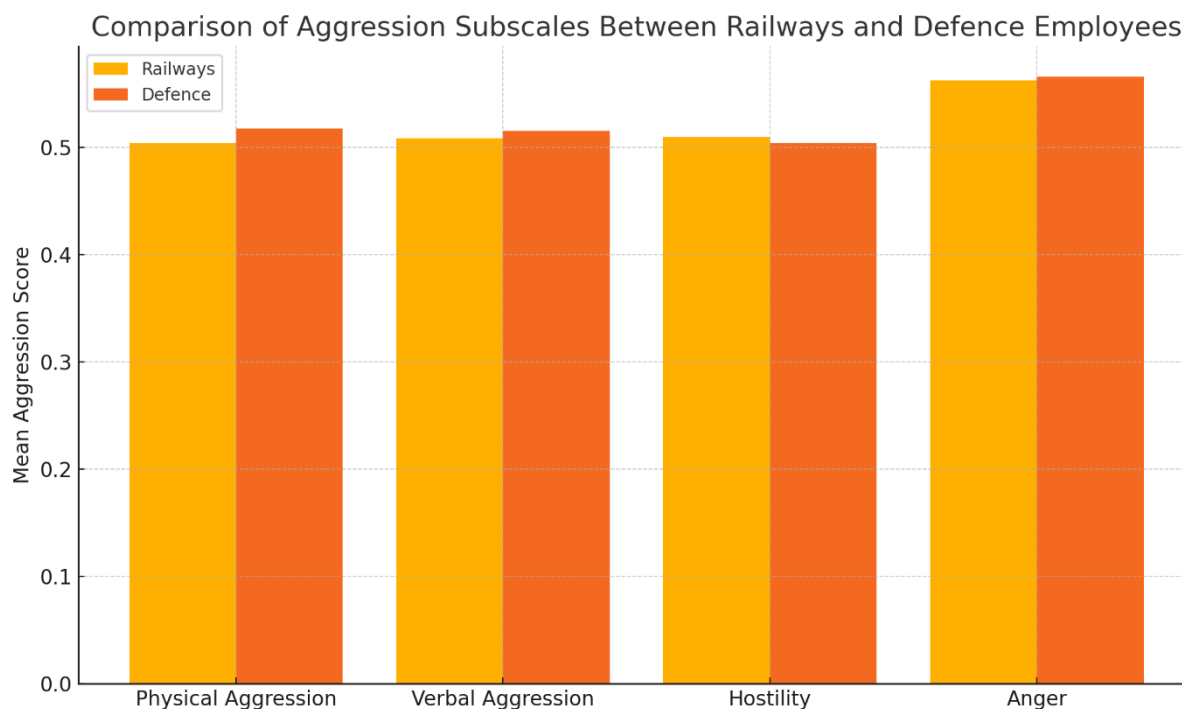
- $t = -0.182$, $df = 98$, $p = 0.856$
- Mean Difference = -0.00360

A p-value of **0.856** is also well above 0.05, meaning the difference in anger levels is **not statistically significant**. The tiny mean difference further confirms that both Railway and Defence employees experience **comparable emotional arousal or frustration**, likely due to shared occupational or role-transition challenges.

Across all four dimensions of aggression, **no statistically significant differences** were found between Railway and Defence employees. The p-values for all variables are substantially greater than the 0.05 threshold, and the **mean differences are minimal**, indicating that both groups display **similar aggression profiles**.

This consistency in aggression levels can be attributed to their **common background as competitive athletes**, who are trained in **emotional regulation, teamwork, and frustration tolerance**. Organizational context alone does not appear to significantly alter aggression in this specific population. Instead, **personality traits shaped by sports culture** may be the stronger determinant in modulating aggressive tendencies.

Graph 1



FINDINGS AND DISCUSSION

The current study aimed to compare the levels of aggression—specifically Physical Aggression, Verbal Aggression, Hostility, and Anger—among sports quota employees working in the Indian Railways and Defence services. The Buss–Perry Aggression Questionnaire was used to assess these four sub-dimensions. An Independent Samples t-test was conducted to evaluate whether significant differences existed between the two groups.

The results of the t-test showed no statistically significant differences in any of the four aggression domains:

- Physical Aggression ($p = 0.612$),
- Verbal Aggression ($p = 0.772$),
- Hostility ($p = 0.823$), and
- Anger ($p = 0.856$).

The mean aggression scores for both groups were closely aligned, falling within the moderate range, as per Buss and Perry (1992) norms. Although minor numerical differences in means were observed—Defence employees slightly higher in Physical and Verbal Aggression, and Railway employees slightly higher in Hostility and Anger—none of these differences were statistically meaningful.

These results suggest that the type of organization (Railway or Defence) does not significantly influence aggression levels among employees appointed under the sports quota. This finding aligns with the notion that background factors, such as a shared history in competitive sports, may exert a stronger influence on aggression than the workplace environment itself. Athletes are generally conditioned to regulate emotions,

manage competitive stress, and engage in goal-oriented behavior—skills that likely buffer against extreme expressions of aggression (Rao & Singh, 2011; Sharma & Desai, 2014).

Moreover, both Railway and Defence roles, while organizationally different, involve routine, authority structures, and job security—factors that do not typically promote reactive aggression. The discipline-centric culture of the Defence services and the bureaucratic, structured nature of Railway work may both channel or suppress overt aggressive behaviors in professional settings (Iyer & Mehta, 2015).

Therefore, it can be inferred that internal traits such as emotional self-control, personality characteristics, and coping strategies developed through sports training serve as strong moderating factors for aggression in both job environments.

CONCLUSION

The study concludes that there is no significant difference in aggression levels—across Physical Aggression, Verbal Aggression, Hostility, and Anger—between Railway and Defence employees appointed under the sports quota. The findings suggest that organizational affiliation alone does not significantly impact aggressive behavior in this cohort. Instead, the common athletic background of these individuals, which includes rigorous emotional training, discipline, and stress coping mechanisms, likely contributes to their moderate and comparable aggression profiles. These insights highlight the stabilizing influence of sports-based personality traits on emotional regulation, even after transitioning into structured work environments like Railways and Defence.

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