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Lifestyle of the elite national karate-ka (karate practitioner) and its effect on controlling the pre-competition stress

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ABSTRACT

This research aims to study the lifestyle of elite national Karate-ka and its effect on controlling the pre-competition stress. The current research participants include all of the participating athletes in the State Karate Championships (n=185). According to the small amount of the population, the whole society was chosen as the participants. The current research information were collected by the use of two questionnaires of the lifestyle standard questionnaire (SF-36) and questionnaire of sports stress coping strategies (two main dimensions, approach coping style and avoidant coping style). The questionnaire reliability (R= 0.87) was reported by Besharat. The research data were analyzed by the use of Spearman rank correlation in significance level $p \leq 0.05$. Mean and standard deviation of two coping styles of avoidant (71.6 ± 3.4) and approach (64.9 ± 2.8) showed that most of the times Karate-ka use the avoidant coping style in the stressful situations. The current research results showed that a significant correlation exists between the lifestyle and its components with the stress coping styles in level $P \leq 5\%$. Also these results showed that a positive and significant correlation exists between the lifestyle and approach coping style (R= 0.71) with the avoidant coping style (R= 0.78).

Keywords: Stress coping strategies; Lifestyle and athlete.

INTRODUCTION

Several intervening variables exists in determining the lifestyle of athletes, and we could not say that which one excels, thus evaluating them in different conditions and in athletes of different sports seems essential [1]. Each athlete has its own lifestyle and tries to provide the best situation for him/herself. According to the creation of stress before the competitions in most of the athletes, they try to observe some of the individual issues and to choose a mentally desirable diet and control the stress in order to gain peace [2]. Studying the factors of athletes' lifestyle has been the subject of many researches and several researchers have focused on this subject. Their goal is to study different angels of lifestyle followed by increasing the mental peace and also improving the behavioral changes for reducing the pressures and controlling the stress before the competitions. Researchers believe that an appropriate diet and performing tasks for maintaining the desirable mental conditions are some of the most effective factors on controlling stress [3 & 4]. Undoubtedly, experiencing stress and mental pressures are not separable from sports, and the method of coping with these factors is very important in the mental health of the athlete. On the other hand, one

of the main goals of several athletes and sports teams participating in championships is reaching victory and success. The athletes should have the ability to deal with the coach's criticism, failure, wrong judgment, audience noise, and coping with injuries, in order to reach their favorite result in the sports competitions [5]. In fact, they reduce the stress and they enhance the appropriate methods of coping with it in order to gain victory and to overcome their competitors [6, 7, and 8]. Robert and et al (2005) believed that one of the issues in front of each and every athlete in the professional and championship level is competition, and participating in competitions and tendency toward acquiring the satisfying result are accompanied by doubled stress for the athletes. Although a little bit of stress results in the improvement of performance of the individual, the increase of stress results in the individual's functioning disorder, and in addition to the fact that it affects the individual's performance, it also damages his/her mental health [Quoted by 9]. Each and every individual is exposed to competition stress in some ways, but their reaction toward coping with stress is different. It is obvious that different human beings do not react in similar ways in the similar situations, and their perception from the stimulus and events are different [10]. One of the theoretical models for studying the stress coping strategies is approach-avoidant styles. In a research the researchers showed that no significant difference exists between the stress coping styles of basketball players and non-athletes. Also unlike non-athletes, the basketball players prefer the approach style than the avoidant style. Other researchers showed that disability in effective coping with sports stress is harmful for the performance and personal satisfaction of the athlete. Hammermeister and Burton (2004) stated that spreading the stress coping techniques is the most important factor for balancing and bearing the sports stress, and it results in the optimal performance level of the athlete [Quoted by 11]. In a research, Anshel (2008) showed that stress has a deterrent role on the sports performance and contrariwise, improving the coping skills improves the sports performance [3]. In a research Chen and et al (2005) showed that the quality of active life and being a champion is related to the stress reduction in competitions [Quoted by 12]. Also there are some results available for the positive social effects of sports activities [14, 15, 13, and 12]. McIister (2001) studied the results of comparing the quality of life and athletes' and non-athletes' stress and figured out that the athlete individuals have higher quality of life and lower stress than the non-athletes [Quoted by 6]. Vaez Mousavi (2000) showed that the quality of life of female athletics in individual sports is better than the quality of life of athletics in team sports. In contrast, the quality of life of male athletics in team sports is better than the quality of life of male athletics in individual sports. By studying the quality of life of athletes and non-athletes, Vaez Mousavi showed that athletes have a better quality of life than the non-athletes [16]. In a research, Hemayat Talab (2003) showed that the amount of life satisfaction among the athletic university students is more than the non-athletic university students [Quoted by 1]. Based on the above mentioned cases it seems that paying attention to different parts of lifestyle of an athlete is very important in recognizing the mental aspects of an athlete and controlling his/her stress before the competitions. Thus this research tries to study the elite Karate-kas' lifestyle based on the designed goals and its effect on controlling the stress before the competitions.

MATERIALS AND METHODS

The overall aim of this study is to study the national elite Karate-kas' lifestyle and its effect on controlling the pre-competition stress. Thus according to such kind of aim, the research methodology is descriptive-correlative, and the data collection has been performed by a questionnaire. The studied participants of this research were all of the athletes presenting in the state karate championships (n=185) with at least one championship year background. Based on the small amount of population, the whole society was chosen as the sample. The statistics of whole number of athletes in martial arts federation and the state committee of Karate were achieved. Two questionnaires of the lifestyle standard questionnaire (Short Form-36) and questionnaire of sports stress coping strategies (two main dimensions, approach coping style and avoidant coping style) were used. The questionnaire reliability (R=0.87) was reported by Besharat. The scale of coping strategies in sports is a 40-question test evaluating the sports stress coping strategies in two main dimensions in 5-value Likert scale (score 1- completely incorrect, to score 5- completely correct). After receiving the experts' comments of 10 experienced professors of psychology and sports management, the questionnaires were distributed among the athletes, and the reliability of each of them was evaluated by the use of Cronbach's alpha and they were respectively $r=0.79$, $r=0.71$, $r=0.81$. Also, the internal consistency of stress coping strategies is varied between $R=0.71$ to $R=0.83$, indicating a high internal consistency in research tools. Also before completing the questionnaire by the athlete, the important and explicable points were explained to the athletes by the researcher. The lifestyle standard questionnaire (SF-36) was used for measuring the quality of life. This questionnaire includes 8 dimensions (physical performance, limitation of physical role, physical pain, public health, power, social performance, limitation of psychological role and mental health). Its reliability in most of the researches was reported high ($R=0.78$). Sample Likert model was used for scoring and determining the total score of quality of life of examinees. Also in order to analyze the information, firstly the descriptive statistics were used for

classification, data regulation, mean determination, standard deviation and drawing charts. Then at the inferential statistics part, because of abnormality of data distribution (by the use of Kolomogrov-Smirnoff test- one group) the non-parametric methods were used for determining the correlation between the variables through the Spearman rank correlation in significance level $P \leq 0.05$.

RESULTS

In this research the examinees' age mean was 22.6 ± 3.8 , and their sports background was 8.7 ± 2.8 . Mean and standard deviation of two approach (64.9 ± 2.8) and avoidant coping strategies (71.6 ± 3.4) showed that most of the times the Karate athletes use the avoidant coping strategy in stressful situations. This research results showed that a significant correlation exists between the quality of life and its components with the stress coping strategies at level $P \leq 5\%$. Also these results show that a positive and significant correlation exists between the quality of life and approach coping strategy ($R= 0.71$) and the avoidant coping strategy ($R= 0.78$).

Table1. Comparing the stress coping strategies of Karate-ka

Indicators	Mean	SD
Approach coping strategy	64.9	2.8
Avoidant coping strategy	71.6	3.4

Table2. Correlation between the stress coping strategies and lifestyle

Variable	N	r	P
Correlation between approach coping strategy and lifestyle	185	0.71	0.001
		0.78	
Correlation between avoidant coping strategy and lifestyle		0.71	
		0.78	

**Significance at level $p \leq 0.05$.*

Table3. Scores of 8 dimensions of lifestyle of athletes

Index	Mean	SD
Physical performance	20.2	2.2
Limitation in physical role	11.8	3.1
Limitation in emotional role	7.9	1.1
Social performance	5.6	2.3
Physical pain	5.2	3.2
Mental and psychological health	14.6	1.4
Power	10.9	2.6
Public health	12.8	2.7

DISCUSSION AND CONCLUSION

The current research results show that a positive and significant correlation exists between the quality of life of athletes and their stress coping strategies ($R= 0.73$). These results show that athletes who have better lifestyle (score of lifestyle) have better scores in stress coping strategies (approach-avoidant), and in other words the athletes with higher scores have less stress in lifestyle. Also the current research results show that the athletes in avoidant strategy have higher mean than the approach strategy, which is consistent with the findings of Besharat (2005) [1]. Since there are several intervening variables in determining of the athletes' lifestyle and since it could not be said that which one excels the other, then evaluating them in different situation and in athletes of different sports seems different. Researchers believe that no consensus exists to say that which coping strategy is more effective. Quoted by a few studies, surveying the correlation of coping with some of the outcomes had inconsistent results. Kempton and et al (2001) stated that professional and experienced marathon runners, use different coping strategies and these strategies depend on the type and status of stressor Ozgold and et al (1993) found out that professional athletes use positive thinking, praying, preventing distraction, controlling and focusing on the goal, change or control of the stressful environment, controlling emotions, feelings and stimuli for coping with stress [Quoted by 17].

Balighi (2007) showed that individual or team sports result in the different use of stress coping strategies and the team sport athletes use the avoidant coping strategy more than the individual athletes. In a research on the individual and team sport athletes, Park (2000) understood that team athletes use more different coping strategies than the

individual athletes, due to the difference in stressful resources [Quoted by 6, 14]. Some of the researches show that in unpredictable situations, use of avoidant coping strategy is more effective, because in this strategy, the emotional stimuli are adjusted and in comparison between the team sports and individual sports, the team sports have more unpredictable situations than the individual sports, because most of these sports are the type of open skills and thus it seems that the use of avoidant coping strategy by the players of team sports seems justified. Researchers stated different results related to the prioritizing of using stress coping strategies in athletes based on the gender, team or individual sports, level of acquired ranks. Researches of Richard et al (2006), Nicholas (2006), Campennet al (2001), Miller (1992) and Giacobbi (2004) show that use of coping strategies depends on the type of the stressor, and individuals react to the stress differently in different situations [Quoted by 16]. Generally, based on the discussion details and apart from the effective factors on the use of each of the stress strategies by the athletes, it seems that having a better quality in the lifestyle makes the athlete more success in using strategies of coping with stress and it confronts the athlete with less stress during the competition. Thus this matter suggests the coaches to pay attention to the athlete's lifestyle according to its effectiveness on the amount of stress before the competition. Also the use of effective coping and reduction of stress results in the enabling of athletes for achieving a strong basis for maintaining motivation and increasing the self-satisfaction in sports, and to increase their professional and personal quality of life.

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