

# Available Online Journal of Education and Social Studies

ISSN: 2789-8075 (Online), 2789-8067 (Print) http://www.scienceimpactpub.com/jess

#### IMPACT OF SPORTS ANXIETY AND SPORTS IMAGERY ON PERFORMANCE AMONG ATHLETES

# Muhammad Akbar<sup>1</sup>, Masud Akhtar<sup>2</sup>, Muhammad Akram Riaz<sup>3</sup>, Ifraz Adeel<sup>4</sup>, Kishwar Batool<sup>5</sup> and Saima Waqar<sup>6</sup>

<sup>1</sup>Department of Psychology, Govt. Graduate College, Jhang, Pakistan

<sup>2</sup> Department of Psychology, International Islamic University, Islamabad, Pakistan

<sup>3</sup> Department of Human Development and Family Studies, University of Home Economics, Lahore, Pakistan

<sup>4</sup> Quality Enhancement Cell, University of Home Economics, Lahore, Pakistan

<sup>5</sup> Department of Psychology, The University of Lahore, Sargodha Camous, Sargodha, Pakistan

<sup>6</sup> Department of Psychology, National Institute of Rehabilitation Medicine, Islamabad, Pakistan

#### ABSTRACT

It has been seen that sports anxiety and imagery have a significant impact on athletes' performance. Therefore, the present study examines the impact of sports anxiety and imagery on athletes' performance. Participants comprised 200 athletes from different sports institutes of Sargodha. The score obtained from Sports Anxiety Scale is used to measure sports anxiety. The score obtained from the Warwick-Edinburgh Sports Performance Scale is used to measure the performance of the athletes. The score obtained from Sports Imagery Scale is used to measure sports imagery. Linear regression was applied to test the objective. It was found that 140 participants experienced anxiety (70%), whereas 60 participants did not reveal anxiety (30%). Findings revealed that sports anxiety negatively predicted sports performance, whereas sports imagery positively predicted sports performance.

Keywords: Sports anxiety; Sports imagery; Performance. \* Email: akramriaz313@gmail.com © The Author(s) 2022. https://doi.org/10.52223/jess.20223209 This is an open-access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

#### INTRODUCTION

An anxious state is an emotional state that can cause changes in your physiology, such as higher blood pressure. While anxiety is your body's normal response to stress, it should be kept under control. It is an uncomfortable feeling of fear and anticipation of what may come. Many people experience nervousness and dread on the first day of school, when they go to an interview, or when they are asked to give a speech (Giacobello, 2000). However, if you are extremely worried and your worry negatively affects your life, you could have an anxiety condition. It is not uncommon for people with anxiety disorders to have thoughts or concerns that come and go frequently. Fearing scenarios, they avoid specific situations. While some individuals may also have other physical symptoms, such as sweating, shaking, disorientation, or a rapid heartbeat, this alone should not be considered definitive proof of poisoning. Anxiety is a state of nervousness that may be moderate or severe. While everyone experiences symptoms of worry from time to time, anxiety becomes a way of life for many people. On the other hand, you may worry and become apprehensive prior to a test, a medical test, or a job interview.

The purpose of any performance is to present, present, or present something. An action or process of carrying out or performing an action, task, or function is called carrying out or accomplishing an action, task, or function. The Oxford English Dictionary regards performance as the act or process of completing a

task, an action, or the state of working or functioning well or badly (Gardner and Bartlett, 1996). Imagery entails simulating a real-life scenario without experiencing it. It is distinctly different from daydreaming or merely thinking about something. Athletes and exercisers use imagery to attain various emotional, cognitive, and behavioral benefits. Directly, as well as indirectly, by improving drive, confidence, and focus (Morris et al., 2005).

This study was carried out by Lam et al. (2009). When it came to training female beginner basketball players, the study team first separated the groups into explicit or implicit learning. Women who had received training in explicit learning were instructed to do a shooting task while listening to the same tone of the sound. The extra work required to learn explicitly and implicitly was equivalent, but only the explicit group's performance dropped, and indirect support of attentional regulation was identified (Moore et al., 2012). The researchers showed that individuals with high levels of trait anxiety in golf raised their mental effort and took longer to put in when the pressure was on. Still, they fared badly under pressure (i.e., reflecting the possible use of maladaptive effort through reinvestment).

However, in previous research, it is estimated that around a third of athletes show their peak abilities when they are highly anxious. However, this does not explain why this is the case. Further research is necessary, but it is possible that this result could be explained by how the athlete conceptualizes or perceives anxiety. To give another example, Medvec et al. (1995) discovered that while the amount of precomputation worry was the same amongst Olympic gymnasts who went on to be successful and those who did not, the athletes used different words to describe their precomputation concern. In more advanced gymnasts, anxiety was seen as an asset; for the less skilled, it was linked to self-doubt and catastrophizing.

Better performers see their anxiety as less frightening and debilitating, while poorer performers believe their anxiety is more threatening and debilitating. Another possibility is that success and failure are distinguished by differences in the ability to control worry. It is also possible that competition anxiety has a less significant impact on performance than the constancy of anxiety across events. While athletes may also acquire coping mechanisms that use consistent changes in attentional focus due to higher anxiety, these strategies may also have other benefits.

The research was undertaken to discover the relationship between anxiety and sports performance for Gomal University's sports team, Deraismail Khan's K.P.K. The specific goal of this study was to explore the relationship between anxiety and several aspects of player performance on the physiological, psychological, and behavioral levels. After collecting the data, the researcher collated and examined it using percentage and mean averages as statistical tools. The researcher found that anxiety had a direct impact on overall sports performance. Awareness of anxiety's harmful effects and possible solutions, including medicine, meditation, and psychotherapy, was among the most significant information uncovered in the study (Khan et al., 2017).

For the most part, performance theories have only been evaluated in controlled laboratory conditions, restricting their transferability to situations outside the lab. While e-sports tournaments are much regulated, we wanted to study what kinds of factors influence competitiveness. There were disparities in performance and anxiety after separating the group into three different cortisol response patterns, with low to moderate levels of cortisol linked to the highest performance and anxiety. Optimal performance is possible during e-sports if a modest amount of physiological arousal is coupled with intense fear. In general, anxiety affects performance more strongly than physiological arousal (Khan et al., 2017).

A study was performed to investigate the influence of imaging intervention on psychological factors and athletic performance. Out of the 73 studies considered, 19 were deemed eligible to meet the inclusion criteria. Research has found that visual intervention can help in numerous sports, including basketball, field

hockey, golf, ice hockey, soccer, swimming, and track and field (Jose et al., 2018). To expand on the present understanding of the effect of images in sports on any sport-specific outcome, we conducted a metaanalysis that took into consideration other variables that could potentially influence the outcome. Motor performance, motivational outcomes, and emotional outcomes were considerably boosted by imagery therapies. The imagery training's effectiveness was connected with a greater amount of imagery training (Simonsmeier et al., 2020).

The Wakefield and Smith (2011) study found various advantages of using visualization to improve strength performance as well as a rise in coping with fear and confidence. Numerous studies have confirmed the relationship between basic motor abilities and sports performance as a result of motor imagery exercise (Lin et al., 2022). Eighty to ninety percent of elite athletes claim that they use motor imagery to perform better, and professional athletes employ imagery practice more frequently than amateurs (Hidayat et al., 2022). Motor imagery training has been observed to aid both sports performance and patient rehabilitation (Agostini et al., 2021; Jackson et al., 2021; Pastora-Bernal et al., 2021; Mizuguchi et al., 2012).

The current study aimed to examine the connection between sports anxiety, performance, and latent sports imagery as well as the role of sports anxiety in predicting athletic performance in athletes. The purpose of this study was to show how sports anxiety affects performance. Furthermore, it was also demonstrated that all three of these factors are connected. Additionally, this research will also clarify how increased use of imagery leads to decreased levels of anxiety or anxiety in sporting performance. In turn, this can be used to develop new techniques for coping with anxious situations for athletes. On the basis of the literature review, the objective of the study was to examine the effect of sports anxiety and sports imagery on sports performance among athletes of the University of Lahore.

# METHODOLOGY

# Sample

The sample of the present study consisted of 200 athletes. A purposive sampling technique was used to collect the information. Informed consent was obtained from the participants before administering the questionnaires. The data was obtained from adults. The research was based on the athletes, so the sample of this study was adult athletes. Those who were not athletes and didn't do sports were excluded because they were not eligible for our study.

# Instruments

# Sport Anxiety Scale-2 (SAS-2)

Somatic anxiety, worry, and focus interruption are assessed using the Sport Anxiety Scale-2 (SAS-2) (Smith et al., 2006). It contains 15 items with 3 subscales comprise the SAS-2. Every scale has five things. Every object receives a score on a four-point Likert scale. Between 0 and 4, 1 represents 0%, and 4 represents 100%. To determine each subscale's raw score, one must add up all the individual items on that particular subscale and then divide by the number of items. To calculate the total anxiety score, add all 15 items; the result is your final anxiety score. The alpha reliability of this scale is good.

# Sport Imagery Questionnaire (SIQ)

Sport Imagery Questionnaire (SIQ) is based on Paivio's model of imagery, which asserts that in human activities imagery is used for both cognitive and motivational purposes (Hall et al., 1998). This is a 30-item questionnaire that contains five sub-scales. Each item is given a Likert-scale rating of 1 to 7, with 1 meaning "rarely use that function of imagery" and 7 meaning "frequently utilize that function of imagery." This metric measures the frequency of imagery use by athletes. These five sub-scales of the Sport Imagery Questionnaire measure cognition, motivation, and arousal levels and are all rated on a 7-point Liker scale.

# Athlete's Subjective Performance Scale (ASPS)

The athletic Performance Rating Scale (APRS) was used to measure and analyze the performance characteristics of successful athletes across sports. The list of items covers six items, all of which are related to the subjective feeling of team sports performance. A Smith et al. (2006) measure was extended into a one-item scale utilized by athletes in a larger study by Kaiseler et al. (2012). As they were asked to rate their satisfaction with their sporting performance, the athletes drew a number to express their satisfaction. Also found in the ASPS its alpha reliability of 0.95 demonstrates good psychometric qualities.

#### Procedure

Data was collected from athletes by approaching them one-on-one. The study's main goal was to give concerned camp residents information about the study's objectives and significance. Informed consent was sought from respondents after a brief introduction and instructions. Before, during, and after each respondent filled out the form, the researcher addressed their questions and alleviated their concerns to boost their confidence and entice them to participate in the study.

#### **RESULTS AND DISCUSSION**

Table 1 reveals that greater numbers of athletes with anxiety (n=140, 70%) and without anxiety (n=60, 30%) athletes participated in the present study. Table 2 shows the impact of sports anxiety on sports performance in athletes. The R2 value of .10 revealed that the predictor variable explained 10% variance in the outcome variable with F(1,198) = 3.50, p<.001. Findings revealed that sports anxiety negatively predicts sports performance ( $\beta$  = -.13, p<.001).

Table 3 shows the impact of sports imagery on sports performance in athletes. The R2 value of .45 revealed that the predictor variable explained 45% variance in the outcome variable with F(1,198) = 3.50, p<.001. Findings revealed that sports anxiety negatively predicts sports performance ( $\beta = .21$ , p<.001).

| Characteristics | n   | %   |
|-----------------|-----|-----|
| With Anxiety    | 140 | 70% |
| Without Anxiety | 60  | 30% |

Table 1. Socio-demographic characteristic of athletes.

| $\mathbf{T}$               | coefficients of the in |                 |                              | · · · · · · · · · · · · · · · · · · · |
|----------------------------|------------------------|-----------------|------------------------------|---------------------------------------|
| I 2010 / RAGRACCION        | coofficients of the in | INDET OF CHOPTE | $2nvi \Delta t v \Delta n c$ | norte nortormanco                     |
| 1 a D C 2. R c g c 3 3 0 D |                        | IDALL OF SDULLS |                              |                                       |
|                            |                        |                 |                              |                                       |

| Variables      | В      | β   | SE   |  |
|----------------|--------|-----|------|--|
| Constant       | 45.81* |     | 2.77 |  |
| Sports Anxiety | 15*    | 13* | .08  |  |
| $R^2$          | .10    |     |      |  |

\*p<.001

Table 3. Regression coefficients of the impact of sports imagery on performance.

| e              | -      |      |      |  |
|----------------|--------|------|------|--|
| Variables      | В      | β    | SE   |  |
| Constant       | 47.88* |      | 2.95 |  |
| Sports Imagery | .32*   | .21* | .10  |  |
| $R^2$          | .45    |      |      |  |
|                |        |      |      |  |

\*p<.001

Findings revealed that sports anxiety significantly predicted sports performance among athletes of Sargodha. Teams of college athletes, both in the college itself and on the intercollegiate level, spend a significant amount of time practicing different strategies to help improve their performance in their sport.

They use both physical and mental capabilities to boost their overall capabilities. Using images is an important mental or psychological talent for athletes (Trotter et al., 2021). Athletic performance relies heavily on visual imagery. Athletes with vivid imagery experience a surge in confidence and anxiety resistance. In addition, imagery shields athletes from the damaging side effects of anxiety in sports (Chantler et al., 2022; Nicholls, 2021).

Findings revealed that sports imagery significantly predicted sports performance among athletes of Sargodha. Higher-level athletes utilize more imagery, and their imagery is more effective (Wright et al., 2022). Athletes who utilize images will benefit greatly from their training in that sport. Imagery skill is believed to be connected to coping methods (Omar-Fauzee et al., 2012). Based on past research findings, it appears that successful varsity athletes employ imagery more than less-successful athletes. The findings indicate that whereas the imaging usage frequency of successful athletic performance was significantly higher, the imaging usage frequency of less-successful athletes was considerably lower. These findings support the application of visualization practice throughout an athlete's training and performance stages (Omar-Fauzee et al., 2012).

# CONCLUSIONS

It is concluded from the present study that more successful athletes will use more imagery as compared to less successful athletes. It is also concluded from the study that sports anxiety negatively predicts performance. It is concluded that sports anxiety is negatively correlated with performance and positively correlated with sports imagery. The study is an important addition to the existing body of knowledge on the impact of sports anxiety and imagery on performance. It is suggested that government agencies should devise policies for the betterment of the mental health of athletes.

# REFERENCES

- Agostini, F., Pezzi, L., Paoloni, M., Insabella, R., Attanasi, C., Bernetti, A., & Paolucci, T. (2021). Motor Imagery: A Resource in the Fatigue Rehabilitation for Return-to-Work in Multiple Sclerosis Patients—A Mini Systematic Review. Frontiers in Neurology, 12, 1132.
- Chantler, S., Griffiths, A., Phibbs, P., Roe, G., Ramírez-López, C., Davison, G., & Deighton, K. (2022). The effect of rugby training on indirect markers of gut permeability and gut damage in academy level rugby players. European Journal of Applied Physiology, 1-10.
- Gardner, J. W., & Bartlett, P. N. (2006). Performance definition and standardization of electronic noses. Sensors and Actuators B: Chemical, 33(1-3), 60-67. 10.1016/0925-4005(96)01819-9.
- Giacobello, J. (2002). Everything you need to know about the dangers of overachieving: A guide for relieving pressure and anxiety. The Rosen Publishing Group.
- Hall, C. R., Mack, D. E., Paivio, A., & Hausenblas, H. A. (1998). Imagery use by athletes: development of the Sport Imagery Questionnaire. International Journal of Sport Psychology. 10.1080/10913670902812713
- Hidayat, Y., Yudiana, Y., Hambali, B., Sultoni, K., Ustun, U. D., & Singhnoy, C. (2022). The effect of the Interactive Self-talk and Mental Imagery program on Badminton Motor Skills and Self-Confident of Youth Beginner Student-Athletes.
- Jackson, P. L., Lafleur, M. F., Malouin, F., Richards, C., & Doyon, J. (2001). Potential role of mental practice using motor imagery in neurologic rehabilitation. Archives of physical medicine and rehabilitation, 82(8), 1133-1141.

- Jose, J., Joseph, M. M., & Matha, M. (2018). Imagery: It's effects and benefits on sports performance and psychological variables: A review study. International Journal of Physiology, Nutrition and Physical Education, 3(2), 190-193.
- Kaiseler, M., Polman, R. C., & Nicholls, A. R. (2012). Effects of the Big Five personality dimensions on appraisal coping, and coping effectiveness in sport. European Journal of Sport Science, 12(1), 62-72.
- Khan, M. K., Khan, A., Khan, S. U., & Khan, S. (2017). Effects of anxiety on athletic performance. Res. Inves. Sports Med, 1, 1-5.
- Lam, W. K., Sterzing, T., & Cheung, J. T. M. (2013). Influence of protocol complexity on fit perception of basketball footwear. Footwear Science, 5(3), 155-163.
- Lin, C. H., Lu, F. J., Gill, D. L., Huang, K. S. K., Wu, S. C., & Chiu, Y. H. (2022). Combinations of action observation and motor imagery on golf putting's performance. PeerJ, 10, e13432.
- Medvec, V. H., Madey, S. F., & Gilovich, T. (1995). When less is more: counterfactual thinking and satisfaction among Olympic medalists. Journal of personality and social psychology, 69(4), 603.
- Mizuguchi, N., Nakata, H., Uchida, Y., & Kanosue, K. (2012). Motor imagery and sport performance. The Journal of Physical Fitness and Sports Medicine, 1(1), 103-111.
- Moore, L. J., Vine, S. J., Cooke, A., Ring, C., & Wilson, M. R. (2012). Quiet eye training expedites motor learning and aids performance under heightened anxiety: The roles of response programming and external attention. Psychophysiology, 49(7), 1005-1015.
- Morris, T., Spittle, M., & Watt, A. P. (2005). Imagery in sport. Human Kinetics.
- Nicholls, A. R. (2021). Psychology in sports coaching: Theory and practice. Routledge.
- Omar-Fauzee, M. S., Saputra, Y. H., Samad, N., Gheimi, Z., Asmuni, M. N., & Johar, M. (2012). Mental toughness among footballers: A case study. International Journal of Academic Research in Business and Social Sciences, 2(1), 639.
- Pastora-Bernal, J. M., Estebanez-Pérez, M. J., Lucena-Anton, D., García-López, F. J., Bort-Carballo, A., & Martín-Valero, R. (2021). The effectiveness and recommendation of motor imagery techniques for rehabilitation after anterior cruciate ligament reconstruction: a systematic review. Journal of Clinical Medicine, 10(3), 428.
- Simonsmeier, B. A., Frank, C., Gubelmann, H., & Schneider, M. (2018). The effects of motor imagery training on performance and mental representation of 7-to 15-year-old gymnasts of different levels of expertise. Sport, Exercise, and Performance Psychology, 7(2), 155.
- Smith, A. L., Balaguer, I., & Duda, J. L. (2006). Goal orientation profile differences on perceived motivational climate, perceived peer relationships, and motivation-related responses of youth athletes. Journal of sports sciences, 24(12), 1315-1327.
- Smith, R. E., Smoll, F. L., Cumming, S. P., & Grossbard, J. R. (2006). Measurement of multidimensional sport performance anxiety in children and adults: The Sport Anxiety Scale-2. Journal of Sport and Exercise Psychology, 28(4), 479-501.
- Trotter, M. G., Coulter, T. J., Davis, P. A., Poulus, D. R., & Polman, R. (2021). Social support, self-regulation, and psychological skill use in e-athletes. Frontiers in psychology, 12, 722030.
- Wakefield, C. J., Smith, D., Hogard, E., Ellis, R., & Parry, C. (2020). Using PETTLEP imagery as a simulation technique in nursing: Research and guidelines. Nurse Education in Practice, 43, 102700.
- Wright, D. J., Frank, C., & Bruton, A. M. (2022). Recommendations for combining action observation and motor imagery interventions in sport. Journal of Sport Psychology in Action, 13(3), 155-167.