

An investigation of stress management techniques in group and individual athletes in Rasht City

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ABSTRACT: Competition may be a stimulating challenge for athletes and effecting the physical and cognitive emotions. This research was conducted to Description of stress management techniques in group and individual athletes in Rasht City. The research sample consisted of 312 male athletes (137 individual and 175 team) that were participated in this research. Subjects completed the scale of coping styles in sports questionnaire. Data were analyzed using mean, standard deviation and paired and independent sample t-test. For all statistical comparisons, the level of significance was set at $p < 0.05$. The results showed that athletes for coping with stress used the avoidant style more than the confrontation style. Athletes in team sports used the avoidant coping style more than the athletes in individual sports, but there weren't a significant difference between these two groups with confrontation coping style. Therefore, using the avoidant style by athletes is suitable for coping with sports stressors because ignoring the stressor events in uncontrollable situations and also in situations that require immediate decisions is a proper way to coping stress.

Keywords: Stress management, Athletes, Group and individual sport's team

INTRODUCTION

Stress is among factors which have caused human troubles for a very long time. It has also affected his behavior and action. The word stress was first used in 15th century; it was only referring to physical pressure and it had no application in social and behavioral sciences. However in 17th century the word over generalized to non-engineering sciences, too; It was used to refer to pressure and individual's tolerance against hardship.

Austrian psychiatrist, Hans Selye, was the first person to use this word in psychiatry. The term was then entered into psychology and then after into organizational behavior studies. Finally, the research on resistance to stress began to prosper during 1980s. All people somehow experience different stresses, but the responses to these stresses are different. The response of each person to different stimulants depends on the severity of stressor and the vulnerability of the person. Obviously, different people have different reactions to stress in the same situation and their definition of the stimulant and

events is different (Kleinke & L, 2003). In general, competition might be a challenging stimulant for athletes and therefore cause them to experience cognitive or physical arousal (Rhiner, 1993). Despite the facts that exercise is effective in reducing the stress, severe physical and muscular activity or other psychological factors in exercise have an undesirable effect and they might increase the stress. Therefore, it is necessary to control any stress and tension to reach an optimized performance (Parkash, 2006; Wilks, 1991).

Success in sports fields is not only the outcome of physiological and bio-mechanical function, but also psychological factors play an important role in function. Athletes accomplish their duties with different levels of stress; emotional and competitive condition of different sports matches, create unique situations and causes different types of stress. However, individual differences can also affect the athletic function and the relation between stress and athlete's performance. Obviously, most of the athletes

face psychological stressors (Parkash, 2006). Stress in sports can be defined as a physical, mental or emotional demand which can lead to negative arousal in athlete's body or it might cause another athlete to experience a positive arousal. This is why some skilled athletes succeed during stress, while others fail (Arunjot, 2001).

Although there is some level of tolerance against stress in each athlete which is necessary for his optimized and desirable function and it depends on factors like experience, level of competition, importance of the result and his innate characteristics. But the success and functionality in sports is mainly subject to typical stressors like physical or mental fault, tolerance of pain, seeing the trickery or success of the rival, being fined by referee or reprimand from the coach. On the other hand, athletic environment is full of unseen stressor events. Studies show that failure to resistance against athletic stress is harmful to functionality and personal satisfaction of the athlete (Scalan, 1991; Skinner, 2003).

Mental readiness and especially the readiness to face stress is a part of athletes' readiness. However, mostly the athletes and coaches neglect it (Arunjot, 2001). Therefore, considering the importance of this issue, we have tried to study and compare stress management styles among athletes from different fields.

METHODS

The current study is a descriptive and field study. In order to collect data we used questionnaire. The sample was selected out of athletes in Rasht city. Participants were divided into three groups: 1- pupils group (n =102), 2- students (n =86) and 3- athletes' active in athletic committees of the city (n =182). These participants had at least one year history of participation in athletic matches. In order to select the sample we took the active teams of Guilan University

RESULTS

The descriptive indicators of statistical indices for stress management styles among athletes are shown in Table 1.

Table 1: Description of statistical indices for stress management styles among athletes

Coping styles		M±SD*	Mean of total standard deviation
Confrontation	Behavioral	2.87 ± 0.69	3.48 ± 0.46
	Cognitive	4.09 ± 0.54	
Avoidant	Behavioral	3.47 ± 0.83	3.61 ± 0.59
	Cognitive	3.65 ± 0.60	

* Data presented as mean ± standard deviation

as the standard; Athletes and pupils were selected on the basis of these fields and due to the limitation of university sports teams, all athletes in every field were considered as our sample. The list of active fields in Guilan University during 2006-2007 was as follows: Team sports: Basketball, handball, volleyball, football and individual sports: Badminton, martial arts, field and track and table tennis. The criteria by which we could decide on sufficiency of the samples, was the number of questionnaires filled in. We used 312 completed questionnaires in our study (85% of all questionnaires distributed). In order to collect required data we used "scale of stress coping styles in sports". This questionnaire includes two sections; personal details (sport type, education, age, and gender, history of sporting and championship history) and 40 questions about styles to cope with stress. These styles include two major dimensions; confrontation coping style and avoidant coping style. We studied these styles through Likert scale (from completely false = 1 to completely true= 5) in 7 events. Each of the major dimensions in scale of stress coping styles in sports was divided into seven themes on the basis of "duty-based coping" and "emotion-based coping". They were as follows: The internal consistency of four sub-scales including "duty-based confrontation", "emotion-based confrontation", "duty-based avoidant" and "emotion-based avoidant" have been calculated by Besharat in 2004 ($0.89 \leq \alpha \leq 0.91$). It shows that the scale have a strong internal correspondence. The correlation coefficients of participants were 0.87 which shows the reliability of test-retest (8). We used SPSS 11.5 in order to analyze the data. After collecting raw data and extracting them, we used firstly the descriptive statistics to categorize and manipulate the data, to determine the mean, standard deviation and to draw diagrams. We also used paired T-test, independent T-test and F- test at level of $P \leq 0.05$ in order to evaluate the data.

Results show that athletes, in order to resist to stress, use avoidant style more than confrontation style ($M=3.61 \pm 0.59$) (Table 2). Athletes, also, used avoidant coping style when facing stressors like physical or mental fault, pain or injury, reprimand from the coach and undesirable conditions. They used significantly confrontation coping style when facing

trickery or fault of their rivals, bad decision of the referee and success of the rival ($P \leq 0.05$). Among coping sub-scales, the cognitive confrontation style is the most prevalent style ($M=4.09$, $SD=0.54$) and behavioral confrontation style is the last coping style. This priority was significant at level of $P \leq 0.05$ (Table 2).

Table 2: Statistical comparison of stress management styles among athletes

Coping style	M±SD	Paired sample t-test*		
		t	df	P *
Confrontation – Avoidant	- 0.12 ± 0.67	-3.31	311	0.01†
Confrontation cognitive - Confrontation behavioral	1.22 ± 0.83	25.99	311	0.01†
Avoidant behavioral - Avoidant cognitive	- 0.18 ± 0.67	- 4.72	310	0.01†
Confrontation behavioral - Avoidant behavioral	- 0.59 ± 1.1	- 9.55	310	0.01†
Confrontation cognitive - Avoidant cognitive	- 0.44 ± 0.62	12.63	311	0.01†

† significant at ($p \leq 0.05$) * Paired sample t-test

Results of our study shows that athletes use two completely different coping styles when facing seven stressor events. Athletes in team sports used avoidant coping style more than athletes in individual sports. However, there was no significant difference between them in terms of sports type and confrontation coping style (Table 3). Results show that participants with a

Diploma degree ($M=3.73$, $SD=0.63$), BA and higher degree ($M=3.62$, $SD=0.55$) and those with degrees below diploma ($M=3.54$, $SD=0.53$) used avoidant coping style more, respectively. There was no significant difference between athletes in terms of coping style, gender, age, and level of championship and their history of sporting.

Table 3: Results of statistical analysis on coping styles in team and individual sports

index sub-scales of coping styles	N	M±SD	Independent sample t-test*		
			t	df	P*
team	175	Confrontation 3.48 ± 0.49	- 0.15	310	0.87
individual	137	Confrontation 3.49 ± 0.42			
team	175	Avoidant 3.68 ± 0.60			
individual	137	Avoidant 3.52 ± 0.57	2.23	310	0.02†

† significant at ($p \leq 0.05$) * independent samples t-test for comparison between groups

DISCUSSION AND CONCLUSIONS

Information gained through analyzing the data shows that athletes use avoidant style more than confrontation style to cope with stress ($M=3.61 \pm$

0.59) (Table 1). This is in line with results of studies by Giacobbi (2004), Anshel (2001), Malika et al (2005) and Gould (1993) which define avoidant

coping as the most prevalent style (Anshel, 2001; Giacobbi, 2004; Gould, Finch, & Jackson, 1993; Malika, 2005). It seems that using avoidant style by athletes to cope with athletic stressors is appropriate, because according to results by Ruth and Kohen, disregarding stressor events during uncontrollable situations where athletes need to decide instantly, is an appropriate way to cope with stress. Paying attention to stressors perverts the focus of athlete away from accurate performing of the technique and causes him to not succeed (Anshel, 2000). In the current study avoidant style is reported to be the prevalent style which is incongruent with results by Mark (2006), Dale (1989), Noblet (2002) and Wilks (1999) (Dale et al., 1989; Mark, 2006; Noblet et al., 2002; Wilks, 1991). Among coping sub-scales, the cognitive confrontation style is the most prevalent style ($M= 4.09$, $SD= 0.54$) and behavioral confrontation style is the last coping style. This priority was significant at level of $P \leq 0.05$. However, reviewing the results of different studies show antithesis results. For example Weinberg (1996) claims that golfers (individual sports) use cognitive confrontation style to minimize stressor situation and this might be the best coping style (Weinberg, 1996). Aflatuni (1998) believes that cognitive coping style is the most prevalent coping style among basketball players (team sport), (Aflatuni, 1998). Richard et al (2006) state that cognitive coping styles are the most applicable styles for coping with stress among skilled cricket players (individual sport), (Richard, 2006). Gould et al (1993) reported that skilled skaters (individual sport) use cognitive confrontation style (Gould et al., 1993). Mark (2006) despite the above results figured out that athletes in competitive matches tend to use behavioral-confrontation style vastly. But the cognitive-avoidant style was particularly unusable (Mark, 2006). More use of cognitive confrontation style shows that skilled athletes focus on match and performance even during the times when they are coping directly with troubles; this might play an important role in their success. On the other hand, athletes, used avoidant coping style when facing stressors like physical or mental fault, pain or injury, reprimand from the coach and undesirable conditions ($P < 0.05$). They used confrontation coping style when facing trickery or fault of their rivals, bad decision of the referee and success of the rival. These results confirm the results by Anshel (2001), (Anshel, 2001). It seems that when the stressor is an outsider factor, they use confrontation style, as the athlete feels that he is able to change the situation and this change might improve the result; however when the stressor is a personal factor (athlete's fault) or factors which cannot be changed in short term (injury or the bad

condition of environment) and also the factors which belong to supportive tools of an athlete (coach), then they response evidently and try to cope with the stressor through focusing on the problem or by disregarding the stressor. Several studies (including: Richard et al., (2006), Nicholas et al., (2006), Campen et al., (2001), Anshel (2000), Miller (1995), Hogh et al., (2001), Giacobbi (2004) and Mark (2006)) show that using coping styles depend on the stressor type and people show different responses to stress during different situations (Anshel, 2000; Campen et al., 2001; Giacobbi, 2004; Hogh et al., 2001; Mark, 2006; Miller et al., 1995; Nicholas, 2006; Richard, 2006). It is worth mentioning that people show responses to different stressors on the basis of their evaluation of the stressor action; they compare the results of their evaluation with resources at hand and finally consider an appropriate response. Therefore the response to different stressors not only depends on different individuals, but also depends on different evaluations. These results confirm the results by Weinberg (1996). Results of this study show that athletes use two completely different coping styles when facing seven stressor events (Weinberg, 1996). Athletes in team sports used avoidant coping style more than athletes in individual sports. However, there was no significant difference between them in terms of sports type and confrontation coping style (Table 3). These finding confirm the results by Anshel (2001) (Anshel, 2001). He has shown that this style of coping is prevalent when coping with stresses caused by weather, personal fault, trickery of the rival, pain and injury and coach. Williams et al., (1993) studied 112 golfers and showed that avoidant style is the prevalent and effective coping style among them (Williams et al., 1993). These results are incongruent with results by Finch et al., (1993) who interviewed 17 top American skaters to investigate the coping processes during one season and a complete sporting period and finally figured out that the prevalent coping style among them is to disregard the problems and to focus on their duties (cognitive-avoidant) (Gould et al., 1993). However, the studies by Krohne and Hindel (1998), Malika (2005) and Gould et al., (1993) showed that avoidant style is prevalent among athletes in individual sports (Table tennis, Field and track and wrestling) (Gould, et al., 1993; Krohne et al., 1998; Malika, 2005), but in studies by Dale (1989) and Wilks (1991) the prevalent coping style was confrontation style among skilled female football players, soccer players and basketball players (team sports) (Dale et al., 1989; Wilks, 1991). Studies show that during uncontrollable situations, using avoidant coping style is an effective way; because this style reduces the

emotional stimulants and develops the congruency with stressors. On the other hand, team sports have more uncontrollable situations than individual sports, since most of these sports belong to open skills. Therefore, it is justifiable for athletes to use avoidant style. Results show that participants with a Diploma degree, BA and higher degree and those with degrees below diploma use avoidant coping style more, respectively ($P \leq 0.0$). Considering these anomalous results show that there are some factors other than age, gender, history of sporting and skillfulness level which affect the way athletes cope with stress; these factors (i.e. personality type and personal characteristics) can affect coping style, too. In general, studies in Iran are just studying the relation between stress coping style and athletic success and also the athletic coping style between athletes and non-athletes; however in studies outside Iran, these studies are done particularly on specific athletes and most studies are concerned with one sports type; study on hokey and skate is more prevalent. These studies also use interview with a limited number of participants during a long-term period. However we used SCSS questionnaire in the current study. Using questionnaire without lie detector and also the limitation for a researcher to be present at exercise location of many participants, especially male participants, can affect the results of study. In short, it seems that anomalous results in different studies confirm theoretically that coping styles are pertinent to situations.

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