

Effect of 12 Weeks VMBR Training on Anxiety among Table Tennis Players

Mr. Arnav Sharma¹, Dr. Brij Kishore Prasad²

¹PhD Scholar, Department of Physical Education Pedagogy, Lakshmibai National Institute of Physical Education, Gwalior, Madhya Pradesh

²Associate Professor, Department of Health Science, Lakshmibai National Institute of Physical Education, Gwalior, Madhya Pradesh

ABSTRACT The study was conducted to examine the effects of Visual Motor Behaviour Rehearsal (VMBR) Training on Sports Anxiety of Table Tennis players after the duration of 12 weeks. Fifty (50) male state level Table Tennis players with age group 17 to 23 years were selected from Inspire Table Tennis Academy, Secunderabad, Telangana and divided randomly into two groups, control and Main Group, each group consisting of 25 subjects. Main Group under gone VMBR Training for the duration of 12 weeks, three times in a week and Control Group was not involved in any kind of training programme except their daily practice. Measurements of Anxiety of all Table Tennis players with the use of Sports Anxiety Scale-2 (SAS-2) with three dimensions which were somatic, worry and concentration disruption developed by Ronald E. Smith, Frank L. Smoll, Sean P. Cumming, and Joel R. Grossbard in year 2006 was taken at the beginning and after the experimental period of 12 weeks. Significant effect was found in Main Group at 0.01 level of significance for somatic, worry and concentration disruption from anxiety scale dimensions of Table Tennis players.

Keywords- *Visual Motor Behaviour Rehearsal, Sports Anxiety Scale*

Address for Correspondence - Arnav Sharma, Ph.D. Scholar, Department of Physical Education Pedagogy, Lakshmibai National Institute of Physical Education, Gwalior, Madhya Pradesh, Email- arnavsharma164@gmail.com

Introduction

The definition of Cognitive anxiety is as "negative expectations and cognitive concerns about oneself, the situation at hand and potential consequences", and somatic anxiety defines as "one's perceptions of the physiological affective elements of the anxiety experience, that is, indications of autonomic arousal and unpleasant feelings states such as nervousness and tension" (Soundarapandiyam Dhinakaran et al., 2020)

Visual Motor Behavioural Rehearsal serves as the cornerstone of all programmed mental skill training in applied sports psychology. The primary goals of VMBR are to make players feel more confident and perform better while also reducing stress, negative emotions, and anxious thoughts. (Singh & Bhowmik, 2020)

Cognitive restructuring strategy used in Cognitive Behavioural Therapy assists athletes in locating the root of their stress, comprehending their emotional reactions, and empowering them to respond more positively. Players begin to see challenges as opposed to dangers as a result, leading to an increase in positive feelings and performance satisfaction (Oelberger, 2020). Mental enhancement for reducing

sports competitive anxiety which also helps in progression of performance among elite level sports-persons (Sharma & Purashwani, 2021) The use of visualization and imaging as a method for improving performance has proven to be successful. Visual-Motor Behaviour Rehearsal, however, is a methodical psychological strategy that aids athletes from a variety of sports in overcoming psychological challenges and improving performance. The technique known as Visual-Motor Behaviour Rehearsal (VMBR) involves mentally recording an event and playing it again piece by piece. Technique improvement, mistake analysis and repair, and completion preparation are all phases in VMBR that help athletes perform better. raise psychological thresholds and skill development (Chauhan et al., 2020). The foundation of VMBR is the idea that using imagination before doing a task may make it simpler and more precise. It is also feasible to achieve intellectual and physical feats by using imagination in ways that go beyond what is achievable for athletes. Through visualization exercises, VMBR training enables athletes to become aware of their motor performance flaws, which helps them to reduce errors and enhance performance. (Chaudhary, 2018). VMBR is proven as one of the methods that can

help novice learning process became faster and more accurate. Combining VMBR training with physical practice help in skill performance enhancement become more efficient.(Sa'ari & Isa, 2018)

One of the most popular sports in the world is Table Tennis. Table Tennis, which has been around for just over a century, has steadily risen to become the seventh-largest sport in the world. (Jiangzhou et al., 2020).

In a sporting context, imaging has been defined as the mental state in which athletes envision themselves as they prepare for a task or work to enhance performance. Both deliberate and unintentional recall processes can result in imagery, which is when a person perceives an image or experiences a movement as an image without really witnessing the real thing. In this setting, imagery has a key role in enhancing motor task performance. (Di Corrado et al., 2014)

On the basis of reviews related to literatures, available research findings, and researchers own understanding, it was hypothesized that there would be a significant improvement in anxiety dimensions of state level male Table Tennis players after the 12 weeks Visual Motor Behaviour rehearsal training programme.

Therefore, an investigation into the effects of training in Visual Motor Behaviour Rehearsal was conducted in this study on selected psychological dimensions of sports anxiety that were somatic anxiety, worry and concentration disruption.

Methods

Variables selected for the present study were Somatic anxiety, Worry and Concentration disruption under Sports anxiety.

To attain the purpose of the study, 50 male Table Tennis player of state level were selected as subjects from Inspire Table Tennis Academy, Secunderabad (Telengana). The age of the subjects was ranged between 17 to 23 years. For administration feasibility two intact groups were formed, where randomly 25 at each group players were placed. One was Control Group and second group was Main Group.

Training protocols:

1. Control Group: The participants of the Control Group undertook only regular Table Tennis practice.
2. Main Group: The participants of the Main Group went through the Visual motor Behaviour Rehearsal training programme. This was scheduled for three

days (Monday, Wednesday and Friday) per week in the morning between 6.30 a.m. to 7:10 a.m. for 12 weeks.

A: Phase 1- Players of Main Group takes part in the Progressive Muscle Relaxation technique that involved systematically tensing and relaxing specific muscle groups.

B: Phase 2- Players of Main Group takes part in the Visual presentation of game

Worry, and Concentration (Smith et al., 2006, p. 2) developed by Ronald E. Smith, Frank L. Smoll, Sean P. Cumming, and Joel R. Grossbard.

Administration of the Test:

Players were instructed to fill the questionnaires with their honesty and clearly understanding each statement.

Results

Table 1 Descriptive Statistics (Mean and Standard Deviation) of Anxiety Variables

Variables	Control Group		Main Group	
	Mean	SD	Mean	SD
Pre-Somatic	11.84	1.28	11.68	1.51
Post-Somatic	11.48	1.19	10.24	1.33
Pre-Worry	12.36	1.43	11.84	1.65
Post-Worry	12.12	1.45	10.20	1.29
Pre-Concentration Disruption	10.44	1.55	10.96	1.61
Post-Concentration Disruption	11.00	1.38	09.44	1.08

Table 1 showed the descriptive statistics (mean and standard

related contents like motivation, skills, technique and matches shown with help of projector see every detail through successful visualization.

C: Phase 3- Players of Main Group takes part through Imagery technique, whatever they had seen.

The tools used for the purpose of the study to examine Sports Anxiety, (SAS-2) Sports Anxiety Scale-2 with dimensions Somatic,

They were also instructed to ask for any doubt if necessarily required for the statement's understanding. The questionnaires were filled twice, pre and post, i.e., before and after 12 weeks of VMBR Training for both Control and Main Group of the selected Table Tennis players.

deviation) of Control Group and Main Group before 12 week of

training and after 12 weeks of training on Somatic Anxiety, Worry and Concentration Disruption.

Table 2 Dependent sample t-test of Anxiety between Control and Main Group of Table

Variables	Control Group		Main Group	
	t- Value	p-Value	t- Value	p-Value
Somatic	1.056	.302	6.035	.000
Worry	0.782	.442	6.537	.000
Concentration Disruption	1.532	.139	5.361	.000

Tennis players

Table 2 showed the inferential statistics (dependent t-test) of Control Group and Main Group before 12 week of training and after 12 weeks of training on selected psychological variables Somatic Anxiety, Worry, and Concentration Disruption. No significant effect was found among players

Discussion

The present study evaluated the effect of 12 weeks Visual Motor Behaviour Rehearsal training to examine its effect on Anxiety among Table Tennis players. To achieve the purpose of the study dependent t-test was applied. As per the previous studies that were conducted with more frequency and duration of the VMBR Training has shown significant effect on psychological variables conducted with 8 and 12 weeks of training as well (Chaudhary, 2018) (Choudhary et al., 2018) (Sa'ari & Isa, 2018) (Singh &

of Control Group at 0.05 level of significance. Significant effect was found in Main Group for Somatic Anxiety, Worry and Concentration Disruption from sports mental toughness and anxiety scale dimensions of Table Tennis players at 0.01 level of significance.

Bhowmik, 2020). Visual Motor Behaviour Rehearsal has its origin in the techniques used in Behaviour therapy, which rely upon imagery and visualization rehearsal for anxiety reduction. Desensitization and anxiety management training both being with relaxation training, followed by imagery related to anxiety to phobic situations. The goal of each is to train the client to be in anxiety related settings but with the, achievement of a relaxed, rather than anxiety state. (Alrahamneh & Elbokai, 2011) The Effectiveness of Visuo- Motor Behaviour Rehearsal

(VMBR) to Reduce the Anxiety and to Improve Self Concept for Athletes with Special Needs. The link between mental strength and sporting achievements. Even athletes with high levels of mental strength feel the pressure, tension, and anxiety that comes with sporting competition (Sharma, 2022).

The study could also be conducted on playing ability and other psychological dimensions of Table Tennis players to reach performance effects based on the intervention technique.

Conclusion

The study gives us an understanding of various psychological components that

affect performance. However, Visual-Motor Behaviour Rehearsal is a systematic psychological technique helps Table Tennis players in overcoming psychological factors. VMBR (Visual Motor Behaviour Rehearsal) involves replaying an event step by step based on a mental video. The steps of Visual Motor Behaviour Rehearsal that contribute to improved performance are; Technique enhancement, error analysis & correction, preparation for completion improve psychological parameters. More research is needed to understand the relationship between cognitive intervention with players' ages anxiety gender differences in anxiety, individual versus team sports, and sexual diversity in anxiety.

Conflicts of interest

Authors have no conflict of interest to disclose

Reference

1. Alrahamneh, a. A., & elbokai, h. T. (2011). The effectiveness of visuo-motor behavior rehearsal (vmbr) to reduce the anxiety and to improve self concept for athletes with special needs. *International journal of psychological studies*, 3(2), p276. <https://doi.org/10.5539/ijps.v3n2p276>
2. Chaudhary, s. (2018). Comparative effects of autogenic and visuo motor behavior rehearsal training on mental toughness of team games players. *International journal of physiology, nutrition and physical education*, 3(1), 2023–2026.
3. Chauhan, b., kumar, d. S., & solanky, d. A. (2020). Effectiveness of visual-motor behaviour rehearsal training on self efficacy, achievement motivation and anxiety among athletes: a review.

- International journal of recent scientific research*, 11(2), 37396–37399. <https://doi.org/10.24327/ijrsr>
4. Choudhary, s., singh, v., & sing, a. (2018). Effects of visuo motor behavior rehearsal on cohesion of handball players. *Indian journal of physical education sports medicine & exercise science*, 18(1), 69–73.
 5. Di corrado, d., guarnera, m., & quartiroli, a. (2014). Vividness and transformation of mental images in karate and ballet. *Perceptual and motor skills*, 119(3), 764–773. <https://doi.org/10.2466/22.24.pms.119c30z6>
 6. Jiangzhou, l., primanita, a., khalid, m. N. A., & iida, h. (2020). Analyzing the improvement process of table tennis using the game refinement theory. *Proceedings of the sriwijaya international conference on information technology and its applications (siconian 2019)*. Sriwijaya international conference on information technology and its applications (siconian 2019), Palembang, indonesia. <https://doi.org/10.2991/aisr.k.200424.067>
 7. Oelberger, d. R. (2020, april 24). *Cognitive behavioral therapy- a powerful tool in athletic performance enhancement*. Richard oelberger. <https://www.richardlistens.com/cognitive-behavioral-therapy-a-powerful-tool-in-athletic-performance-enhancement/>
 8. Sa'ari, m. R., & isa, k. A. (2018). Visuo-motor behavior rehearsal training (vmbr) approach in enhancing novice archer shooting accuracy performance. *Gading (online) journal for social sciences*, 22(special issue september), 191–195.
 9. Sharma, a. (2022). Analysis of relationship between selected psychological dimensions with skill performing competencies of table tennis players. *Poonam shodh rachna*, 1(7), 1–5. <https://doi.org/10.56642/psr.v01i07.001>
 10. Sharma, a., & purashwani, p. (2021). Relationship between selected psychological variables among trainees of combat sports. *Journal of sports science and nutrition*, 2(1), 01–03. <https://doi.org/10.33545/27077012.2021.v2.i1a.25>

11. Singh, s. P., & bhowmik, s. K. (2020).
Effect of visuo-motor behavior rehearsal on enhancing mental toughness of soccer players. *Rupkatha journal on interdisciplinary studies in humanities*, 12(5), 1–11.
<https://doi.org/10.21659/rupkatha.v12n5.rioc1s19n3>
12. 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.
<https://doi.org/10.1123/jsep.28.4.479>
13. Soundarapandiyan dhinakaran, m., pandian, j., & arumugam, n. (2020).
Psychological skills training for managing anxiety and better performance in elite athletes: a review.