Signifying the relationship between perceived motivational climate and anxiety in the elite athletes in the individual sports

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ABSTRACT: The aim of this survey was investigating the relationship between perceived motivational climate and anxiety in the elite athletes in the individual sports. For this purpose, the population that was chosen in this investigation was the elite athletes in individual sports championships in Qazvin after 2011 (120 persons with the same sport tendency between adults). 120 persons filled up the questionnaire about personal information, motivational climate and anxiety. The questionnaire used in this survey was the second version of perceived motivational climate questionnaire in sport (PMCSQ-2) for evaluating motivational climate and state competitive anxiety questionnaire for evaluating athletes’ anxiety. Information about the athletes’ anxiety level on their performance and the effect of motivational climate made by coaches in decreasing anxiety on the athletes. In addition, the Pearson correlation test was used to assess the relationship between anxiety and self-confidence with perceived motivational climate. The results of Pearson correlation coefficients indicated that there is a significant relationship between perceived motivational climate and the level of athletes’ anxiety and self-confidence.

Key words: perceived motivational climate, anxiety, elite athlete, individual sports.

INTRODUCTION

Although sport psychology is not a novel field, in the last few years had lots of development in the domain of the role of psychology in increasing efficiency of athletes’ mind and the operation. Late investigations indicate that athletes should psychologically be in a good condition as well as regular, serious and developed exercises.

One of the most significant aspects of the research especially in the field of sport psychology is understanding motivation. One of the studied milestones and main common points among psychology and sport is motivation or motivational climate that influenced on the people’s motivation. In fact, according to some statistics, studied related to perceiving motivation is almost form one third of all present psychological studies. It is important to investigate scientific and practical reasons in why some people behave in a particular method and also factors in changing this behavior.

Motivational climate is a vital factor in influencing on people’s motivation. It is a failure or success explanation in a social environment such as a classroom or a sports team (Ames, 1992). Predicting one of the key factors that can be effective in the athletes’ motivation and also understanding of environment is absolutely. Obviously in the sports without external reward, the athlete should be motivated intrinsically. Positive emotions, such as feelings of pleasure, satisfaction and pleasure of participating in an activity will increase the willingness of athletes to continue their participation in the activity.

Because of the exclusive features in these sports, enhancing awareness of the athletes’ motivational process in the non-team sports is extremely important especially among elites. In this article, individual sports are mostly considered; since Iranians because of some educational and cultural problems almost avoid doing team-sports. However, for many people working in these fields, there are limited chances in achieving success.
Motivational climate

One of the most effective factors that influences on the people’s motivation is motivational climate. This issue is related to the inappropriate and appropriate behavior of social environments for instance classroom, sport team. (Cox A, Williams L., 2008)

Mastery motivational climate

Mastery climate is a kind of atmosphere in which people are persuaded to learn and growth; success is evaluated beyond the competitive results and individual effort is highly concerned without any compareto others. (Boyce, B.A., Gano-Overway, L.A., & Campbell, A.L, 2009)

Ego motivational climate

Ego motivational climate refers to the atmosphere on which no one get encouraged to learnarne and growth, the main concentration is on the competitive results not the individual effort, individual inputs are prevented, and they are repeatedly compare to others. (Boyce, B.A., Gano-Overway, L.A., & Campbell, A.L, 2009)

Anxiety

Anxiety, according to the multi-aspect theory of anxiety, includes various aspects. However, generally anxiety includes two parts cognitive and semantic; that can influence on the performance in different methods. Cognitive anxiety is an emotive feeling like fear and tension. Cognitive anxiety is the psychological factor of anxiety and is the results of negative expectations and evaluations of success. Somatic anxiety caused by a physiological factor of stimulating the nervous system and can be seen as increased heart rate, sweating, muscle cramps, cold hands and trouble breathing and short breath.

Elite athletes

This word refers to the athletes who have participated in the world competitions and could achieve ranking or medal. 

Motivational climate can have two attitude mastery climate (superiority) and ego climate (performance). (Ames, 1992&Ames and Archer 1988). 

Perceived motivational climate structure emanates from Achievement Goal Theory (AGT) (Ames & Archer 1988, Elliot&Dweck1988, Maehr&Nicholl1989,Nicholl1984). According to AGT, everybody has two attitude towards their aims; mastery and ego orientation. This attitude indicates how people interpret their competence and define their achievements (Nicholls, 1989). People in the mastery climate feel success when they make lots of effort to gain improvement in their duty (task-oriented). They experience the competence feeling through the individual development and improvement, domination and mastery over the task with great effort. On the contrary for people in the egocentric climate (they are self-oriented), if comparing to other people have better performance, they will feel success with showing more merit by less effort. Self-oriented People measure themselves to the average level people. Moreover, the tendency to adopt a mastery or ego climate that comes with the achievement of activity will induced by the level of autonomy and mastery in people (regardless of position) and the ways of access to the characters (situational).

Quested and Duda (2010) in the study of the ballet dancers proved that social and Autonomy-Supportive Environments promote competence feeling, independence and autonomy and relatedness. As a results, it was believed that perceived mastery climate predicted competence, autonomy and relatedness positively and an ego climate had negative influences on the feeling of competence.

Individual sports

Individual sport is a kind of sport that only one player /athlete compete. Although athletes or players participate in the competitions alone, most of them train together, so it's impossible to investigate just the athlete because they have some coaches that have a significant role in their development of skills and experiences.

Some of the individual sports are

Squash - Badminton - Boxing - Table Tennis / Ping-Pong – shooting – archery - judo - Bike riding- Track and field – gymnastics - fencing - croquet - Wrestling - Golf - weightlifting – Taekwondo - karate - martial arts - swimming - wushu

Some of the sports such as tennis can be played in the team sports, as well.
In this research, according to the climate of this region the sports that could achieve lots of rewards were badminton, table tennis, shooting, archery, judo, track and field, wrestling, weightlifting, taekwondo, karate, martial arts, wushu and swimming.

Renata Barić (2011) investigated the relationship between psychological pressure and perceived motivational climate in the sports team. The differences in the perceiving motivational climate was investigated on 388 soccer and handball players who had different psychological pressures. The results showed that dominant perceived climate was mastery, and there is a direct relationship between psychological pressure and ego climate, but an inverse relation with mastery climate. The athletes who had less pressure, showed more effects of mastery climate while athletes under much pressure feels more ego climate.

Goal oriented and performance of elite wrestlers was considered by Mohseni Omranian by the name of “The relationship of perceived motivational climate” from 15 to 20 years in Mazandaranin 2006. The aim of this study was considering the relationship between perceived climate, goal orientation and performance of teenage and young elite wrestlers in Mazandaran. The target population for this research was 36 people out of all free and Greco-Roman wrestlers (teens (15 to 17 years) and youth (18 to 20 years)) championship in Mazandaran. The evidence showed that there is a significant and direct relationship between autism (ego) and mastery climate and also between ego and performance climate. But there is not any significant relationship between perceived motivational climate and performance and also goal—orientation and performance. Wrestling coaches can try to make skill and performance climate regardless of the relationship between psychological variants and performance of these wrestlers and take advantages of task-oriented and autism motivations.

Another research has been done to investigate the relationship between understanding the teammate’s motivational climate, stress and the weekly training with burnout in young athletes by Iranmanesh at al. (2012) in Kerman. The sample population was the men athletes of team and individual sports (Table tennis, karate, taekwondo, badminton, cycling, handball, volleyball, basketball, and soccer) in 15 to 19 years’ experience athletes in championships in Kerman. Stress was the most important factor in burnout of athletes. The result showed that consideration to the teammates and controlling their stress can lead to decrease the burnout of athletes and so better performance and stability in the sports field. (Iranmanesh, 2012)

**METHODS**

The realm of this research is anxiety and perceived motivational climate in the field of psychology.

This research was done in Qazvin during 2012-2013.

Research method was descriptive-correlation from the point of view of performance is measuring and from the point of view of data collection was interview. The population includes elite athletes in the individual sports in Qazvin.

The samples consisted of 136 elite athletes. Whole athletes were chosen because of the lack of samples. 120 persons Out of these samples responded to the questionnaire.

Questionnaire Measurement tools are standard, every athlete filled up the questionnaire in two sections: 1) personal information, time spent in that sport, time spent in the international fields, education and age 2) perceived motivational climate questionnaire 3) competitive level questionnaire

**Perceived motivational climate questionnaire**

The second version of the perceived motivational climate (PMCSQ-2) that had been done in 2000 by Newton et al. was used for evaluating the athletes’ understanding of motivational climate. This 33- item questionnaire includes 6 smaller tests and 2 main aspects that specifies the mastery climate aspect with 17 questions and ego climate with 16 questions. Participants in this study answered according to the Likert scale of 1) totally disagree 5) strongly agree. Newton et al. found evidence of adequate validity and internal consistency (reliability and validity) 0.87 for mastery climate and 0.89 ego climate for subscales of the questionnaire (PMCSQ-2). Validity and reliability of the questionnaire is strongly recommended on Iranian athletes in sports science research (Aqdasi et al 1391) Cronbach alpha was used Because of the necessity of signifying validity of this questioner for performing this survey that Reliability coefficient was 0.81.

**Competitive State anxiety questionnaire**

The second version of Competitive State anxiety questionnaire (will & Martinez CSAI-2-1990) was used to assess the level of athletes’ cognitive and somatic anxiety. This 27-item questionnaire measures the individual differences in body or somatic anxiety and two aspects of cognitive anxiety that are concerns and impaired
concentration. 9 items in the questionnaire measure the cognitive state anxiety levels. Questionnaires has been completed from 1 (not at all) to 4 (very much) with the numerical Likert scale. This questionnaire with a Cronbach’s alpha of 0.7 points has been known reliable and valid (Radesp and Case 2008). So far, Competitive State anxiety questionnaire has been useful in various fields and is known as a valid and stable tool for assessing sport operation anxiety. Besides, The Cronbach’s alpha was used to determine the reliability of the above questionnaire with reliability equal to 0.83.

**STATISTICAL METHODS**

Descriptive statics was used for data classification and describing data (frequency, mean and standard deviation), Levine tests for homogeneity of variance and Kolmogorov-Smirnov test to evaluate normal distribution. The data was analyzed with the 21st version of SPSS software. In that software the Pearson correlation coefficient was used to determine the relationship between anxiety with perceived motivational climate. 121 persons’ questionnaire were chosen out of the whole of samples (one questionnaire was incomplete) for the final analyze. Elite participants have been in the age of 14 to 44 year-old (M=24.69 & SD=6.946). They have been involved in those sports for 2 to 30 years (SD=6.946). Duration of their presence in the world competitions was between 1 to 13 years (SD=3.26 & M=1.17). The cases have been summarized in the following table.

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<th>Table 1. participants’ personal information</th>
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<td>Average of international experience participants’ experience</td>
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**Descriptive statistics**

At the beginning of the questioner, some factors like education, age and sports experiences were asked that will be described in the statistical results.

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<th>Table 2. participants’ education</th>
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Mean, standard deviation and variance for the variables examined in this study were: mastery climate, ego climate, cognitive or somatic anxiety and self-confidence that participants totally had understood the present climate more mastery (M=3.79 & SD=0.90) to ego (M=3.41 & SD=0.75). The results show that the athletes had less cognitive anxiety (M=1.87 & SD=0.53) and mean somatic anxiety (M=3.16 & SD=1.19). It seems that athletes have had moderate to high self-confidence level (M=2.16 & SD=0.75). Null hypothesis: there is no significant relationship among the perceived motivational climate and anxiety in the elite athletes for individual sports.

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<th>Table 3. the results of Pearson correlation coefficient on the elites</th>
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*It is significant in the 0.05. **It is significant in 0.01.

According to the results shown in the table 4-6 there is an inverse relationship between perceived ego climate and somatic correlation anxiety (p=0.227), while there is an inverse relationship between perceived ego
climate and cognitive anxiety among athletes (P= 0.271), and also with low self-confidence (P= - 0.278); it means that there is a direct relationship with the self-confidence level.

**DISCUSSION AND CONCLUSION**

With consideration to the evidence of the questionnaire, it was shown that elite athletes in the individual sports understood their climate often mastery to ego. It shows that all the climate made by the coaches and teammates with emphases on collaborative learning, persuasive- learning climate to increase their skills, and also to help to their teammates to achieve their personal and team goals were mastery.

Furthermore, it was concluded that elite athletes feel importance in the national team and their emphasis is on the improvement, effort and learn to team competition.

Perceived ego climate in few athletes presents that coaches pay most of their attention to the key players and they would be blamed for their mistakes. These results corresponded with results of other researches on the elite athletes and the research on the Norwegian skiers by Pennes Guard and Roberts (2002), and also Namazi Poor et al.’s results on the team sports. They found the elite’s climate more mastery to ego.

In general, athletes have lots of self-confidence. It shows that although athletes are prone to negative emotions such as cognitive and somatic anxiety, they have enough interests in their field. These results correspond Cechini et al. (2001) results.

**The relationship between obtained results of elite’s athletes**

On the basis on this research, elite’s athletes has understood the mastery motivational climate which was corresponded to the Rynbvt and Dvda (2006), Kavasanv and Roberts (1996), Gachini et al. (2001) and Aqdasi et al. (2012). About athletes’ performances, coaches pay attention mostly on the national and international athletes’ anxiety and concentration disorder. The previous researches show that there is an inverse relationship between athletes’ anxiety and performance.

Daemi(1381) in his research proved that there is a significant and reverse statistical relationship between the anxiety level in the athletes and their performance. He also mentioned that there is a significant statistical relationship about the anxiety level between successful and unsuccessful teams. However, Ziyaee (1385) in a research by the purpose of investigating the relationship of reaction time with anxiety and intelligence indicated that there is not any relationship among performance level, reaction time and anxiety. Observation by Hainaut (2006) suggested that stressful situation have had a positive impact on the visual respond time, but no considerable impact on the auditory respond time. There is a paradox in the previous results about the unequal response to the anxiety in the team and individual sports in different levels, so in this research all the samples were chosen among individual sports to eliminate the interference of the kind of the sport on the research. Consequently, this research is more generalizable that elites have low anxiety in the individual sports.

Findings of the present study clearly shows that there is a direct relationship among mastery climate, decreasing anxiety and enhancing self-confidence. With regard to these findings, it seems that training should have more realistic mastery motivational climate to increase the emotional and motivational on sports teams. Previous research suggested that, the benefits of such an environment, whilst increasing training programs and exercises benefits, also lead to growth the functional and manageable beliefs about the causes of success. The low-level anxiety in athletes keeps them unsuccessful. Other advantages of mastery motivational climate is the increase of the competence feeling that is a way of increasing the level of self-esteem. Therefore, it seems that anxiety is one of the effective mechanism on the relationship between mastery climate and appropriate self-confidence, and also self-confidence is the influence of this climate on the competence feeling.

**INVESTIGATING HYPOTHESIS AND PREDICTING RESULTS**

The obtained results showed that among elite’s athletes there is an inverse relationship between perceived ego climate with correlation somatic anxiety. While among these athletes, there is a reverse relationship between perceived mastery climate and cognitive anxiety and a direct relationship with self-confidence level. This basic premise of the study confirms the relationship between perceived motivational climate and anxiety in elite athletes of different individual sports. The results corresponded with Abrahamsen et al (2008) and Farahani et al (2013).
**Recommendations raised from the investigation**

The coaches received the necessary training for understanding climate, environment and vital impact on the anxiety and finally on the success of athletes, and also be aware of their important roles on making this environment for athletes.

It is mostly recommended that coaches with engaging athletes in making decision , for enhancing understanding an important factor and for making an appropriate mindset for athletes to understand the level of their ability, increase self-confidence and self-efficacy on the athletes and finally to decrease their competitive anxiety.

According to the findings, it can be said that mastery climate can enhance the success probability in the individual sports as well as team sports in the competitive level and help them to reach to the elite level. Thus, it is necessary for this issue to be considered in athletes training from an early age by the policy relevant authorities

**Suggestions for further research**

Some issues are recommended for future research based on the gained experience in this projects, studies and challenges:

Studies on the athletes’ perceived climate and anxiety in a season before, during and after the competitions to introduce the differences of these variants in the season and its effect on the psychological health on the athletes.

It is desirable to carry out the same research on comparing the differences between team and individual sports, According to the close relationship between essential needs with perceived climate as well as mental health, a study is to be carry out simultaneously considering all the factors.

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