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The Effect of a Course of cope modeling intervention on re – concentration and the Performance of Teenager Female Taekwondo Athletes of Iranian National Team

Y. Khanjari (M.A)¹, E. A. Ameri (Ph.D), R. Garooei (M.A)

University of Tehran, University of Tehran, University of Kharazmi

E-mail address: ykhanjari@yahoo.com

¹Corresponding author: Tel: 09354832941, Email: YKHANJARI@yahoo.com

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ABSTRACT. The purpose of current study is to consider a course of doing cope modeling intervention on re-concentration and the performance of teenager female taekwondo athletes of Iranian national team in 2009. The current study is in tentative type and pre and post test design with control group. To do this 22 people (female) among invited people to the camp of taekwondo national team in teenager level for participation in Asian competition of Kish were randomized and then were separated into two groups of control (10) and experimental(12). Then both of them completed the OMSAT-3 questionnaires in pre-test stage, so that to be evaluated from the view of re-concentration skill and making check list for performance evaluation. After 4 months cope modeling intervention of both groups was performed. Collected data was considered by independent statistical t-test. The results of this study showed that there is a significant difference between control and experimental groups in skills of re-concentration after doing a course of cope modeling intervention ($P < 0.05$). At last the results showed that there is a significant difference between control and experimental groups in performance after doing a course of cope modeling intervention ($P < 0.05$). It seems that constant and regular practice of psychological skills to coping with stress during in the period before the tournament, has a positive effect on the national athletes when they are in the pressure condition.

1. INTRODUCTION

One of the important aspects and probably the scientific aspect of sport is the psychology topic. In general, the optimal execution of sports skills depends on 3 types of physical, psychological, professional readiness. Since various ways of exercise, and ways of skills execution have been developed, and the difference between the heroes have been decreased to just a few miliseconds and a few millimeter, it seems that the difference between the heroes' performances is related to their psychological training more than any other time. Gucciardi (2008) expresses that nowadays with the development of psychology; the topic of the effect of the psychological skills on performance of sports skills has gained great importance, and psychological factors that intervene sport performance have become a widespread interest among athletes, coaches and sports psychologists in such a way that in recent years, surveys and experimental investigations extensively have focused on individual psychological factors including confidence, motivation, attention, visualization, psychosomatic skills and the impact of each of these factors on the performance. Ordinary athletes assume that they do not need any psychological training exercises and often deride such exercises, because they are usually afraid of anything new. The psychological training exercises and psychoanalytical skills are beneficial to athletes and sport teams to the great extent, and hence ordinary athletes are lagging behind them. Veinberg and Gould (2007) count psychological factors as the primary reason for day to day fluctuations in sport performance.

Several interventions in the field of sport psychology have been published that combine the use of cognitive and behavioral strategies, and sometimes are executed in a particular sequence so that they would facilitate sports performance. One of these interventions which have a specific function in martial arts tournaments is the cope modeling (Enshel, 1995). This modeling includes a

psychological-behavioral set, which includes four stages, in response to challenging events experienced during the campaign. The quick and structural nature of this modeling is consistent with cognitive and behavioral requirements of martial arts. Cope modeling include 4 stages after the experience of sudden challenging event during the campaign. These stages include: controlling emotion, organizing input, planning the next response and then executing the next task or skill.

Controlling emotions entails restoring calmness by taking a deep breath, positive self-talk (everything is Ok, be relaxed, be patient, keep calm), and restoring control of the situation by accepting responsibility of unpleasant events (mental strength). Organizing input includes distinguishing meaningful information from meaningless one. Sport competitions abound with distracting, aural and visual factors that most of them are irrelevant to the target task. Athletes must learn that they should refine and disregard the input which is unrelated to the achieving to the performance requirement. However, other visual and auditory signs and symptoms must receive athletes' optimal attention and they should quickly take account of them in the process of decision-making (planning). Planning includes receiving available information, and then making quick decision about how to achieve next task requirements. Finally, athletes should execute skill with optimal effort and minimal reflection. This modeling has credibility in competitive tennis (Anshel, 1991) and training athletes in the proper use of thoughts and preferred execution of them in their proper sequence in order to overcome the unpleasant effects of experimenting challenging events during the competition. It seems that features of cope modeling are in accordance with performance requirements in martial arts (Prak & Cborn, 1997). An example of the use of cope modeling in martial arts is cited after a temporarily failure (e.g, loss of a point or losing the game temporarily).

Athletes should take a deep breath and restore their calmness, focus their attentions on features related to competition environment (e.g, the opponent's expressing condition and movements, while disregarding motives, information and events that are deemed unnecessary). They should quickly (in a few seconds) remain calm, and plan the next strategy (attack contrivance), and finally quick execution of the plan in accordance with the governing situation. Long interval between planning and skill execution results in negative thoughts (self-doubt and, anxiety and dilemma), and interrupts skills requiring quick and automatic execution. Martial arts necessitate collecting of information quickly, categorizing information into important and unimportant categories, analyzing information about future events, selecting a proper action, and then quick execution of selected action. The set of cognitive and behavioral processes described by Chung and Lee meticulously match the components of cope modeling.

Performance stability, one of the most difficult purposes in sport competitions, is specially related to the widespread physical and psychological requirements of martial arts, including psychological training in the competition, maintaining focus, executing already acquired skills during competitions, overcoming environmental factors such as competing in an unfamiliar field or in the presence of opposing audiences and as well as confronting opponents and their various degrees of competences. How do athletes remain calm and execute skills with stability in optimal levels? How maintaining emotional control and reducing unpleasant thoughts and their persistency is possible? Successful martial arts athletes are able to confront with high-level physical and psychological sport requirements and winning the points by possessing precise psychological tendencies.

In our country, psychological skill training has been slightly taken into consideration; specially practicing skills related to relieving anxiety has been slightly taken into consideration. While, nowadays, psychoanalytical interventions such as cope modeling and mental toughness in difficult conditions have accounted for by many of sports psychologists and top coaches around the world particularly in martial arts. Hence, the present study aims to answer that whether presentation of a psychoanalytical intervention with a coping nature under conditions with high level of psychological pressure that naturally results in the loss of focus can negatively affect recovery in focus skill and young adult female Taekwondo players' performance in national team of Iran?

2. RESEARCH METHOD

The present research method is quasi-experimental, and make use of pretest-posttest procedure with a control group. Population and sample in the present study entails 25 girls invited to Asian competitions held in Kish Island in 1388 among whom 12 persons were randomly included in the experimental group and 10 persons in control group. The other 3 girls were not used because if there would be a reduction in the number of the sample or if a player is omitted from the control group would be replaced by one of the 3 reserves. At first, the athletes were randomly divided into 2 groups of control and experimental, then in order to assess their recovery in focus skills, both groups in the pretest completed the OMSAT-3 questionnaire and with regard to the obtained information, the mean score for both groups were calculated. It should be noted that recovery in focus skill was regarded as the dependent variable since, according to their coaches, team members' major problem in recent years had been a decline in players' performances due to the loss of focus during the games, and the researcher considering the nature of cope modeling aim to conduct his study on this skill. The reliability and validity of the OMSAT-3 questionnaire were established by Sanati Monfared and his colleagues. Also in order to assess the the pretest performance, a checklist provided by the researcher was used including 20 questions. This checklist was completed by the coach and head coach, and they answered items in the form of 9-point Likert scale ranging from 1 to 9. Cronbach Alpha for this checklist found to be .96. After a six-month cope modeling intervention, at the end, independent sample T-test was conducted on the data to determine the difference between the two groups with regard to the target variables. Table 1 shows mental skills in the questionnaire OMSAT-3.

Table 1. Mental skills in the questionnaire OMSAT-3 (three levels of cognitive, psychosomatic and basic skills).

OMSAT-3		
cognitive skills	Psychosomatic skills	Basic skills
Focus re -concentration visualization mental practice competition planning	Reaction to stress Keeping calm Controlling stress Energizing	Goal-setting Self-confidence Commitment

3. TRAINING METHOD

Regarding the fact that the use of the cope modeling in difficult circumstances of the game and when the person isn't in conducive spiritual-mental conditions during the game, and the person has lost his focus (such as losing a score) is more applicable, thus the researcher conducted the training once in conditions of mental imagery, in a way that the participants were rehearsing all of the four stages of the cope modeling in the training hall under good and calm conditions in the form of mental imagery and perception under stressful conditions of the competition. This exercise was practiced for 10 minutes before the comtetition was run. And once it was conducted under conditions that the individuals were practicing together in the training competition, and they were suffering from difficult conditions in a way that the participants in the experimental group were asked to apply the following stages during the game and while facing stressful conditions in their minds. 1) The athlete should take a deep breath and restore his calmness. 2) They should focus their attention on the features related to the game environment (for example, position and opponent's expressing movements while disregarding motives, information and the events deemed unnecessary). 3) They should quickly (in a few seconds) remain calm, and plan the next strategy (attack contrivance), 4) Quick execution of the plan in accordance with the governing situation. In each session every individual did at least 2 training game through application of cope modeling.

After each game every individual described the way they applied the modeling, and whether they reached desired outcome. This exercise was practiced during the trainings and in face-to-face campaigns of taekwondo in 4 months, three times a week.

4. RESEARCH RESULTS

In table 2, the mean score related to 2 variables i.e. recovery in focus and performance in the pretest and posttest in both control and experimental after a training period of four months is presented. The results of the comparison of the mean difference between the pretest and posttest variables in both control and experimental group were analyzed using independent t-test can be seen in table 3. There was a significant difference between the mean difference in score of the recovery in focus in the pretest and posttest after a 4-month period of psychological intervention of cope modeling ($P<0.05$). There was also a significant difference between the mean difference in score of the pretest and posttest performance after a 4-month period of psychological intervention of cope modeling ($P<0.05$). Figure 1 and 2 show these differences in the experimental and control group in recovery in focus skills and taekwondo players' performances respectively as well.

Table 2. The mean scores of the control and experimental groups at pretest and posttest in both variables

performance	re -concentration	Variable group	
91/10	18/00	pretest	Control group
106/40	19/10	posttest	
88/45	17/58	pretest	experimental group
115/63	23/66	posttest	

Table 3. The mean differences in scores of the control and experimental groups at pretest and posttest in both variables

p	T	SD	M(P2-P1)	group	statics variable
0/010	-2/85	3/42	6/08	experimental	re -concentration
		4/58	1/10	control	
0/006	-3/01	11/65	27/18	experimental	performance
		5/85	15/30	control	

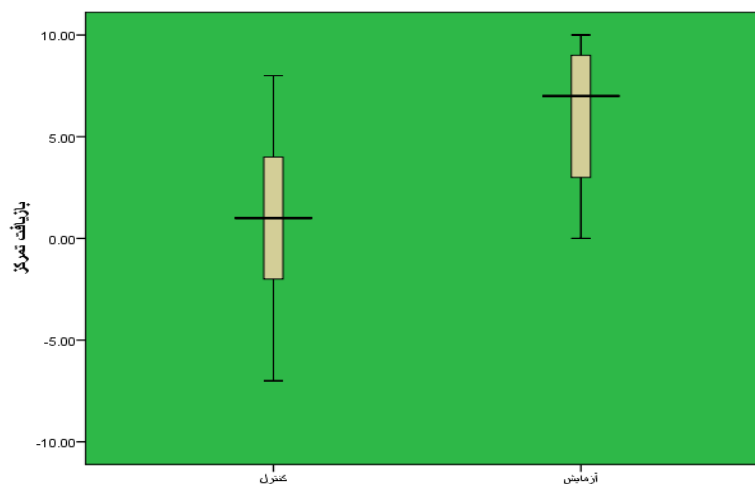


Figure 1. The comparison of the control and experimental groups in recovery in focus after practicing four months of psychological intervention of cope modeling

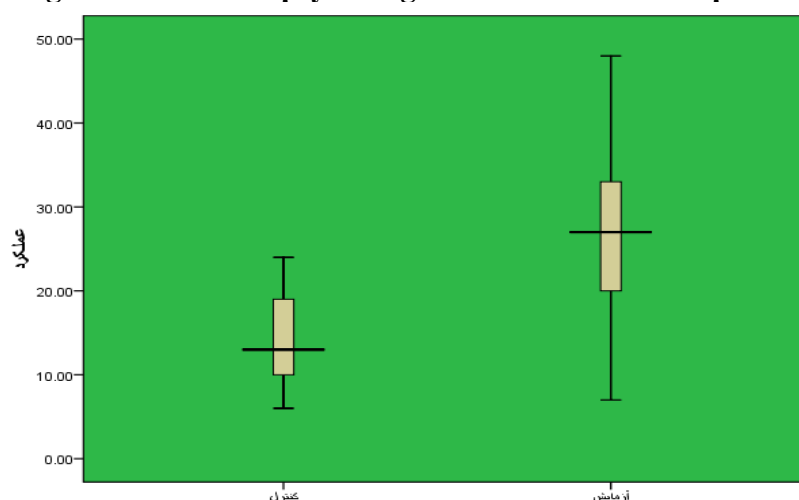


Figure 2. The comparison of the control and experimental groups performance after practicing four months of psychological intervention of cope modeling

5. RESULTS AND DISCUSSION

The results of the present study showed that the psychological-behavioral intervention of a period of cope modeling affected recovery in focus skill. The finding is in line with studies conducted by Anshel(2001), Jones (2002), and Gucciardi (2008). According to Butcher (1993) processing of irrelevant information can cause poor performance in competitive situations. He believes that athletes not only should have effective attention during their sport performances but also they should regain their attention when deviated by internal and external stimuli. Factors that may deviate attention toward stimuli unrelated to the performance of athletes have been reported to be infinite (Naydfer, 1976). According to Aurlyk (1986) proper recovery in focus before, during and after the game is the one of the most important skills for high performance of athletes which is less practiced. It is considered that to achieve sustainable performance in training and competition, athletes must codify the skill in inhibiting the distracting factors and regularly practice it. In sports such as Taekwondo, the athlete should accurately focus on the opponent's slightest movements during the competition in order to take advantage of the opportunity to execute the attack techniques and win points. And after each technical performance of the opponent and employ defense and counter-attack techniques to prevent his opponent's winning points. Thus, high concentration and doing exercises that increase the strength of prediction and speed of action and

reaction during the competition is important to the success of Taekwondo players. When the player loses a point (temporary failure) actually he temporarily loses his focus, and in order to restore his focus he needs recovery in focus skill. It seems that psychological intervention of the cope modeling which has a similar nature as recovery in focus has had a tremendous impact on the improvement of test subjects' recovery in focus. It was also found that practicing cope modeling has improved Taekwondo players' performances. The finding is in line with the studies conducted by Gucciardi (2008), Anshel (2001, 2003) and Chung (1994). Weinburg and Gould (2007) believe that psychological interventions through psychological skills training should be through regular methods and over time and the use of psychological skills and strategies including illustration, relaxation and goal setting in order to have the necessary effect on athletic performance. When recovery in focus skill, under stressful conditions of competition, would be reinforced after regular exercises, in fact the skill in focusing on the movements and techniques has improved. An increase in focus during a campaign affects athletic performance in itself and improves it.

Gucciardi believes that regular exercises imagery and self-talk of a cognitive or motor model facilitates the neuromuscular pathway and ultimately leads to accelerating the implementation of the model. The more the exercises, the faster the neurotic transmission. The repeated and regular practices of the cope modeling with parameters of imagery and positive self-talk have had a positive influence in opening neuromuscular pathway of this skill in people, in a way that the participants admitted that when they are under difficult conditions of the competition (e.g., loss of a point) with a moment of thinking of cope modeling restore their calmness much faster than any other time, and continue to race that improves athletic performance, and perhaps it is one of the reasons that improves performance, accelerates recovery in focus and restores calmness during the competition. It seems also that the exercise of scheduling the cope modeling has been influential in regulating the research sample. According to Inverted-U theory, regulating and achieving its optimum lead to successful performance. Due to the determinant role of today's mental training on athletes success, especially athletes in the national teams in the AFC, world and Olympic championships, therefore, it is recommended that coaches and officials of national teams with the help of sports psychologists identify strength and weaknesses of athletes' mental skills, and with regard to it apply the necessary measures and programs to promote and improve these skills.

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