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Original Article

A Comparative research investigation on different dominions of aggressiveness among professional Indian para throwers

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Abstract:
Introduction-In the past few decades, there has been a notable surge in the number of sport possibilities available to those with disabilities, including elevated training and competitive chances. Athletes with disabilities who are able-bodied have just recently started to garner attention, and research on the psychosocial elements of disabled sports involvement is very new. Even less is therefore known about the psychological traits of athletes with disabilities who compete at a high level, like the Paralympic Games. In general, athletic aggression is a result of athletes' failures during competition, which encourages emotional changes in the form of irritation, impulsivity, trouble self-regulating, and other behaviours. There has been little research on the psychological factors supporting elite Indian paralympic athletes, particularly para throwers. Due to the lack of research on parasports, the primary research topic of this paper exclusively selects sports with Para athletes. **Material and Methods-** This study aimed to investigate the levels of aggression on several aggression subscales among top Indian Paralympic throwers. The sample for the present study consisted of 20 Para-throwers (10 standing throwers and 10 seated throwers) who competed in the Paralympics and Para-world championships. Demographic information was gathered using a personal information form made by the investigator, and the Buss-Perry Aggression Scale was utilised to determine each person's level of hostility. The T-test was run on SPSS 26.0 version and, p0.05 is accepted as the meaningful level. **Results-** The results of the study show that while levels of physical aggression, verbal aggression, and hostility were not significantly different between the two groups, there were statistically significant variations in anger levels (p0.05). **Conclusions-** In contrast to upright throwers, however, seated throwers reported significantly and materially greater levels of anger. As athletes prepare for and compete in international tournaments, these findings, in our opinion, demonstrate that coaches can focus on managing and controlling athletes' anger and hostility. Larger research investigations and the application of performance metrics are required to comprehend the mechanics underlying this better. Athlete health monitoring can help coaches manage stress, improve their coaching, and eventually improve athlete performance.
Keywords: Aggression, Para-throwers, Psychological, Athletes, Disability, Psychology

Introduction

A lot of athletes have "talent" or athletic skill, but they haven't always reached their maximum potential. Athletes must examine their own performance to determine if they are giving it their all. A widespread misunderstanding among athletes is the idea that in order to concentrate on the "mental game," they must first learn "perfect" technique or knowledge of their specific sport. Sports psychology is a branch of sports science that aids athletes in developing self-assurance and concentration as they become proficient in the technical aspects of their sport (Singh, 2022; Wood, 2010). In all sporting undertakings, human beings strive for perfection since they are by nature competitive. Every man, as well as every other nation, tries to challenge the other to show who is the superior force. This could be accomplished by educating athletes in sports in a scientific, methodical, and well-planned manner and by guiding them towards activities and competitions that are effective

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and successful given their skills and aptitudes (Kalfs, 1969). In order to perform better on the pitch, athletes can benefit from the help of a sports psychologist (Singh, 2022; Wood, 2008). Sport psychologists now work with both male and female athletes to help them perform at their best, according to Wuest and Bucher (2006). Professional athletes, national team athletes, and some elite or exceptional athletes, such figure skaters, are all dealt with by psychologists. In order to help them achieve their objectives, sports coaches may consult a sport psychologist.

Some of the psychological variables that can be used to pinpoint psychological predictors are personality traits, anxiety, self-esteem, and mental toughness (Singh, 2022; Anizu, 2003). Depending on their level of physical preparation, training, mental fortitude, capacity to perform well under pressure, and teamwork, athletes might succeed or fail. An athlete needs to possess all the necessary qualities (physical, psychological, and social) in order to compete well. The athlete will struggle greatly if any of these qualities are missing. Coaches must consequently have a deeper awareness of the methods and strategies employed in sports as well as psychological expertise.

Competition and aggression are two sides of the same coin; in athletics, having a body without "aggression" is equivalent to having a soulless body. Strong evidence backs up the premise that rowdier games in general can improve performance by motivating players to "do or die" for the success of the team. However, there is evidence that, in certain situations or positions, player antagonism can harm both individual skill performance and team success (Kamlesh, 1984). The association between aggressiveness, stress, mental toughness, and other psychological traits and athletics has long been the subject of investigation. In a range of topic areas, sports animosity has been the focus of various studies in the literature (Thomas F. Denson, 2018; Keskin, 2018) and various games (Yetis, 2016; Sofia, 2017; Kostorz, 2021; Özlem, 2018).

There is not a lot of research on psychological skill training for para-athletes, despite the numerous studies (Omar-fauzee, 2010; Hannon, 2012; Allan, 2018; Holmes, 2008; Lim, 2018; Brown, 2017) that discuss the significance of physical and mental training for athletes.In order for athletes to reach their maximum potential and be better prepared for psychologically demanding situations, it is imperative that they receive psychological training (Mesagno, 2008). Many research have been conducted on paraathletes with intellectual disabilities, rather than athletes with different kinds of disabilities (Gorely T, 2012). With competitors vying to be selected for Paralympic wheelchair basketball teams, two research were carried out. The first study by Henschen et al.(1992) discovered that the tension and anger scores of athletes who were chosen for the US Paralympic team were lower than those of the other competitors. The US athletes chosen for the 2004 Athens Paralympics had higher vigour scores and lower levels of perplexity and despair than those who were not chosen for the team, according to Martin et al. (2011) second study. Furthermore, the 16 Personality Factor Questionnaire revealed that the people chosen for the team had higher levels of toughness and lower levels of anxiety. Along with being less trait worried and less self-critical as competition drew near, those who made the squad also showed these traits.(Cattell, 1970; 1993)

Cox and Davis (1992) conducted a comparison of the psychological skills of wheelchair athletes preparing for the 1988 Seoul Paralympic Games (n = 31) with a group of able-bodied athletes preparing for a regional tournament (n = 50) using a different type of personality assessment. These abilities, which were assessed using the Psychological Skills Inventory for Sports, included anxiety management, focus, confidence, mental preparation, motivation, and team emphasis. Higher ratings for each variable suggested more desired attributes. The assessment was limited to track and field athletes because they made up about half of the Paralympian group (n = 15). The findings showed that these athletes scored much higher than their able-bodied counterparts in the areas of anxiety control, confidence, and motivation.(Mahoney, 1987)

According to Omar-fauzee (2010), para-athletes possess an intense psychological and physical drive to excel in their sport. Over the past few years, para-athlete participation and achievement have skyrocketed, particularly in India. Disability is viewed differently in every nation and culture, which has an impact on capable athletes' involvement as well. Through their participation and accomplishments, these paraathletes inspire others to take up the sport by showing them that a person's disability can be an asset (Misener, 2013). High intrinsic motivation is typically seen by paraathletes (Banack, 2011). Several people with disabilities are still engaged in sports but regress despite the government of India's attempts. Para-athletes must constantly manage a variety of situations, including overuse of sports, risky behaviour, functional limitations, psychological stressors, normalised pain, health risks, personal opportunities to prevent sports-related injuries, and uneven prerequisites (Fagher K., 2016).Therefore, in order to increase participation and help athletes perform better, psychological skills training and time to time proper monitoring with scientific assessment of psychological profiling is necessary for para-sports players.

Although India is a nation that loves sports and has a variety of sports cultures, mental toughness training—which is crucial for maximising performance—is not given enough attention Research on psychological techniques and ways to improve the mental toughness of paralympic athletes is necessary, particularly in India since we are becoming more and more competitive in the Paralympic Games worldwide (Harada, 2011).

Research on the psychological processes underlying the performance of Elite Indian Para-Throwers is lacking. This study compared the aggressiveness of para-throwers who participated in standing and seated events at the Paralympics and Paralympic World Championships and are active athletes.

Purpose of the study

The aim of the study was to examine the patterns of aggression in various dominion (i.e. physical, verbal, anger and hostility) seated para-throwers and standing para-throwers competing the Paralympics and Para-world championships and are active sportspersons. Therefore as an outcome, the researcher assumed that seated para-throwers and standing para-throwers will exhibit significantly different levels of aggression.

Methodology

Subjects Selection of Study

20 Para-throwers (10 standing throwers and 10 seated throwers) who competed in the Paralympics and Para-world championships were selected as participants for this study. The study enlisted the help of 10 standing throwers and 10 seated throwers. The participants ranged in age from 20 to 40 years old. Two groups of participants were formed. Throwers who are standing are categorised in Group A, while those who are seated are placed in Group B. Data collection of the athletes took place from end of November 2021 to April 2022. A Personally Identifiable information form created by the researcher with assistance from the supervisor and specialists is used to gather socio-demographic information (Table 1).

Table 1. Socio-demographic information of the Para-athletes

Factors		Total Population (%)	Male (%)	Female (%)
Subject		20 (100%)	16 (80.00%)	4 (20.00%)
Age				
	20-25	4 (20%)	2 (20%)	
	26-30	4 (20%)	4 (20%)	
	31-35	2 (10%)	2 (10%)	
	36-40	10 (50%)	6 (30%)	4 (20%)
State				
	Harayana	10 (50%)	8 (40%)	2 (10%)
	Rajasthan	4 (20%)	4 (20%)	
	Utterpradesh	2 (10%)	2 (10%)	
	Maharastra	2 (10%)	1 (5%)	1 (5%)
	Others	2 (10%)	1 (5%)	1 (5%)

Assessment Criterion

As a criteria measure to assess the hypothesis, the result of the Buss-Perry Aggression Scale had been used.

Buss-Perry Aggression Scale: The Buss-Perry Aggression Scale was created by Buss and Perry in 1992. A 5-point Likert scale is used to examine the hostile attitudes of college students (absolutely disagree = 1, disagree = 2, neutral = 3, agree = 4, and agree = 5). Four scales—Physical Aggression, Verbal Aggression, Anger, and Hostility—were produced from numerous factor studies. 29 things make up this scale. There are nine of them (13, 8, 2, 11, 25, 16, 29, 22), eight (20, 24, 3, 26, 10, 15, 7, 17), seven (19, 28, 1, 18, 9, 23, 12) and five (27, 6, 21, 14, 4) that are sub-titles for verbal aggressiveness. When a person does well on the sub-dimensions of the scale, it indicates that they have strong traits in the corresponding area. These items are assessed on a five-point Likert scale.

Procedure

The researcher personally visited and spoke with each subject and explained the study's goal to assure their honesty and participation. The researcher provided a thorough description of how to answer the items in the aggression questionnaire after distributing the questionnaire booklet for responses. The scoring was done using the scoring key after the responses from respondents were gathered. Due to data collecting, the exam took 10–12 minutes to complete.

Statistical Tools

The independent T-test was conducted using SPSS version 26.0 to assess the aggression score, which includes physical aggression, anger, verbal aggression, and hostility. The significant level was chosen at 0.05 in order to test the hypothesis.

Results

T-test results for standing para-throwers and seated para-throwers on various subscales of aggression, including physical aggression, verbal aggression, anger, and hostility. Table 2 and Table 3 show descriptive statistics and the equality of group means, respectively.

Table 2. Descriptive statistics on aggression level between standing para-throwers and seated para-thrower.

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Physical Aggression	Standing	10	27.800	6.643	3.727
	Sitting	10	33.600	10.844	4.297
Verbal Aggression	Standing	10	13.400	3.543	2.503
	Sitting	10	14.200	1.654	.634
Anger	Standing	10	20.400	4.965	2.577
	Sitting	10	28.000	1.232	.847
Hostility	Standing	10	21.400	5.786	1.249
	Sitting	10	21.600	2.701	1.208

Table 2 illustrates the mean, standard deviation, and standard error of the mean for the information on the various sub - scales of aggression level for both the standing thrower and seated thrower groups.

Table 3. T- test of equality of mean for aggression level between standing para-throwers and seated para-thrower.

		F	Sig.	t	Sig. (2-tailed)
Physical Aggression	Equal Variances Assumed	5.432	.042	-1.141	.278
	Equal Variances Not Assumed			-1.141	.287
Verbal Aggression	Equal Variances Assumed	1.448	.346	.120	.901
	Equal Variances Not Assumed			.120	.906
Anger	Equal Variances Assumed	11.654	.007	-2.811	**.013***
	Equal Variances Not Assumed			-2.811	.023
Hostility	Equal Variances Assumed	.775	.343	.705	.511
	Equal Variances Not Assumed			.705	.514

***Significant at .05 level of confidence**

Table 3 illustrates that the value of t-statistic for anger is 2.811. This t-value is significant as its p value is 0.013 which is less than .05. Thus, the null hypothesis of equality of population means of two groups is rejected, and it may be concluded that the anger level of both groups standing throwers and seated thrower is different. Further, anger level of group B (seated para-throwers) is higher than that of group A (standing para-throwers), leading one to the conclusion that seated throwers express higher levels of aggression on the anger subscale of aggression than do standing throwers. Additional levels of hostility, such as physical. Hostility, verbal aggression, and aggression all have different mean values, but not significantly different mean values like the anger scale.

Discussion of Findings

The goal of this study was to see whether there were differences in hostility between para-throwers who were seated and those who were standing. Although the athlete traits and skill requirements for the two events are somewhat similar (Singh, 2022; Tomar, 2012), there was a significant variation in the levels of rage between the groups of standing para-throwers and seated para-throwers. It was discovered that seated throwers' mean values of rage were significantly higher than those of standing throwers participating at the international level. However, the use of equipment in all throwing sports may be the main reason making throwers more violent, which may make seated para throwers moreangry than standing para throwers. In addition, seated para-throwers' aggressiveness may be different from that of standing para-throwers due to their physique, body shape, and sense of self-worth (Singh, 2022; 2022). The fact that modern coaches lay more attention on subtle strategies that need proper mental focus and the absence of any psychological or physiological abnormalities may be one factor. Any team, whether para-throwers or para-runners, possesses certain psychological and physiological traits since, on occasion, a player's animosity might have an impact on the game's final result (Rathi, 2017).

In contrast to other studies (Keeler, 2007, Maxwell, 2004, and Mintah, 2017), which revealed that men are more violent than women in typical sports, the current study determined variations in the levels of rage experienced by standing and seated para-thrower players. There were no appreciable differences in the levels of aggression and mental toughness between para-athletes and para-swimmers, according to research done in 2017 (Rathi). Males exhibit greater levels of hostility than females, according to a study by Keeler (2007) that

examined the patterns of sport aggression in adult men and women. A review of the literature revealed that the bulk of aggressiveness studies were carried out on healthy individuals, with little research being done on para athletes. Additionally, a recent study of collegiate football players by Mintah (2017) revealed that both male and female football players oppose the use of hostile and instrumental aggressiveness. According to Bandura's 1973 social learning theory, aggression is a learnt social behaviour that is picked up through imitation, modelling, demonstration, and reinforcement. For instance, teenage athletes aim to emulate the actions of their sports role models (Arehart, 2002).

Since there hasn't been much substantial research with elite para athletes, the findings of this study contribute to the fields of sport psychology, applied psychology, and behavioural psychology. Previous studies have used both elite and non-elite athletes as well as healthy and handicapped persons. Numerous research on sports aggressiveness have been published in the literature (Thomas F. Denson, 2018; Keskin, 2018) in a variety of topic areas (Yetis, 2016; Sofia, 2017; and different games (Kostorz, 2021; zlem, 2018). The results of a study conducted by Sani (2020) on sport emotion and collective efficacy among healthy and impaired players showed a significant difference between the two groups. Further research revealed that comparing the groups of healthy and handicapped athletes, only degrees of anxiety and anger were significantly different. Sport emotions also predicted 31% and 15%, respectively, of the variability in collective efficacy among athletes in good health and those who were impaired. The importance of experiences, anxiety and anger management in athletes with impairments, as well as happiness in athletes in good health, were all discussed (Sani, 2020).

It will be important to conduct more research in the future to determine whether additional psychological characteristics (such as para-powerlifters, paracanoe, para-badminton, etc.) are acceptable for other population groups. Future research should focus on different eras, and researchers may use comparable approaches to focus on different psychological domains, such as motivation, self-esteem, and contentment, but not exclusively. To more precisely identify possible needs, in-depth psychosocial research utilising big population-based samples is required.

Conclusion

The researcher can infer that standing and seated para-throwers exhibit different levels of anger as a result. The findings of this pilot study encourage researchers to carry out a more thorough investigation on related topics. A significant portion of the para athletic population may be persuaded to participate in and benefit from this kind of research due to the perception that it is easy to understand and basic. Additionally, since studies suggest that aggression can either reflect hostility if a player loses a game or can give them an early competitive advantage, coaches should place a greater emphasis on tactful strategies that can only be implemented with proper concentration of mind and no psychological or physiological disturbances in para throwers. The findings of this study indicate that there is cause for concern as elite para-athletes show higher rates of both anxiety and rage. This highlights the value of having psychological assistance available to high-performance teams both in advance of and during major competitions like the Paralympic Games.There is still a dearth of information in the psychosocial literature regarding the psychological characteristics of Paralympians and para-athletes. However, a comprehensive understanding of the psychological makeup of these athletes enhances the body of knowledge already available in the areas of physiology and technology, providing a comprehensive picture of the factors that go into making a successful para-athlete. This understanding may also help the team that works to maximize both performance and mental health in these competitive athletes.

Para-athletes have an intense psychological and physical drive to succeed in their sport (Omar-fauzee, 2010). However, the para-athletes face extra difficulties and stress outside of the actual competition, such as: a) Travelling at a higher difficulty level than other athletes due to their longer trip times, which stresses them out (Hanton, 2012); b) frequently moving from a seat to a wheelchair and back; c) finding it difficult to be away from home and social support for an extended period of time, which could have a detrimental effect on performance (Martin, 1996); d) Anxiety brought on by incorrectly categorising their disability as that of an athlete with a higher or lower degree of impairment, which could have an impact on their performance. (Martin, 1996)

Although India is a nation that loves sports and has a variety of sports cultures, mental toughness training—which is crucial for maximising performance—is not given enough attention. Research on psychological techniques and ways to improve the mental toughness of paralympic athletes is necessary, particularly in India since we are becoming more and more competitive in the Games like Para-Asia, Paralympic worldwide.

Conflict of interest

No conflict of interest from authors side.

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