

*Full Length Research Paper*

# **Sport imagery and mental health among omnivorous combative players: A psychological probe**

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The present study was examined to determine sport imagery and mental health among omnivorous combative players. To obtain data for this study, the investigators had selected ninety (N=90) male omnivorous combative players. They were further assigned into three categories that is Category (A) thirty (N=30) judokas, Category (B) thirty (N=30) wrestlers and Category (C) thirty (N=30) boxers, who had participated in inter-college competitions from various colleges of Guru Nanak Dev University, Amritsar and Panjab University, Chandigarh were randomly selected for the collection of data. The age of the subjects was ranged between 20 to 25 years. Sport imagery questionnaire developed by Hall et al. (1998) and mental health questionnaire prepared by Singh and Gupta (2000) were administered. One way analysis of variance (ANOVA) was applied to find out the significant differences among omnivorous judokas, wrestlers and boxers. Where 'F' values found significant in ANOVA test then Tukey post-hoc test (TPHT) was applied to see the mean difference between mean scores of three categories. Data was analyzed using the statistical package for social science (SPSS) version 18.0. The level of significance was set at 0.05. It is concluded that the results on the subscales that is cognitive general, motivational general-arousal and motivational general were found insignificant among all omnivorous combative players. With regard to cognitive specific, motivational specific, the overall sport imagery were found highly significant among omnivorous combative players. However, the results on the subscales that is emotional stability, security-insecurity, the overall mental health were found insignificant whereas highly significant results were found on the subscales overall adjustment, autonomy, self-concept and intelligence among omnivorous judokas, wrestlers and boxers.

**Key words:** Sport imagery, mental health, omnivorous, combative.

## **INTRODUCTION**

Sports related to combat skills have been a part of human culture for thousands of years. A Combat sport, also known as a Fighting sport, is a competitive contact sport where two combatants fight against each other using certain rules of engagement, typically with the aim of simulating parts of real hand to hand combat. Combative behavior is any physically aggressive act that causes or intends to hurt or damage a person or object. Omnivorous combat players are those who eat both plants and animal foods. These types of foods help to improve the muscle strength and power of the body.

Everyone has the ability to use imagery; nevertheless, people sometimes choose not to use it even in situations in which it could be helpful. It can also be seen as an experience that mimics real experience in which the individual is aware of seeing an image, feeling movement of an image, experiencing an image of smell, taste or sound without experiencing the real thing (White and Hardy, 1998).

Early research defined imagery as "all those quasi-sensory or quasi-perceptual experiences of which we are self-consciously aware, and which exist for us in the nascence of those stimulus conditions that are known to produce their genuine sensory or perceptual counterparts, and which may be expected to have different consequences from their sensory or perceptual

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counterparts" (Richardson, 1969). It has been found that imagery is employed most often immediately prior to a competitive event, rather than during or after competition (Barr and Hall, 1992). When the athletes use imagery in training they tend to use it during practice, not before or after practice (Salmon et al., 1994). Outside of training and competition, athletes have reported using imagery intermittently throughout the day, but most often at night just before falling asleep (Hall et al., 1990; Rodgers et al., 1991).

The expression mental health consists of two words: mental and health. Mental Health is essentially about how we think and feel about ourselves and how we interpret the world around us. It affects our capacity to manage, to communicate, to form and sustain relationships. Cuts and Mosely (1941), "mental health is the ability to adjust satisfactorily to the various strains we meet in life and mental hygiene as the means we take to assume this adjustment". Mental health is the resilience or bounce of the individual's personality in managing his own physical, social and psychological environment (Crow and Crow, 1956). Schneider's (1964) mental health as such represents a psychic condition which is characterized by mental peace, harmony and contentment. It is identified by the absence of disability and debilitating symptoms both mental and somatic in the person. The objective of the present research is to find out the significant differences among omnivorous judokas, wrestlers and boxers in relation to sport imagery and mental health.

## METHODS

### Sample of respondents

To obtain data for this study, the investigators had selected ninety (N=90) male omnivorous combative players. They were further assigned into three groups that is Category (A) thirty (N=30) judokas, Category (B) thirty (N=30) wrestlers and Category (C) thirty (N=30) boxers, who had participated in inter-college competitions from various colleges of Guru Nanak Dev University, Amritsar and Panjab University, Chandigarh were randomly selected for the collection of data. The age of the subjects was ranged between 20 to 25 years.

### Instrumentation

Sport imagery questionnaire consists of thirty (N=30) items developed by Hall et al. (1998) to assess five imagery functions that is cognitive specific (CS) cognitive general (CG), motivational specific (MS), motivational general-arousal (MG-A) and motivational general mastery (MG-M). The mean subscale scores (For CS, CG, MS, MG-M and MG-A) can be calculated for a respondent by summing the item scores (ratings) for each subscale and dividing by the number of items in the subscale. Each item is rated on a 7-point scale from 1=rarely to 7=often; therefore, a higher score reflects greater imagery.

The Investigators have also used the mental health battery constructed by Singh and Gupta (2000) for measuring all the dimensions of mental health of the subjects and their overall mental

health. This battery consisted of one hundred and thirty (N=130) items covering all the areas of mental health. This questionnaire included six areas that is, emotional stability (EM), overall adjustment (OA), autonomy, security-insecurity, self-concept and intelligence. In this test, the scoring of response sheets of each subject is done with the help of a key provided in the test. If subject gave the correct answer then a score of +1 was awarded and for incorrect answer zero mark is given. There was no time for the completion of both the questionnaires but the subjects were instructed not to take too much time over any question. The questionnaires were distributed to the respondents along with the writing material. After the completion of the subject's questionnaires, questionnaires were collected and checked that no response was left.

### Data processing methods

One way analysis of variance (ANOVA) was applied to find out the significant differences among omnivorous judokas, wrestlers and boxers Where 'F' values found significant in ANOVA test then Tukey post-hoc test (TPHT) was applied to see the mean difference between mean scores of three categories. Data was analyzed using the Statistical Package for Social Science (SPSS) version 18.0. The level of significance was set at 0.05.

## RESULTS

The statistical analysis of data collected on (N=90) players belonging to three categories (judokas, wrestlers and boxers) are presented in tables and interpretations are given accordingly. It has been observed from Tables 1 and 2 that there is significant difference on cognitive specific among three categories of omnivorous combative players; the f value=3.96 is much greater than the tabulated value=3.09. The f value=1.48 was found lower than the table value=3.09; hence found insignificant on the subscale cognitive general among omnivorous judokas, wrestlers and boxers. With regard to motivational specific the f value=4.98 was found significant and much higher than tabulated value among three categories at 0.05 level of significance. The f value =1.78 on the subscale motivational general-arousal was found lower than the tabulated value among the three categories. With regard to subscale motivational general-mastery that f value=2.28 was lesser than critical value=3.09 among the all three categories that is omnivorous judokas, wrestlers and boxers at 0.05 level of significance. The f value=7.14 of overall sport imagery was found highly statistically significant among omnivorous judokas, wrestlers and boxers at tabulated value=3.09. While comparing the mean values of all the subscales in Tukey post hoc test, it is found that judokas have found much better sport imagery as compared to their counterparts that is wrestlers and boxers.

It is evident from Tables 3 and 4 that there is insignificant difference on emotional stability among three categories of omnivorous combative players; it is observed that f value=2.05 is lesser than the tabulated

**Table 1.** One way analysis of variance (ANOVA) among omnivorous judokas, wrestlers and boxers with regard to sport imagery and their subscales.

Groups	Sum of squares	df	Mean square	F	Sig.
<b>Cognitive specific</b>					
Between groups	4.705	2	2.352	3.96*	0.023
Within groups	51.691	87	0.594		
Total	56.396	89			
<b>Cognitive general</b>					
Between groups	2.050	2	1.025	1.48	0.233
Within groups	60.141	87	0.691		
Total	62.191	89			
<b>Motivational specific</b>					
Between groups	10.481	2	5.240	4.98*	0.009
Within groups	91.452	87	1.051		
Total	101.933	89			
<b>Motivation general-arousal</b>					
Between groups	4.067	2	2.034	1.74	0.181
Within groups	101.539	87	1.167		
Total	105.606	89			
<b>Motivation general-mastery</b>					
Between groups	3.692	2	1.846	2.28	0.108
Within groups	70.477	87	0.810		
Total	74.169	89			
<b>Overall sport imagery</b>					
Between groups	109.009	2	54.504	7.14*	0.001
Within groups	663.948	87	7.632		
Total	772.957	89			

\*Significant at 0.05, table value F 0.05 (2, 87) = 3.09.

value=3.09. The f value=3.94 was found higher than the table value=3.09 hence found significant on the subscale overall adjustment among omnivorous judokas, wrestlers and boxers. With regard to autonomy the f value=6.25 was found significant and much higher than tabulated value among three categories at 0.05 level of significance. The f value=1.86 on the subscale security-insecurity was found lower than the tabulated value among the three categories. With regard to subscale self-concept the f value=4.45 was higher than critical value=3.09 among all three categories that is omnivorous judokas, wrestlers and boxers at 0.05 level of significance. The f value=9.34 of intelligence was found much highly statistically significant among omnivorous

judokas, wrestlers and boxers at tabulated value= 3.09. With regard to over all mental health the f value=1.26 was lesser than tabulated value=3.09 among omnivorous judokas, wrestlers and boxers at 0.05 level of significance.

## DISCUSSION

Sport imagery and mental health are integral part of psychological aspects in sports. From the above mentioned results it is revealed that on the cognitive specific, motivational specific subscales were found significant. Recently, research has also determined that

**Table 2.** Tukey Post Hoc Test (TPHT) among omnivorous judokas, wrestlers and boxers with regard to cognitive specific, motivational specific and overall sport imagery.

Categories	N	Subset for alpha = 0.05	
		1	2
<b>Cognitive specific</b>			
Wrestlers	30	5.11	
Boxers	30	5.37	5.37
Judokas	30		5.67
Sig.		0.443	0.315
<b>Overall sport imagery</b>			
Boxers	30	24.88	
Wrestlers	30	25.07	
Judokas	30		27.31
Sig.		0.965	1.000
<b>Motivational specific</b>			
Boxers	30	5.03	
Wrestlers	30	5.06	
Judokas	30		5.77
Sig.		0.992	1.000

**Table 3.** One Way Analysis of Variance (ANOVA) among omnivorous judokas, wrestlers and boxers with regard to mental health and their subscales.

Groups	Sum of squares	df	Mean square	F	Sig.
<b>Emotional stability</b>					
Between groups	10.422	2	5.211	2.05	0.135
Within groups	221.233	87	2.543		
Total	231.656	89			
<b>Overall adjustment</b>					
Between groups	161.156	2	80.578	3.94*	0.023
Within groups	1780.500	87	20.466		
Total	1941.656	89			
<b>Autonomy</b>					
Between groups	47.756	2	23.878	6.25*	0.003
Within groups	332.467	87	3.821		
Total	380.222	89			
<b>Security-insecurity</b>					
Between groups	11.289	2	5.644	1.86	0.162
Within groups	264.000	87	3.034		
Total	275.289	89			
<b>Self-concept</b>					
Between groups	20.267	2	10.133	4.45*	0.014
Within groups	198.133	87	2.277		
Total	218.400	89			

**Table 3.** Contd.

<b>Intelligence</b>					
Between groups	76.067	2	38.033	9.34*	0.000
Within groups	354.333	87	4.073		
Total	430.400	89			
<b>Overall mental health</b>					
Between groups	104.022	2	52.011	1.26	0.288
Within groups	3586.467	87	41.224		
Total	3690.489	89			

\*Significant at 0.05, table value F 0.05 (2, 87)=3.09.

**Table 4.** Tukey Post Hoc Test (TPHT) among omnivorous judokas, wrestlers and boxers with regard to overall adjustment, autonomy, self- concept and intelligence.

Categories	N	Subset for alpha = 0.05	
		1	2
<b>Overall adjustment</b>			
Boxers	30	26.16	
Wrestlers	30	28.03	28.03
Judokas	30		29.43
Sig.		0.284	0.490
<b>Autonomy</b>			
Wrestlers	30	10.70	
Judokas	30	11.20	11.20
Boxers	30		12.43
Sig.		0.614	0.056
<b>Self-concept</b>			
Judokas	30	10.46	
Boxers	30	10.60	10.60
Wrestlers	30		11.53
Sig.		0.943	0.062
<b>Intelligence</b>			
Wrestlers	30	23.86	
Judokas	30	23.90	
Boxers	30		25.83
Sig.		0.998	1.000

athletes use imagery during sport-injury rehabilitation (Sordoni et al., 2000, 2002). With regard to cognitive general, motivational general-arousal and motivational general-mastery were found lesser and insignificant among omnivorous combative players. Overall sport imagery was found significant among omnivorous judokas, wrestlers and boxers. While comparing the mean values of all the players, judokas have much better sport imagery as compared to their counterparts. It might be due to better facilities, training and different environment of the games. Hall et al. (1990) found that gymnasts and figure skaters use kinesthetic imagery

more than squash, soccer, and football players. The nature of imagery has been investigated in some depth revealing that comparison of positive and negative imagery has been a popular approach used to examine imagery content, study has found that the use of positive imagery for a variety of tasks improves motor performance, whereas the use of negative imagery has resulted in a decline in performance (Powell, 1973; Woolfolf et al., 1985). Munroe et al. (2000) found athlete's reported imagery as being most effective during pre-competition and during practice. Adegbesan (2010) investigated that the result indicated a significant

correlation of imagery use and sport confidence among football players.

Therefore based on the above said, it is evident that on the subscales of overall adjustment, autonomy and intelligence were highly statistically significant among omnivorous combative players. Gill (2009) examined the results and revealed that inter-university medalist softball players were found better as compared to their counterpart non-medalist softball players on the variable mental health. With regard to other subscales the emotional stability, security-insecurity and self-concept was found insignificant among omnivorous judokas, wrestlers and boxers. The overall mental health was also found insignificant among all the omnivorous combative players. The supported study for the present study by Kanwar (2004) reveals that inter college champion judokas had better mental health than non-champion inter college judokas. Kumar et al. (1985) found variations in mental health of individual, team and non-athletes and analysis yielded significantly poor mental health for non-athletes than the team athletes and individual athletes.

### Conclusion

On the basis of above findings, it is concluded that the results on the subscales that is, cognitive general, motivational general-arousal and motivational general were found insignificant among all omnivorous combative players. With regard to cognitive specific, motivational specific, the overall sport imagery were found highly significant among omnivorous combative players. However, the results on the subscales that is emotional stability, security-insecurity, the overall mental health were found insignificant, whereas highly significant results were found on the subscales overall adjustment, autonomy, self-concept and intelligence among omnivorous judokas, wrestlers and boxers.

### Practical application

The study will be beneficial to understand the sport imagery and mental health of omnivorous combative players. The sports psychologists working with these combative players and federations will be benefited from the findings of the present article to prepare their training programmes accordingly. The present manuscript will also be a useful feedback for one and all concerned with these combative players.

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