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Comparative analysis of will to win, aggression, mental toughness, and anxiety in national swimmers and para swimmers

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Abstract

This study investigates the psychological factors of "Will to Win," "Aggression," "Mental Toughness," and "Anxiety" in a sample of 20 male national swimmers compared to 20 male para swimmers. The analysis using t-tests revealed significant differences between the two groups in "Will to Win," "Mental Toughness," and "Anxiety." Swimmers had a notably higher "Will to Win" ($t = 5.01, p < .05$) and greater mental toughness ($t = 3.34, p < .05$), indicating a stronger competitive drive and resilience. They also exhibited higher levels of anxiety ($t = 3.72, p < .05$) compared to para swimmers. However, aggression levels did not show a significant difference ($t = 1.91, p = .06$), suggesting both groups have similar levels of aggression. Descriptive statistics show that swimmers have a higher mean score for "Will to Win" ($M = 10.15$) and mental toughness ($M = 37.05$), while para swimmers have lower scores for these factors but lower anxiety ($M = 16.80$). These results highlight the distinct psychological profiles of swimmers and para swimmers, emphasizing the need to address their unique psychological needs to optimize their performance and well-being.

Keywords: Swimming, para swimming, anxiety, aggression, mental toughness, will to win

Introduction

Psychology plays a crucial role in determining an athlete's performance and mental health in competitive sports, just like physical and physiological attributes do. Competitive anxiety, mental toughness, aggression, and will to win are among the most significant of these characteristics. They not only affect how athletes handle pressure during events but also impact their mental health and the longevity of their careers (Hanton *et al.*, 2015) ^[4].

Para swimming is a challenging sport which demands not only physical strength but also a strong mental attitude. Due to their disabilities, para swimmers encounter particular difficulties that may affect their psychological well-being and stress management strategies. In contrast to athletes with able bodies, para swimmers may be more stressed and anxious because of cultural perceptions of disability, accessibility issues, and health worries. Despite these difficulties, a large number of para swimmers have excelled in competitive sports and demonstrated amazing perseverance, demonstrating their special psychological traits and coping mechanisms. While a lot of research has been done on these aspects in able-bodied athletes, there's an increasing need to understand how they play out in Para swimmers-athletes with physical disabilities who compete at high levels (Meyer & Fletcher, 2020) ^[7].

Performance can be significantly impacted by competition anxiety, which is the tension and unease athletes have both before and during contests. The strong drive to succeed, or the will to win, is equally essential and, depending on how it is handled, can either improve or detract from performance. Despite the fact that it's frequently associated with negativity, aggression can really be leveraged to increase attention and competition. Athletes need to use coping mechanisms, or techniques for handling pressure and stress, in order to maintain mental wellness and perform at their best.

Aim

The aim of this study is to compare how psychological factors like "Will to Win," "Aggression," "Mental Toughness," and "Anxiety" differ between national swimmers and para swimmers.

Objectives

1. To compare the 'Will to Win' between national swimmers and para swimmers.
2. To assess the differences in 'Aggression' levels between national swimmers and para swimmers.
3. To evaluate the 'Mental Toughness' of national swimmers and para swimmers.
4. To investigate the relationship between 'Anxiety' and

performance among national swimmers and para swimmers.

Method

The study included 40 national-level athletes, divided equally into 20 male swimmers and 20 male para swimmers, all aged between 18 and 30 years. To understand their psychological profiles, we conducted assessments to measure aggression and competitive state anxiety, mental toughness and will to win. These evaluations aimed to uncover any psychological challenges and differences between the two groups that could affect their performance and experience in sports.

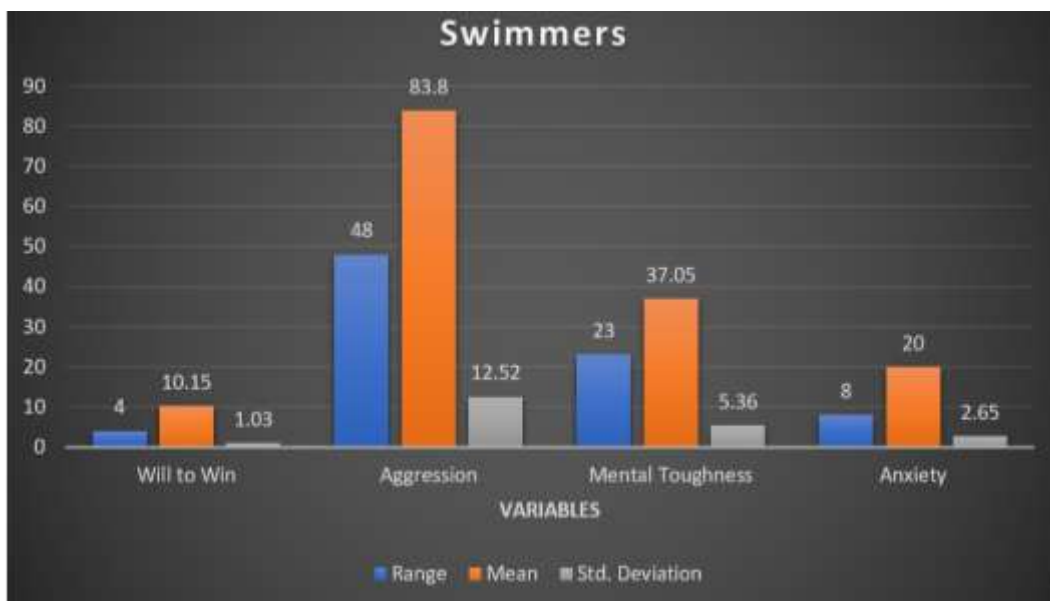
Result and Discussion

Table 1: Descriptive statistics of will to win, aggression, mental toughness and anxiety of swimmers

Variable	N	Range	Mean	Std. Deviation
Will to Win	20	4.00	10.15	01.03
Aggression		48.00	83.80	12.52
Mental Toughness		23.00	37.05	05.36
Anxiety		8.00	20.00	02.65

Table 1: Presents the descriptive statics of Will to Win: Male swimmers have a strong competitive drive, with an average score of 10.15. Most swimmers in this group show a consistent level of determination, as indicated by the low variation (standard deviation of 1.03). Aggression: The swimmers tend to be quite aggressive, with an average score of 83.80. However, there's a noticeable range in how aggressive each swimmer is, shown by the higher variation (standard deviation of 12.52). Mental Toughness: The mental

toughness of male swimmers is relatively high, with an average score of 37.05. While they generally possess strong mental resilience, there is some difference in toughness among individuals (standard deviation of 5.36). Anxiety: Male swimmers experience moderate levels of anxiety, with an average score of 20.00. Anxiety levels are fairly consistent across the group, with little variation (standard deviation of 2.65).



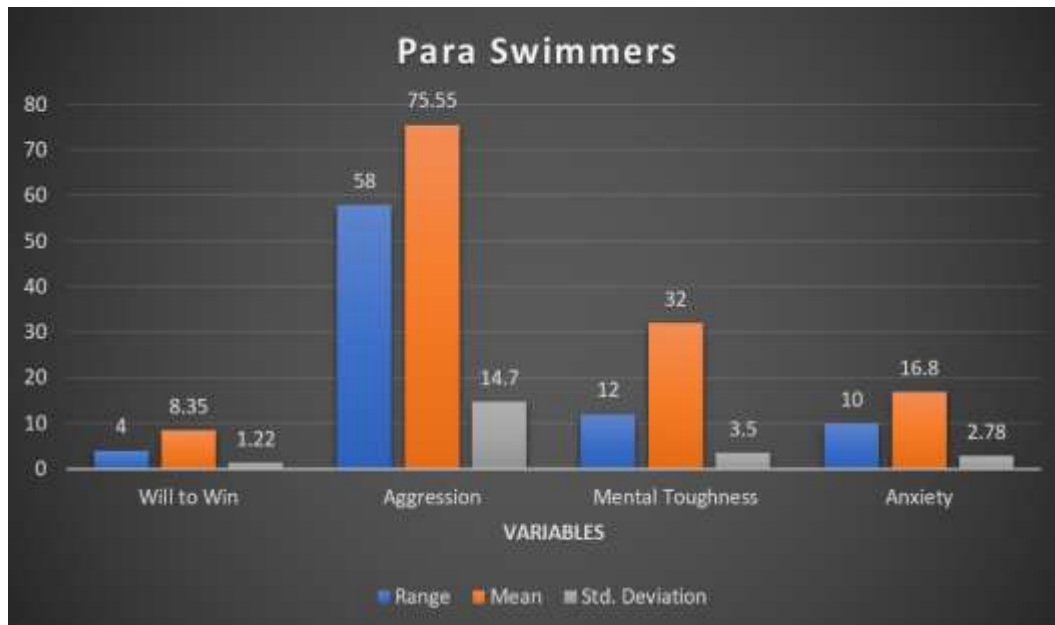
Graph 1: Graphical representation of will to win, aggression, mental toughness, and anxiety in swimmers

Table 2: Descriptive statistics of will to win, aggression, mental toughness and anxiety of para swimmers

Variable	N	Range	Mean	Std. Deviation
Will to Win	20	4.00	08.35	01.22
Aggression		58.00	75.55	14.70
Mental Toughness		12.00	32.00	03.50
Anxiety		10.00	16.80	02.78

Table.2. presents the descriptive statistics for "Will to Win,"

showing that male para swimmers have a strong competitive drive, averaging 8.35, with slightly higher variation (SD = 1.22) than male swimmers. Their aggression levels are lower, with an average score of 75.55 and a standard deviation of 14.70. Mental toughness among para swimmers is moderately strong, averaging 32.00 with less variation (SD = 3.50). Anxiety levels are lower, averaging 16.80, with relatively low variation (SD = 2.78) similar to male swimmers.



Graph 2: Graphical representation of will to win, aggression, mental toughness, and anxiety in para swimmers

Table 3: T-test comparison of will to win, aggression, mental toughness and anxiety between swimmers and para-swimmers

Variables	Subjects	t-value	p-value	DF	Sig. (2-tailed)
Will to Win	Swimmers	5.01	0.01	18	< .05
	Para-swimmers				
Aggression	Swimmers	1.90	0.06	18	< .05
	Para-swimmers				
Mental Toughness	Swimmers	3.34	0.01	18	< .05
	Para-swimmers				
Anxiety	Swimmers	3.71	0.01	18	< .05
	Para-swimmers				

Tabulated value at DF 20 = 2.101

* Significance level at 0.05 (2-tailed)

The table compares the psychological variables of "Will to Win," "Aggression," "Mental Toughness," and "Anxiety" between swimmers and para-swimmers. Each variable was analysed to determine whether there were significant differences between the two groups.

- **Will to Win:** The t-value is 5.01, with a p-value of 0.01, indicating a significant difference between swimmers and para-swimmers. Since the p-value is less than 0.05, it suggests that swimmers and para-swimmers differ significantly in their "Will to Win."
- **Aggression:** The t-value is 1.90, with a p-value of 0.06. Although the t-value suggests some difference, the p-value is slightly above 0.05, indicating that the difference in "Aggression" between swimmers and para-swimmers is not statistically significant at the conventional 0.05 level.
- **Mental Toughness:** The t-value is 3.34, with a p-value of 0.01. This result shows a significant difference in "Mental Toughness" between swimmers and para-swimmers, as the p-value is less than 0.05.
- **Anxiety:** The t-value is 3.71, with a p-value of 0.01. This indicates a significant difference in "Anxiety" between swimmers and para-swimmers, with the p-value being less than 0.05.

The findings revealed notable differences between the two groups. Male swimmers exhibited a significantly stronger "Will to Win" ($t = 5.01$, $p = 0.01$), indicating a higher competitive drive compared to male para-swimmers. In terms of "Aggression," although swimmers had higher average

scores, the difference between the two groups was not statistically significant ($t = 1.90$, $p = 0.06$), suggesting that both groups exhibit similar levels of aggression in their sports performance. However, significant differences were found in "Mental Toughness" ($t = 3.34$, $p = 0.01$), with male swimmers displaying stronger mental resilience compared to their para-swimmer counterparts. Additionally, the study found that male swimmers experience significantly higher levels of competition anxiety ($t = 3.71$, $p = 0.01$) than male para-swimmers, suggesting different psychological responses to competitive pressures between the two groups. There are several factors, which includes expectations, rigorous competition, and extreme greater pressure to perform at national level competitions. These findings highlight the significance of understanding and addressing the various psychological needs of swimmers and para-swimmers to optimize their performance and well-being in competitive sports.

Conclusion

This study provides valuable insights into the psychological profiles of national-level male swimmers and male para-swimmers. The data reveals that male swimmers generally possess a stronger "Will to Win" and greater "Mental Toughness" compared to male para-swimmers, suggesting that they may be better equipped to handle competitive pressures. However, this comes with higher levels of competition anxiety, which could affect their performance under stress. Although the difference in aggression levels between the two groups was not significant, the overall

findings highlight the unique psychological challenges faced by both swimmers and para-swimmers. These insights underscore the importance of tailored psychological training and support to enhance the performance and well-being of athletes in both groups. By addressing these differences, coaches and sports psychologists can better support the specific needs of swimmers and para-swimmers, helping them to achieve their full potential in competitive sports.

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