

Full Length Research Paper

Affective temperaments in the students of the School OF Physical Education and Sports (Mustafa Kemal University-HATAY TURKEY)

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The objective of this study was to investigate temperament features of students of the School of Physical Education and Sports. The design was by "Personal Information Form" developed by researchers and Temperament Evaluation of Memphis, Pisa, Paris and San Diego – Auto questionnaire (TEMPS-A) Scale developed by Akiskal et al. (1997) were used in this general screening study. The sample group was consisted of a total of 200 volunteers (72 female participants and 128 male participants) studying at Teaching Department, Sports Management Department and Recreation Department of the school. Statistical Package for Social Sciences (SPSS) 16.0 was used to assess the data. Data were summarized in means and standard deviations. One-Sample Kolmogorov-Smirnov test was used to determine normal distribution. Error threshold was accepted as 0.05. The results show the ratio of dominant affective temperaments (8%) in a specific sample without any psychiatric disorders which was found to be similar to those reported in literature. Cyclothymic and anxious temperament was significantly more common in sportswomen. Hyperthymic temperament including leadership features were more common in sports players compared to the general society. Conclusively, defining the temperamental nature of sportsmen might help predicting how they relate to their team members, improving sportive performance and making them psychologically more stable.

Key words: Cyclothymic disorder, temperament, occupation, psychology, leadership.

INTRODUCTION

Humans and their behaviors -a common point of psychology and sports sciences- are essential in terms of establishing a healthy and desired human society, improving sportive performance and making the individual psychologically more productive. Both psychology and sports sciences are closely and deeply interested in the topic of personality. However, there is not one single definition about personality with which all the theorists agree (Svrakic D. and Cloninger, 2007).

Personality is the pattern of whole rooted behaviors, thoughts and feelings that emerge as the result of individual's social experiences, developments and structural features, it constitutes individual's mode of

adaptation to his life style (Sorias, 2007).

As for Cloninger and Svrakic (2007), personality is formed by the combination of temperament, character and mind: "If we examine what these three components represent; temperament biologically contributes to personality and character makes social and cultural contributions. The basic functions of the personality are to feel, to think, to perceive and to convert them into aimed behaviors".

Character, temperament and personality –used wrongly and synonymously in the everyday language- are different from each other. Temperament is structural features that are passed by heredity and are changed little during lifetime.

Character is developed under the effect of environment and education style and thus includes the features subject to change in time. Personality is the combination of the temperament passed by genetics and character

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(Sayin and Aslan, 2005).

In the ancient era, temperament was described as the biological basis of the personality and its features were thought to be individual and unique. Later, Stewart emphasized that temperament was “the organic combination of the personality types” in 1887. Temperament has been derived from “temperare” which means “to temper” and stands for the attitudes and behaviors based on structural, genetic and biological basis (Goodwin and Jamison, 2007). Definitions about temperament -presented by Kraepelin and later developed by Akiskal- point out the relation between biological reasons and personality. Basic hypothesis of Akiskal about this issue is that genes do not only and directly affect bipolar instability but also sub-dimensions of mood, behavior and cognition and that subliminal signs or subliminal features (reflections of which are seen in the personality and appear at younger ages) arise under concept of “temperament” (Vahip, 2004). Rothbart describes temperament as a structure that individual biologically and innately has and can be shaped by such factors as heredity, maturity and experience (Rothbart, Ahadi and Evans, 2000).

Akiskal proposed that the basis of the mood instability was affective temperament and classified it into 5 basic affective temperaments: depressive, hyperthymic, cyclothymic, irritable and anxious temperaments (Akiskal and Mallya, 1987). Affective temperament has a diagnostic validity. Structure and genetics may be passed down to generations. Yet, unlike bipolar disorders, it does not require any treatment (Kesebir, Vahip and Akdeniz, 2005). It is reported by different authors that cyclothymia –accepted as the antecedent of the affective disorders- is related to creative productivity. Akiskal, Savino and Akiskal (2005) demonstrated different distributions of the affective temperament in the professional preferences.

Individuals' general tendencies in life are related to personality features and thus they are engaged with professions and occupations compatible with their tendencies and personality features. In this sense, it is highly important to investigate general temperament features of the teachers, recreationists, coaches and sports managers who will take part in growing a desired and healthy generation and guiding them to sports.

Therefore, the aim of the present research was to focus on temperament features of the students of the School of Physical Education and Sports (SPES). Our research was the first study about temperament conducted with a specific professional group who did not have any psychiatric disorders.

METHOD

Research model

General screening model -one of the descriptive research methods- and descriptive statistics model were used in this research.

Research population

The population of the research was consisted of the students at the School of Physical Education and Sports of Mustafa Kemal University during 2009 to 2010 academic year. The sample of the research was made up by a total of 200 volunteer participants (72 female participants and 128 male participants) at the Teaching Department, Sports Management Department and Recreation Department.

Data collection tool

Questions regarding sociodemographic features and TEMPS-A Scale designed by Akiskal et al. (1997) were used in the research. TEMPS-A (Temperament Evaluation of Memphis, Pisa, Paris and San Diego – Autoquestionnaire) was used in order to assess dominant affective temperament and mean scores of the subscales. The original Temperament Evaluation of Memphis, Pisa, Paris and San Diego – Auto questionnaire designed by Akiskal included 109 items for women and 110 for men.

The Turkish version of the scale is consisted of 99 items. It takes 15 to 45 min to fill in the questionnaire. It is a self report and Likert type scale in which the individual should fill in as “true” and “false” considering his whole life. It has got 5 subscales: depressive, hyperthymic, cyclothymic, irritable and anxious. Dominant depressive subscale has 18 items, cyclothymic subscale 19 items, hyperthymic subscale 20 items, irritable subscale 18 items and anxious subscale 24 items. The cutoff scores to assess temperament are 13, 18, 20, 13 and 18 scores respectively. Test-retest reliability of the Turkish version is 0.73 and 0.91. (Vahip, Kesebir, Alkan et al., 2005). Croanbach alpha coefficients are between 0.77 and 0.85. All participants were informed of the purpose of the study and signed consent forms.

Data analysis

SPSS 16.0 statistical software package was used to assess the data and to find the calculated values. The data were summarized with means and standard deviations. One-Sample Kolmogorov-Smirnov test was used to determine whether the data followed a normal distribution or not.

Because the data followed a normal distribution; Independent-sample T test and ANOVA test were used in order to detect the differences between independent variables. Tukey HSD test was used to find the reason behind the differences after ANOVA. Error threshold was accepted as 0.05 in the present research.

RESULTS

Upon analyzing Table 1, it was seen that percentage and frequency distributions were as follows:

- (i) Those who did not have dominant temperament (f: 184, 92.0%),
- (ii) Those who had depressive temperament (f: 1, 0.5%),
- (iii) Those who had cyclothymic temperament (f: 3, 1.5%),
- (iv) Those who had hyperthymic temperament (f: 4, 2.0%),
- (v) Those who had irritable temperament (f: 2, 1.0%) and
- (vi) Those who had anxious temperament (f: 2, 1.0%),
- (vii) Those who had cyclothymic, irritable, anxious temperament (f: 1, 0.5%),

Table 1. Percentage and frequency distributions of temperament types in participants.

Temperament	F	%
No dominant temperament	184	92.0
Depressive temperament	1	0.5
Cyclothymic temperament	3	1.5
Hyperthymic temperament	4	2.0
Irritable temperament	2	1.0
Anxious temperament	2	1.0
Cyclothymic, Irritable, and Anxious temperament	1	0.5
Depressive and irritable temperament	1	0.5
Irritable and anxious temperament	2	1.0

(viii) Those who had depressive and irritable temperament (f: 1, 0.5%),

(ix) Those who had irritable and anxious temperament (f: 2, 1.0%).

The comparison of the temperament scores of the participants in terms of sex (gender) variable yielded a statistically significant difference between the scores of cyclothymic temperament and anxious temperament of the female and male students ($P < 0.05$). The scores of cyclothymic temperament and anxious temperament of the female students were found to be significantly higher than those of male students. However, the comparison of the depressive temperament, hyperthymic temperament and irritable temperament scores of the participants in terms of sex (gender) variable did not reveal a statistically significant difference between female and male students ($P > 0.05$) (Table 2).

The comparison of the temperament scores of the participants in terms of being a registered sports player or not did not point a statistically significant difference between the registered sports players and non registered players ($P > 0.05$) (Table 3).

The comparison of the temperament scores of the participants in terms of departments demonstrated a statistically significant difference between the depressive temperament scores of the teaching department students, the management department students and the recreation department students ($P < 0.05$). On the other hand, we could not find any statistically significant difference in the comparison of the scores of cyclothymic temperament, hyperthymic temperament, irritable temperament and anxious temperament in terms of departments among the teaching department students, the management department students and the recreation department students ($P > 0.05$).

Comparisons of temperament scores of the participants in terms of departments demonstrated a statistically significant difference in the depressive temperament scores of the teaching department students, the management department students and the recreation

department students ($P < 0.05$). It was found out that depressive temperament scores of the management department students were significantly higher than those of the teaching department students ($P < 0.05$). On the other hand, the comparisons of the scores of cyclothymic temperament, hyperthymic temperament, irritable temperament and anxious temperament in terms of departments did not present any statistically significant differences among the teaching department students, the management department students and the recreation department students ($P > 0.05$).

DISCUSSION

Personality is described in a way to include temperament. The aim of the research is to investigate “temperament” that is biologically determined, has hereditary features, relatively constitutes personality and is affected less by other environmental factors.

Affective temperament features do not change with age. In terms of weighted affective temperament frequency, there was not any difference in the mean scores among groups of young age, middle age and elder age people or there were small differences. The rate of dominant affective temperament of a kind was found to be between 13 to 20%. The prevalence of the five dominant affective temperaments and sex (gender) distributions were found very similar in the international researches. Subscale temperament types were between 1 and 4% in these researches (Rihmer, 2010). The subscale temperament types in the healthy controls were found by 13% in the Turkish validity and reliability study of TEMPS-A scale but in the later research it was determined as 8%; which was supported by the present research (Table 1). The percentages of the five dominant affective temperaments of the present research ranged between 0.5 and 2%; which was consistent with the literature data.

Upon analysing the Turkish validity and reliability study, it was found that depressive temperament was by 3.1%, anxious and irritable temperament by 3.7%, hyperthymic temperament by 1.2% (Vahip, Kesebir and Alkan et al. 2005).

Table 4 shows TEMPS-A scale which was administered to individuals without any illness in different international researches and similar results were obtained in all of these researches: women were more depressive, anxious and cyclothymic whereas men were more hyperthymic and irritable (Rihmer, Akiskal and Rihmer et al., 2010).

In the present research, the rate of anxious temperament in female students was higher –similar to the researches above-; on the other hand, the rate of cyclothymic temperament in female students was found significantly high- unlike the Turkish validity and reliability studies.

Table 2. Comparison of temperament scores of participants in terms of gender variable.

Temperament	Gender	N	Mean	SD	t	p
Depressive	Male	128	4.37	2.90	-1.656	0.099
	Female	72	5.11	3.26		
Cyclothymic	Male	128	8.40	4.19	-2.295	0.023*
	Female	72	9.83	4.34		
Hyperthymic	Male	128	13.70	3.75	1.606	0.110
	Female	72	12.85	3.36		
Irritable	Male	128	4.81	3.62	-0.222	0.824
	Female	72	4.93	4.21		
Anxious	Male	128	5.59	4.58	-2.220	0.028*
	Female	72	7.17	5.19		

SD: Standard deviation.

Table 3. Multiple comparisons of depressive temperament scores with regard to departments.

(I) Department	(J) Department	Difference between the means (I - J)	SD	p
Teaching	Management	-1.78426	.63853	.016*
	Recreation	-.06018	.67312	.996
Management	Teaching	1.78426	.63853	.016
	Recreation	1.72408	.86083	.114
Recreation	Teaching	.06018	.67312	.996
	Management	-1.72408	.86083	.114

SD: Standard deviation.

Table 4. The comparison of the dominant temperaments.

Dominant temperament	Vahip et al. (2005) (%)	Aksoy et al. (2010) (%)
Depressive	3.1	1.5
Cyclothymic	1.7	1.5
Hyperthymic	1.2	2
Anxious	3.7	1
Irritable	3.7	1

Determination of affective temperaments may reveal information about individuals' social functions. The study conducted by Akiskal, Savino and Akiskal (2005) reported that affective temperament demonstrated important differences in professional preferences. In this research, doctors and lawyers demonstrated temperament distributions similar to the control group

whereas managers demonstrated higher hyperthymic rates; and as for industrialists, they had the highest hyperthymic rates. When we considered higher energy (of the industrialists) and higher energy that was devoted through premiums; the relation between professional preferences and their hyperthymic temperaments was important. In the same research, architects and artists had higher cyclothymic rates; which was very important in the sense that cyclothymic temperament was closely associated with artistic creativeness in literature. Hyperthymic individuals are more likely to be successful in media and entertainment world by adopting leadership positions in a society that have higher energy and are extrovert. In the present research, hyperthymic rate was found by 2% but in Turkish validity and reliability study, it was by 0% in healthy individuals.

This temperament -identified by Akiskal and Mallya (1987) as energetic, enthusiastic, easily self- expressive, self-confident and optimistic is described as having life

plans, sleeping less, being open to newness, having big interests and includes the features of the “ideal” sports players. There are small number of researches regarding to hyperthymia since 1966 to the present time in the medical literature (Akiskal, 2002).

The fact that rates of cyclothymia and hyperthermia – the two sub-types of temperament related to leadership features and creativeness- were found higher in sports players was important when we considered the connection among creativeness, leadership features and sports psychology.

The turbulent lives of the people with cyclothymic temperament –between sadness and happiness- are regarded as the source of creativeness and inspiration in many areas of the art and life. Individuals with irritable temperaments are successful in professions where agility plays an important role like military (Akiskal, 2007).

Individuals with depressive temperament are hard working, honest, sensitive to pain, in need of commitment and they are suitable for professions that require long time commitments. It was important in the present research that the management department students had high rate of depressive temperaments; which proved that there was a consistency between their management features (shaped by strong patience and determination) and their dominant temperaments.

Conclusion

There is a limited information about the distribution of the affective temperaments within a specific population. Our research was the first one about this research topic. It demonstrated the possible effect of temperament features (that are associated with biological features and that may determine personal features and our relation styles) on our professional preferences. It was found out that female sports players had significantly higher rates of cyclothymic and anxious temperaments compared to others and sports players had higher hypertymic temperaments (that include leadership features) compared to the society. Studies investigating affective temperaments in different professions will shed light on the effect of affective temperaments on professional preferences.

Practical implications

Affective temperament is an important biological component of character. Defining affective nature of sportsmen/women may help to improve team cohesion and sportive performance leading psychologically productiveness.

Hyperthymic temperament could be understood as a key to leadership and may relate with sport in terms of profession choice.

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