EFFECTIVENESS OF VISUAL-MOTOR BEHAVIOUR REHEARSAL TRAINING ON SELF EFFICACY, ACHIEVEMENT MOTIVATION AND ANXIETY AMONG ATHLETES: A REVIEW

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ABSTRACT

Research findings suggest the potential of Psychological Skill Training regarding performance enhancement among sportspersons. Visual-Motor Behaviour Rehearsal (VMBR) is the technique that includes relaxation training, visualization or mental imagery, and performance skill in a simulated stressful environment. Prior imagination to perform the function of work before or work before the actual performance can make the work easier, precise and the person become able with imagination exercises to make physical, mental and intellectual achievements, beyond the limits of his real physical and intellectual abilities. The Visual-Motor Behaviour Rehearsal is very important for physical training since the player stand-up with the competition in his mind before the actual competition, and this is what vivid imagery seeks to and which in turn make the player train under real match conditions. Researches has clearly indicated the significance of Visual-Motor Behaviour Rehearsal that brings an athlete to masters the general sense of relaxation, confidence, control tension, remove stress in parts of the body and rehearse for an upcoming competition to enhance the winning feeling. The present paper is an attempt to review the effect of Visual-Motor Behaviour Rehearsal (VMBR) on the psychological parameters i.e., Self-efficacy, Achievement Motivation and Anxiety among athletes of work done earlier in the field.

INTRODUCTION

Sports psychology plays a very vital role in enhancing the performance of sportspersons. It deals with the various mental qualities such as concentration, confidence, emotional control and commitment etc., which are important for successful performance in sports and games. Studies in sports psychology submit that the best performers tend to have higher levels of self-confidence, higher task-oriented focus, control over their anxiety level, more determination and commitment (Woodman, Lew 2003). Further, Self-efficacy also has its impact on motivation in terms of the amount of effort a performer put in and how long they persist at task (Bandura 1977).

DeWitt (1980) suggests that to excel in any sports, just like anything one does, require persistence in training and practice, but for some athletes, there is more to training than the physical aspect. Some athletes strongly implement cognitive (mental) training methods in their preparation to enhance sports performance. Mental training is a broad term encompassing various techniques to help individuals alter their own stress reactions to environmental events. Professional athletes and collegiate athletes have been known to use imagery and visualization techniques as an advantage during training and competition. Provision of Psychological skill training for athletes has become a widely accepted practice Petrie and Diehl, (1995). Visual-Motor Behaviour Rehearsal is the psychological skill developed by Suinn (1972:1976). This technique includes relaxation training, visualization or mental imagery and performance skills in a simulated stressful environment. These components carry the foundation of psychological skill training program.

Self Efficacy, Achievement Motivation and Anxiety Among Athletes

Bandura’s (1977) theory of self efficacy was developed within the framework of social cognitive theory. Although, the theory of self efficacy was proposed to account for the different results achieved by diverse methods used in clinical psychology for treatment of anxiety, it has since been expanded and applied to
other domains of health and exercise behavior as well (McAuley, 1992and O’leary, 1985).

According to Bandura (1993), Self-efficacy perception is seen to be one of the main determinants of human behavior and in particular behavior change. Self efficacy perception may also contribute to cognitive development and cognitive functioning. Schuраes and Pajares (2001) state that self efficacy affects academic motivation, learning and success of individuals. Pajares (2002) stated and expressed that individuals with low self efficacy avoid challenging tasks and immediately give up against difficulties. In addition, these people were observed to have more stress when compared to the others with high self efficacy and become unsuccessful as a result of their low level of effort.

Hazell, Cotterill and Hill (2014) conducted a study on 20 male semi-professional soccer players. Players were tested on performance, anxiety and self – efficacy, the results revealed a significant difference in somatic anxiety for the experimental group and a decrease in performance for the control group. And no significant interaction was found between the within-factor independent variable. According to Tod, (2014), achievement motivation encompasses athlete’s predispositions towards striving for success and how specific situations influence their desires, emotions and behaviors. Yahyaoui (2009) studied on the attribution of success and failure and its relationship with the motivation of achievement in football players. Aim of the study is to know the relationship between the attribution of success and failure with the sporting achievement motivation among the players of the national teams. Results indicated that players attribute much success or failure of internal sporting aspects over external aspects. A statistically significant difference was found between the teams. In addition, a positive correlation was found between the attribution of success and achievement of success motivation, and the allocation between poor performance and motivation to avoid failure among players in our sample.

The concepts of anxiety and arousal are well researched in the field of sports psychology and majority of the studies have shown the importance of mental skill in performance of athletes. Martens and colleagues (1990) predicted positive relationship between cognitive anxiety and performance while performance was found positively associated with somatic anxiety. Burton (1988) also observed higher levels of cognitive anxiety are associated with lower levels of performance (Motowildo, Packard and Manning 1986).

**Visual-Motor Behaviour Rehearsal Training Effect on Self Efficacy, Achievement Motivation and Anxiety Among Athletes**

One of the most systematically described and researched versions of imagery rehearsal is called Visual-Motor Behaviour Rehearsal Suinn (1984b). Visual-Motor Behaviour Rehearsal has its origin in the techniques used in behavior 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. In essence, these behavior therapies emphasize retraining of emotional aspects of situations (Suinn, 1990 and Wool folk et.al., 1985). Visual-Motor Behaviour Rehearsal research initially grew from case study illustration to more recent sophisticated research design. Visual-Motor Behaviour Rehearsal training contributes to the enhancement of sports performance across a wide variety of different sports, besides its approach to mental practice seems to require the synergistic involvement to both relaxation and mental imagery.

Lohar and Scogin (1998) examined the effect of self administered VMBR training on athletic performance. 36 male and female collegiate athletes representing seven sports participated in the study. Results indicated that Visual-Motor Behaviour Rehearsal group exhibited significantly greater increases in sports performance than did the delayed-training control group. A significant decrease in sports competition anxiety was also observed for Visual-Motor Behaviour Rehearsal Group. Hall and Erffmeyer (1983) conducted a study on the effect of Visual-Motor Behaviour Rehearsal with video-taped modeling on free throw accuracy of intercollegiate female basketball players. Findings indicated that the use of visual cues through modeling may provide a means of enhancing Visual-Motor Behaviour Rehearsal and support the suggestions that most forms of mental rehearsals are more effective for athletes with relatively high levels of skill.

Weinberg, Seabourne and Jackson, (1985) compared the effect of relaxation training, imagery training and Visual-Motor Behaviour Rehearsal and found VMBR more effective in facilitating karate performance than either relaxation or imagery alone. Subjects were randomly assigned to four groups i.e. Visual-Motor Behaviour Rehearsal group, imagery group, relaxation group and the placebo-control group. Measures of trait anxiety, state anxiety and performance were all used to help the effectiveness of each four groups. Trait anxiety result indicated that all subject reduction in trait anxiety over the course of the testing period. State anxiety results indicated that the Visual-Motor Behaviour Rehearsal and relaxation groups exhibited lower levels of state anxiety than the imagery and placebo-control groups. Results also showed an effect for sparring; with Visual-Motor Behaviour Rehearsal group exhibiting better performance than all other groups. Gray (1990) studied the effect of Visual-Motor Behaviour Rehearsal with videotaped modeling on racquetball performance of beginning players. Male students were pre and post tested on forehead and backhand racquetball skill tests. Results indicated that the subjects given Visual-Motor Behaviour Rehearsal with videotaped model exhibiting better performance than the relaxation and imagery group for forehead shooting event.

Onestak (1997) studied the effect of Visual-Motor Behaviour Rehearsal and videotaped modeling on the free throw accuracy of male intercollegiate athletes. Based on a pre-assessment the subjects were matched for free throw shooting ability categories, and then assigned to one of three experimental conditions: (I) Visual – Motor Behaviour Rehearsal, (II) Visual-Motor Behaviour Rehearsal plus videotaped modeling, (III) videotaped modeling. Post assessment data for free throw shooting performance was analyzed using Analysis of Variance. Result indicated there was a significant improvement in free throw shooting from pre-to post-assessment. A number of nonspecific factors common to each of the experimental conditions may be responsible for the demonstrated...
improvement in free throw shooting. Imagined interactions, internal dialogues experienced as conversations with significant others, are conceptualized as a form of social cognition. Imagined interactions have important affective components and mental imagery. Results of an investigation demonstrate that verbal imagery is associated with self-dominance, rehearsal and understanding while visual imagery is associated with more pleasantness. Pleasant imagined interactions are lower in self-dominance and more similar to actual communication than unpleasant imagined interactions. The results are explained in terms of information processing and relational communication i.e., two categories of imagined interaction reflecting verbal and mixed imagery are also proposed Zagacki, Edwards, Honeycutt (1992).

Hayfa Tayseer Elbokai’s (2011) observed the effect of Visual-Motor Behaviour Rehearsal on the athletes with special needs. 63 male and female athletes of national team age ranging from 20 to 35 years participated in the study. Based on a pre-assessment of subject’s anxiety and self-control the subject were the assigned to experimental conditions. Visual-Motor Behaviour Rehearsal post-assessment data for experimental performance was analyzed by means of two groups. A significant main effect for the experimental group was observed, indicating the significant improvement in self concept and low anxiety from pre-to post assessment. Hashim and Yusof (2011) compared the effect of two different relaxation techniques, namely progressive muscles relaxation and autogenic relaxation on mood of young soccer players. Sixteen adolescent athletes received Progressive muscle Relaxation or Autogenic Relaxation training. Using Profile of Mood States-Adolescent, their mood states were measures one week before relaxation training, before the first relaxation sessions. Results indicated no significant interaction effect and no significant effect in any of subscales. Significant effect for testing sessions was found for confusion, depression, fatigue and tension subscales. Post hoc tests revealed post intervention in the confusion, depression, fatigue and tension subscale scores. Hence, it was concluded that these two relaxation techniques influence equivalent mood responses and may be used to regulate young soccer player’s mood states.

For several years, Studies have been implemented to determine how beneficial Visual-Motor Behaviour Rehearsal is to athletes, Kolonay (1977) showed that the success rate of New York college basketball foul shooters had significantly improved. Basketball team in Visual-Motor Behaviour Rehearsal group listened to a 10 minute relaxation and free throw imagery audiotape prior to each of 15 basketball practice sessions, While other teams listened to the relaxation tape alone, the imagery tape alone or engaged in irrelevant activity. Visual-Motor Behaviour Rehearsal training led to an increase in free throw percentage accuracy than the others. Ravi Chandran (2010) studied the effect of Visual-Motor Behaviour Rehearsal on selected psycho physiological variables of athletes at adolescent level using Pre-posttest design. Results indicated that the Participants intervention group of Visual-Motor Behavior Rehearsal has positively favoured psycho physiological variables of cognitive anxiety, somatic anxiety and mood states and these also increased the level of self confidence and vigor. Al-Salt, Amman, Jordan (2011) in his study also showed that Visual-Motor Behaviour Rehearsal (VMBR) method not only reduces the level of anxiety, but also improve the self-concept for athletes with special needs.

Rafiu’din et al. (2018) studied the effect of mental imagery training on novice archery athlete performance and compared the differences in shooting accuracy between non voice and expert archers. 12 archers participated in study. The result showed that the novice archers shooting score have improved in comparing to their pretest score after the intervention. The novice archers showed positive correlation between in shooting test. Study had concluded imagery training approach indeed has proven beneficial training method for novice archers to increase shooting accuracy. The above review of literature, shows the effectiveness of Visual-Motor Behaviour Rehearsal training on the psychological parameters among athletes, however, the research is lacking and require further studies to see the effect of Visual-Motor Behaviour Rehearsal on psychological parameters of athletes in Indian context.

**CONCLUSION**

Review of literature article gives us an understanding of various psychological components that affect performance. Previous literature also indicated that the visualization and imagery has been used as an effective tool for enhancing performance. However, Visual-Motor Behaviour Rehearsal is a systematic psychological technique helps athletes from various sports in overcoming psychological issues as well as improvement in performance. Visual-Motor Behaviour Rehearsal (VMBR) is the method of creating a mental video of an event and replaying it step by step. The steps of Visual-Motor Behaviour Rehearsal that contribute to improved performance are; Technique enhancement, error analysis & correction, preparation for completion improve psychological parameters and skill enhancement. Thus, future research could be undertaken to understand the effectiveness of Visual-Motor Behaviour Rehearsal on psychological parameters and applied as per the athlete’s requirement, thus helping an athlete to enhance his/her performance and improve psychological parameters.

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