

International Journal of Psychology Research



ISSN Print: 2664-8903
ISSN Online: 2664-8911
Impact Factor: RJIF 5.24
IJPR 2024; 6(1): 103-106
www.psychologyjournal.in
Received: 19-01-2024
Accepted: 27-02-2024

Dr. Mehak Arora
Assistant Professor,
Department of Psychology,
Guru Nanak Dev University,
Amritsar, Punjab, India

Differences of mental skills between male and female athletes of Guru Nanak Dev University, Amritsar, Punjab

Dr. Mehak Arora

DOI: <https://doi.org/10.33545/26648903.2024.v6.i1b.56>

Abstract

Study Aim: The aim of this study was to determine the difference of Mental Skills between male and female athletes of Guru Nanak Dev University, Amritsar, Punjab.

Material and Methods: Twenty-eight (N=28) individuals between the ages of 19 and 25 were enlisted as participants for the research endeavor. These individuals willingly engaged in the study, with full disclosure provided regarding the study's objectives and procedures. Mental Skills questionnaire constructed by Hardy and Nelson (1996) was utilized.

Statistical Analysis: Within the realm of data analysis, the data was examined by utilizing descriptive statistics and graphical illustrations. The determination of means was accomplished through the implementation of an independent samples t-test. All statistical calculations were performed utilizing SPSS (Statistical Package for the Social Sciences) version 20.0. A significance level of 0.05 was set for hypothesis testing.

Results: Imagery Ability: The calculated t value is smaller than critical value (0.6862<2.056), so the means are not significantly different. At $p < 0.05$ with regards to Imagery Ability between Male Athletes and Female Athletes. Mental Preparation: The calculated t value is smaller than critical value (1.8969<2.056), so the means are not significantly different. At $p < 0.05$ with regards to Mental Preparation between Male Athletes and Female Athletes. Self-Confidence: The calculated t value exceeds the critical value (2.8214>2.056), so the means are significantly different so the means are significantly different. At $p > 0.05$ with regards to Self-Confidence between Male Athletes and Female Athletes. Anxiety & Worry Management: The calculated t value is smaller than critical value (0.4761<2.056), so the means are not significantly different. At $p < 0.05$ with regards to Anxiety & Worry Management between Male Athletes and Female Athletes.

Concentration Ability: The calculated t value exceeds the critical value (2.4974>2.056), so the means are significantly different so the means are significantly different. At $p > 0.05$ with regards to Concentration Ability between Male Athletes and Female Athletes. Relation Ability: The calculated t value is smaller than critical value (1.9539<2.056), so the means are not significantly different. At $p < 0.05$ with regards to Relation Ability between Male Athletes and Female Athletes. Mental Skill: The calculated t value is smaller than critical value (0.9719<2.056), so the means are not significantly different. At $p < 0.05$ with regards to Mental Skill between Male Athletes and Female Athletes.

Keywords: Mental skill, imagery ability, mental preparation, self-confidence, anxiety & worry management, concentration ability, relation ability

Introduction

These psychological skills are considered as a series of trainable psychological characteristics that are required abilities when athletes have to deal with suddenly difficult situations that help them to improve their performance ^[1, 2]. These psychological skills also contribute to successful talent development and optimal performance by elite athletes and include coping ability, motivation, and attention or self-confidence and stress adjustment ^[3, 4, 5]. Mental skills help athletes to control their minds efficiently and consistently as they execute sport related goals. This not only involves developing skills such as concentration and stress control, but it also includes efforts to influence personal characteristics such as self-esteem and sportsmanship. Psychological skills techniques help athletes adjust their action, thoughts, feeling and physical sensation to improve their games ^[6]. In recent years, a new approach has emerged with an emphasis on identifying mental skills related to particular

Corresponding Author:
Dr. Mehak Arora
Assistant Professor,
Department of Psychology,
Guru Nanak Dev University,
Amritsar, Punjab, India

sports. Sports psychologists have proposed three relevant categories of mental skills. The first covers basic skills including goal setting, confidence and commitment. The second category involves psychosomatic skills such as response to stress, fear, relaxation and refreshment, skills that are associated with an athlete's physiological characteristics. The third category encompasses cognitive skills including visualization, mental rehearsal, focusing, refocusing and competition planning; all these involve interaction with cognitive processes, such as learning, perception, memory and thinking. Among the mental skills common to high performing athletes are goal setting, imagery, self-confidence and the ability to focus on performance [7-11]. In the early days, coaches and athletes recognized the importance of mental states for optimal performance, but the field of sports psychological training was not flourished because of the misunderstanding that

psychological skills are innate properties and lack of knowledge to train these abilities [12]. Psychological skills, such as goal setting and self-talk, may serve as strategies to focus attention [13]. The psychological skills of the athletes did not differ according to skill level, but in terms of mental toughness and anxiety, the national team scored highest and lowest, respectively [14].

Material and Methods

Twenty-eight (N=28) individuals between the ages of 19 and 25 were enlisted as participants for the research endeavor. These individuals willingly engaged in the study, with full disclosure provided regarding the study's objectives and procedures. The participants were subsequently separated into two distinct groups:

- Group-A: Male Athletes: (N₁=14)
- Group-B: Female Athletes: (N₂=14)



Fig 1: Orientation of male subjects for data collection process.



Fig 2: Orientation of female subjects for data collection process

Research Design

It is a research study that uses the method of quantitative data collection and analysis with the aim to find out the significant differences of Emotional Maturity (*viz.*, Emotional Stability, Emotional Progression, Social Adjustment, Personality Integration and Independence) between Cycling and Football Players.

Variables

Mental Skills

Mental Skills questionnaire constructed by Hardy and Nelson (1996) was utilized. The mental skill questionnaire

consists of a number of statements about experiences associated with competitive sports. Each subject was asked to read each statement very carefully and to circle the appropriate number to indicate the extent to which one agrees with the statement. A 6-point Likert type rating scale was used which ranges from strongly disagree to strongly agree. The subjects were asked to answer honestly to each question in relation to their own sporting experience. The encircled responses to each of the test items are added to get a score. The lower score represents weaker whereas the higher score represents stronger level of mental ability. Following sub variables were recorded.

1. Imagery Ability
2. Mental Preparation
3. Self-Confidence
4. Anxiety & Worry Management
5. Concentration Ability
6. Relation Ability

Sampling

The concept of "purposeful sampling technique" pertains to a methodical, discerning, or subjective approach to sampling where the selection of sample objects is made at the researcher's own volition. It is commonly believed by researchers that employing reliable estimates can lead to the attainment of a sample that is representative, thus allowing for time and cost savings, as demonstrated in the selection of a specific group.

Ethical Considerations

The present investigation encountered specific ethical dilemmas. While collecting and presenting research data, the researcher took into account the following ethical principles.

Statistical Analysis

Within the realm of data analysis, the data was examined by utilizing descriptive statistics and graphical illustrations. The determination of means was accomplished through the implementation of an independent samples t-test. All statistical calculations were performed utilizing SPSS (Statistical Package for the Social Sciences) version 20.0. A significance level of 0.05 was set for hypothesis testing.

Results

Table 1: Independent samples t-test result of Imagery Ability between male athletes and female athletes

Imagery Ability		
	Male Athletes	Female Athletes
Mean	12	13.4286
Variance	25.1429	35.5306
Stand. Dev.	5.0143	5.9608
n	14	14
t	0.6862	
d. o. f	26	
critical value	2.056	
t < critical value	no sig. diff.	

The calculated t value is smaller than critical value (0.6862<2.056), so the means are not significantly different. At $p < 0.05$ with regards to Imagery Ability between Male Athletes and Female Athletes.

Table 2: Independent samples t-test result of Mental Preparation between male athletes and female athletes.

Mental Preparation		
	Male Athletes	Female Athletes
Mean	16.4286	12.6429
Variance	30.3878	25.3725
Stand. Dev.	5.5125	5.0371
n	14	14
t	1.8969	
d. o. f	26	
critical value	2.056	
t < critical value	no sig. diff.	

The calculated t value is smaller than critical value (1.8969<2.056), so the means are not significantly different. At $p < 0.05$ with regards to Mental Preparation between Male Athletes and Female Athletes.

Table 3: Independent samples t-test result of self-confidence between male athletes and female athletes

Self-Confidence		
	Male Athletes	Female Athletes
Mean	13.2143	18.1429
Variance	19.0255	23.6939
Stand. Dev.	4.3618	4.8676
n	14	14
t	2.8214	
d. o. f	26	
critical value	2.056	
t > Critical value	There is sig. diff.	

The calculated t value is exceeds the critical value (2.8214>2.056), so the means are significantly different so the means are significantly different. At $p > 0.05$ with regards to Self-Confidence between Male Athletes and Female Athletes.

Table 4: Independent samples t-test result of Anxiety & Worry Management between male athletes and female athletes

Anxiety & Worry Management		
	Male Athletes	Female Athletes
Mean	11.7857	12.5714
Variance	19.8827	18.2449
Stand. Dev.	4.459	4.2714
n	14	14
t	0.4761	
d. o. f	26	
critical value	2.056	
t < critical value	No sig. diff.	

The calculated t value is smaller than critical value (0.4761<2.056), so the means are not significantly different. At $p < 0.05$ with regards to Anxiety & Worry Management between Male Athletes and Female Athletes.

Table 5: Independent samples t-test result of Concentration Ability between male athletes and female athletes.

Concentration Ability		
	Male Athletes	Female Athletes
Mean	9.5714	14.0714
Variance	9.102	36.352
Stand. Dev.	3.017	6.0293
n	14	14
t	2.4974	
d. o. f	26	
critical value	2.056	
t > critical value	There is sig. diff.	

The calculated t value is exceeds the critical value (2.4974>2.056), so the means are significantly different so the means are significantly different. At $p > 0.05$ with regards to Concentration Ability between Male Athletes and Female Athletes.

Table 6: Independent samples t-test result of relation ability between male athletes and female athletes

Relation Ability		
	Male Athletes	Female Athletes
Mean	17.1429	13.6429
Variance	25.1225	19.801
Stand. Dev.	5.0122	4.4498
n	14	14
t	1.9539	
d. o. f	26	
critical value	2.056	
t < critical value	no sig. diff.	

The calculated t value is smaller than critical value ($1.9539 < 2.056$), so the means are not significantly different. at $p < 0.05$ with regards to Relation Ability between Male Athletes and Female Athletes.

Table 7: Independent samples t-test result of Mental Skill between male athletes and female athletes.

Mental Skill		
	Male Athletes	Female Athletes
Mean	80.1429	84.5
Variance	166.6939	114.6786
Stand. Dev.	12.911	10.7088
n	14	14
t	0.9719	
d. o. f	26	
critical value	2.056	
t < critical value	No sig. diff.	

The calculated t value is smaller than critical value ($0.9719 < 2.056$), so the means are not significantly different. at $p < 0.05$ with regards to Mental Skill between Male Athletes and Female Athletes.

References

- Birrer D, Rothlin P, Morgan G. Mindfulness to enhance athletic performance: Theoretical considerations and possible impact mechanisms. *Mindfulness*. 2012;3:235-246.
- Rothlin P, Horvath S, Trosch S, Holtforth M, Birrer D. Differential and shared effects of psychological skills training and mindfulness training on performance-relevant psychological factors in sport: A randomized controlled trial. *BMC Psychol*. 2020;8:80.
- Blijlevens SJE, Gemser MT, Wylleman P, Bool K, Visscher C. Psychological characteristics and skills of top-level Dutch gymnasts in the initiation, development and mastery stages of the athletic career. *Psychol. Sport Exerc*. 2018;38:202-210.
- Birrer D, Morgan G. Psychological skills training as a way to enhance an athlete's performance in high-intensity sports. *Scand. J Med Sci. Sports*. 2010;20:78-87.
- Otten M. Choking vs. clutch performance: A study of sport performance under pressure. *J Sport Exerc. Psychol*. 2009;31:583-601.
- Bahmani B, Soukhtezari S, Mazaherinezhad A, Mansour S. Assessing mental skills of student athletes in a collegiate sport Olympiad. *Biosci Biotechnol Res Asia*. 2015;12:527-531.
- Durand-Bush N, Salmela JH, Green-Demers I. The Ottawa mental skills assessment tool (OMSAT-3). *Sport Psychol*. 2001;15(1):1-19.
- Gholamhossinzadeheghlidi L, Bahari M, Shirazi M. The relationship of psychological skills and performance of skilled men volleyball players in vulnerable situations of competition. *Res J Sport Sci*. 2016;4(1):01-09.
- Orlick T, Partington J. Mental links to excellence. *Sport Psychol*. 1988;2(2):105-130.
- Greenleaf C, Gould D, Dieffenbach K. Factor's influencing Olympic performance: interviews with Atlanta and Nagano US Olympians. *J Appl. Sport Psychol*. 2001;13(2):154-184.
- Gould D, Dieffenbach K, Moffett A. Psychological characteristics and their development in Olympic champions. *J Appl. Sport Psychol*. 2002;14(3):172-204.
- Vealey RS. Future directions in psychological skills training. *Sport Psychol*. 1988;2:318-336.
- Van Raalte JL, Vincent A, Brewer BW. Self-talk: review and sport-specific model. *Psychol. Sport Exerc*. 2016;22:139-148.
- Wu CH, Nien JT, Lin CY, Nien YH, Kuan G, Wu TY, et al. Relationship between mindfulness, psychological skills, and mental toughness in college athletes. *Int. J Environ. Res. Public Health*. 2021;18:01-09.