EDUZONE: International Peer Reviewed/Refereed Multidisciplinary Journal (EIPRMJ), ISSN: 2319-5045
Volume 14, Issue 1, January-June, 2025, Available online at: www.eduzonejournal.com

Examining Mental Skills in Players of among Racket Games and Combat Sports

Maninder Singh[1], Dr. Manjit Kaur[2]

[1]Research Scholar, Sant Baba Bhag Singh University, Village: Khiala, PO: Padhiana, Distt: Jalandhar
[2]Assistant Professor, Sant Baba Bhag Singh University, Village: Khiala, PO: Padhiana, Distt: Jalandhar

ABSTRACT

The purpose of the study is to examining mental skills in players of among racket games and combat sports. For this purpose, A total of three hundred male participants (N=300), aged 18 to 25, from universities in the northern region of India, were involved in the study. Additionally, these participants were divided into the following groups: Group: A: Racket Games (N1=150) and Group B: Combat Sports (N2=150). The current investigation employed the independent t-test. In hypothesis testing, 0.05 was used as the significance criterion. Imagery Ability: Significant variance difference (p = .000), so "Equal variances not assumed" is used. The t-test is significant (p = .001), indicating a meaningful difference between the two groups. The mean difference (1.50667) suggests that one group exhibits significantly better imagery ability. Mental Preparation: No significant variance difference (p = .188), so "Equal variances assumed" is used. The t-test is significant (p = .002), suggesting a significant difference between the two groups. The mean difference (-2.98667) indicates that one group scores significantly lower in mental preparation. Self-Confidence: Significant variance difference (p = .000), so "Equal variances not assumed" is used. The t-test is significant (p = .003), confirming a significant difference between the two groups. The mean difference (1.52667) suggests that one group has significantly higher self-confidence. Anxiety and Worry Management: Significant variance difference (p = .000), so "Equal variances not assumed" is used. The t-test is significant (p = .001), indicating a meaningful difference between the groups. The mean difference (1.91333) suggests that one group has significantly better anxiety and worry management skills. Concentration Ability: Significant variance difference (p = .000), so "Equal variances not assumed" is used. The t-test is significant (p = .004), confirming a significant difference between the groups. The mean difference (1.42667) indicates that one group has significantly better concentration ability. Relaxation Ability: No significant variance difference (p = .645), so "Equal variances assumed" is used. The t-test is highly significant (p = .000), indicating a substantial difference between the two groups. The mean difference (-4.01333) suggests that one group has significantly lower relaxation ability. Mental Skills Total: No significant variance difference (p = .687), so "Equal variances assumed" is used. The t-test is not significant (p = .662), indicating no meaningful difference in total mental skills between the groups.

Keywords: Mental Skill, Racket Games, Combat Sports, Players

INTRODUCTION

Psychological competencies, commonly known as mental or cognitive strategies, are fundamental to optimal performance, personal growth, and emotional health. These abilities comprise diverse cognitive and affective techniques that help individuals control their thought processes, regulate emotions, sustain attention, and excel in demanding situations (Weinberg & Gould, 2019). Fundamental psychological skills involve establishing objectives, mental rehearsal, internal dialogue, attentional control, affect management, and self-efficacy enhancement (Vealey, 2007).

Empirical studies indicate that proficient use of these psychological tools correlates with enhanced stress adaptation, greater persistence, and superior execution of tasks (Thelwell et al., 2010). Competitive performers, for example, demonstrate greater consistency during high-pressure events when utilizing cognitive rehearsal and attentional control methods (Gucciardi et al., 2009). The application of these psychological tools extends beyond athletic contexts to educational achievement and mental health. Evidence-based interventions like cognitive restructuring and present-moment awareness training have proven effective in improving cognitive performance, alleviating distress, and fostering adaptive behaviors among learners and working professionals (Gardner & Moore, 2007). Furthermore, systematic development of psychological skills has been successfully incorporated into clinical treatments for mood disorders, assisting individuals in modifying dysfunctional cognitions and strengthening emotional durability (Beck, 2011). Contemporary neuroscience research demonstrates that consistent cognitive training induces neuroanatomical and neurophysiological adaptations, especially in brain regions governing executive functions, emotional processing, and evaluative judgments (Davidson & McEwen, 2012).

Selection of Subjects

A total of three hundred male participants (N=300), aged 18 to 25, from universities in the northern region of India, were involved in the study. Additionally, these participants were divided into the following groups: Group

- A: Racket Games (N1=150)
- Group B: Combat Sports (N2=150)

[Racket Games; N_1=150]		
1.	Tables Tennis	50
2.	Badminton	50
3.	Tennis	50
[Combat Sports; N_2=150]		
1.	Boxing	50
2.	Judo	50
3.	Taekwondo	50

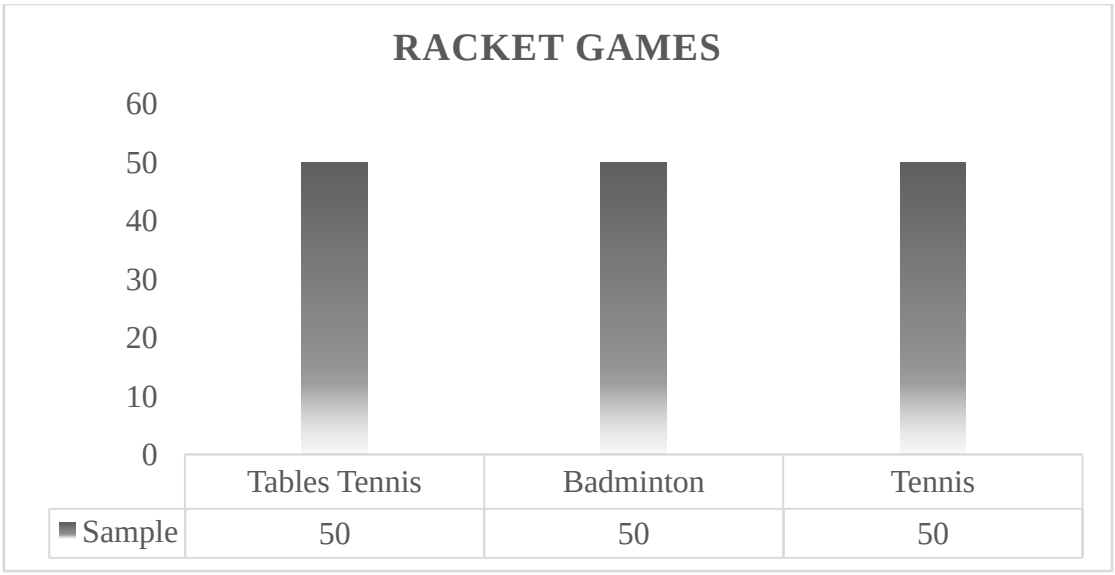

Figure 1 The visual representation of the selection of participants concerning Racket Games

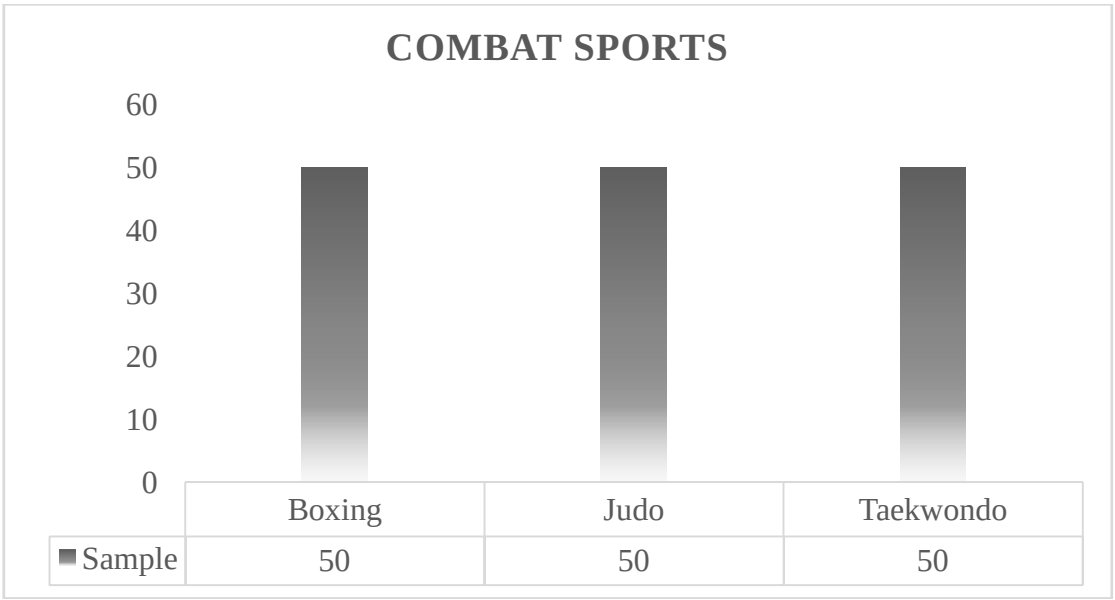

Figure 2 The visual representation of the selection of participants concerning Combat Sports

SELECTION OF VARIABLES

Mental Skill:

i.	Imagery Ability
ii.	Mental Preparation
iii.	Self Confidence
iv.	Anxiety and Worry Management
v.	Concentration Ability
vi.	Relaxation Ability

Statistical Techniques
The current investigation employed the independent t-test. In hypothesis testing, 0.05 was used as the significance criterion.

RESULTS

Table 1: Normality Test for Mental Skills

	Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Imagery Ability	Racket Games	.117	150	.000	.949	150	.000
	Combat Sports	.105	150	.000	.919	150	.000
Mental Preparation	Racket Games	.096	150	.002	.952	150	.000
	Combat Sports	.113	150	.000	.961	150	.000
Self Confidence	Racket Games	.120	150	.000	.949	150	.000
	Combat Sports	.117	150	.000	.924	150	.000
Anxiety and Worry Management	Racket Games	.109	150	.000	.953	150	.000
	Combat Sports	.144	150	.000	.918	150	.000
Concentration Ability	Racket Games	.102	150	.001	.966	150	.001
	Combat Sports	.122	150	.000	.962	150	.000
Relaxation Ability	Racket Games	.082	150	.015	.980	150	.029
	Combat Sports	.101	150	.001	.979	150	.021
Mental Skills Total	Racket Games	.070	150	.069	.984	150	.089
	Combat Sports	.049	150	.200*	.993	150	.633

Mental Skills

- **Most subscales (Imagery Ability, Mental Preparation, Self-Confidence, Anxiety & Worry Management, Concentration Ability, Relaxation Ability) show p-values < 0.05**, indicating non-normal distribution.
- **Exception:** "Mental Skills Total" for both **Racket Games (p = 0.069, 0.089)** and **Combat Sports (p = 0.200, 0.633)** suggest normality.

Table 2: Comparison of Mental Skills Between Groups Using Independent Samples T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Imagery Ability	Equal variances assumed	46.569	.000	3.243	298	.001	1.50667	.46465	.59226	2.42107
	Equal variances not assumed			3.243	231.110	.001	1.50667	.46465	.59118	2.42215
Mental Preparation	Equal variances assumed	1.743	.188	-3.074	298	.002	-2.98667	.97160	-4.89873	-1.07460
	Equal variances not assumed			-3.074	296.366	.002	-2.98667	.97160	-4.89878	-1.07456
Self Confidence	Equal variances assumed	25.183	.000	2.961	298	.003	1.52667	.51562	.51194	2.54139
	Equal variances not assumed			2.961	265.627	.003	1.52667	.51562	.51144	2.54189
Anxiety and Worry Management	Equal variances assumed	14.678	.000	3.475	298	.001	1.91333	.55059	.82980	2.99687
	Equal variances not assumed			3.475	282.803	.001	1.91333	.55059	.82956	2.99711
Concentration Ability	Equal variances assumed	21.548	.000	2.870	298	.004	1.42667	.49701	.44857	2.40477
	Equal variances not assumed			2.870	265.699	.004	1.42667	.49701	.44808	2.40525
Relaxation Ability	Equal variances assumed	.213	.645	-6.193	298	.000	-4.01333	.64804	-5.28865	-2.73802
	Equal variances not assumed			-6.193	297.037	.000	-4.01333	.64804	-5.28866	-2.73800
Mental Skills Total	Equal variances assumed	.162	.687	-.438	298	.662	-.62667	1.43026	-3.44136	2.18802
	Equal variances not assumed			-.438	297.715	.662	-.62667	1.43026	-3.44137	2.18803

COMPARISON OF MENTAL SKILLS BETWEEN GROUPS (INDEPENDENT SAMPLES T-TEST)

1. Imagery Ability

- Significant variance difference (**p = .000**), so "Equal variances not assumed" is used.
- The t-test is significant (**p = .001**), indicating a meaningful difference between the two groups.
- The mean difference (**1.50667**) suggests that one group exhibits significantly better imagery ability.

2. Mental Preparation

- No significant variance difference (**p = .188**), so "Equal variances assumed" is used.
- The t-test is significant (**p = .002**), suggesting a significant difference between the two groups.
- The mean difference (**-2.98667**) indicates that one group scores significantly lower in mental preparation.

3. Self-Confidence

- Significant variance difference (**p = .000**), so "Equal variances not assumed" is used.
- The t-test is significant (**p = .003**), confirming a significant difference between the two groups.
- The mean difference (**1.52667**) suggests that one group has significantly higher self-confidence.

4. Anxiety and Worry Management

- Significant variance difference (**p = .000**), so "Equal variances not assumed" is used.
- The t-test is significant (**p = .001**), indicating a meaningful difference between the groups.
- The mean difference (**1.91333**) suggests that one group has significantly better anxiety and worry management skills.

5. Concentration Ability

- Significant variance difference (**p = .000**), so "Equal variances not assumed" is used.
- The t-test is significant (**p = .004**), confirming a significant difference between the groups.
- The mean difference (**1.42667**) indicates that one group has significantly better concentration ability.

6. Relaxation Ability

- No significant variance difference (**p = .645**), so "Equal variances assumed" is used.
- The t-test is highly significant (**p = .000**), indicating a substantial difference between the two groups.
- The mean difference (**-4.01333**) suggests that one group has significantly lower relaxation ability.

7. Mental Skills Total

- No significant variance difference (**p = .687**), so "Equal variances assumed" is used.
- The t-test is not significant (**p = .662**), indicating no meaningful difference in total mental skills between the groups.

REFERENCES

[1]. Beck, J. S. (2011). Cognitive behavior therapy: Basics and beyond (2nd ed.). Guilford Press.
[2]. Davidson, R. J., & McEwen, B. S. (2012). Social influences on neuroplasticity: Stress and interventions to promote well-being. Nature Neuroscience, 15(5), 689–695.
[3]. Gucciardi, D. F., Gordon, S., & Dimmock, J. A. (2009). Advancing mental toughness research and theory using personal construct psychology. International Review of Sport and Exercise Psychology, 2(1), 54–72.
[4]. Thelwell, R. C., Greenlees, I. A., & Weston, N. J. (2010). Using psychological skills training to develop soccer performance. Journal of Applied Sport Psychology, 22(4), 363–372.
[5]. Vealey, R. S. (2007). Mental skills training in sport. In G. Tenenbaum & R. C. Eklund (Eds.), Handbook of sport psychology (3rd ed., pp. 287–309).
[6]. Weinberg, R. S., & Gould, D. (2019). Foundations of sport and exercise psychology (7th ed.). Human Kinetics.