



COMPARISON OF STATE AND TRAIT ANXIETY LEVELS OF HOCKEY SUPER LEAGUE REFEREES

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Abstract:

The purpose of the present research is defining state and trait anxiety levels before and after matches among hockey referees. The sample of the research consists of 16 referees who refereed in hockey super league in 2014-2015 seasons. Data of the research were collected with Trait-State Anxiety Inventory, which was developed by Spielberger et al. (1970) and adapted to Turkish by Öner and Le Compte (1985). Collected data were analysed on SPSS 22.0 packaged software. Before and after matches data were compared with paired samples t-test. According to the analyses, state anxiety scores were higher than trait anxiety scores among hockey referees before matches. Additionally, state anxiety levels were higher among referees, who were 31 and older, married, and had a medium or low level of income. Consequently, there is a negative and strong correlation between income and state anxiety.

Keywords: hockey, referee, anxiety

Introduction

Based on basic psychological needs concept, it is very important for individuals, whose role is motivating and controlling others, such as teachers, trainers, managers and parents to pay attention to anxiety and motivation sources. When these needs are prohibited, motivation and performance are affected in various ways (Deci and Ryan., 1987). Anxiety refers to the feeling experienced when there is a potential danger from internal or external world or any incident is interpreted as dangerous by the individuals. These individuals feel alert and as if something bad will happen (Alisinaoğlu and Ulutaş, 2000).

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There are two types of anxiety as state and trait. State anxiety is defined as the kind of anxiety that occurs as a result stress coming from environmental conditions, is mostly based on logical reasons, can be understood by others and is experienced by almost every individual based on temporary situations (Öner and Le Compte, 1998; Selya, 1998; Kuru, 2000). Trait anxiety refers to the perception of the stressing situation as dangerous or threatening and the increasing and continuing of the frequency and the intensity of the instant emotional reactions. Trait anxiety is a personality trait that varies. Individuals with high trait anxiety are more prone to perceive stressful conditions as dangerous and threatening and react with intense state anxiety reactions than the individuals with lower trait anxiety (Özgüven, 1994).

Trait anxiety cannot be observed directly in individuals' behaviours. However, the intensity and the frequency of the state anxiety reactions that can be detected in various times and places can be helpful in detecting trait anxiety (Öner and Le Compte, 1998). The level of anxiety is very important for the referees to present desired and expected performance. Levels of anxiety can affect competition results and performance negatively (Başer, 1998). Higher levels of anxiety may prevent referees from making correct decisions and establishing authority on the field. Referees, who are under great pressure, may make bad decisions. Over anxiety may make referees forget the situations that they know well and whistle many times during training, and also make them present some negative behaviour due to confusion in their feelings (Gümüş, 2002).

The purpose of the present research is, comparing hockey super league referees' state and trait anxiety levels in terms of some variables, and defining the relationships between these variables and referees' state and trait anxiety levels.

Method

The present research is a descriptive study conducted with the purpose of defining hockey referees' state and trait anxiety scores.

The sample of the research consists of 16 individuals, who refereed in Turkish Hockey Super League in 2014-2015 seasons. Demographic data related to participants are presented in the table below.

Table 1: Demographic data

Variables	Groups	n	%
Age	20–30 years old	8	50,0
	31 and older	8	50,0
Marital Status	Married	8	50,0
	Single	8	50,0
Level of Income	Low	4	25,0
	Medium	6	37,5
	High	6	37,5

The inventory used to collect data for the present research was developed by Spielberger et al. in 1970 in order to define individuals' state and trait anxiety levels. Turkish adaptation and the validity and reliability studies of the Turkish form were realized by Öner and Le Compte (1983). The self-report inventory consists of 40 items of short expressions. The inventory consists of two parts; first part involves 20 items for "state anxiety form", and the second part consists of 20 items for "trait anxiety form" aimed to define what was felt in the last seven days. The inventory items are scored on 4-point likert type scale; and Cronbach Alpha consistency coefficient was reported as ranging between .83 and .87; test-retest reliability ranging between .71 and .86; and item reliability ranging between .34 and .72 (Öner and Le Compte, 1998; Aydemir and Köroğlu, 2000). Both state and trait anxiety sub-scales of the inventory was employed for the present research. Total scores that can be obtained from both sub-scales range between 20 and 80.

Data collection; trait anxiety scale was implemented on participants during development seminars, when there were no matches. State anxiety scale was implemented on the same referees 20 minutes before a match they refereed. Trait anxiety inventory was implemented on 22 referees. Because 6 of these referees didn't referee any matches during the research, 6 of the trait anxiety scales were excluded from the research.

Data were analysed on SPSS 22.0 statistics program. Data obtained from the referees were scored in accordance with the scoring instructions provided for the inventory. The differences between obtained trait and state and trait anxiety scores were tested with paired samples t-test. Significance was defined as $p \leq 0.05$, like some other studies (Özdal, 2016a; Özdal, 2016b; Bilgiç et al., 2016; Abakay, 2013; Polat et al., 2011; Yıkılmaz et al., 2015; Alıncak, 2016; Cinpolat et al., 2016).

Findings

Table 2: Comparison of State and Trait Anxiety Scores of Referees

	Average	N	Sd	t	p
State Anxiety	41.56	16	4.83	4.635	0.001
Trait Anxiety	32.19	16	4.90		

Table 2 presents the comparison of state and trait anxiety scores of the hockey referees. Accordingly, there is a significant difference between state and trait anxiety scores of the referees ($p < 0.05$).

Table 3: Comparison of State and Trait Anxiety Scores of Referees in terms of Age Variable

		Average	N	Sd	t	p
20–30 age group	State Anxiety	39.88	8	5.30	1.560	.163
	Trait Anxiety	35.38	8	4.07		
31 and older	State Anxiety	43.25	8	3.92	9.161	0.001
	Trait Anxiety	29.00	8	3.42		

Table 3 presents the comparison of state and trait anxiety scores in terms of age variable. Accordingly, state anxiety scores of participants, who were 31 or older, were higher at a significant level. On the contrary, trait anxiety scores of participants, who were 20-30 years old, were higher at a significant level ($p < 0.05$).

Table 4: Comparison of State and Trait Anxiety Scores of Referees in terms of Marital Status

		Average	N	Sd	t	p
Married	State Anxiety	43.88	8	3.52	6.574	0.000
	Trait Anxiety	30.63	8	5.04		
Single	State Anxiety	39.25	8	5.04	1.815	.112
	Trait Anxiety	33.75	8	4.53		

Table 4 presents the comparison of state and trait anxiety scores in terms of marital status. Accordingly, state anxiety scores of married participants were higher at a significant level ($p < 0.05$).

Table 5: Comparison of State and Trait Anxiety Scores of Referees in terms of Level of Income

		Average	N	Sd	t	p
Low	State Anxiety	46.75	4	.96	8.818	.003
	Trait Anxiety	30.50	4	3.42		
Medium	State Anxiety	43.00	6	1.26	4.841	.005
	Trait Anxiety	33.00	6	4.90		
High	State Anxiety	36.67	6	3.88	1.065	.335
	Trait Anxiety	32.50	6	6.16		

Table 5 presents the comparison of state and trait anxiety scores in terms of level of income. Accordingly, state anxiety score average of participants with low-income levels was higher than the participants with high-income levels at a significant level. State anxiety score average of participants with high level of income was higher than the other two groups at a significant level ($p < 0.05$).

Table 6: Comparison of Level of Income and State and Trait Anxiety Scores

		Trait Anxiety	State Anxiety
Level of Income	r	.145	-.858
	p	.591	.001

$p < 0.001$, $n = 16$

Table 6 presents the correlations between level of income and anxiety inventory scores of participants. Accordingly, there is a negative and strong correlation between level of income and anxiety scores. This finding indicates that anxiety scores decrease as levels of income increase.

Conclusion

Today, the effects of state and trait anxiety on the performance in sportive competitions have become an important research subject. There are many factors affecting anxiety levels among referees, and the positive effects of these factors on the performance have been investigated. Individuals experience anxiety at every age; however the reason of the anxiety varies for each age group. In the first years of their lives, individuals experience the anxiety of leaving their mothers, while they experience anxiety for leaving their friends at primary education period, and during puberty they experience anxiety for belonging to a group, looking nice for opposite sex, or failure. Accordingly, the reasons for anxiety vary with advancing ages (Arslanoğlu et al., 2010).

The purpose of the present research was investigating anxiety and basic psychological need levels of hockey referees in terms of some variables. The finding obtained in the present research, and their interpretations are presented below. According to the findings obtained in the present research, there is a negative and significant correlation between anxiety levels and age variable. According to the analyses conducted for the present research, state anxiety scores of the referees, who were 31 or older, were higher than the referees, who were 20-30 years old. The reason for this finding is the proneness to anxiety experience. I believe, factors, such as the situations they are involved in, perceiving of these as stressful generally, their position, responsibilities, life standards, in-family relationships, business life affect the state

anxiety levels of referees, who were 31 years old or older. There are some studies, which reported that anxiety increased with advanced age, while there are some others, which reported no variation in anxiety by age.

Another finding of the present research on the comparison of state and trait anxiety scores in terms of marital status was that state anxiety scores of participants were significantly higher. Factors, such as in-family responsibilities like providing peace and happiness, and meeting the needs of the family, may have resulted in that state anxiety scores of married referees were significantly higher than the single referees. In general terms, as a social support, family life can be accepted as a tool for coping for stress. However, economic and social difficulties can also have negative effects on anxiety levels. According to the findings obtained in the present research, state and trait anxiety scores vary by marital status. Some other studies also reported similar findings.

The findings obtained in the present research showed that monthly income is a significant factor affecting anxiety. Previous studies on the subject matter also reported that economic status has a significant effect on anxiety (Alisinaoğlu and Ulutaş 2004; Öner, 1998; Sargın, 1994; Aral, 1997; Varol, 1990). Anxiety levels of referees with low or medium levels of income were higher, which may be explained by the fact that those referees experience dissatisfaction, incompetence or insecurity, as they cannot meet their needs adequately. It is also reported that referees with low level of income may be more pressuring or intolerant (Varol, 1990). According to the findings obtained in the present research, there is a direct relationship between level of monthly income and state anxiety. Anxiety levels of referees with higher incomes were lower than the referees with lower incomes at a significant level. Consequently, it can be stated that state and trait anxiety levels of hockey referees are varied by some variables, such as age, level of income and marital status.

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