



AN ANALYSIS OF CHANGING LEVELS OF ANXIETY EXPERIENCED BY THE PERSONNEL OF THE 25TH WINTER UNIVERSIADE COORDINATION CENTER

This article was presented at I. International Sports Economy And Management Congress between 12-15 October 2011 and was presented at Physical Education and Sports Congress 23-25 May 2013, Constanta-Romania.

Emre Belli¹, Ali Gürbüz², Dursun Katkat³

¹ Atatürk University, School of Physical Education and Sports

² Mimar Sinan University, Physical education and Sports

³ Mersin University, School Of Physical Education and Sports-TURKEY

Abstract

The aim of this research is to determine the level of anxiety experienced by the personnel of the 25th Winter Universiade Coordination Center and to observe whether there is any correlation with certain demographic factors.

Spielberg State-Trait Anxiety Inventory (STAI) was implemented as pre-test and post-test on 79 women and 144 men, 223 in total working for the coordination 4 months and 4 days before the competitions, to acquire data about the levels of anxiety. Frequency analysis for the SPSS program, independent sample t-tests and one way ANOVA were applied during the statistical evaluation of the acquired data.

According to the data acquired, the study concludes that the trait anxiety level experienced by the personnel of the coordination decreased as days passed toward the beginning of the competition, and in contrast, state anxiety levels increased as the beginning of the competition approached.

Key words: Anxiety, Winter Universiade

Introduction

Sports have an increasing influence on people from all around the world day by day, no matter whether people take part in sports actively or passively. Sports develop parallel with the economy on a daily basis and also play an increasingly active role on the world market. New records have been broken in sports with the help of developing science and technology and the economic, technological, educational and developmental levels that sports teams and athletes represent in sports areas have begun to compete against one another.

Sport has become a symbol that represents the development level of a country [13]. The position of sports as a representative of the development level of countries has brought some psychological responsibilities to the athletes and

there has arisen an urgent necessity to handle athletes as a psycho-social entity from a scientific perspective [5]. Previous studies have investigated the relationship between anxiety level and performances of athletes and they have come to the conclusion that performance alone is not sufficient for excellence in physical capacity and furthermore, psychological factors also play a great role [1]). While the psychological state of athletes affects their physical capacities and performances, the psychological state of employees working for the organization will also influence the quality of the organization. That is why the investigation of anxiety levels of employees who work for Winter Universiade is of significant value.

The term 'anxiety' has been one of the most frequently used words throughout human history. The term 'anxiety' was first used in the first half

of the century in the field of psychology and the studies related to this field were mostly conducted at the end of 1940s. Freud was the first to use this term and investigated its reasons, as well as defining the term as a concept [18]. According to Freud, anxiety functions as a factor which warns people against the threats coming from the physical or social environment, helps them fit into society and live comfortably in the world. Furthermore, anxiety at a normal level is quite necessary for people to survive [12].

Two types of anxiety were investigated in the survey, which were used to measure the anxiety levels in our study. Trait anxiety results from personal characteristics of individuals that endure over time, while state anxiety is the negative result expectation that individuals feel about any specific circumstances [17]. State anxiety has been defined as an emotional situation that leads to an increase in anxiety, fear, blood pressure and arousal level [29]. Additionally, anxiety strongly influences individuals in their lives and frequently manifests itself across various situations as a reason of maladjustment [16].

State anxiety is the emotive situation that is characterized by fear, anxiety and tender that is felt at that moment. It involves the feeling of anxiety and tension that accompany physiological stimulus. According to Spielberg, state anxiety is like a kinesthetic energy. Or, it is even the immediate reaction that occurs at the level of various violence levels [9]. State anxiety is the subjective fear that an individual feels due to the stressful situation which the individual bears [23]. Christopher [8] has defined state anxiety as “ a conscious perception of the feeling of anxiety along with mental fatigue, or activation of parasympathetic nervous system or stimulus [6].

Trait anxiety, on the other hand, can be defined as an inclination of individuals to feel or interpret most situations as stressful. As is obviously understood from the term itself, this type of anxiety is stable and perpetual when compared to state anxiety which refers to temporary and uncomfortable experiences. If an individual has an inclination to feel anxiety, he/she has a greater tendency to experience more anxiety. This means that the situation

differs from person to person according to the type of personality. Trait anxiety may not be obviously observed as in state anxiety. In order to observe this type of anxiety, the frequency and violence of state anxiety can be analyzed for the benefit of trait anxiety's observation [6]. Accordingly, individuals who have a high level of trait anxiety have a greater tendency to be more easily and frequently offended than those with a low level of trait anxiety and feel the state anxiety more frequently and strongly [24]. According to Matthew [19], individuals having a high level of trait anxiety either define most situations as a potential threat or risk and react accordingly; or react against threat risks more strongly than as in the state anxiety; or show both reactions.

Trait anxiety is the inclination of individuals toward their own anxiety experiences. This can be either defined as the perception of the situations that the individuals are in as stressful, or the tendency to interpret this as a stress. According to objective criteria, trait anxiety is the infelicity or dissatisfaction that stems from the perception of neutral situations as dangerous or threatening by individuals [6]. Individuals with high levels of such kinds of anxiety have a greater tendency to be easily offended and slip into a mood of pessimism. These individuals experience trait anxiety more frequently and densely than others [20].

Material and methods

The aim of this study is to determine the level of anxiety experienced by the personnel working for the 25th Winter Universiade Coordination Center and to investigate whether there is any reaction observed against some demographical factors.

This study includes 79 females and 144 males, 223 personnel in total working for the 25th Winter Universiade coordination center, chosen randomly for the study.

Spielberg State-Trait Anxiety Inventory (STAI) Scale, developed by Spielberg and his colleagues (1964), was used in the study the reliability and validity studies for which were conducted by Öner and Le Compte [23] in order to determine the state and trait anxiety level of the personnel.

This type of scale which is a kind of self-assessment includes 40 items consisting of short statements. State and trait anxiety scales are independent of each other, each consisting of 20 items. All items were given a value between 1 and 4, providing that scores of all reverse items within the scale were reversed. Total score obtained from the scale varies from 20 to 80. High score refers to high anxiety level while low score refers to low anxiety level [11].

SPSS was used and a significance level of 0.05 was accepted for the analysis of acquired data. Frequency analysis was used in order to determine the demographic features of participants and independent sample t-tests were used in order to determine their anxiety levels in terms of anxiety changes over time, gender, status and marital status. Furthermore, one-way ANOVA was used for the analysis of anxiety levels according to their education levels.

Findings

Table 1. Demographic Features of Participants

Sex	N	%
Female	79	35.4
Male	144	64.6
Marital Status	N	%
Married	44	19.7
Single	179	80.3
Status	N	%
Directors	43	19.3
Personnel	180	80.7
Educational Status	N	%
Bachelors	107	48
Postgraduates	58	26
Undergraduates	40	17.9
Elementary schools	18	8.1
Total	223	100

Table 1 which presents the gender distribution of participants shows that 79 females in total comprise 35.4 % of the distribution while 144 males comprise 64.4 %. When marital status is concerned, 19.7 % of the participants are married while 80.3 % includes single individuals. Concerning the status factor, 43 participants are directors comprising 19.3% of the total number,

while 180 participants are personnel comprising 80.7 %. Considering the educational backgrounds of the participants, 107 participants are bachelors comprising 48 %, 58 participants are postgraduates comprising 26 % of the total number, 40 are undergraduates consisting of 17.9 % and lastly, 18 participants are graduates from elementary schools.

Table 2. Paired Sample T-Test Results of Anxiety Levels of Participants

Sub-Scales	(Pre-Test) –(Post-Test)							
	Before 4 months			Before 4 days			Tests	
	N	Mean	Std.Dev.	N	Mean	Std.Dev.	t	p
State Anxiety	223	40.88	9.191	223	45.83	10.132	-3,901	,000*
Trait Anxiety	223	43.83	6.962	223	38.56	9.901	-5,797	,000*

Table 2 which presents the changes in participants' anxiety levels that endure over time indicates that there is a statistically significant

difference for both state (p=,000) and trait (p=,000) anxiety levels (p<0,05).

Accordingly, concerning state anxiety, anxiety level of participants 4 months to

universiade ($X=40,88 \pm 9,191$) are lower than those of 4 days to universiade ($X= 45,83 \pm 10.132$).

In terms of trait anxiety of the personnel, their anxiety level 4 months to the opening of

universiade ($X=43,83 \pm 6,962$) is higher than that of those 4 days to the opening of universiade ($X=38,56 \pm 9,901$).

Table 3. Independent Sample T-Test Results of Gender Differences

Sub-Scales	Sex	Time	\bar{X}	s.d.	t	p
State Anxiety	Male (N=144)	before 4 months	39.23	11.132	-3,901	,132
	Female (N=79)		38.76	9.135		
	Male (N=144)	before 4 days	45.93	7.421	-1,146	,106
	Female (N=79)		44.12	4,123		
Trait Anxiety	Male (N=144)	before 4 months	44.54	8.801	-5,797	,194
	Female (N=79)		43.12	8.801		
	Male (N=144)	before 4 days	39.13	6.912	-2,345	,245
	Female (N=79)		38.11	6.912		

*($p < 0,05$)

Table 3 presents the gender differences among participants according to state and trait anxiety levels and it shows that there is not a statistically significant difference between the

pre-test that was administered 4 months to the universiade and the post-test administered to participants 4 days to universiade ($p > 0,05$).

Table 4. Independent Sample T-Test Results of Participants in Terms of Marital Status

Sub-Scales	Marital Status	Time	\bar{X}	s.d.	t	p
State Anxiety	Married (N=44)	before 4 months	40.76	4,849	-1,231	,222
	Single (N=179)		41.23	2,779		
	Married (N=44)	before 4 days	44.19	2,244	-1,114	,342
	Single (N=179)		45.63	3,687		
Trait Anxiety	Married (N=44)	before 4 months	42.02	6,198	-5,216	,413
	Single (N=179)		43.44	5,067		
	Married (N=44)	before 4 days	37.01	5,021	-2,476	,294
	Single (N=179)		38.03	2,613		

*($p < 0,05$)

When we look at the marital status of participants, there is not a statistically significant difference in the results of the pre-test 4 months

to universiade and the post-test 4 days to universiade in terms of trait and state anxiety ($p > 0,05$).

Table 5- Independent Sample T-Test Results of Participants in Terms of Status

Sub-Scales	Status	Time	\bar{X}	s.d.	t	p
State Anxiety	Directors (N=43)	before 4 months	41.19	2,112	-2,118	,637
	Personnel (N=180)		40.37	3,395		
	Directors (N=43)	before 4 days	40.99	4,145	-1,446	,292
	Personnel (N=180)		39.82	1,687		
Trait Anxiety	Directors (N=43)	before 4 months	40.02	2,978	-4,367	,373
	Personnel (N=180)		39.59	5,344		
	Directors (N=43)	before 4 days	39.14	5,222	-3,245	,119
	Personnel (N=180)		39.03	3,139		

*(p<0,05)

According to t-test results in terms of participants' status, there is not a statistically significant difference between pre-test 4 months

to universiade and post-test 4 days to universiade in terms of state and trait anxiety levels (p>0,05).

Table 6. Independent Sample T-Test Results of Participants in Terms of Educational Status

Sub-Scales	Educational Status	Time	\bar{X}	s.s	f	p
State Anxiety	Bachelors (N=107)	before 4 months	41.19	5,158	-2,118	,065
	Postgraduates (N=58)		39.99	2,389		
	Undergraduates (N=40)		41.34	3,892		
	Elementary School (N=107)		42.06	6,598		
	Bachelors (N=107)	before 4 days	44.67	4,198	-3,859	,112
	Postgraduates (N=58)		43.99	4,569		
	Undergraduates (N=40)		45.99	2,758		
	Elementary School (N=107)		46.01	3,004		
Trait Anxiety	Bachelors (N=107)	before 4 months	45.13	8,358	-1,452	,164
	Postgraduates (N=58)		45.32	2,709		
	Undergraduates (N=40)		44.99	2,345		
	Elementary School (N=107)		44.45	2,123		
	Bachelors (N=107)	before 4 days	42.22	8,901	-2,132	,231
	Postgraduates (N=58)		42.44	3,528		
	Undergraduates (N=40)		41.79	5,123		
	Elementary School (N=107)		41.89	1,283		

*(p<0,05)

According to Table 6, there is not a statistically significant difference between the results of the pre-test 4 months to universiade and the post-test 4 days to universiade in terms of state and trait anxiety levels (p>0,05).

Discussion and results

The present study, which investigates changes of anxiety levels of personnel working for the 25th Winter Universiade coordination center over time implies the following conclusions:

According to the findings, state anxiety levels 4 months to universiade ($X= 40,88 \pm 9,191$) are lower than those of 4 days to universiade ($X= 45,83 \pm 10,132$). Considering that state anxiety is an emotive situation characterized by fear, worry and tension, the increase in state anxiety may stem from the fact that some problems may arise before the opening of the universiade and there was little time to the universiade in order to solve them, thereby causing uneasiness.

On the other hand, trait anxiety seems to be higher 4 months to universiade ($X= 43,83$

$\pm 6,962$) than that of 4 days to universiade ($X=38,56 \pm 9,901$). Taking into consideration that trait anxiety refers to the situations within which individuals live as stressful or the inclination to interpret this, trait anxiety stems from the fact that participants want to overcome the stressful situation as time passes approaching the opening of the winter universiade.

The findings of the present study, which also investigates the anxiety levels in terms of gender differences, show that there is not a statistically significant difference. In the studies of Üngören [28] on the high school and university students from the field of Tourism Education and Doğan and Çoban [10] on the university students in the faculty of Education, the researchers did not find a statistically significant difference between gender and anxiety. Ocaktan et. al. also did not find any significant differences between them in their study with health personnel working at the Health center. Furthermore, the studies in literature have not found any statistically significant difference between gender and anxiety are as follows:[4, 27, 14]. These findings support the findings of the present study. However, there are also other studies that conclude significant difference in terms of gender differences and they are as follows:[11, 7, 26, 15]. Their findings are in contrast to the findings of the present study.

In terms of the marital status of participants with regards to anxiety levels, no significant difference was revealed. Despite the non-significance in terms of marital status, single individuals seem to have higher state and trait anxiety when compared to married ones. The studies of [25,3,2] also support the finding of the present study. This finding may result from the fact that single participants have greater goals for the future and married participants do not have regular life styles when compared to those who are single.

Another finding of the present study in terms of participants' status with regards to anxiety level, is that no significant difference was revealed. Even though there was not a significant difference in terms of status, administrators tended to feel more anxiety than other participants. This may stem from the fact that these types of personnel have more responsibilities and they are also responsible for those working under them. Therefore they feel more anxiety.

According to the findings of the present study, there was not a statistically significant difference in terms of educational background. However, while educational levels decreased state anxiety levels increased. The fact that those with low educational levels have less self-esteem as they are given a heavy load of work may lead to difficulties for them, even though they have fewer responsibilities when compared to those with high educational levels. Moreover, the fact that those with low educational levels work in lower positions and they are controlled by supervisors may even cause anxiety.

Erzurum 25th Winter Universiade which is among the greatest organizations realized in our country, Turkey, has had personnel who took charge of all kinds of responsibilities and played a significant role during the candidacy process for the Olympics and recognition of Turkey. Because of this reason, it is of significant value to investigate the anxiety levels of personnel working for 25th Winter Universiade Coordination, as their performances directly affect the organization. The lower the anxiety level is, the higher the performance is. That is why apart from enhancing physical conditions such as wages, working conditions, development and etc., the psychological situations of personnel should also be taken into consideration.

BIBLIOGRAPHY

1. Akarçeşme, C. (2004). Voleybolda Müsabaka Öncesi Durumluk Kaygı İle Performans Ölçütleri Arasındaki İlişki, Yüksek Lisans Tezi, Gazi Üniversitesi Sağlık Bilimleri Enstitüsü, Ankara.
2. Akdemir, A., Cinemre, B. (1996) Sosyal fobi: epidemioloji, eşlik eden hastalıklar, klinik gidiş, prognoz. Psikiyatri Psikoloji Psikofarmakoloji Dergisi, 4:11-17.

3. Amies, P.L., Gelder, M.G., Shaw, P.M., ve ark. (1983) Social phobia: a comparative clinical study. Br J Psychiatry, 142:174-179.
4. Arslan, Ç. (2007), "Üniversite Öğrencilerinin Sürekli Kaygı ve Kişisel Kararsızlık Düzeylerinin İncelenmesi", Yayınlanmamış Yüksek Lisans Tezi, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Konya.
5. Başaran , H.M., Taşğın , Ö., Sanioğlu, A., Taşkın, K.A. (2009). Sporcularda Durumluk ve Sürekli Kaygı Düzeylerinin Bazı Değişkenlere Göre İncelenmesi, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi S.21,SS.534.
6. Bezek, N.T. (2008) TBL (Türkiye Erkekler Basketbol Birinci Ligi)'deki Basketbolcularda Performans Kaygı İlişkisi, Selçuk Üniversitesi Sağlık bilimleri Enstitüsü Yüksek Lisans Tezi, Konya.
7. Ceyhan, A. A. (2004), "Ortaöğretim Alan Öğretmenliği Tezsiz Yüksek Lisans Programına Devam Eden Öğretmen Adaylarının Umutsuzluk Düzeylerinin İncelenmesi" Sosyal Bilimler Dergisi, 2004/1, ss.91-102.
8. Christopher. M.J. (2002). Anxiety arousal and visual attention: a mechanistic account of performance variability, Department of Exercise and Sport Sciences, University of Florida, USA.
9. Cox, H.R. (1990). Sport Psychology Concepts and Applications, Brown Publishers, ss.212,USA.
10. Doğan, T., Çoban, A.E. (2009), "Eğitim Fakültesi Öğrencilerinin Öğretmenlik Mesleğine Yönelik Tutumları ile Kaygı Düzeyleri Arasındaki İlişkinin İncelenmesi", Eğitim ve Bilim, Cilt 34, Sayı 153, ss.157-168.
11. Dursun, S., Aytaç, S. (2009). Üniversite Öğrencileri Arasında İşsizlik Kaygısı, Uludağ Üniversitesi İktisadi ve İdari Bilimler Dergisi,Cilt:28, s.1, s.s.75.
12. Geçtan, E. (1999). İnsan Olmak. 20. Basım, Remzi Kitabevi. İstanbul.
13. Gümüş, M. (2002). Profesyonel Futbol Takımlarında Puan Sıralamasına Göre Durumluk Kaygı Düzeylerinin İncelenmesi, Yüksek Lisans Tezi, Sakarya Üniversitesi Sosyal Bilimler Enstitüsü, Sakarya.
14. Genç, H. (2008), "Gazi Üniversitesi Gazi Eğitim Fakültesi Güzel Sanatlar Eğitimi Bölümü Resim-İş Eğitimi Anabilim Dalı Öğrencilerinin Kaygı Düzeyleri Üzerine Bir Durum Çalışması", Yayınlanmamış Yüksek Lisans Tezi, Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
15. Ghaderi, A.R., Venkatesh Kumar, G.; Sampath K. (2009), "Depression, Anxiety and Stress among the Indian and Iranian Students", Journal of the Indian Academy of Applied Psychology, January 2009, Vol. 35, No.1, pp. 33-37.
16. Jeffrey R. S. (2003) Use and abuse of academic examinations in stress research, Psychosomatic Medicine, 65, pp.1055-1057.
17. Kapıkıran Ş. (2002) Üniversite öğrencilerinin sınav kaygısının bazı psiko-sosyal değişkenlerle ilişkisi üzerine bir inceleme, Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, Sayı:11, s:34-43.
18. Köknel, Ö. (1988). Zorlanan İnsan, 2. basım, Altın Kitaplar Yayınları, İstanbul.
19. Matthew, A.P., Harwood, C. (2006) The performance environment of the England youth soccer teams, School of sport and exercises sciences, Loughborough University, UK.
20. Shoen Ferid Rr (1993) Dimensions anxiety and their effects on an aspect of the performance process commissions of the menter arousal, University of Sudiago, USA.
21. Ocaktan, E.M., Keklik, A., Çöl, M. (2002). Abidinpaşa Sağlık Grup Başkanlığı'na Bağlı Sağlık Ocaklarında Çalışan Sağlık Personelinde Spielberger Durumluk ve Sürekli Kaygı Düzeyi, Ankara Üniversitesi Tıp Fakültesi Dergisi, C.55, S.1, ss.21-28. Ankara
22. Öner, N., Le Compte, A. (1983). Durumluk-Sürekli Kaygı Envanteri El Kitabı, Boğaziçi Üniversitesi Matbaası, 1 Baskı, İstanbul.
23. Özgür, G. (1984) Ege Üniversitesi birinci sınıf öğrencilerin klinik uygulaması kaygı düzeylerin incelenmesi, Ege Üniversitesi Sağlık Bilimleri Enstitüsü yüksek lisans tezi, İzmir.
24. Schneier, F.R., Johnson, J, Hornig C.D., ve diğ.(1992) Social phobia: comorbidity and morbidity in an epidemiologic sample. Arch Gen Psychiatry, 49:282-288.
25. Şahin, C. (2009), "Eğitim Fakültesinde Öğrenim Gören Öğrencilerin Umutsuzluk Düzeyleri", Selçuk Üniversitesi, Ahmet Keleşoğlu Eğitim Fakültesi Dergisi, Sayı:27, ss.271-286.
26. Tümerdem, R. (2007), "Dicle Üniversitesi Eğitim Fakültesi ve Fen-Edebiyat Fakültesi Kimya Son Sınıf Öğrencilerinin Kaygılarını Etkileyen Etmenler" Elektronik Sosyal Bilimler Dergisi, ISSN:1304-0278 Bahar-2007 C.6 S.20 (32-45). www.e-sosder.com.
27. Üngüren, E. (2007). "Lise ve Üniversitelerde Turizm Eğitimi Alan Öğrencilerin Umutsuzluk ve Kaygı Düzeylerinin Çeşitli Değişkenler Açısından Değerlendirilmesi: Antalya'da Bir Uygulama", Yayınlanmamış Yüksek Lisans Tezi, Akdeniz Üniversitesi Sosyal Bilimleri Enstitüsü, Antalya.
28. Zeng H. Z., Leung R. W., Liu W. (2008). An examination of competitive anxiety and self-confidence among college varsity athletes, Journal of Physical Education & Recreation, Vol.14 No.2, pp: 6-12.

Received: November 2013

Accepted: March 2014

Published: June 2014

Correspondence

emre.belli@atauni.edu.tr
ali.gurbuz@msgsu.edu.tr
dkatkat@atauni.edu.tr