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## Comparative study on hardiness among female combat game athletes

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### Abstract

The purpose of the study was to compare the hardiness level between the female combat game athletes (boxers, judokas and wrestlers) for which 56 athletes (18 boxers, 18 judokas and 18wrestlers) were selected from various colleges of Panjab University, Chandigarh having age ranged from 18-26 years. Hardiness scale developed by K. Allred and T. Smith in 1989 was used to measure the psychological hardiness of combat game athletes. This questionnaire consists of 40 items that reflect the hardiness of athletes. Analysis of variance (ANOVA) with significant level at ( $p < 0.05$ ) was used to examine the variances between the groups. It was found that significant differences were observed on the variable hardiness between the female combat game athletes (boxers, judokas and wrestlers). So it can be concluded that female boxers exhibited higher hardiness as compared to the female judokas and female wrestlers.

**Keywords:** Badminton, smash skill, motor ability, boys, girls

### Introduction

Hardiness is associated with various psychological style such as good health, resilience and good performance under a variety of nerve-racking circumstances and is possibly a valued personality style for highly challenging settings and professions (Bartone, 2008) [3]. "Hardiness is a combination of three attitudes (commitment, control, and challenge) that together provide the courage and motivation needed to turn stressful circumstances from potential calamities into opportunities for personal growth by Maddi" (2006) [8]. Robinson (2003) [9] suggested that sports these days is an organized event involving several crores of rupees, infrastructure, management and resources required for the competition. Better performance is associated with mental skills, physiological and psychological attributes which needed to be identified by the coaches, sportsperson and team owners to make it reliable.

Bartone, Spinose, Robb and Pastel (2008) [4] says that hardiness is the psychological characteristics that is associated with performance, better health status and resilience in wide variety of stressful situations. Hanton, Evans and Neil (2003) [6] founded that hardiness and personality construct a sports specific situation and hardiness is the important element in the construction of personality which provide supports to the fact that skill level is a vital variable showing individual difference when measuring the competitive anxiety. Hardy, Jones and Gould (2002) [5] hardiness and optimism is two personality factors which influence athletes coping efforts. Hendrix, Acevedo and Herbert (2000) [7] studied hardiness in athletes and found that athletes which having low hardiness level have greater issues of athletic training, lower levels of personal accomplishments, greater emotional exhaustion and depersonalization.

### Methodology

A total of 56 players were selected as subjects for the present study. The age of the subjects ranged from 18-26 years. Out of 56 subjects, 18 were boxing inter- college players, other 18 were judo inter-college players and the another 18 were wrestling inter-college players of Panjab University, Chandigarh. Comparison was made between these combat game athletes. The data was collected in their free time without any distraction.

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**Instrument**

Hardiness scale developed by K. Allred and T. Smith in 1989 was used to measure the psychological hardiness of combat game athletes. This questionnaire consists of 40 items that reflect the hardiness of athletes.

**Results**

Descriptive statistics were computed for all measures. The data obtained were analysed with the help of statistical software SPSS.

**Table 1:** Analysis of Variance (ANOVA) results with regard to Hardiness among Female Combat game athletes (boxers, judokas and wrestlers)

Source of Variance	Sum of Squares	df	Mean Square	F-ratio	Sig.
Between Groups	1569.370	2	784.685	4.221	.020*
Within Groups	9481.000	51	185.902		
Total	11050.370	53			

\*Significant at 0.05 level F 0.05 (2,53)

**Descriptive statistics of female combat game athletes on the variable Hardiness**

It can be observed from the table-4.9 that results of Analysis of Variance (ANOVA) among male combat game athletes (boxers, judokas and wrestlers) with regard to variable mental toughness were found statistically significant ( $p < 0.05$ ). Since the obtained F-ratio 4.221 was found statistically significant, therefore, Post-hoc test (LSD) was applied to find out the degree and direction of differences between paired mean among combat game athletes (boxers, judokas and wrestlers) with regard to the mental toughness. The results of

the Post-hoc test have been presented in the below table.

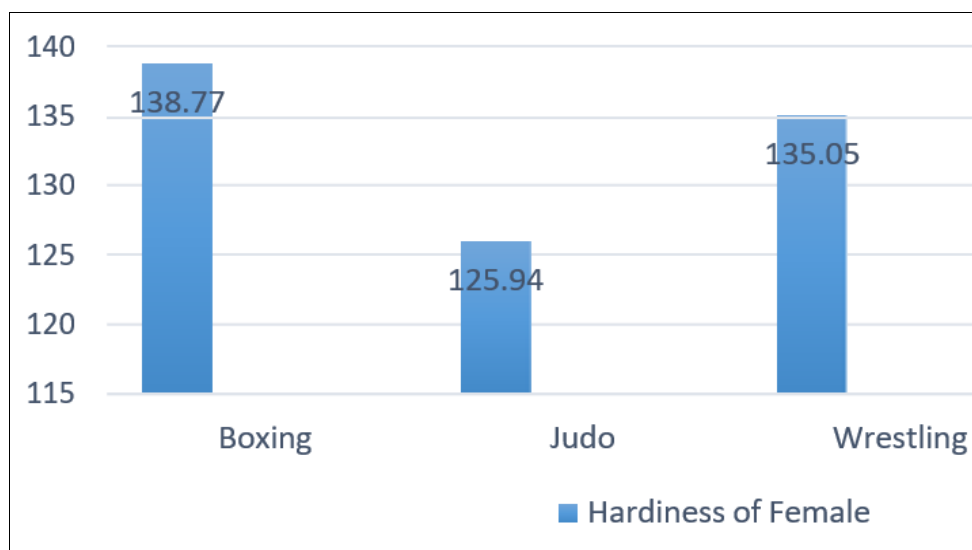
**Table 2:** Comparison of Mean values of Post-hoc test (LSD) among combat game Female athletes (boxers, judokas and wrestlers) with regard to the variable Hardiness

Group (A)	Group (B)	Mean Difference (A-B)	Sig.
Boxers	Judokas	12.83333*	0.007
(Mean=138.33)	wrestlers	3.72222	0.417
Judokas	Boxers	-12.83333*	0.007
(Mean=125.94)	Wrestlers	-9.11111	0.050
Wrestlers	Boxer	-3.722222	0.417
(Mean=135.05)	Judokas	9.11111	0.050

A glance at table-1 showed that the mean value of boxers group is 138.33 whereas judokas group is 125.94 and the mean difference between both the groups was found 12.83333. The p- value sig. 0.007 shows that boxers had demonstrated significantly better on hardiness than judokas. The mean value of wrestlers group is 135.05 and mean difference of boxers and wrestlers is 3.72222. the p-value sig. 0.417 revealed that boxers exhibited better on overall hardiness level.

The mean difference between judokas and wrestlers was found -9.1111. The p-value sig. 0.050 showed that the wrestlers had demonstrated better than judokas though not significantly. The graphical representation of responses has been exhibited in figure 9. So, there is significant difference in the Hardiness level of female combat game (boxers, judokas and wrestlers) athletes.

**Hardiness level of Female Combat game (Boxers, Judokas and Wrestlers) athletes**



**Fig 1:** Graphical Representation of Mean comparison with regard to female combat game athletes (boxers, judokas and wrestlers) on the variable Hardiness.

**Discussions**

It has also been observed from the Analysis of Variance (ANOVA) table-4.10 with regard to the Hardiness of Females combat games athletes revealed that there was significant difference in Hardiness of Females combat game athletes (Boxers, Judokas and Wrestlers). It can also be summarized from the observed results that the Female Boxers exhibited higher level of Hardiness as compared to the Judokas and wrestlers. The outcome of the results may be due to the state of being dedicated to the cause, being more engaged, ability to prove or justify something. Kadian and Malik (2019) [11]

studied on female wrestlers and found that wrestlers have high level of hardiness and sports is required to increase the hardiness level and decreases the stress levels. Kadian and Malik (2017) [12] studied on the women on the variable hardiness and self-esteem and they found that sports can be a great tool to develop or to enhance the hardiness level in women. Ahmed and Singh (2017) [1] studied on the hardiness level of football and judo players and no significant difference was found between them. Wieser and Thiel (2014) [10] found a significant difference in the hardiness level between national and international footballers.

## Conclusions

From the results of the present study, it was found that significant difference was found between the female combat game athletes (boxers, judokas and wrestlers) with regard to the variable hardiness. From the above findings we can conclude that boxers, judokas and wrestlers were not equally developed in the hardiness. Female boxers exhibited more hardiness as compared to female judokas and wrestlers.

## Limitations of the study

Mood of the respondent while giving answers to the items will be considered as limitation of the study. Questionnaire has its own boundaries. Any bias might enter into the subject's answer and on this account, it may be considered as the limitation of the study. Further, the life style of the subjects can also influence the results, as it is beyond the control of researcher. Socio economic factors, were not controlled by the researcher. Therefore, can be considered as limitation of the study.

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