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## Comparative study of competition anxiety stress and depression among judo players and other combat games players

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### Abstract

The main purpose of the study was to compare the study of competition anxiety, depression and stress among women judo players and other combat game players among the female students. For the purpose of the study, 40 college women will be selected from Tamilnadu State and National level players (Judo Players & Other Combat Game Players). The subjects were divided into two equal groups consisting of twenty (n =20) subjects each, from the randomly selected participants. The psychological variables like Anxiety, Depression, and Stress were measured through the standardized questionnaire. The DASS questionnaire was used to evaluate the 3 items simultaneously. 3 - Self-report scales are included in the (DASS-21 items) Depression, the results obtained 't' value of depression and stress was 0.994 and 1.6505 was lesser than the required 't' value of 2.101 to be significant at 0.05 level. Hence, it was proved that there was no significant difference between the groups and the hypothesis was accepted at 0.05 level. The obtained 't' value of 2.4479 was lesser than the required 't' value of 2.101 to be significant at 0.05 level. Hence, it was proved that there was a significant difference between the groups in anxiety and the hypothesis was rejected at 0.05 level. Athletes are susceptible to a variety of mental health problems that may be related to both sport-related and non-sport-related causes, according to data collected in this study about the prevalence of psychological discomfort in athletes. Additionally, the findings revealed that the analyzed mental health issues were dependent on Judo and Other Combat Game Players. Females were discovered to be a vulnerable subsample, particularly amateur female athletes rather than top ones.

**Keywords:** Judo players, combat game players, depression, anxiety and stress, DASS 21

### Introduction

Judo is a form of sporadic combat that relies on both aerobic and anaerobic metabolism and is characterised by quick muscular movements (Sbriccoli *et al.*, 2007)<sup>[18]</sup>. The victor of the bout, which lasts a maximum of five minutes, is the judoka who scores the highest or Ippons, his opponent to the ground. It is an unpredictable sport that is divided into weight classes. In the days leading up to competition, judo female athletes frequently adopt quick weight-loss techniques in order to compete in a lower division. Higher self-esteem denotes a favourable self-evaluation, whereas lower self-esteem denotes a negative self-opinion, and this element is crucial in sport (Abalde & Pino, (2016)<sup>[1]</sup>.

Although having good mental health is crucial for female athletes to perform well (Purcell *et al.*, 2019)<sup>[12]</sup>, little is known about the mental health of female athletes, especially in terms of the prevalence of mental health concerns. Lack of research in this area has frequently been excused by the stereotypes that female athletes are just "stronger people" and that participation in sports automatically selects for individuals with good physical and mental health (Chang *et al.*, 2020)<sup>[3]</sup>. According to a number of studies, athletes are generally less depressed and worried than the general population, and they are also better at handling stress and have higher levels of self-esteem and positive body images (Rice *et al.*, 2016; Gouttebauge *et al.*, 2019)<sup>[13, 4]</sup>. It is overlooked, nonetheless, that the sports environment frequently contains particular stressors brought on by high-stress situations, ongoing mental efforts, demands, and constraints that may have a negative impact on mental health (Rice *et al.*, 2016)<sup>[13]</sup>. To support the a aforementioned, numerous studies have demonstrated that female athletes who are constantly required to prove themselves to a coach and/or teammates have better career

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trajectories than their counterparts playing the same position, as well as those who are dissatisfied with the direction of their sports career or were injured and are getting ready to end their career (typically those who are the most committed and at elite level) (Gouttebarga *et al.*, 2019) [4].

Differences in sports also have an impact on various elements of mental health. For instance, the unique nature of gymnastics, figure skating, and other high-risk sports can account for the notable variations in anxiety levels that occur among female athletes who participate in these sports (Schaal *et al.*, 2011; Lakicevic *et al.*, 2020) [15, 8]. Success in the first case rests on the jury's decision, and stress grows as the situation's degree of control is reduced. Anxiety or fear would be a counter-indicator of participation in that specific sport in the second group of sports, where seeking thrill and overcoming danger is the essence of action (and exceptions would just serve to confirm that norm). The pursuit of perfection, which is known to exist in artistic swimming, is difficult to achieve in other sports. When compared to team ball sports, racing and fine motor skills have very high incidence rates when it comes to eating problems. However, when compared to the kind of sport, female athletes who participated in combat and contact sports had the highest frequency of eating disorders (Schaal *et al.*, 2011; Lakicevic *et al.*, 2021) [15, 8].

The early detection of psychological distress susceptibility factors in younger age categories enables eradication or mitigation of its effect on sports performance and benefits an female athlete's overall health, according to the findings that the international success of juniors in combat sports represents a significant predictor of the long-term international success of seniors (Li *et al.*, 2018) [9]. This is particularly true for older female athletes, as psychological anguish can worsen later in a career if it is ignored (Prinz *et al.*, 2016) [11].

The main aim of this study was to compare the study of competition anxiety, depression and stress among women judo players and other combat game players. Based on the previous findings on variations in the prevalence of mental health symptoms among female athletes in specific sports, we hypothesize that there is no significant difference on the variables of Anxiety, depression and stress among judo players and other combat game players. In addition, may contribute to understanding these differences in our particular subsamples.

**Method:** For the purpose of the study 40 college women will

## Results

**Table 1:** The comparison of Depression Judo players and Other combat game Players through calculation of 't' test is presented.

Variables	Group	Mean	SD	SEM	MD	DF	t	p value
Depression	Judo Players	11.9	10.31	2.3	2.8	38	0.994	0.163
	Other Combat Game Players	14.7	7.23	1.61				
Anxiety	Judo Players	8.7	7.57	1.6927	6.3	38	2.4479	0.0191
	Other Combat Game Players	15	8.67	1.9387				
Stress	Judo Players	15.45	9.36	2.093	3.95	38	1.6505	0.1071
	Other Combat Game Players	19.4	5.19	1.1605				

\*Significant at  $p < .05$

The results presented in Table I shows that the mean, standard deviation and mean difference value of Depression. The obtained 't' value of 0.994 was lesser than the required 't' value of 2.101 to be significant at 0.05 level. Hence, it was proved that the there was no significant difference between

be selected from Tamilnadu State and National level players (Judo Players & Other Combat Game Players). The subjects were divided into two equal groups consisting of twenty ( $n = 20$ ) subjects each, from the randomly selected participants. The psychological variables like Anxiety, Depression, and Stress was measured through the standardized questionnaire.

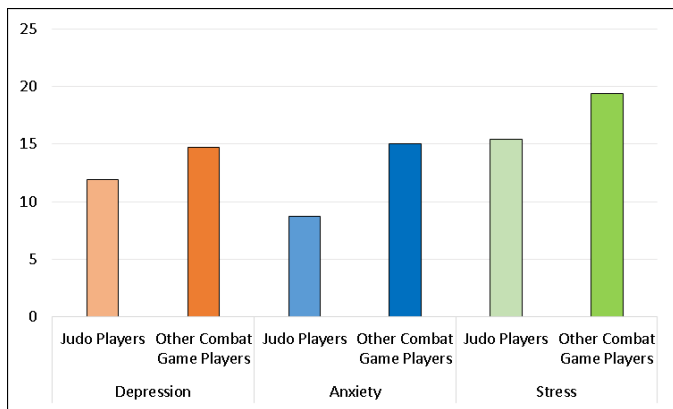
Depression, anxiety & stress are all negative emotions. The DASS questionnaire was created by the University of New South Wales (Australia) to evaluate the 3 items simultaneously. 3 - self-report scales are included in the (DASS-21 items) Depression, Anxiety & Stress is a categorical conception which seeks to advance the process of identifying, comprehending, and measuring the pervasive and emotional state of depression, anxiety & stress which are significant clinically. Each of the three DASS-21 (Depression, Anxiety and Stress Scale) scales contains 7 items, divided into subscales with similar content. The depression scale evaluates - dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia and inertia. The anxiety scale evaluates - autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic non-specific arousal. It evaluates issues with falling asleep, nervousness, and being easily agitated or angry, irritable or overreacting, and impatient. The scores for the relevant questions are added up to determine the scores for depression, anxiety, and stress.

The DASS is self-report questionnaire which is used to measure the severity of the psychological disorder. Each scale consists of 7 question – Depression (Q-3, 5, 10, 13, 16, 17, 21), Anxiety (Q -2, 4, 7, 9, 15, 19, 20) & Stress (Q-1, 6, 8, 11, 12, 14, 18). The investigator explained about the purpose of the questionnaire clearly. Each questionnaire was given separately to each subject. The subjects were instructed to read the questionnaire and circle the number 0, 1, 2 & 3 which indicates the how much the statement applied to the subject over the past week. Scoring: Each sub scale is summed up and multiplied by 2. This scale is one of the most commonly used scales when it comes to emotional assessment due to its metric qualities, which were also proven in our situation. This is due to the low time requirement of the scale as well as the fact that it is simple to complete and publically available.

The data was analyzed by applying 't' ratio to find out the difference between Judo players and other combat game players. The level of significance was fixed at 0.05 level of confidence.

the groups for depression and the hypothesis was accepted at 0.05 level. The obtained 't' value of 2.4479 was lesser than the required 't' value of 2.101 to be significant at 0.05 level. Hence, it was proved that the there was significant difference between the groups in anxiety and the hypothesis was rejected

at 0.05 level. The obtained 't' value of 1.6505 was greater than the required 't' value of 2.101 to be significant at 0.05 level. Hence, it was proved that there was no significant difference between the groups and the hypothesis was accepted at 0.05 level.



**Fig 1:** Differences in sports also have an impact on various elements of mental health

### Discussion

Judo athletes who are highly motivated outperform those who are less motivated in terms of mental efficiency and impulsivity index (Korobeynikov *et al.*, 2017) [7]. In weightlifters, mental exhaustion was adversely connected with greater exercise motivation (Shang & Yang, 2021) [16]. The autonomy support provided by coaches has a major impact on young athletes' self-determined motivation, which in turn improves their athletic performance, just as it did in the review article that was just given (Joesaar, Hein & Hagger, 2012) [5]. A trait of mental toughness that is typical among judo is combativity. A tendency to dominate the competition as well as an enthusiastic and aggressive fighting style are all characteristics of combativeness (Silva *et al.*, 2018) [17].

When comparing our results obtained on Judo with the results obtained using the same scale, DASS-21, in other combat players (e.g., Jovanovic *et al.*, 2014; Bottesi *et al.*, 2015; Saricam, 2018) [6, 2, 14], we could not notice any regularity in terms of values on particular subscales. However, when separately comparing the Judo athletes with other combat players from our research with the results of other research in which DASS-21 was used, it is noticeable that other combat players self-perceive unpleasant emotional states more in line than Judo layers (Jovanovic *et al.*, 2014; Bottesi *et al.*, 2015) [4, 2].

However, gender differences studies that used DASS offer inconsistent results, often indicating no gender differences (Mahmoud *et al.*, 2010) [6]. In this study, the obtained results can be justified for a sport-participating sample, a factor known to help with mental health issues. This was also shown in our study, where female athletes showed better health when compared other female players, results were found. Thus, if there is a difference between females players in psychological distress in the Judo and Other combat players. Therefore, taking part in sports can induce more psychological benefits in female Judo Players and other combat players, at least in the researched aspects of the study.

### Conclusion

Athletes are susceptible to a variety of mental health problems that may be related to both sport-related and non-sport-related causes, according to data collected in this study about the

prevalence of psychological discomfort in athletes. Additionally, the findings revealed that the analysed mental health issues were dependent on Judo and Other Combat Game Players. Females were discovered to be a vulnerable subsample, particularly amateur female athletes rather than top ones. Future epidemiological and interventional research should investigate the best methods for determining the mental health needs associated with various sports activities, particularly in terms of gender.

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