



The examination of the personality traits and optimal performance mood of the university athletes

Ceviker A.^{1ABCDE}, Ozlu K.^{1ABCDE}, Deryahanoglu G.^{1ABCDE}, Demirdoken C.^{1ABCDE}, Turkay H.^{2ABCDE}

¹ Faculty of Sport Sciences, Hitit University, Turkey

² High School of Physical Education And Sports, Kafkas University, Turkey

Authors' Contribution: A – Study design; B – Data collection; C – Statistical analysis; D – Manuscript Preparation; E – Funds Collection.

Abstract

Purpose: The aim of this study is to investigate the relationship between personality traits and optimal performance mood in response to gender, sports branch, weekly training hours of the athletes competing in the university league variables.

Material: A total of 250 volunteer athletes from 17 universities, 75 female and 175 male, participated in the study. 95 of the athletes are basketball and 155 are volleyball players. In addition to the personal information form which includes demographic information prepared by the researchers, "Optimal Performance Mood Scale" developed by Jackson and Eklund (2004) and adapted to Turkish by Aşçı et al. (2007) and "5-factor personality traits scale" developed by Benet-Martinez, John (1998) and adapted to Turkish by Schmitt, Allik, McCrae and Benet-Martinez (2007) were applied to the participants. Frequency analysis was applied in order to determine the participants' demographic information based on the statistical data analysis, and unpaired t-test was applied to determine the personal traits and optimal performance mood scores in response to gender, branch, weekly training sessions. Furthermore, in order to determine the relationship between that personal traits and optimal performance moods correlation test was applied. Statistical significance level was accepted as $p < 0.05$.

Results: As a result of the analysis of the data obtained; while there was no significant difference between the athletes according to the gender variable, it was concluded that there was a significant difference between sports branch, weekly sport variables and personality traits and optimal performance moods. In addition, a positive correlation was found between the participants' personality traits and optimal performance moods as a result of the correlation test ($r=0,608$).

Conclusions: This study has proved that personality traits and optimal performance moods effect one another positively and gender variable makes no significant difference. Yet, sport branches and weekly training hours makes meaningful differences between general and subscales scores.

Keywords: personality, optimal performance, volleyball, basketball.

Introduction¹

Sports and performance are two complementary phenomena in contemporary sports. It is desired to have high-performance scores as a result of sportive activities. The importance of psychological factors has been revealed in scientific researches to improve the quality of performance. Therefore, it is important to examine the psychological structures associated with optimal performance in order to determine the psychological conditions that may contribute to performance [1].

Since it demonstrates the mental and psychological states resulting from the optimal performance experience during exercises; "Optimal performance mood/flow state" is an important phenomenon that needs further investigation [2].

The optimal performance mood concept was introduced into the literature as a result of the researches conducted by Csikszentmihalyi [3] in order to explain the reasons that lead individuals to free-time activities. It is defined as a state associated with self completion that means personality is integrated with thoughts,

intentions, emotions and all these senses concentrate on the same goal. Optimal performance mood state tends to occur when a person encounters a clear set of objectives requiring appropriate responses. Unlike normal life, these "flow activities" allow a person to concentrate on clear and harmonious goals and provide immediate feedback. Flow also happens when a person's skills are fully involved in overcoming a challenge that is fully manageable. It, therefore, acts as a magnet to achieve new skills and to make things much more challenging. If the issues are less challenging, the person begins to resolve it by increasing them. If the issues are too much challenging it is possible to turn back to flow state after learning new skills [4]. Moneta [5] explains "flow" as the integration of the individuals' personal competences, purposes and their inner pleasure after a completed activity. Asakawa [6], defines optimal performance mood as the optimal mental state which occurs when a person feels competent, highly motivated and takes pleasure during an activity.

Peak performance or optimal performance can be identified as an personal achievement in setting standards rather than specifying a psychological state. The optimal performance experience is closely related to the optimal

© Ceviker A., Ozlu K., Deryahanoglu G., Demirdoken C., Turkay H., 2020

doi:10.15561/18189172.2020.0101

performance mood and it is personal experience of a peak performance. The optimal performance experience does not always lead to the formation of an optimal performance mood [7,8]. This relationship occurs in skilled athletes with high performance and they achieve the optimal performance mood level when the task is difficult. Optimal performance mood can move the athlete to a higher level of performance letting him have a state of consciousness that they have never thought before [7].

Considering it is as a part of life and struggle, the relationship between sports performance and athletes' personality traits should be examined carefully. Personality can be defined as distinctive and characteristic patterns of thoughts, emotions and behaviors which define the way an individual interacts with the physical and social environment [9]. It includes emotional, motivational and most importantly cognitive processes that influence how the individual behaves or feels in the performance experiences and that occur in their inner world. Pervin and John [10] define personality as qualities which cause individuals to differ in their performances due to their thinking and feeling ability and the resulting behaviour.

Personal traits are among the factors affecting optimal performance mood and take part in literature. Through several studies, it is concluded that while depressive and anxious people have little opportunity to experience optimal performance mood; hardworking and neat ones are more likely to experience optimal performance mood [11].

In addition to the innate traits, the traits acquired as a result of the interaction with the environment are unique to person and differ from person to person. Therefore, different personality traits cause differences in optimal performance mood levels. To maintain a qualified and high performance the relationship between them should be taken into consideration.

Hypothesis:

- H1: There is no relationship between personality traits of Unilig athletes and their optimal performance moods.
- H2: Gender variable causes no significant difference between personality traits of Unilig athletes and their optimal performance moods.
- H3: Branch variable causes no significant difference between personality traits of Unilig athletes and their optimal performance moods.
- H4: Weekly training duration causes no difference between personality traits of Unilig athletes and their optimal performance moods.

Purpose:

In this context, the aim of this study to examine the affects of athletes' personality traits to determine their optimal performance moods and analyse their personal traits in terms of gender, branch and weekly training durations variables. At the end of the study the researchers offer further suggestions to trainers and ones work at sports clubs so as to achieve a positive affection with athletes.

Material and Method

Participants.

In this study which examines the relationship between personality traits and optimal performance moods of athletes, relational screening model aimed to determine covariance and/or the degree between two or more variables from the general screening models was used [12]. The sample of the study consists of 250 athletes (75 female, 175 male) with 21.61 age average in 2 different branches (basketball and volleyball) from 17 different universities that participate in UNILIG competitions being held in Çorum province and present at 2017-2018 activity calendar of Turkey University Sports Federation (TUSF).

Research Design.

In addition to the personal information form created by the researchers to determine the socio-demographic information of the participants within the scope of study, "Optimal performance mood scale" consisting of 9 subscales of 5 point Likert type (with 0.55 to 0.87 internal consistency coefficients) developed by Jackson and Eklund [13] and adapted to Turkish by Aşçı et al. [7] and "Five-factor personality traits scale" consisting of 5 subscales of 5-point Likert type developed by Benet-Martinez and John [14] Schmitt and adapted to Turkish by Schmitt, Allik, McCrae and Benet-Martinez [15] were used.

Statistical Analysis.

Statistical analysis of the data was performed with the SPSS 22.0 package program and the normality of the data was tested with Kolmogorov-Smirnov. After determining the normal distribution of the data, unpaired t-test was used to determine the differences between the scores obtained from gender, sports branch, weekly sports hours, and personality and optimal performance mood scale and subscales. The relationship between the participants' personality scale scores and optimal performance mood scores was analyzed by correlation test. Statistical significance level was accepted as $p < 0.05$.

Results

Table 1. Demographic traits of unilig athletes

Gender	f	%
Female	75	30.0
Male	175	70.0
Branch	f	%
Basketball	95	38.0
Volleyball	155	62.0
Sports Age	f	%
1-5	84	33.6
6-10	104	41.6
11 or More	62	24.8
Weekly Training	f	%
1-2	213	85.2
3-4	37	14.8
Total	250	100.0

Table 2. Unpaired t-test results of differentiation status according to gender of personality traits and optimal performance levels of unilig athletes

Variables	Gender	n	\bar{x}	ss	t	sd	p																																																																																																																																																																																
Extroversion	Female	75	3.45	0.52	1.14	248	0.257																																																																																																																																																																																
	Male	175	3.37	0.52				Conscientiousness	Female	75	3.47	0.54	-0.14	248	0.891	Male	175	3.48	0.47	Openness	Female	75	3.60	0.57	0.67	248	0.504	Male	175	3.55	0.50	Agreeableness	Female	75	3.49	0.49	1.41	248	0.160	Male	175	3.40	0.44	Neuroticism	Female	75	3.32	0.57	0.33	248	0.745	Male	175	3.29	0.53	Personality General	Female	75	3.47	0.40	0.93	248	0.355	Male	175	3.42	0.35	Task Difficulty - Skill Balance	Female	75	3.45	0.67	0.273	248	0.785	Male	175	3.42	0.72	Action-Consciousness Combination	Female	75	3.56	0.83	1.218	248	0.224	Male	175	3.43	0.78	Open Goals	Female	75	3.93	0.78	2.015	248	0.045*	Male	175	3.71	0.81	Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093
Conscientiousness	Female	75	3.47	0.54	-0.14	248	0.891																																																																																																																																																																																
	Male	175	3.48	0.47				Openness	Female	75	3.60	0.57	0.67	248	0.504	Male	175	3.55	0.50	Agreeableness	Female	75	3.49	0.49	1.41	248	0.160	Male	175	3.40	0.44	Neuroticism	Female	75	3.32	0.57	0.33	248	0.745	Male	175	3.29	0.53	Personality General	Female	75	3.47	0.40	0.93	248	0.355	Male	175	3.42	0.35	Task Difficulty - Skill Balance	Female	75	3.45	0.67	0.273	248	0.785	Male	175	3.42	0.72	Action-Consciousness Combination	Female	75	3.56	0.83	1.218	248	0.224	Male	175	3.43	0.78	Open Goals	Female	75	3.93	0.78	2.015	248	0.045*	Male	175	3.71	0.81	Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60								
Openness	Female	75	3.60	0.57	0.67	248	0.504																																																																																																																																																																																
	Male	175	3.55	0.50				Agreeableness	Female	75	3.49	0.49	1.41	248	0.160	Male	175	3.40	0.44	Neuroticism	Female	75	3.32	0.57	0.33	248	0.745	Male	175	3.29	0.53	Personality General	Female	75	3.47	0.40	0.93	248	0.355	Male	175	3.42	0.35	Task Difficulty - Skill Balance	Female	75	3.45	0.67	0.273	248	0.785	Male	175	3.42	0.72	Action-Consciousness Combination	Female	75	3.56	0.83	1.218	248	0.224	Male	175	3.43	0.78	Open Goals	Female	75	3.93	0.78	2.015	248	0.045*	Male	175	3.71	0.81	Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																				
Agreeableness	Female	75	3.49	0.49	1.41	248	0.160																																																																																																																																																																																
	Male	175	3.40	0.44				Neuroticism	Female	75	3.32	0.57	0.33	248	0.745	Male	175	3.29	0.53	Personality General	Female	75	3.47	0.40	0.93	248	0.355	Male	175	3.42	0.35	Task Difficulty - Skill Balance	Female	75	3.45	0.67	0.273	248	0.785	Male	175	3.42	0.72	Action-Consciousness Combination	Female	75	3.56	0.83	1.218	248	0.224	Male	175	3.43	0.78	Open Goals	Female	75	3.93	0.78	2.015	248	0.045*	Male	175	3.71	0.81	Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																
Neuroticism	Female	75	3.32	0.57	0.33	248	0.745																																																																																																																																																																																
	Male	175	3.29	0.53				Personality General	Female	75	3.47	0.40	0.93	248	0.355	Male	175	3.42	0.35	Task Difficulty - Skill Balance	Female	75	3.45	0.67	0.273	248	0.785	Male	175	3.42	0.72	Action-Consciousness Combination	Female	75	3.56	0.83	1.218	248	0.224	Male	175	3.43	0.78	Open Goals	Female	75	3.93	0.78	2.015	248	0.045*	Male	175	3.71	0.81	Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																												
Personality General	Female	75	3.47	0.40	0.93	248	0.355																																																																																																																																																																																
	Male	175	3.42	0.35				Task Difficulty - Skill Balance	Female	75	3.45	0.67	0.273	248	0.785	Male	175	3.42	0.72	Action-Consciousness Combination	Female	75	3.56	0.83	1.218	248	0.224	Male	175	3.43	0.78	Open Goals	Female	75	3.93	0.78	2.015	248	0.045*	Male	175	3.71	0.81	Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																								
Task Difficulty - Skill Balance	Female	75	3.45	0.67	0.273	248	0.785																																																																																																																																																																																
	Male	175	3.42	0.72				Action-Consciousness Combination	Female	75	3.56	0.83	1.218	248	0.224	Male	175	3.43	0.78	Open Goals	Female	75	3.93	0.78	2.015	248	0.045*	Male	175	3.71	0.81	Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																				
Action-Consciousness Combination	Female	75	3.56	0.83	1.218	248	0.224																																																																																																																																																																																
	Male	175	3.43	0.78				Open Goals	Female	75	3.93	0.78	2.015	248	0.045*	Male	175	3.71	0.81	Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																																
Open Goals	Female	75	3.93	0.78	2.015	248	0.045*																																																																																																																																																																																
	Male	175	3.71	0.81				Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*	Male	175	3.63	0.81	Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																																												
Specific Feedback	Female	75	3.86	0.81	2.06	248	0.040*																																																																																																																																																																																
	Male	175	3.63	0.81				Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775	Male	175	3.74	0.71	Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																																																								
Concentration on Task	Female	75	3.71	0.91	-0.286	248	0.775																																																																																																																																																																																
	Male	175	3.74	0.71				Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*	Male	175	3.60	0.84	Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																																																																				
Sense of Control	Female	75	3.85	0.72	2.292	248	0.023*																																																																																																																																																																																
	Male	175	3.60	0.84				Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117	Male	175	3.47	0.90	Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																																																																																
Decreased Self Awareness	Female	75	3.67	0.92	1.571	248	0.117																																																																																																																																																																																
	Male	175	3.47	0.90				Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*	Male	175	3.60	0.78	Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																																																																																												
Conversion of Time	Female	75	3.81	0.79	1.989	248	0.048*																																																																																																																																																																																
	Male	175	3.60	0.78				Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867	Male	175	3.85	0.90	Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																																																																																																								
Achieving Goal Experience	Female	75	3.87	0.86	0.167	248	0.867																																																																																																																																																																																
	Male	175	3.85	0.90				Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093	Male	175	3.60	0.60																																																																																																																																																																				
Optimal Performance Mood General	Female	75	3.75	0.61	1.688	248	0.093																																																																																																																																																																																
	Male	175	3.60	0.60																																																																																																																																																																																			

Table 3. Unpaired t-test results of differentiation status according to branch of personality traits and optimal performance levels of unilig athletes

Variables	Sports Branch	n	\bar{x}	ss	t	sd	p																																																																																																																																																																																
Extroversion	Basketball	95	3.66	0.43	7.039	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.22	0.50				Conscientiousness	Basketball	95	3.68	0.43	5.517	248	0.000*	Volleyball	155	3.35	0.48	Openness	Basketball	95	3.79	0.40	5.773	248	0.000*	Volleyball	155	3.42	0.54	Agreeableness	Basketball	95	3.57	0.39	3.943	248	0.000*	Volleyball	155	3.34	0.47	Neuroticism	Basketball	95	3.55	0.49	6.023	248	0.000*	Volleyball	155	3.15	0.52	Personality General	Basketball	95	3.66	0.29	8.373	248	0.000*	Volleyball	155	3.30	0.34	Task Difficulty - Skill Balance	Basketball	95	3.61	0.62	3.308	248	0.001*	Volleyball	155	3.31	0.73	Action-Consciousness Combination	Basketball	95	3.81	0.62	5.527	248	0.000*	Volleyball	155	3.26	0.82	Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*	Volleyball	155	3.55	0.84	Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*
Conscientiousness	Basketball	95	3.68	0.43	5.517	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.35	0.48				Openness	Basketball	95	3.79	0.40	5.773	248	0.000*	Volleyball	155	3.42	0.54	Agreeableness	Basketball	95	3.57	0.39	3.943	248	0.000*	Volleyball	155	3.34	0.47	Neuroticism	Basketball	95	3.55	0.49	6.023	248	0.000*	Volleyball	155	3.15	0.52	Personality General	Basketball	95	3.66	0.29	8.373	248	0.000*	Volleyball	155	3.30	0.34	Task Difficulty - Skill Balance	Basketball	95	3.61	0.62	3.308	248	0.001*	Volleyball	155	3.31	0.73	Action-Consciousness Combination	Basketball	95	3.81	0.62	5.527	248	0.000*	Volleyball	155	3.26	0.82	Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*	Volleyball	155	3.55	0.84	Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61								
Openness	Basketball	95	3.79	0.40	5.773	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.42	0.54				Agreeableness	Basketball	95	3.57	0.39	3.943	248	0.000*	Volleyball	155	3.34	0.47	Neuroticism	Basketball	95	3.55	0.49	6.023	248	0.000*	Volleyball	155	3.15	0.52	Personality General	Basketball	95	3.66	0.29	8.373	248	0.000*	Volleyball	155	3.30	0.34	Task Difficulty - Skill Balance	Basketball	95	3.61	0.62	3.308	248	0.001*	Volleyball	155	3.31	0.73	Action-Consciousness Combination	Basketball	95	3.81	0.62	5.527	248	0.000*	Volleyball	155	3.26	0.82	Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*	Volleyball	155	3.55	0.84	Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																				
Agreeableness	Basketball	95	3.57	0.39	3.943	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.34	0.47				Neuroticism	Basketball	95	3.55	0.49	6.023	248	0.000*	Volleyball	155	3.15	0.52	Personality General	Basketball	95	3.66	0.29	8.373	248	0.000*	Volleyball	155	3.30	0.34	Task Difficulty - Skill Balance	Basketball	95	3.61	0.62	3.308	248	0.001*	Volleyball	155	3.31	0.73	Action-Consciousness Combination	Basketball	95	3.81	0.62	5.527	248	0.000*	Volleyball	155	3.26	0.82	Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*	Volleyball	155	3.55	0.84	Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																
Neuroticism	Basketball	95	3.55	0.49	6.023	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.15	0.52				Personality General	Basketball	95	3.66	0.29	8.373	248	0.000*	Volleyball	155	3.30	0.34	Task Difficulty - Skill Balance	Basketball	95	3.61	0.62	3.308	248	0.001*	Volleyball	155	3.31	0.73	Action-Consciousness Combination	Basketball	95	3.81	0.62	5.527	248	0.000*	Volleyball	155	3.26	0.82	Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*	Volleyball	155	3.55	0.84	Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																												
Personality General	Basketball	95	3.66	0.29	8.373	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.30	0.34				Task Difficulty - Skill Balance	Basketball	95	3.61	0.62	3.308	248	0.001*	Volleyball	155	3.31	0.73	Action-Consciousness Combination	Basketball	95	3.81	0.62	5.527	248	0.000*	Volleyball	155	3.26	0.82	Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*	Volleyball	155	3.55	0.84	Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																								
Task Difficulty - Skill Balance	Basketball	95	3.61	0.62	3.308	248	0.001*																																																																																																																																																																																
	Volleyball	155	3.31	0.73				Action-Consciousness Combination	Basketball	95	3.81	0.62	5.527	248	0.000*	Volleyball	155	3.26	0.82	Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*	Volleyball	155	3.55	0.84	Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																				
Action-Consciousness Combination	Basketball	95	3.81	0.62	5.527	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.26	0.82				Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*	Volleyball	155	3.55	0.84	Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																																
Open Goals	Basketball	95	4.14	0.59	5.968	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.55	0.84				Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*	Volleyball	155	3.52	0.85	Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																																												
Specific Feedback	Basketball	95	3.99	0.67	4.578	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.52	0.85				Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*	Volleyball	155	3.52	0.78	Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																																																								
Concentration on Task	Basketball	95	4.06	0.62	5.718	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.52	0.78				Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*	Volleyball	155	3.47	0.87	Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																																																																				
Sense of Control	Basketball	95	4.01	0.58	5.394	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.47	0.87				Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*	Volleyball	155	3.32	0.90	Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																																																																																
Decreased Self Awareness	Basketball	95	3.87	0.81	4.902	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.32	0.90				Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*	Volleyball	155	3.47	0.83	Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																																																																																												
Conversion of Time	Basketball	95	3.97	0.60	5.195	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.47	0.83				Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*	Volleyball	155	3.64	0.95	Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																																																																																																								
Achieving Goal Experience	Basketball	95	4.22	0.63	5.239	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.64	0.95				Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*	Volleyball	155	3.45	0.61																																																																																																																																																																				
Optimal Performance Mood General	Basketball	95	3.97	0.45	7.084	248	0.000*																																																																																																																																																																																
	Volleyball	155	3.45	0.61																																																																																																																																																																																			

According to unpaired t-test results to find out whether the difference between personality traits of Unilig athletes and their optimal performance mood levels is statistically significant or not in terms of gender subscale there is no a meaningful difference ($p > 0.05$). In contrast, open goals, specific feedback, sense of control, conversation of time subscales cause statistically meaningful differences ($p < 0.05$).

According to the results of unpaired t-test conducted to test whether the difference of perceptions of personality scale and optimal performance mood subscales of the unilig athletes participated in the study is statistically significant according to sports branch, there was significant difference between participants' personality

scale and optimal performance mood scale general and subscale scores and sports branch ($p < 0.01$).

According to the results of unpaired t-test conducted to test whether the difference of perceptions of personality scale and optimal performance mood subscales of the unilig athletes participated in the study is statistically significant according to sports branch, there was no significant difference only in agreeableness subscale scores of the participants ($*=p > 0.01$, $**=p > 0.05$).

According to the results of the scale scores conducted to determine the Personality Scale and Optimal Performance Moods of Unilig Athletes, it is determined that there was a high positive relationship between personality traits and optimal performance mood ($p < 0.01$, $p = 0.000$, $r = 0.608$).

Table 4. Unpaired t-test results of differentiation status according to weekly training hours of personality traits and optimal performance levels of unilig athletes

Variables	Weekly Training Hours	n	\bar{x}	ss	t	sd	p																																																																																																																																																																																
Extroversion	1-2	213	3.44	0.50	3.646	248	0.000*																																																																																																																																																																																
	3-4	37	3.11	0.55				Conscientiousness	1-2	213	3.54	0.46	5.526	248	0.000*	3-4	37	3.09	0.48	Openness	1-2	213	3.61	0.51	3.826	248	0.000*	3-4	37	3.26	0.55	Agreeableness	1-2	213	3.44	0.46	1.433	248	0.153	3-4	37	3.33	0.47	Neuroticism	1-2	213	3.34	0.55	2.762	248	0.006*	3-4	37	3.07	0.45	Personality General	1-2	213	3.48	0.35	4.904	248	0.000*	3-4	37	3.18	0.31	Task Difficulty - Skill Balance	1-2	213	3.47	0.71	2.180	248	0.030**	3-4	37	3.20	0.67	Action-Consciousness Combination	1-2	213	3.52	0.80	2.409	248	0.017**	3-4	37	3.18	0.68	Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*	3-4	37	3.30	0.89	Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*
Conscientiousness	1-2	213	3.54	0.46	5.526	248	0.000*																																																																																																																																																																																
	3-4	37	3.09	0.48				Openness	1-2	213	3.61	0.51	3.826	248	0.000*	3-4	37	3.26	0.55	Agreeableness	1-2	213	3.44	0.46	1.433	248	0.153	3-4	37	3.33	0.47	Neuroticism	1-2	213	3.34	0.55	2.762	248	0.006*	3-4	37	3.07	0.45	Personality General	1-2	213	3.48	0.35	4.904	248	0.000*	3-4	37	3.18	0.31	Task Difficulty - Skill Balance	1-2	213	3.47	0.71	2.180	248	0.030**	3-4	37	3.20	0.67	Action-Consciousness Combination	1-2	213	3.52	0.80	2.409	248	0.017**	3-4	37	3.18	0.68	Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*	3-4	37	3.30	0.89	Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49								
Openness	1-2	213	3.61	0.51	3.826	248	0.000*																																																																																																																																																																																
	3-4	37	3.26	0.55				Agreeableness	1-2	213	3.44	0.46	1.433	248	0.153	3-4	37	3.33	0.47	Neuroticism	1-2	213	3.34	0.55	2.762	248	0.006*	3-4	37	3.07	0.45	Personality General	1-2	213	3.48	0.35	4.904	248	0.000*	3-4	37	3.18	0.31	Task Difficulty - Skill Balance	1-2	213	3.47	0.71	2.180	248	0.030**	3-4	37	3.20	0.67	Action-Consciousness Combination	1-2	213	3.52	0.80	2.409	248	0.017**	3-4	37	3.18	0.68	Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*	3-4	37	3.30	0.89	Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																				
Agreeableness	1-2	213	3.44	0.46	1.433	248	0.153																																																																																																																																																																																
	3-4	37	3.33	0.47				Neuroticism	1-2	213	3.34	0.55	2.762	248	0.006*	3-4	37	3.07	0.45	Personality General	1-2	213	3.48	0.35	4.904	248	0.000*	3-4	37	3.18	0.31	Task Difficulty - Skill Balance	1-2	213	3.47	0.71	2.180	248	0.030**	3-4	37	3.20	0.67	Action-Consciousness Combination	1-2	213	3.52	0.80	2.409	248	0.017**	3-4	37	3.18	0.68	Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*	3-4	37	3.30	0.89	Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																
Neuroticism	1-2	213	3.34	0.55	2.762	248	0.006*																																																																																																																																																																																
	3-4	37	3.07	0.45				Personality General	1-2	213	3.48	0.35	4.904	248	0.000*	3-4	37	3.18	0.31	Task Difficulty - Skill Balance	1-2	213	3.47	0.71	2.180	248	0.030**	3-4	37	3.20	0.67	Action-Consciousness Combination	1-2	213	3.52	0.80	2.409	248	0.017**	3-4	37	3.18	0.68	Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*	3-4	37	3.30	0.89	Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																												
Personality General	1-2	213	3.48	0.35	4.904	248	0.000*																																																																																																																																																																																
	3-4	37	3.18	0.31				Task Difficulty - Skill Balance	1-2	213	3.47	0.71	2.180	248	0.030**	3-4	37	3.20	0.67	Action-Consciousness Combination	1-2	213	3.52	0.80	2.409	248	0.017**	3-4	37	3.18	0.68	Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*	3-4	37	3.30	0.89	Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																								
Task Difficulty - Skill Balance	1-2	213	3.47	0.71	2.180	248	0.030**																																																																																																																																																																																
	3-4	37	3.20	0.67				Action-Consciousness Combination	1-2	213	3.52	0.80	2.409	248	0.017**	3-4	37	3.18	0.68	Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*	3-4	37	3.30	0.89	Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																				
Action-Consciousness Combination	1-2	213	3.52	0.80	2.409	248	0.017**																																																																																																																																																																																
	3-4	37	3.18	0.68				Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*	3-4	37	3.30	0.89	Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																																
Open Goals	1-2	213	3.86	0.77	3.969	248	0.000*																																																																																																																																																																																
	3-4	37	3.30	0.89				Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*	3-4	37	3.22	0.81	Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																																												
Specific Feedback	1-2	213	3.78	0.79	3.931	248	0.000*																																																																																																																																																																																
	3-4	37	3.22	0.81				Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*	3-4	37	3.32	0.71	Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																																																								
Concentration on Task	1-2	213	3.80	0.76	3.532	248	0.000*																																																																																																																																																																																
	3-4	37	3.32	0.71				Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*	3-4	37	3.18	0.79	Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																																																																				
Sense of Control	1-2	213	3.76	0.79	4.183	248	0.000*																																																																																																																																																																																
	3-4	37	3.18	0.79				Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*	3-4	37	3.04	0.83	Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																																																																																
Decreased Self Awareness	1-2	213	3.61	0.90	3.623	248	0.000*																																																																																																																																																																																
	3-4	37	3.04	0.83				Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*	3-4	37	3.30	0.59	Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																																																																																												
Conversion of Time	1-2	213	3.72	0.80	3.095	248	0.002*																																																																																																																																																																																
	3-4	37	3.30	0.59				Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*	3-4	37	3.17	0.89	Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																																																																																																								
Achieving Goal Experience	1-2	213	3.98	0.83	5.413	248	0.000*																																																																																																																																																																																
	3-4	37	3.17	0.89				Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*	3-4	37	3.21	0.49																																																																																																																																																																				
Optimal Performance Mood General	1-2	213	3.72	0.60	4.924	248	0.000*																																																																																																																																																																																
	3-4	37	3.21	0.49																																																																																																																																																																																			

Table 5. Results of pearson correlation analysis to determine the relationship between personality traits and optimal performance mood of unilig athletes

Variables	Optimal Performance Mood Scale General
Personality General Scale	.608**
	.000

Discussion

The analysis to test the gender variable shows there is no significant difference between personality traits of male and female Unilig tlethes. The subscale perceptions of optimal performance mood state causes meaningful difference in terms of gender difference.

When the data obtained in our study was evaluated, there was no significant difference according to gender

variable of perceptions of personality scale and optimal performance mood subscales. Nas [16] stated that there was no difference between the students studying in the sports departments of universities according to the gender variable. The data obtained are also similar to the study conducted by Gözmen and Aşçı [17] on optimal performance, mood, personality and perfectionism in athletes.

Yıldız et al., [18] concluded that gender variable causes a meaningful difference in optimal performance mood states of 207 athletes. While Tok [19] asserted gender difference causes no meaningful difference in extreme sports athletes Lonchbaum ve ark. [20] remarked that individuals who take regular exercises and ones who don't take regular exercises have similar personality traits.

Contrary to the findings, Eryücel [21] found out that gender causes no significant difference in optimal performance mood states of individual athletes and team players when their optimal performance mood states and soliloquy. According to the data of the study sports branch variable causes meaningful differences in personality traits and optimal performance moods of Unilig athletes.

Bernier et al., [22] examined the awareness and acceptance of performance on athletes in their study. They compared elite swimmers with young elite golfers. Optimum performance levels of both groups were found to be similar. In another part of the research, 7 elite young golfers were included in the psychological skills training program and it was concluded that the program based on awareness and acceptance contributed to the increase in performance in competition. There is a significant difference between volleyball players and basketball players according to the sport branches of perceptions of personality scale and optimal performance mood subscales of UNILIG athletes. It can be said that obtaining different results according to different branch variables in both studies is due to the fact that Barnier et al. [22] conducted the study on individual athletes. On the other hand, Yanar v. d. [23] states that weekly training duration or sports cause no significant difference in optimal performance mood states.

Robazza and Bortoli [24] examined the mood, normative anger and anxiety levels of 197 rugby athletes in their study. Consequently, it is seen that rugby players have moderate anger frequency of symptoms. Similarly, it was concluded that the players had moderate anxiety and their anxiety symptoms decreased if they felt self-confidence. In our study, it is seen that there is a high positive relationship between personality traits and optimal performance moods. These results are similar to the results of the study conducted by Robazza and Bartoli [24].

Altıntaş et al. [25] concluded in their study on 167 elite male athletes that the motivation levels of the athletes had an effect on the optimal performance mood according to the branch variable. In other words, while interior motivation facilitates the formation of optimal performance mood in athletes, exterior motivation seems to prevent this situation. In our study, a significant difference was found between the general and subscales of personality scale and optimal performance mood scale and sports branches. This results in support of our study.

According to our study results, there is a highly positive relationship between personality traits and optimal

performance mood states of the participants. It can be concluded that individuals with high personality trait scores are more likely to experience optimal performance mood.

Likewise our study results, there are other researches which state similar findings about a positive correlation between personal traits and optimal performance mood states. Gozmen and Aşçı put forth that there is a positive correlation between personal traits and optimal performance moods of elite athletes. Also Ross and Kaiser [26] and Ullen et al. [11] asserted that, similar to our findings, there is a positive correlation between personal traits and optimal performance moods of athletes. There are further researches with similar results [27,28,29].

Moreno says that it is quite expected that there is a positive relationship between personal traits and optimal performance moods. According to Moreno [30] athletes with self control and open for improvement traits have inner motivation for the activities and this let them to experience optimal performance mood.

Conclusion

According to the results of the examination of the Personality Traits and Optimal Performance Moods of the total of (n = 250) male-female Unilig athletes, it is concluded that the validity and reliability aspects of the measurement tools are valid in our study as in previous studies.

In our study, when examined the difference of Unilig athletes' personality scale and optimal performance mood subscale perceptions in terms of gender variable, it is concluded that there is a meaningful difference in optimal performance mood subscale.

In our study, when examined the differences in perceptions of personality scale and optimal performance mood subscales of Unilig athletes according to gender; it is concluded that there is no significant difference according to the gender of the participants.

According to the sports branches of perceptions of personality scale and optimal performance mood subscales of Unilig athletes; it is concluded that there is a significant difference between athletes' general and subscales scores of personality scale and optimal performance mood scale and sports branches.

According to weekly training hours of perceptions of personality scale and optimal performance mood subscales of Unilig athletes, there is a significant difference in agreeableness subscale.

According to score results of scale carried out to determine the personality scale and optimal performance mood of Unilig athletes, it is concluded that personality traits and optimal performance moods affect one another positively.

Conflict of interests

The authors declare that there is no conflict of interests.

References

1. Hefferon K, Boniwell L. *Positive Psychology. Theory, Research and Applications*. Çeviren: Doğan T. Nobel Yayın: İstanbul; 2014.
2. Jackson SA, Thomas PR, Marsh HW, Smethurst CJ. Relationships between flow, self-concept, psychological skills, and performance. *Journal of Applied Sport Psychology*, 2001; 13, 129– 153. <https://doi.org/10.1080/104132001753149865>
3. Csikszentmihalyi M. *Beyond Boredom and Anxiety*. Jossey-Bass: San Francisco; 1995.
4. Csikszentmihalyi M. *Finding flow: The psychology of engagement with everyday life*. Basic Books; 1997.
5. Moneta GB. The flow experience across cultures. *Journal of Happiness Studies*, 2004; 5(2): 115– 121. <https://doi.org/10.1023/B:JOHS.0000035913.65762.b5>
6. Asakawa K. Japanese College Students : How do they. *Journal of Happiness Studies*, 2004; 5:123–54. <https://doi.org/10.1023/B:JOHS.0000035915.97836.89>
7. Aşçı FH, Çağlar E, Eklund RC, Altıntaş A, Jackson S. Durumluk ve Sürekli Optimal Performans Duygu Durum-2 Ölçekleri'nin Uyarlama Çalışması [State and Continuous Optimal Performance Emotion Status-2 Scales Adaptation Study]. *Hacettepe Journal of Sport Sciences*, 2007; 18(4): 182–196. (In Turkish)
8. Jackson SA, Marsh HW. Development and validation of a scale to measure optimal experience: The flow state scale. *Journal of Sport & Exercise Psychology*, 1996; 18: 17– 35. <https://doi.org/10.1123/jsep.18.1.17>
9. Smith E, Hoeksema S, Fredrickson B, Loftus G. *Atkinson and Hilgard's Introduction to Psychology. Psikolojiye Giriş*. 14th ed. Çeviren: Öncül Ö, Ferhatoğlu D, Arkadaş Yayınevi; Ankara; 2012. P. 450-480.
10. Pervin LA, John OP. *Personality: Theory and research* (12th ed.). Oxford: John Wiley and Sons; 2013.
11. Ullen F, Manzano O, Almeida R, Magnusson PKE, Pedersen NL, Nakamura J, Csikszentmihalyi M, Madison G. Proneness for psychological flow in everyday life: Associations with personality and intelligence. *Personality and Individual Differences*, 2012; 52 (2): 167– 172. <https://doi.org/10.1016/j.paid.2011.10.003>
12. Karasar N. *Bilimsel Araştırma Yöntemi* [Scientific Research Method]. Ankara: Nobel Yayın Dağıtım; 2010.
13. Jackson SA, Eklund RC. *The Flow Scales Manual*. Morgantown, WV: Fitness Information Technology; 2004.
14. Benet-Martínez V, John OP. Los Cinco Grandes across cultures and ethnic groups: multitrait multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology*, 1998; 75(3): 729– 750. <https://doi.org/10.1037/0022-3514.75.3.729>
15. Schmitt DP, Allik J, McCrae RR, Benet-Martínez V. The Geographic Distribution of Big Five Personality Traits: Patterns and Profiles of Human Self-Description Across 56 Nations. *Journal of Cross-Cultural Psychology*, 2007; 38;(2): 173–212. <https://doi.org/10.1177/0022022106297299>
16. Nas K. The effect of the physical education and sports high school students' personal characteristics to gender, age and sports type. *The Journal*, 2018; 11(57):100-109.
17. Gözmen A, Aşçı F. Sporcularda optimal performans duygu durumunun yordanmasında beş faktörlü kişilik özelliklerinin ve mükemmeliyetçiliğin rolü [The role of five-factor personality traits and perfectionism in predicting optimal performance mood in athletes]. *Spor Bilimleri Dergisi*, 2016; 27 (1): 40-48. (In Turkish) <https://doi.org/10.17644/sbd.251312>
18. Yıldız AB, Gülşen DBA, Yılmaz B. Sporcuların optimal performans duygu durumunun yaşam tatminleri üzerindeki etkisi. *Niğde University Journal of Physical Education And Sport Sciences*. 2015; 9: 90-97.
19. Tok S. The big five personality traits and risky sport participation. *Social Behavior and Personality: An International Journal*, 2011; 39(8): 1105– 1111. <https://doi.org/10.2224/sbp.2011.39.8.1105>
20. Lonchbaum MR, Rhodes RE, Stevenson SJ, Surlis J, Stevens T, Wang CKJ. Does gender moderate the exercising personality? An examination of continuous and stage-based exercise. *Psychology, Health and Medicine*, 2010; 15(1): 50– 60. <https://doi.org/10.1080/13548500903443449>
21. Eryücel ME. An Analysis of Self-Talk and Flow State of Athletes in Team and Individual Sports. *Journal of Education and Learning*, 2019;8:286. <https://doi.org/10.5539/jel.v8n2p286>
22. Bernier M, Thienot E, Codron R, Fournier JF. Mindfulness and acceptance approaches in sport performance. *Journal of Clinical Sport Psychology*, 2009; 3(4): 320-333. <https://doi.org/10.1123/jcsp.3.4.320>
23. Yanar S, Kirandi O, Ates O, Ehlizoglu M, Celikbilek S. Investigation of the correlation between athletes' training continuity and flow experience. *International Journal of Academic Research*, 2017;9:37–40. <https://doi.org/10.7813/2075-4124.2017/9-1/B.6>
24. Robazza C, Bortoli L. Perceived impact of anger and anxiety on sporting performance in rugby players. *Psychology of Sport and Exercise*, 2007; 8(6): 875-896. <https://doi.org/10.1016/j.psychsport.2006.07.005>
25. Altıntaş A, Kelecek S, Aşçı F. Elit sporcularda durumsal güdülenme ve optimal performans duygu durumu arasındaki ilişki [Relationship between situational motivation and optimal performance mood in elite athletes]. *Pamukkale Spor Bilimleri Dergisi*, 2013; 4(4): 14-21. (In Turkish)
26. Ross SR, Keiser HN. Autotelic personality through a five-factor lens: Individual differences in flow-propensity. *Personality and Individual Differences*, 2014; 59, 3–8. <https://doi.org/10.1016/j.paid.2013.09.029>
27. Nofle EE, Robins RW. Personality predictors of academic outcomes: big five correlates of GPA and SAT scores. *Journal of Personality and Social Psychology*, 2007; 93(1): 116-130. <https://doi.org/10.1037/0022-3514.93.1.116>
28. Roberts BW, Walton KE, Bogg T. Conscientiousness and Health Across the Life Course. *Review of General Psychology*, 2005; 9(2): 156–168. <https://doi.org/10.1037/1089-2680.9.2.156>
29. Hills P, Argyle M. Happiness, introversion-extraversion and happy introverts. *Personality and Individual Differences*, 2001; 30(4): 595–608. [https://doi.org/10.1016/S0191-8869\(00\)00058-1](https://doi.org/10.1016/S0191-8869(00)00058-1)
30. Moreno MJA, Cervelló GE, González-Cutre CD. Relationships among goal orientations, motivational climate and flow in adolescent athletes: differences by gender. *The Spanish Journal of Psychology*, 2008; 11(1): 181– 191. <https://doi.org/10.1017/S1138741600004224>

Information about the authors:

Çeviker A. (Corresponding author); <http://orcid.org/0000-0002-6566-1251>; abdulkerimceviker@hitit.edu.tr; Hitit University, Sports Science Faculty; Çevre Yolu Bulvarı 19030, Çorum, Turkey.

Özlu K.; <http://orcid.org/0000-0003-1839-5437>; kurtulusozlu@hitit.edu.tr; Hitit University, Sports Science Faculty; Çevre Yolu Bulvarı 19030, Çorum, Turkey.

Deryahanoğlu G.; <http://orcid.org/0000-0001-5186-3453>; gamederyahanoglu@hitit.edu.tr; Hitit University, Sports Science Faculty; Çevre Yolu Bulvarı 19030, Çorum, Turkey.

Demirdöken Ç.; <http://orcid.org/0000-0003-0212-2872>; cisemunlu@hitit.edu.tr; Hitit University, Sports Science Faculty; Çevre Yolu Bulvarı 19030, Çorum, Turkey.

Turkay H.; <http://orcid.org/0000-0002-7851-2757>; hikmetturkay06@gmail.com; High School of Physical Education And Sports, Kafkas University; 36500 Sarıkamış, Kars, Turkey.

Cite this article as:

Ceviker A, Ozlu K, Deryahanoglu G, Demirdoken C, Turkay H. The examination of the personality traits and optimal performance mood of the university athletes. *Pedagogy of physical culture and sports*, 2020;24(1):4-11.

<https://doi.org/10.15561/18189172.2020.0101>

This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited (<http://creativecommons.org/licenses/by/4.0/deed.en>).

Received: 15.09.2019

Accepted: 16.10.2019; Published: 10.11.2019