

# The Online Journal of Recreation and Sport

*Volume 7 Issue 1*  
*January 2018*

**Editor-in- Chief**

Prof. Dr. Metin YAMAN

**Deputy Chief Editor**

Assoc. Prof. Dr. Gülten HERGÜNER

**Editors**

Dr. Aytekin İŞMAN	Dr. Mehmet GÜÇLÜ
Dr. Azmi YETİM	Dr. Mehmet GÜNAY
Dr. Çetin YAMAN	Dr. İ.Hakkı MİRİCİ
Dr. Erdal ZORBA	Dr. Nevzat MİRZEOĞLU
Dr. Fatih ÇATIKKAŞ	Dr. Ömer ŞENEL
Dr. Gülten HERGÜNER	Dr. Rana VAROL
Dr. H. Ahmet PEKER	Dr. Serdar TOK
Dr. Hülya AŞÇI	Dr. Suat KARAKÜÇÜK
Dr. İbrahim YILDIRAN	Dr. Ramazan ABACI

**Technical Editors**

Zekai ÇAKIR  
Sezai ÇAKIR  
Engin SARIKAYA  
Mustafa ALTINSOY



---

**Copyright © 2012 - THE ONLINE JOURNAL OF RECREATION AND SPORT**

---

All rights reserved. No part of TOJRAS articles may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the publisher.

**Contact Address:**

Prof. Dr. Metin YAMAN

TOJRAS, Editor in Chief Published in TURKEY Ankara -Turkey

## Welcome to TOJRAS

### Message from the Editor

The Online Journal of Recreation and Sport- TOJRAS was first published in 2012. The article publishes original, qualified and sufficient research papers in the field of physical education and sport, sport management, recreation and education of coaching to contribute to the field of sport both in Turkey and in the world. The publication language of the journal is English. The referees and editors of TOJRAS are field experts and the articles are reviewed by them according to their field expertise. The main goal of TOJRAS is to assure a fruitful and academic platform for the authors, referees, and the members of science and advisory board and the contributors to the enhancement of science in the light of the rules of ethics.

We would like to welcome and thank you for your online journal interest which helped TOJRAS to gain popularity and dignity among academic publications locally and internationally so that we can bring various and profound studies in the field of sport by valuable researchers. In addition to them, teachers, teacher trainers, parents, and students around the world have visited TOJRAS for five years continuously. It means that TOJRAS has contributed to the dissemination of new trends in sport education and research to all over the world for years. We hope that this latest issue will also follow our global educational goal.

TOJRAS provides its readers with the opportunity of meeting different aspects on sport education so that they can expand their study fields. Also, the content is freely accessible without charge to the user or to his/her institution. In addition, any views expressed in this publication are the views of the authors and are not the views of the Editor and TOJRAS.

TOJRAS thanks and appreciates the editorial board and reviewers who have contributed a lot to the submissions of this issue for their valuable contributions.

#### Call for Papers

TOJRAS invites you for article contribution. Submitted articles can be about all aspects of sport education. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJRAS. Manuscripts must be submitted in English.

TOJRAS is guided by its editors, guest editors and advisory boards. If you are interested in contributing to TOJRAS as an author, guest, editor or reviewer, please send your CV to [infotojras@gmail.com](mailto:infotojras@gmail.com).

January, 2018  
Prof. Dr. Metin YAMAN  
**Editor in Chief**

## Chief Editor

Dr. Metin YAMAN

## Deputy Chief Editor

Dr. Gülten HERGÜNER

## Editorial Board

Dr. Aytekin İŞMAN  
Dr. Azmi YETİM  
Dr. Çetin YAMAN  
Dr. Erdal ZORBA  
Dr. Fatih ÇATIKKAŞ  
Dr. Gülten HERGÜNER  
Dr. H. Ahmet PEKER  
Dr. Hülya AŞÇI  
Dr. İbrahim YILDIRAN

Dr. Mehmet GÜÇLÜ  
Dr. Mehmet GÜNAY  
Dr. İ.HAKKI MİRİCİ  
Dr. Nevzat MİRZEOĞLU  
Dr. Ömer ŞENEL  
Dr. Rana VAROL  
Dr. Serdar TOK  
Dr. Suat KARAKÜÇÜK  
Dr. Ramazan ABACI

## System and Technical Editors

Zekai ÇAKIR  
Engin SARIKAYA

Sezai ÇAKIR  
Mustafa ALTINSOY

## Turkish Language Editors

Dr. Fahri TEMİZYÜREK  
Dr. Gülsemin HAZER

Dr. Mehmet ÖZDEMİR

## English Language Editors

Dr. İ. Hakkı MİRİCİ  
Dr. Sinem HERGÜNER  
Dr. Tuba Elif TOPRAK

Mehmet Galip ZORBA  
Bahar TAMERER

## Measurement and Evaluation Editors

Dr. Gökhan DELİCEOĞLU

Merve KARAMAN

## Science And Advisory Board

Dr. Adela Badau, Romania	Dr. Kemal Tamer, Gazi University, Turkey
Dr. Ali Ahmet Doğa, Kırıkkale University, Turkey	Dr. Margaret Talbot
Dr. Amir Ghiami	Dr. Mehmet Akif Ziyagil, Mersin University, Turkey
Dr. Arslan Kalkavan, Karadeniz Technical University, Turkey	Dr. Mehmet Günay, Gazi University, Turkey
Dr. Asuman Seda Saraçali, Adnan Menderes University Turkey	Dr. Metin Yaman, Gazi University, Turkey
Dr. Aytekin İşman, Sakarya University, Turkey	Dr. Mithat Koz, Ankara University, Turkey
Dr. Azmi Yetim, Gazi University, Turkey	Dr. Muhsin Hazar, Gazi University, Turkey
Dr. Bae Dixon, Australia	Dr. Müslüm Bakır, Okan University, Turkey
Dr. Birol Doğan, Ege University, Turkey	Dr. Nadhim Al-Wattar, Iraq
Dr. Cecilia Cevat, Romania	Dr. Nevzat Mirzeoğlu, Sakarya University, Turkey
Dr. Cengiz Aslan, Fırat University, Turkey	Dr. Osman İmamoğlu, Ondukuz Mayıs University, Turkey
Dr. Dana Badau, Romania	Dr. Ömer Şenel, Gazi University, Turkey
Dr. Diana Jones, USA	Dr. Özbay Güven, Gazi University, Turkey
Dr. Emre Erol, Gelişim University, Turkey	Dr. Peter Bonov, Bulgaria
Dr. Erdal Zorba, Gazi University, Turkey	Dr. Rana Varol, Ege University, İzmir
Dr. F. Tondnevis, Iranr.	Dr. Rasim Kale, Gelişim University, Turkey
Dr. Gülfem Ersöz, Ankara University, Turkey	Dr. Sami Mengütay, Haliç University, Turkey
Dr. Güner Ekenci, Gelişim University, Turkey	Dr. Seydi Ahmet Ağaoğlu, Ondukuz Mayıs University, Turkey
Dr. Hasan Kasap, Gedik University, Turkey	Dr. Seydi Karakuş, Dumlupınar University, Turkey
Dr. Hatice Çamlıyer, Manisa Celal Bayar University, Turkey	Dr. Suat Karaküçük, Gazi University, Turkey
Dr. Hülya Aşçı, Marmara University, Turkey	Dr. Turgay Biçer, Marmara University, Turkey
Dr. İbrahim Yıldiran, Gazi University, Turkey	Dr. Wolfgang Baumann, Germany
Dr. Ju Ho Chang, Korea	Dr. Wolfgang Buss, Germany
Dr. Kang-Too Lee, TAFISA President, Korea	Dr. Zaid Kazi Gasim, Irak
Dr. Kelly Park, Korea	

Field Editor (Sports Management Science, Sportsman / Athletics health and training science, Physical Education and Sport Education and Sporda recreation training-editors)		
Dr. A. Dilşad Mirzeoğlu, Turkey	Dr. Güner Ekenci, Turkey	Dr. Müslüm Bakır, Turkey
Dr. Adela Badau, Romania	Dr. Güven Erdil, Turkey	Dr. M. Zahit Serarslan, Gelişim University, Turkey
Dr. Adnan Turgut, Turkey	Dr. Hakan Kolayış, Turkey	Dr. Nadhim Al-Wattar, Iraq
Dr. Ahmet Altıparmak, Turkey	Dr. Hasan Kasap, Turkey	Dr. Nevzat Mirzeoğlu, Turkey
Dr. Ahmet Peker, Turkey	Dr. Hatice Çamlıyer, Turkey	Dr. Nigar Yaman, Turkey
Dr. Ali Ahmet Doğan, Turkey	Dr. Hayri Ertan, Turkey	Dr. Osman İmamoğlu, Turkey
Dr. Amir Ghiami	Dr. Hülya Aşçı, Turkey	Dr. Ozan Sever, Turkey
Dr. Arslan Kalkavan, Turkey	Dr. Işık Bayraktar, Turkey	Dr. Özbay Güven, Turkey
Dr. Asuman Seda Saraçali, Turkey	Dr. İbrahim Yıldırım, Turkey	Dr. Özcan Saygın, Turkey
Dr. Aytekin İşman, Turkey	Dr. İhsan Sarı, Turkey	Dr. Peter Bonov, Bulgaria
Dr. Azmi Yetim, Turkey	Dr. İlhan Toksöz, Turkey	Dr. Rasim Kale, Turkey
Dr. Bae Dixon, Australia	Dr. Ju Ho Chang, Korea	Dr. Reşat Kartal, Turkey
Dr. Barboros Erdoğan, Turkey	Dr. Kang-Too Lee, TAFISA President, Korea	Dr. Ramazan ABACI, Turkey
Dr. Beyza Merve Akgül, Turkey	Dr. Kelly Park, Korea	Dr. Salih Suveren, Turkey
Dr. Birol Doğan, Turkey	Dr. Kemal Tamer, Turkey	Dr. Sami Mengütay, Turkey
Dr. Cecilia Cevat, Romania	Dr. Kürşat Karacabey, Turkey	Dr. Selçuk Özdağ, Turkey
Dr. Cengiz Aslan, Turkey	Dr. Lale Orta, Turkey	Dr. Serdar Tok, Turkey
Dr. Çetin Yaman, Turkey	Dr. M. Yalçın Taşmektepligil, Turkey	Dr. Settar Koçak, Turkey
Dr. Dana Badau, Romania	Dr. Margaret Talbot	Dr. Seydi Ahmet Ağaoğlu, Turkey
Dr. Diana Jones, USA	Dr. Mehmet Acet, Turkey	Dr. Seydi Karakuş, Turkey
Dr. Ekrem Levent İlhan, Turkey	Dr. Mehmet Akif Ziyagil, Turkey	Dr. Sibel Arslan, Turkey
Dr. Emre Erol, Turkey	Dr. Mehmet Bayansaldız, Turkey	Dr. Sinem Hergüner, Turkey
Dr. Ercan Zorba, Turkey	Dr. Mehmet Güçlü, Turkey	Dr. Suat Karaküçük, Turkey
Dr. Erdal Zorba, Turkey	Dr. Mehmet Günay, Turkey	Dr. Suat Yıldız, Turkey
Dr. Erkan Arslanoğlu, Turkey	Dr. Mehmet Kılıç, Turkey	Dr. Süleyman Gönülateş, Turkey
Dr. Erkan Çetinkaya, Turkey	Dr. Mehmet Özal, Turkey	Dr. Taner Bozkuş, Turkey
Dr. Ertuğrul Gelen, Turkey	Dr. Mehmet Özdemir, Turkey	Dr. Tekin Çolakoğlu, Turkey
Dr. F. Tondnevis, Iran	Dr. Melih Salman, Turkey	Dr. Turgut Kaplan, Turkey
Dr. Fatih Çatıkkaş, Turkey	Dr. Metin Kaya, Turkey	Dr. Veleddin Balcı, Turkey
Dr. Fatih Yaşartürk, Turkey	Dr. Mithat Koz, Turkey	Dr. Wolfgang Baumann, Germany
Dr. Fatih Yenel, Turkey	Dr. Mikail Tel, Turkey	Dr. Wolfgang Buss, Germany
Dr. Fatma Filiz Çolakoğlu, Turkey	Dr. Muhsin Hazar, Turkey	Dr. Yağmur Akkoyunlu, Turkey
Dr. Feza Korkusuz, Turkey	Dr. Murat Akyüz, Turkey	Dr. Yalçın Taşmektepligil, Turkey
Dr. Gökhan Acar, Turkey	Dr. Murat Çilli, Turkey	Dr. Yaprak Kalemoğlu Varol, Turkey
Dr. Gülfem Ersöz, Turkey	Dr. Murat Kul, Turkey	Dr. Yaprak Pınar Kemaloğlu, Turkey
Dr. M. Sibel YAMAN, Turkey	Dr. Murat Sarıkabak, Turkey	Dr. Zaid Kazi Gasim
Dr. M. Zahit Serarslan, Turkey	Dr. Murat Taş, Turkey	
Dr. Mikail Tel, Turkey	Dr. Mutlu Türkmen, Turkey	

## Table Of Contents

**THE RELATION BETWEEN LIFE QUALITY AND OBESITY IN INDIVIDUALS DOING PHYSICAL ACTIVITY****Doi:** <http://doi.org/10.22282/ojrs.2018.26>*Gizem AKARSU, Erdal ZORBA, Metin YAMAN, Aytekin Hamdi BAŞKAN,  
Akan BAYRAKDAR, Merve KARAMAN*

1-19

**THE EFFECTS OF MORNING AND EVENING ENDURANCE TRAINING ON TSH AND FT4 HORMONES****Doi:** <http://doi.org/10.22282/ojrs.2018.27>*Sibel TETİK, Uğur DÜNDAR, Süleyman GÖNÜLATEŞ, Tansu YAAN, Kerim DÜNDAR*

20-29

**RELIGION AND SPORT STUDIES IN TURKEY: AN ANALYSIS OF THE ONLINE SOURCES IN TURKISH****Doi:** <http://doi.org/10.22282/ojrs.2018.28>*Yakub GELEN, Pınar YAPRAK KEMALOĞLU*

30-54

**ALIENATION IN TURKISH FOOTBALL: THE OPINION OF TURKISH SPORT PUBLIC ABOUT THE NUMBER OF FOREIGN FOOTBALL PLAYERS IN TURKISH FOOTBALL****Doi:** <http://doi.org/10.22282/ojrs.2018.29>*Yüce ARİF, Balcı VELİTTİN*

55-76

*ISSN: 2146-9598*  
*Doi Prefix:10.22282*





<http://doi.org/10.22282/ojrs.2018.26>

## THE RELATION BETWEEN LIFE QUALITY AND OBESITY IN INDIVIDUALS DOING PHYSICAL ACTIVITY

<sup>1</sup>Gizem AKARSU, <sup>1</sup>Erdal ZORBA, <sup>1</sup>Metin YAMAN <sup>2</sup>Aytekin Hamdi BAŞKAN,  
<sup>1</sup>Akan Bayrakdar, <sup>1</sup>Merve KARAMAN,

<sup>1</sup>Gazi University, Faculty of Sports Sciences

<sup>2</sup>Giresun University, Faculty of Sports Sciences

### ABSTRACT

This research was conducted to analyze the relation between life quality and obesity in individuals doing physical activity. This research aimed to study the relation between life quality and obesity in individuals doing physical activity and its population included individuals doing physical activity in Ankara province and its sampling consisted of 102 women and 108 men, a total of 210 persons, selected in B-Fit, Shapes for Women, Ankara Yiğit Youth and Sports Center, and Cross Fight VIP Sports Center by using the random sampling method. The research data were collected to measure general life quality of individuals by using the BMI body analysis method to determine the World Health Organization Life Quality Scale (Whoqol-Bref) and Body Mass Index. SPSS 23 package program was used to analyze the collected data.

The height average of the women was 1.66 and that of the men was 1.76. The body weight average of the women was 60.07kg and that of the men was 72.49kg. The BMI average of the women was 21,63 kg/height<sup>2</sup> and that of the men was 23,2 kg/height<sup>2</sup>. 21.6% of the women indicated that they did exercises for health, 31.4% said they did it for losing weight, 8.8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socializing, and 35.3% said they did it to improve their muscular tone. 6.9% of the women who were thin according to the BMI classification did exercises for health, 8.8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 24.5% said they did it to improve their muscular tone. 14.7% of the women whose

BMI classification was normal said that they did exercises for health, 12.7% said they did it to lose weight, and 10.8% said they did it to improve their muscular tone. 18.6% of the women who were overweight according to the BMI classification did exercises to lose weight.

14.8% of the men said they did exercises for health, 5.6% said they did it to gain weight, 2.8% said they did it for socialization, and 58.3% said they did it to improve their muscular tone. 0.9% of the men who were thin according to the BMI classification said they did exercises for health, 4.6% said they did it to gain weight, and 2.8% said they did it to improve their muscular tone. 11.1% of the men who were normal according to the BMI classification said that they did exercises for health, 2.8% said they did it to lose weight, 0.9% said they did it to gain weight, 2.8% said they did it for socialization, and 45.4% said they did it to improve their muscular tone. 2.8% of the men who were overweight according to the BMI index said that they did it for health, 15.7% said they did it to lose weight, and 10.2% said they did it to improve their muscular tone.

In conclusion, regular physical activity and nutrition program must be implemented to improve life quality and to be healthy. The conducted studies showed that individuals must maintain the two vital components lifelong by balanced nutrition and regular physical activities in order to have an ideal weight and to maintain this weight and to lead a healthy life. The benefits of long-term programmed physical activity have been proven by the conducted studies.

**Key Words:** Life quality, obesity, body mass index, physical activity



## **INTRODUCTION**

Human beings moved for the purposes of sheltering, feeding, and self-defense in natural conditions in the prehistorical periods. Individuals who could fulfill their basic needs used their movement skills to receive admiration, for approval, to have a profession, and to advance in their profession upon the change of living conditions (Ergül, 2017, p.1).

Conditions that improved with the aid of technologic tools improve life quality of individuals and enable performance of multiple works more easily (Vural, 2010, p.1). With the development of technology and increased industrialization, diversification and easing of transportation, utilization of many tools requiring less energy in daily life, popularization of computers and television, and increased time allocated for technological tools affect life quality positively, and they affect physical force and moving negatively (Aydanarğ, 2008, p.10). Whilst people met 90% of their energy needs 100 years ago, and this ratio dropped to 1% today, (Zorba, 2015, p.22). With the development of medical sciences, there is a substantial decrease in deaths due to infectious diseases that was experienced in the past and people became protected from many of illnesses. Hence, people have gained the chance to lead longer, quality and healthy lives (Zorba, 2015, p. 12). Whereas health was expressed as staying away from illnesses in the past and it is defined today as to encompass the developmental aspects (Zorba & Saygın, 2013, p.35).

The significance of the life quality concept increased with the increased length of life and many studies were conducted on this subject. Life quality is a subjective concept affected by socio-economic status, age, illness, profession, and health positively or negatively (Uğur & Eser, 2015, p. 121). The World Health Organization defines life quality as “the way persons perceive their status in connection with their goals, expectations, standards, and interests within the totality of the culture they live in and value judgements” (Zorba, 2008, p. 83).

Life quality is related with the bliss felt in life, the person’s ability to perceive and question oneself, the ability to determine his / her goals, and to improve oneself based on those goals (Gönülateş, 2016, p.22). In order to keep life quality high, it is necessary to keep balanced diet, turn physical activity into a life style, consume healthy food and drinks, abstain from cigarettes and alcohol, and have an ideal body weight (Demirtürk & Kaya, 2016, p.17).

Physical activity is the consumption of energy generated as a result of body movements by means of skeletal muscles. Physical activity may be diversified as aerobic, anaerobic, static or dynamic (Zorba, 2013, p. 1). Physical activity is not only beneficial for physical health but also for mental, social, and emotional health. In a study conducted on 18,766 women at the ages of 70-81 years old in the United States of America in 2001, it was seen that long-term regular exercises improved cognitive capacity (Ağaoğlu, 2015, p. 70). Individuals who adapt regular physical activity as their life philosophy become healthier and happier (Ergün, 2005, p. 137).

Whereas reasons including harsh living conditions, stressful work life, competitive life, and race against time affect life quality of individuals negatively (Gönülateş, 2016, p. 2), regular physical activity and healthy diet affect life quality positively (Ergün, 2005, p. 137). Turning mobility into a life style in society has become a government policy in many countries since it is a fact that protecting health and improving life quality by means of physical activity is feasible (Zorba, 2015, p. 16).

Regular physical activity enables balance establishment, extends the length of life, shortens reflex and reaction time, protects against infections, enables elderly to move independently, and enables children to gain healthy habits (Murathan, 2013, p. 32). Physical activity improves interpersonal communication. People meet other people, establish communication, and let off steam of life and work conditions by physical activity accompanied by socializing and moving (Vural, 2010, 26).

Whilst many conducted research found that women's length of life was longer than that of men, their life quality scores were lower. The reason for finding life quality level of women lower is that it is not only related with gender but also with their responsibilities and personal features (Ilhan et al, 2016, p. 63).

The Life Satisfaction Research that published the field study of TÜİK in Turkey is the first effective research conducted on the satisfaction and life quality in Turkey. The study was conducted on 6,714 persons by using the one on one survey and it has been conducted since 2003 and aims to measure the happiness of people in Turkey about their general life and public services.

According to the results of this research, individuals see health and then love as the source of their happiness. Following these values, money and work came first for men, and money, success and work came first for women (Şeker, 2011, p. 30).

Due to adapting a sedentary life style, lack of information about physical activity and healthy nutrition, and time problems due to intense life tempo, risks of catching diseases including obesity, hypertension, diabetes, osteoporosis, cancer, depression, etc. increase every passing day (İldız, 2014, p. 18). The World Health Organization defines obesity as “accumulation of body fat excessively or abnormally as to derange health” (Orhan & Bozbora, 2008, p. 1). Obesity is a chronic illness which spread throughout the world during the past ten years and needs to be treated. Insufficient physical activity, socio-cultural factors, hormonal and metabolic factors, excessive and wrong nutrition, age, income level, educational status, cigarette and alcohol habits, parity, psychological factors, and received medications are the most important factors leading to obesity (Yılmaz et al, 2016, p. 138). One of the greatest causes of obesity is genetics (25-40%). At least one or both of the parents of 65% of the obese people is overweight. Identical twins are similar in terms of being overweight (Yıldız, 2011, p. 6).

Whereas Body Mass Index (BMI) between 20-24.9 is considered normal, BMI between 25-29.9 is considered slightly overweight, BMI between 30-39.9 is considered overweight, and BMI 40 and higher is considered as excessively overweight in men, BMI between 19-22 is considered normal, BMI between 22.1-28 is considered slightly overweight, BMI between 28.1-36 is considered overweight, and BMI 36.1 and higher is considered excessively overweight in women (Zorba, 2014, p. 124). It is estimated that BMI of 315 million people in the world is higher than 30 kg/m<sup>2</sup> and BMI of 750 million people is between 25-30 kg/m<sup>2</sup> (Şanal, 2008, p. 68).

Despite obesity is an illness seen at any age, basal metabolic rate (BMO) drops and obesity rates increase with age, and it is seen more frequently in women in comparison to men (Yücel, 2008, p. 6). Energy need of individuals over the age of 25 years old drops 4% every 10 years. Hence, adults must consume the extra calories by either exercising or they must decrease their calorie intake (Zorba, 2014, p. 126).

Body fat rate is higher in women in comparison to men. There are essential fats as much as 3-5% of the body weight both in men and women. In addition, there are 5-8% gender specific fats in women (Zorba, 2013, p. 273). The ideal body fat ratio is 12-18% in men and it is 20-28% in women (Orhan & Bozbora, 2008, p. 289).

Obesity occurrence ratio by countries differs due to multiple reasons including culture, physical activity state, and nutrition. In a study conducted in 56 countries, the obesity rate of women was found higher than that of men in 46 countries. Similar to this study, the obesity rate in women is higher than that in men in Turkey as well. The obesity rate in men is 20.5% and it is 40% in women in Turkey. In developed countries, the obesity rate is high in sections with lower socio-economic status, and in developing and underdeveloped countries, the obesity rate is higher in the middle class and upper class (Hamurcu, Öner, Telatar, and Yeşildağ, 2015, p. 43). The reason behind it is that people in underdeveloped or developing countries consume carbohydrate-rich food and they eat more in some meals and skip meals. In developed countries, on the other hand, it stems from the inadequate mobility and wrong nutrition habits of people with low socio-economic status (Yücel, 2008, p. 15).

In Latin America and Caribbean countries, women gain more weight in comparison to men due to religious beliefs and socio-cultural factors. Obesity is accepted as a cultural factor in Jamaica and the obesity rate is 63.8%. Obesity rate is twice higher in women in comparison to men in African, South-East Asian, and East Mediterranean countries. In a study conducted in Egypt, Jordan, Iraq, Sudan, Bahrain, and Qatar, participation of women in physical activities was found low and hence their obesity level was found high due to reasons including inadequate facilities, transportation difficulty, social hindrances, lack of courage, beliefs and attitudes, environmental obstacles, and discrimination against women (Ergin, 2014, p. 49).

Obesity affects life quality negatively by leading to breakdown of interpersonal relationships, difficulty to find employment, loss of self-confidence, rejection in school and work environments, depression, decrease of physical capacity, power loss, decreased self-respect, and various illnesses (Gündüzoğlu et al, 2014, p. 64).

Obesity-related illnesses are listed as 57% Type II Diabetes, 30% gallbladder diseases, 17% coronary heart disease, 17% hypertension, 14% osteoarthritis, 11% uterus carcinoma, 11% breast cancer, and 11% colon cancer (Orhan & Bozbora, 2008, p. 28).

Furthermore, it may lead to multiple illnesses including prostate cancer, hirsutism, and ovarian cancer, fatty liver, asthma, increased preoperative and postoperative complication risks, dyspnea, and musculoskeletal system disorders (Yıldız, 2011, p. 9).

One of the most important reasons for the start of obesity at young ages is eating high calorie fast food starting in childhood (Ergün, 2005, p. 157). In a study analyzing the relation between obesity and life quality and self-respect in adolescents, it was found that high body mass index lowered life quality and affected self-respect and self-perception negatively. There are different variables affecting the concepts of life quality and self-respect but it is well known that obesity affects these concepts negatively in general sense (Işıklar, 2012, p. 90).

Physical education classes are not approached considerably in education and fail to aid school-age children gain sports awareness and sports habits. As a result, generations are raised with insufficient knowledge about physical education and sports, doing insufficient activities, and without developing these habits. However, physical education classes should be tools providing the most important setting for school-age children (Aydanarığ, 2008, p. 25). It may be recommended that physical education programs implemented in schools are made more entertaining, bicycling or walking to school is promoted, appropriate settings are prepared for participation of families in activities along with their children, children are aided to prepare materials related with various sports branches, and appropriate and safe settings are prepared for children to do physical activities (Bayrakdar, 2010, p. 47).

Participating and continuing in doing physical activities is effective for protection against many illnesses including obesity, lung and colon cancers, and cardiovascular illnesses. Moreover, it improves life quality and contributes to improving academic success and development of self-reliance and self-respect positively. Starting physical activity at young ages and continuing in the advancing ages protects children from gaining bad habits and enables them to socialize and contributes to continuation of healthy generations. Furthermore, physical activity improves muscular tone and bone density, enables tissues and organs in the body to work better, accelerates circulation, heals back pains and osteoporosis, increases oxygen consumption and accelerates metabolism and aids to have a healthy body (Ergül, 2017, p. 8).

Physical activity decreases health expenditures in addition to its physiological, sociological and psychological benefits in individuals. 9.4% of health expenditures in the USA in 1995 occurred as a result of obesity and immobility, and 6% of health expenditures in Canada occurred as a result of immobility (İzgi, 2011, p.20).

In addition to participation in physical activity and healthy nutrition, behavior change is necessary for obesity treatment. This behavior change encompasses information including being educated about diet and following oneself about physical activity (İzgi, 2011, p. 13).

This research was conducted to analyze the relation between life quality and obesity in individuals doing physical activity.

## **METHOD**

This study is important for enabling doing studies in different cities by keeping the sampling wider in the future studies and in terms of raising awareness in individuals participating in the survey and teaching them about the benefits of doing regular physical activity. This study aimed to analyze the relation between life quality and obesity in individuals doing physical activity and its population included individuals doing physical activity in Ankara province and its sampling included 102 women and 108 men, a total of 210 individuals, selected in B-Fit, Shapes for Women, Ankara Yiğit Youth and Sports Center, and Cross Fight VIP Sports by using the random sampling method. The research data were collected by using the BMI Body Analysis method to determine the World Health Organization Life Quality Scale (Whoqol-Bref) and Body Mass Index.

### **The World Health Organization Life Quality Scale (Whoqol-Bref)**

WHOQOL-BREF (the World Health Organization Life Quality Scale Short Form) consists of 26 items. It is made of four sections namely physical, social, environmental, and psychological sections. The participants were evaluated during the last 15 days and informed about answering. It is a Likert type scale. The scale is calculated by using the four sections' scores. The physical section assesses work capacity, vitality, mobility, sleep, medical care, and relaxation, etc. The social section assesses sexual life, inter-personal relationships. The environmental section assesses physical safety, financial resources, spare time activities, access

to health services, and transportation. The physical section assesses self-reliance, learning, religious belief, and concentration issues. WHOQOL-BREF scale does not have a total score, in other words, a single life quality score is not obtained by adding the scores of all sections.

The score in any section is important. A high score received in any section shows a better life quality. The first two items of the life quality scale are not included in scoring and evaluated separately. The original scale consists of 26 items and 27 items are used in its Turkish version. None of the 27 items used in its Turkish version is included in scoring and is evaluated separately. The average of the scores received in each item is used in the estimation of the section scores. Then, the average scores are multiplied with 4 and made comparable with WHOQOL-100 scale. It must be checked in score estimation first that the answers given to all of the items are between 1 and 5 and if there is a different value, these must be changed as blank. Subsequently, the scores of the answers for items 3, 4 and 6 are reversed since they indicate negativity (1=5, 2=4, 3=3, 4=2, 5=1). After these processes; the arithmetic average of the scores of items 3, 4, 10, 15, 16, 17, and 18 is estimated and it is multiplied with 4 for the calculation of the physical section scores (minimum 6 items must be answered completely). The arithmetic average of the scores of items 5, 6, 7, 11, 19, and 26 is estimated for the calculation of the psychological section scores and is multiplied with 4 (minimum 5 items must be answered completely). The social section score is calculated by multiplication of the arithmetic average of items 20, 21, and 22 with 4 (minimum 2 items must be answered completely). The score of the fourth section, which is the environmental section, is calculated by the multiplication of the arithmetic average of items 8, 9, 12, 13, 14, 23, 24, and 25 with 4 (minimum 6 items must be answered completely). Fidaner et al performed validity and reliability of WHOQOLBREF scale for Turkish language and society in 1998 and the scale was determined to be suitable for Turkish society. In the assessment of the scale's validity, the structure validity, synchronous validity, distinguishing validity, and the sections' significance for clarifying general health and life quality were assessed and the scale was determined to be valid in these sections. In the reliability assessment, the internal consistency reliability (Cronbach alpha) of all sections and areas of WHOQOL-BREF scale was calculated and it was found between 0.83 and 0.83 29. These values show that the reliability of the scale is superior (Fidaner, 1999).



### Body Mass Index (BMI)

It is defined by the great statistician Lambert Adolpe Jacques Quetelet in 1935. It is obtained by dividing body weight (kg) with the square of body height (meters) (Orhan & Bozbora, 2008, p. 2).

<b>BMI Men</b>	<b>BMI Women</b>
<b>20-24.9 normal</b>	19-22 normal
<b>25-29.9 slightly overweight</b>	22.1-25 slightly overweight
<b>30-39.9 overweight</b>	28.1-36 overweight
<b>40 and higher, excessively overweight</b>	36.1 and higher, excessively overweight

(Zorba, 2014, p.124).

### Data Analysis

SPSS 23 package program was used for the collected data analysis. One-way variance analysis ANOVA was used to compare men and women according to their BMI indexes. Tukey HSD test was performed to determine the differences that occurred as a result of ANOVA. Correlation analysis was made to study the relation between BMI and life quality. The purposes of the person to do physical exercises were assessed based on Crosstab analysis.



## FINDINGS

**Table 1. Arithmetic Average of BMI, Body Weight and Height Values of Men and Women and Standard Deviation Values**

	Gender	N	$\bar{x}$	SD
Height (cm)	Women	102	1,66	,04
	Men	108	1,76	,06
Body weight (kg)	Women	102	60,07	8,23
	Men	108	72,49	8,29
BMI (kg/height <sup>2</sup> )	Women	102	21,63	2,74
	Men	108	23,20	2,28

**Graph 1. Height, Body Weight and BMI averages of Women and Men**

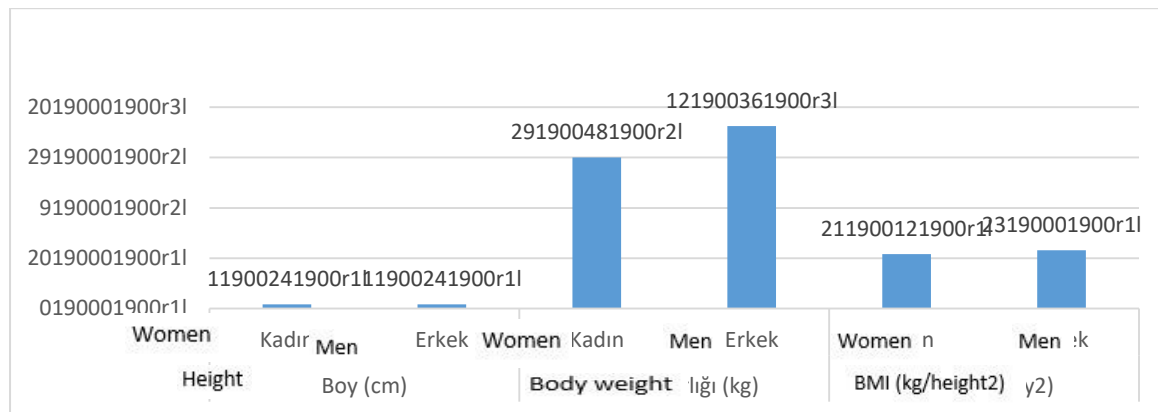


Table 1 and Graph 1 show that; the height average of the women was  $1,66 \pm 0,04$  and the height average of the men was  $1,76 \pm 0,06$ . The body weight average of the women was  $60,07 \pm 8,23$  kg and the body weight average of the men was  $72,49 \pm 8,29$  kg. The BMI average of the women was  $21,63 \pm 2,74$  kg/height<sup>2</sup> and the BMI average of the men was  $23,2 \pm 2,28$  kg/height<sup>2</sup>.

**Table 2. Life Quality Values of the Women by BMI Classification**

	BMI	N	$\bar{x}$	ss	F	p	Tukey
<b>How do you evaluate your life quality?</b>	Thin	44	3,63	,48	7,882	,001*	Thin and Overweight* Normal and Overweight*
	Normal	39	3,84	,53			
	Overweight	19	3,21	,78			
<b>How do you evaluate your health?</b>	Thin	44	3,77	,71	4,094	,020*	Thin and Overweight* Normal and Overweight*
	Normal	39	3,76	,58			
	Overweight	19	3,31	,47			
<b>Item 27</b>	Thin	44	2,36	,96	3,692	,028*	Thin and Overweight*
	Normal	39	1,97	,81			
	Overweight	19	1,73	,99			
<b>Physical Section</b>	Thin	44	16,89	1,54	11,284	,000*	Thin and Overweight* Normal and Overweight*
	Normal	39	16,77	1,34			
	Overweight	19	15,09	1,42			
<b>Psychological Section</b>	Thin	44	15,22	1,47	,653	,523	No difference
	Normal	39	15,31	1,51			
	Overweight	19	14,84	1,58			
<b>Social Section</b>	Thin	44	13,63	2,45	,696	,501	No difference
	Normal	39	14,11	2,57			
	Overweight	19	13,40	1,91			
<b>Environmental section</b>	Thin	44	13,62	1,32	1,309	,275	No difference
	Normal	39	13,47	1,44			
	Overweight	19	14,07	1,15			

\*p<0,05 statistically significant.

In Table 2, significant differences at the level of  $p<0,05$  were determined according to BMI classification in item 27 “how do you evaluate your life quality?, how pleased are you about your health?”. There were no differences found between the values of the psychological section, social section, and environmental section. Table 2 shows that the differences that occurred according to Tukey test stemmed from the thin and overweight, normal and overweight groups.

**Table 3. Life Quality Values of the Men according to BMI Classification**

	BMI	N	$\bar{x}$	sd	F	p	Tukey
<b>How do you evaluate your life quality?</b>	Thin	9	3,55	,52	5,660	,005*	Normal and Overweight*
	Normal	68	3,64	,56			
	Overweight	31	3,22	,61			
<b>How do you evaluate your health?</b>	Thin	9	4,11	,60	5,060	,008*	Normal and Overweight*
	Normal	68	4,10	,60			
	Overweight	31	3,64	,83			
<b>Item 27</b>	Thin	9	2,11	1,05	2,707	,071	No difference
	Normal	68	2,23	,83			
	Overweight	31	1,80	,83			
<b>Physical section</b>	Thin	9	16,63	1,00	1,163	,317	No difference
	Normal	68	16,92	1,27			
	Overweight	31	16,47	1,64			
<b>Psychological section</b>	Thin	9	14,59	1,98	1,402	,251	No difference
	Normal	68	15,50	1,53			
	Overweight	31	15,26	1,59			
<b>Social section</b>	Thin	9	14,51	1,55	,171	,843	No difference
	Normal	68	14,09	2,23			
	Overweight	31	14,27	2,55			
<b>Environmental section</b>	Thin	9	14,27	1,60	1,034	,359	No difference
	Normal	68	13,62	1,38			
	Overweight	31	13,87	1,34			

\*p<0,05 statistically significant.

In Table 3, significant differences at the level of  $p<0,05$  were found between the variables “how do you evaluate your life quality” and “how pleased are you about your health” according to BMI classification. There was no significant difference found between the values of the physical section, social section, environmental section, and psychological section of Item 27. Table 3 shows that the differences that occurred according to Tukey test stemmed from the normal and overweight groups.

**Table 4. The Purposes of the Women for Doing Exercises according to BMI Classification**

	Body Mass Index			
	Thin	Normal	Overweight	Total
For health	7	15	0	22
	6,9%	14,7%	,0%	21,6%
To lose weight	0	13	19	32
	,0%	12,7%	18,6%	31,4%
To gain weight	9	0	0	9
	8,8%	,0%	,0%	8,8%
To reduce stress level	1	0	0	1
	1,0%	,0%	,0%	1,0%
For socialization	2	0	0	2
	2,0%	,0%	,0%	2,0%
To increase muscular tone	25	11	0	36
	24,5%	10,8%	,0%	35,3%
Total	44	39	19	102
	43,1%	38,2%	18,6%	100,0%

$\chi^2 = 81,141$   $p < 0,001$

21.6% of the women said that they did exercises for health, 31.4% said they did it to lose weight, 8.8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 35.3% said they did it to improve their muscular tone. 6.9% of the women who were thin according to BMI classification said they did exercises for health, 8.8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 24.5% said they did it to improve their muscular tone. 14.7% of the women who were normal according to BMI classification said that they did exercises for health, 12.7% said they did it to lose weight, and 10.8% said they did it to improve their muscular tone. 18.6% of the women who were overweight according to BMI classification said that they did it to lose weight.

**Table 5. The Purposes of the Men for Doing Exercises according to BMI Classification**

	Body Mass Index			
	Thin	Normal	Overweight	Total
For Health	1	12	3	16
	,9%	11,1%	2,8%	14,8%
To lose weight	0	3	17	20
	,0%	2,8%	15,7%	18,5%
To gain weight	5	1	0	6
	4,6%	,9%	,0%	5,6%
For socialization	0	3	0	3
	,0%	2,8%	,0%	2,8%
To improve muscular tone	3	49	11	63
	2,8%	45,4%	10,2%	58,3%
Total	9	68	31	108
	8,3%	63,0%	28,7%	100,0%

$\chi^2 = 84,025$   $p < 0,001$

14,8% of the men said they did exercises for health, 18,5% said they did it to lose weight, 5,6% said they did it to gain weight, 2,8% said they did it for socialization, and 58,3% said they did it to improve their muscular tone. 0,9% of the men who were thin according to BMI classification said that they did it for health, 4,6% said they did it to gain weight, and 2,8% said they did it to improve their muscular tone. 11,1% of the men who were normal according to BMI classification said they did exercises for health, 2,8% said they did it to lose weight, 0,9% said they did it to gain weight, 2,8% said they did it for socialization, and 45,4% said they did it to improve their muscular tone. 2,8% of the men who were overweight according to BMI index said that they did it for health, 15,7% said they did it to lose weight, and 10,2% said they did it to improve their muscular tone.

**Table 6. Correlation Analysis Results of the Men**

	r	p
How do you evaluate your life quality?	-,253**	,008*
How pleased are you about your health?	-,263**	,006*
Item 27	-,173	,073
Physical section	-,092	,342
Psychological section	,041	,677
Social section	,000	,996
Environmental section	-,012	,905

According to BMI classification of the men, there was significant relation found at the level of  $p < 0,05$  between the variables “how do you evaluate your life quality” and “how pleased are you about your health”. There was no significant relation found between the other variables.

**Table 7. Correlation Analysis Results of the Women**

	r	p
How do you evaluate your life quality?	-,175	,079
How pleased are you about your health?	-,222*	,025*
Item 27	-,261**	,008*
Physical section	-,363**	,000*
Psychological section	-,072	,470
Social section	-,005	,961
Environmental section	,091	,363

According to BMI classification of the women, there was significant relation found at the level of  $p < 0,05$  between item 27, “how pleased are you about your health”, and physical section variables. There was no relation found between the variables of the psychological section, social section, and environmental section of “how do you evaluate your life quality” according to BMI.

## DISCUSSION AND CONCLUSION

Living conditions in the age we live in make people more sedentary. People move less due to reasons including intense work tempo, time spent in front of television and computer, and failure to spend spare times efficiently. Multiple health problems are seen in individuals who intake energy more than they spend and move very little and their body fat mass increases in line with it and obesity develop. The obesity rate in Turkey and the world has increased and

turned out to be the problem of our age. Obesity affects life quality negatively and influences health, work efficiency, happiness, and length of life of persons negatively.

Miller studied the height and weight changes, physical activity levels, and physical fitness of individuals at the age of 13 years old for 18-20 years, and determined that the individuals with normal BMI remained in the same rates during adulthood as well (Aydanarığ, 2008, p.43). Kayman et al conducted a research on both individuals with ideal weight and on individuals who were obese before and lost weight. As a result of this study, they showed that the individuals who continued doing exercises after they lost weight maintained their weight and only 30% of the individuals who did not do exercises maintained their weight (Orhan & Bozbora, 2008, p. 356).

Physical activity not only improves muscular tone but also enables protection of fat-free mass (Murathan, 2013, p.27). Sandberg and Wikblad conducted a study on the effect of diabetes on life quality in 102 Type II diabetic patients and 102 normal individuals. As a result of the study, it was concluded that diabetic disorder led to physical role restrictions and affected social and physical functionalities (Sönmez & Top, 2015, p.211).

In our study, the height average of the women was found 1,66 and the height average of the men was found as 1.76. The body weight average of the women was 60,07 kg and the body weight average of the men was 72,49 kg. The BMI average of the women was 21,63 kg/height<sup>2</sup> and the BMI average of the men was 23,2 kg/height<sup>2</sup>.

21.6% of the women said that they did exercises for health, 31,4% said they did it to lose weight, 8,8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 35,3% said they did it to improve their muscular tone. 6.9% of the women who were thin according to BMI classification said they did exercises for health, 8,8% said they did it to gain weight, 1% said they did it to reduce their stress level, 2% said they did it for socialization, and 24,5% said they did it to improve their muscular tone. 14.7% of the women who were normal according to BMI classification said they did exercises for health, 12,7% said they did exercises to lose weight, and 10,8% said they did exercises to improve their muscular tone. 18.6% of the women who were overweight according to BMI classification said that they did exercises to lose weight.

14,8% of the men said they did exercises for health, 18,5% said they did it to lose weight, 5,6% said they did it to gain weight, 2,8% said they did it for socialization, and 58,3%

said they did it to improve their muscular tone. 0.9% of the men who were thin according to BMI classification said that they did exercises for health, 4,6% said they did it to gain weight, 2,8% said they did exercises to improve their muscular tone. 11.1% of the men who were normal according to BMI classification said they did exercises for health, 2.8% said they did it to lose weight, 0,9% said they did it to gain weight, 2,8% said they did it for socialization, and 45,4% said they did it to improve their muscular tone. 2.8% of the men who were overweight said that they did exercises for health, 15.7% said they did it to lose weight, and 10,2% said they did it to improve their muscular tone.

In conclusion, regular physical activity and nutrition program must be implemented to improve life quality and to be healthy. The conducted studies showed that individuals should sustain the two important components lifelong in order to have an ideal weight and to maintain this weight and to lead a healthy life by balanced nutrition and doing regular physical activities. The conducted studies have proven the benefits of long-term programmed physical activity.

It may be recommended that the government develops policies that could direct individuals to physical activities and balanced nutrition for health and superior life quality and it utilizes the media tools efficiently for this purpose. It may be aimed that the benefits of physical activity are explained to individuals by means of both mass medium and social media. A conscious society enables raising conscious generations. Hence, it may be recommended that the education programs of school-age children are organized as to direct them to physical activities, work conditions of working parents are improved and their awareness is raised about nutrition and physical activity, conditions are improved for any individual to do exercises despite of their sociocultural differences in society, individuals' awareness is raised by offering nutrition training at business places and schools, and turning healthy nutrition and doing exercises into a course of conduct and continuance of it lifelong by using media.



## REFERENCES

- Ağaoğlu, S. (2015). Kadın sağlığı ve egzersiz. *Spor ve Performans Araştırmaları Dergisi*. 6(2), 67-72.
- Aydanarış, S. (2008). *Ankara ilinde yaşayan 18 yaş üzerindeki bireylerin fiziksel aktivite ve egzersize yaklaşımlarının belirlenmesi*. (Yüksek lisans tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.
- Bayrakdar, A. (2010). *Çocuklarda fiziksel aktivite düzeyleri ve beden kitle indeksinin değerlendirilmesi*. (Yüksek lisans tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.
- Demirtürk, F. & Kaya, M. (2016). Sigara içen sedanterlerle sigara içen ve düzenli egzersiz alışkanlığı olan olguların yaşam kaliteleri. *Journal of Contemporary Medicine*. 6(4), 16-24.
- Ergin, A. (2014). Obezitenin kadın sağlığı ve toplumsal cinsiyet açısından değerlendirilmesi. *KASHED*. 1(1), 41-54.
- Ergül, O. (2017). *12-14 yaş grubu ergenlerde ders dışı etkinlikler ve egzersiz kapsamında uygulanan fiziksel aktivite programının ilköğretim öğrencilerinin yaşam kalitesi üzerindeki etkileri*. (Doktora tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.
- Ergün, N. (2005). *Overweightlık (Obezite) ve Sağlıklı Beslenme*. Denizli: Bilal Ofset.
- Fidaner, H. (1999). WHOQOL-100 ve WHOQOL-BREF'in psikometrik özellikleri. *3P Dergisi*.
- Gönülateş, S. (2016). *Farklı ülkelerde rekreatif katılımın yaşam kalitesi üzerine etkisi*. (Doktora tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.
- Gündüzoğlu, N. , Fadiloğlu, Ç. & Yılmaz, C. (2014). Obezilere özgü yaşam kalitesi ölçeğinin geçerlilik ve güvenilirliğinin incelenmesi. *Anadolu Psikiyatri Dergisi*. 15, 63-68.
- Hamurcu, P. , Öner, C. , Telatar, B. & Yeşildağ, Ş. (2015). Obezitenin benlik saygısı ve beden algısı üzerine etkisi. *Türkiye Aile Hekimliği Dergisi*. 19(3). 122-128.
- Ildız, M. (2014). *14-18 yaş lise öğrencilerinin beslenme alışkanlıkları, fiziksel benlik algısı, beden kompozisyonu ve fiziksel aktivite düzeylerinin incelenmesi*. (Yüksek lisans tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.
- Işıklar, A. (2012). Ergenlerde yaşam kalitesi ve benlik saygısı düzeyinin cinsiyet ve obezite değişkenleri açısından incelenmesi. *Fırat Üniversitesi Sosyal Bilimler Dergisi*. 22(2), 84-92.
- İlhan, N. , Arpacı, S. , Havaoğlu, D. , Kalyoncuoğlu, H. & Sarı, P. (2016). Huzurevinde yaşayan yaşlıların yaşam kalitesi ve yaşam kalitesini etkileyen faktörler. *Clinical and Experimental Health Sciences*. 6(2), 56-65.

İzgi, H. (2011). *Düzenli spor yapan ve yapmayan çalışan yetişkin kadınların beslenme alışkanlıklarının ve antropometrik ölçümlerinin incelenmesine yönelik bir çalışma*, (Yüksek lisans tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.

Murathan, F. (2013). *Üniversite öğrencilerinde obezite sıklığı, fiziksel aktivite düzeyi ve sağlıklı yaşam biçimi davranışlarının incelenmesi*. (Doktora tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.

Orhan, Y. & Bozbora, A. (2008). *Obezite*. İstanbul: Medikal.

Sönmez, S. & Top, M. (2015). Ağız ve diş sağlığında yaşam kalitesi: Obezitenin yaşam kalitesi üzerine etkisi. *Sosyal Güvenlik Dergisi (SGD) Journal of Social Security (SGD)*, 5(2), 189-217.

Şanal, E. (2008). *Aerobik ve kombine aerobik dirençli egzersizlerin aşırı kilolu ve obez kadın ve erkeklerde vücut kompozisyonu, kas kuvveti, emdurans, kan basıncı, fiziksel yaşam kalitesi ve duyguduruma etkisi*. (Uzmanlık tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.

Şeker, M. (2011). *İstanbul'da Yaşam Kalitesi Araştırması*. İstanbul: Express.

Uğur, Y. & Eser, E. (2015). Manisa ilinde yarıkentsel bir bölgede yaşayan erişkin kadınlarda obezite ve sosyoekonomik durumun yaşam kalitesine etkisinin değerlendirilmesi. *TAF Preventive Medicine Bulletin*. 14(2), 121-130.

Vural, Ö. (2010). *Masa başı çalışanlarda fiziksel aktivite düzeyi ve yaşam kalitesi arasındaki ilişkinin incelenmesi*. (Yüksek lisans tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.

Yıldız, H. (2011). *14-18 yaş grubu gençlerin vücut yağ yüzdeleri, vücut kitle indeksleri, fiziksel aktivite ve beslenme alışkanlıklarının araştırılması*. (Yüksek lisans tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.

Yılmaz, F. , Demirel, G & Kumsar, A. (2016). Çay, obezite ve kadın. *Journal Of Contemporary Medicine*, 6(2), 137-146.

Yücel, N. (2008). *Kilolu ve obez kadınlarda obezite ve benlik saygısı ilişkisinin değerlendirilmesi*. (Yüksek lisans tezi). <https://tez.yok.gov.tr/UlusalTezMerkezi> sayfasından erişilmiştir.

Zorba, E. & Saygın, Ö. (2013). *Fiziksel Aktivite ve Fiziksel Uygunluk*. Ankara: Fırat

Zorba, E. (2008). *Yaşam Kalitesi ve Fiziksel Aktivite*. 10. Uluslararası Spor Bilimleri Kongresi. 23-25 Ekim, 82-85.

Zorba, E. (2014). *Yaşam Boyu Spor*. Ankara: Atalay

Zorba, E. (2015). *Herkes İçin Yaşam Boyu Spor*. Ankara: Fırat.



<http://doi.org/10.22282/ojrs.2018.27>

## THE EFFECTS OF MORNING AND EVENING ENDURANCE TRAINING ON TSH AND FT4 HORMONES

**Sibel TETİK<sup>1</sup>, Uğur DÜNDAR<sup>2</sup>, Süleyman GÖNÜLATEŞ<sup>3</sup>,  
Tansu YAAN<sup>4</sup>, Kerim DÜNDAR<sup>5</sup>**

T.A., Erzincan University School of Physical Education and Sports, s\_tetik55@hotmail.com<sup>1</sup>

Ass. Prof., Pamukkale University Faculty of Sport Sciences, udundar60@hotmail.com<sup>2</sup>

Ass. Prof., Pamukkale University Faculty of Sport Sciences, sgonulates@hotmail.com<sup>3</sup>

Lec., Pamukkale University Faculty of Sport Sciences, tyaan@hotmail.com<sup>4</sup>

Senior., Dokuz Eylül University Fine Arts Faculty, krmdndr@gmail.com<sup>5</sup>

### ABSTRACT

This study was carried out in order to determine the effects of endurance training during the morning hours and endurance training during the evening hours on TSH and FT4 hormones. 38 students volunteered to participate in the study. The subjects were divided into morning, evening and control groups and their hormone levels were checked with the blood samples given at 07.00 in the morning and 16.00 in the evening. In the evaluation of durability, "Conconi Test" was applied as exercise protocol. After 6 weeks of exercise protocol, blood samples were taken and the "conconi test" protocol was reapplied. IBM SPSS 21.0

package program was used to analyze the data. Descriptive Statistics were used to determine the distributions of the data, Pearson Correlation analysis was used to examine inter-variable relations, and Anova was used to determine differences between groups. The results are presented as mean and standard deviation, with a  $P < 0.05$  significance. As a result, there was no significant difference between the comparison groups between morning, evening and control groups. It was determined that the relationship between TSH and FT4 was significant in the relation between variables.

**Key Words:** Hormone, Thyroid, Durability

## **INTRODUCTION**

It is a known fact that TSH and FT4 express freely circulating thyroid hormones, TSH is a sign of thyroid failure and FT4 is directly related to thyroid hormone. Hormonal systems seem to be associated with both short-term hemostatic control and long-term cellular adaptations. Some studies have also considered the effects of aerobic and anaerobic sporting practices to determine the hormonal effects of different training variables on the organism (Dağlıoğlu ve Hazar 2009). The increase in the rate of thyroid hormone secretion in people participating in physical training programs can be explained by the increase in TSH (thyroid stimulating hormone) levels of exercise (Galbo ve ark 1977). There are 3 iodine atoms in thyroxine (T4) and 4 iodine atoms in triiodothyronine (T3). The Sufficient amount of thyroid hormone production is due to external nutrition and removal of iodine. In general, thyroid hormones have an increasing effect on metabolic rate, oxygen consumption and heat production. Releasing of excess thyroid hormone is called "hyperthyroidism". In this case, attenuation, nervousness, increase in heart rate, lack of warmth, weakness, insomnia and fatigue are observed (Samuel and Toriola 1988). Thyroid hormones enable to regulation of carbohydrate and lipid metabolism by increasing the use of O<sub>2</sub> of body tissue cells (Who 1985). Thyroid hormones influence basal metabolism (Açıkada and Ergen 1990). The increase in hormone release of thyroxine (T4) and triiodothyronine (T3) in exercise relates to regulating energy balance in exercise (Sepulveda et al 1989, Rubai ve Moddy 1991, Kuter and Öztürk 1992). The Thyroid gland hormones in exercise increases the use of carbohydrates, provides intensive hypertrophy by increasing protein synthesis, provides glucose and glycosylation to increase glucose utilization in exercise, increases durability by increasing mobilization and use of free fatty acids. Thus, the thyroid gland hormones thyroxine and triiodothyronine increase in long-term, intense exercises and this increase is related to the provision of energy balance (Takashi et al., 1992).

## MATERIAL AND METHOD

38 students who studied at Denizli Pamukkale University Sports Science and Technology High School have voluntarily participated in the research. The subjects were divided into morning, evening and control groups. Their blood tests were checked before the exercise started in the morning and evening and immediately after the end of the exercise. Bloodletting and blood tests were carried out at the central laboratory of Pamukkale University Medical Faculty Hospital. To determine the body fat percentages of subjects; The skinfold thickness from the biceps, triceps, suprapapula and suprailiac parts was measured with the Skinfold caliper (Holtain Ltd. UK) and the lengths were measured with the Holtain anthropometry set (Holtain Ltd. UK). Body fat measurements were calculated using the formula of Durnin and Womersley (Durnin 1974). The Conconi test was carried out to determine the durability performance. 15-20 minutes warming and stretching activities were carried out during the application of the test and during the exercise period (Renstrom, 2000). In this process, it is aimed to increase body heat, accelerate metabolic processes and optimize muscle-cardiovascular metabolism (Bishop, 2003). During the application of the test, this test, which was carried out circularly with the help of 5 signs located 20 m between each other, was started at a speed of 8.5 km / h. and an increase of 0,5 km/h was made every 200 m, in a one running speed . The test was continued until the athletes voluntarily terminated the test or until they missed two more signals at two successive 20 m. The signal sound was set using a laptop and a CD (Conconi, 1982, Conconi, 1996). During the Conconi test, watches that record the heart rate RS 800 (Polar Vantage NV, Polar Electro Oy, Finland) were given to sportsmen and the HR values of the athletes were recorded during the test. After the test, the results were transferred to a computer and the average CAD corresponding to each speed was determined. By going out of these speeds; They did extensive endurance training to improve the endurance performances of the athletes by 3x10 min 2 min rest and pulse 150, Intensive durability as 1x20 min pulse 165, 3x6-8 min. 3-5 min. Pulse with rest: 178 Widespread intervertebral extreme durability for 3 days a week for 6 weeks, and 1 day is intense endurance and extensive interval endurance training. The blood samples of the subjects taken before the study were analyzed and after 6 weeks the same tests were repeated at the end of the study. IBM SPSS (Statistical Package for the Social Sciences) 21.0 package program was used to analyze the data. Descriptive Statistics (Explore) test was performed to determine whether the data are

distributed normally (parametric) or nonparametric (nonparametric). Pearson Correlation analysis was used to examine relationships between variables, and Anova (post-hocTukey) was used to determine differences between groups. The results have been presented as mean (X) and standard deviation (SS), with a  $P < 0.05$  significance.

## FINDINGS

**Table: 1 The Comparison of Intergroup Variables**

	1 <sup>st</sup> Group(Morning)		2 <sup>nd</sup> Group(Evening)		3 <sup>rd</sup> Group(Control)		F	P
	X	SS	X	SS	X	SS		
Gender	1,3571 <sup>a</sup>	,13289	1,3333 <sup>a</sup>	,14213	1,1667 <sup>a</sup>	,11237	,622	,543
Age	22,3571 <sup>a</sup>	,40065	23,3333 <sup>a</sup>	,85576	22,3333 <sup>a</sup>	,75210	,699	,504
Height	168,4286 <sup>a</sup>	2,27194	169,0000 <sup>a</sup>	1,88696	169,5000 <sup>a</sup>	2,26468	,063	,939
Weight	63,5429 <sup>a</sup>	3,42906	58,3333 <sup>a</sup>	2,60839	59,0167 <sup>a</sup>	2,57452	,950	,397
Bmi	22,1714 <sup>a</sup>	,84395	20,3417 <sup>a</sup>	,57964	20,4417 <sup>a</sup>	,45418	2,441	,102
Fat a	15,0500 <sup>a</sup>	1,61350	15,4500 <sup>a</sup>	1,76363	15,6833 <sup>a</sup>	1,47617	,040	,961
Fat b	14,6571 <sup>a</sup>	1,44772	13,8667 <sup>a</sup>	1,28260	15,9333 <sup>a</sup>	1,42432	,528	,594
Running Speed a	11,6424 <sup>a</sup>	,41413	11,0833 <sup>a</sup>	,41210	11,5417 <sup>a</sup>	,33404	,570	,571
AnaHr a	183,2857 <sup>a</sup>	1,69495	186,9167 <sup>a</sup>	1,64436	184,2500 <sup>a</sup>	,76994	1,632	,210
Running Speed b	11,8000 <sup>a</sup>	,41178	11,2000 <sup>a</sup>	,36845	11,0917 <sup>a</sup>	,32133	1,081	,350
AnaHr b	181,5714 <sup>a</sup>	1,70878	186,8333 <sup>a</sup>	1,71373	184,5833 <sup>a</sup>	,98825	3,034	,061
Topmes a	1807,1429 <sup>a</sup>	236,84378	1666,6667 <sup>a</sup>	211,53599	1850,0000 <sup>a</sup>	151,50758	,204	,817
Topmes b	2098,5714 <sup>a</sup>	242,61818	1805,8333 <sup>a</sup>	202,61345	1791,6667 <sup>a</sup>	128,78119	,760	,475
FT4	1,0557 <sup>a</sup>	,03498	1,0283 <sup>a</sup>	,02806	,9992 <sup>a</sup>	,02271	,916	,409
TSH	2,2306 <sup>a</sup>	,57807	2,5513 <sup>a</sup>	,29942	1,8245 <sup>a</sup>	,20485	,713	,497
FT4 2	1,0964 <sup>a</sup>	,04585	1,0325 <sup>a</sup>	,01935	1,0175 <sup>a</sup>	,02082	1,662	,204
TSH 2	1,4717 <sup>a</sup>	,21104	2,1660 <sup>a</sup>	,29812	1,6479 <sup>a</sup>	,17031	2,429	,103

<sup>a,b</sup>, The difference between groups with different letters in the same line is significant ( $p < 0.05$ )

When the table was examined, It was found that the difference between the groups was not significant in all of the variables of Gender, Age, Height, Weight, Bmi (Body Mass Index), Fat a, Fat b, Running Speed a, AnaHr (Anaobicobic Heart Rate), Running Speed b, AnaHr b, Topmes a (Total Distance), Topmes b, FT4, TSH, FT4 2, TSH 2. ( $P < 0.05$ )

Table: 2 Examining the relationship between variables.

									Runn ing Spee d		Top mes a	runni ng Spee d b	Ana Hr b	Top mes b					
	Grou p	Gend er	Age	Heig ht	Weig ht	Bmi	Fat a	Fat b	a	Hr a	a	b	b	b	FT4	TSH	FT4 2	TSH 2	
Grou P	C Sig. N	1 38	-,170 38	,004 38	,060 38	-,185 38	-,299 38	,047 38	,103 38	-,038 38	,088 38	,020 38	-,225 38	,232 38	-,183 38	-,223 38	-,107 38	-,279 38	,101 38
Gend er	C Sig. N	-,170 38	1 38	,044 38	,552* 38	,689* 38	,566* 38	-,495* 38	-,527* 38	,691* 38	,198 38	,631* 38	,727* 38	,194 38	,646* 38	,432* 38	,007 38	,213 38	,237 38
Age	C Sig. N	,004 38	,044 38	1 38	-,140 38	-,031 38	,053 38	-,030 38	-,061 38	-,209 38	,023 38	-,172 38	-,203 38	,129 38	-,175 38	,098 38	-,138 38	,006 38	-,137 38
Heig ht	C Sig. N	,060 38	,552* 38	-,140 38	1 38	,777* 38	,362* 38	-,208 38	-,240 38	,470* 38	-,005 38	,383* 38	,402* 38	-,063 38	,356* 38	,086 38	-,185 38	-,115 38	,169 38
Weig ht	C Sig. N	-,185 38	,689* 38	-,031 38	,777* 38	1 38	,864* 38	,015 38	,004 38	,445* 38	,004 38	,292 38	,422* 38	-,107 38	,305 38	,336* 38	-,182 38	,113 38	,064 38
Bmi	C Sig. N	-,299 38	,566* 38	,053 38	,362* 38	,864* 38	1 38	,216 38	,224 38	,274 38	,013 38	,116 38	,289 38	-,112 38	,154 38	,441* 38	-,129 38	,249 38	-,016 38
Fat a	P.Cor re. Sig. N	,047 38	-,495* 38	-,030 38	-,208 38	,015 38	,216 38	1 38	,974* 38	-,519* 38	-,148 38	,585* 38	,549* 38	-,292 38	,589* 38	-,066 38	-,002 38	-,056 38	-,062 38
Fat b	C Sig. N	,103 38	-,527* 38	-,061 38	-,240 38	,004 38	,224 38	,974* 38	1 38	-,495* 38	-,183 38	,582* 38	,554* 38	-,322* 38	,603* 38	-,067 38	-,032 38	-,045 38	-,110 38

Runni C ng speed a		-,038	,691* .	-,209	,470* .	,445* .	,274	-,519* .	-,495* .	1	,069	,904* .	,946* .	,022	,881* .	-,037	,074	-,021	,111
Sig.		,820	,000	,208	,003	,005	,096	,001	,002		,679	,000	,000	,896	,000	,824	,659	,898	,509
N		38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
Ana Corre. Hr a		,088	,198	,023	-,005	,004	,013	-,148	-,183	,069	1	,179	,047	,881* .	,155	,078	-,187	-,209	,288
Sig.		,600	,234	,893	,976	,981	,940	,376	,270	,679		,281	,781	,000	,354	,641	,260	,208	,080
N		38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
Top C mes a		,020	,631* .	-,172	,383* .	,292	,116	-,585* .	-,582* .	,904* .	,179	1	,878* .	,181	,970* .	-,108	,104	-,101	,142
Sig.		,904	,000	,303	,018	,075	,487	,000	,000	,000	,281		,000	,276	,000	,518	,534	,547	,397
N		38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
Runn C ing Spee d b		-,225	,727* .	-,203	,402* .	,422* .	,289	-,549* .	-,554* .	,946* .	,047		,878* .	1	,024	,904* .	,048	,118	,079
Sig.		,174	,000	,221	,012	,008	,079	,000	,000	,000	,781	,000		,884	,000	,775	,479	,637	,574
N		38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
Ana C Hr b		,232	,194	,129	-,063	-,107	-,112	-,292	-,322* .	,022	,881* .	,181	,024	1	,146	,143	-,173	-,148	,251
Sig.		,161	,244	,440	,706	,522	,505	,076	,049	,896	,000	,276	,884		,383	,391	,299	,376	,128
N		38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
Top C mes b		-,183	,646* .	-,175	,356* .	,305	,154	-,589* .	-,603* .	,881* .	,155	,970* .	,904* .	,146	1	-,048	,113	-,050	,135
Sig.		,273	,000	,294	,028	,062	,356	,000	,000	,000	,354	,000	,000	,383		,773	,501	,764	,421
N		38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
FT4 C		-,223	,432* .	,098	,086	,336* .	,441* .	-,066	-,067	-,037	,078	-,108	,048	,143	-,048	1	,026	,715* .	,025
Sig.		,178	,007	,559	,609	,039	,006	,693	,691	,824	,641	,518	,775	,391	,773		,879	,000	,883
N		38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
TSH C		-,107	,007	-,138	-,185	-,182	-,129	-,002	-,032	,074	-,187	,104	,118	-,173	,113	,026	1	,546* .	,185
Sig.		,521	,967	,407	,267	,274	,439	,991	,849	,659	,260	,534	,479	,299	,501	,879		,000	,267
N		38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
FT4 P.Cor 2 re.		-,279	,213	,006	-,115	,113	,249	-,056	-,045	-,021	-,209	-,101	,079	-,148	-,050	,715* .	,546* .	1	-,224
Sig.		,090	,199	,970	,492	,501	,131	,740	,789	,898	,208	,547	,637	,376	,764	,000	,000		,177



N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
TSH C	,101	,237	-,137	,169	,064	-,016	-,062	-,110	,111	,288	,142	,094	,251	,135	,025	,185	-,224	1
2 Sig.	,547	,152	,414	,310	,705	,925	,709	,511	,509	,080	,397	,574	,128	,421	,883	,267	,177	
N	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

When the table is examined, The relationship gender variable is significant at 0.01 level with Height, Weight, Bme, Fat a, Fat b, Running Speed a, Running Speed b, Topmes a, Topmes b, FT4. The height variables has significant relationship at 0,01 level with Gender, Weight, Running Speed a; and at 0,05 with Bme, Tompes a, Tompes b, Running Speed b. The Weight variables has significant relationship at 0,01 level with Gender, Height, Bme, Running Speed, Running Speed b and at 0,05 with FT4. The relationship of Bme variables with Gender, Wiegth and FT4 is significant at 0,01 level; with height at 0,05 level. The relationship of Fat a variables with Gender, Fat b, Running Speed a, Running Speed b, Topmes a, and Tompes b is significant at 0.01 level. The relationship of Fat b variables with Gender, Fat a, Running Speed a, Running Speed b, Topmes a, Topmes p is significant at 0.01 level; with AnaHr b is significant at 0.05 level. The relationship of Running Speed a with Gender, Height, Weight, Fat a, Fat b, Running Speed b, Topmes a, Topmes b is significant at 0.01 level. The relationship of Running Speed b with Gender, Weight, Fat a, Fat b, Running Speed a, Topmes a, Topmes b is significant at 0.01 level; with Height there is a significant relationship at 0.05 level. The relationship of AnaHr a variables is significant at 0.01 level with AnaHr b. The relationship of AnaKah b variables is significant at 0.01 level with AnaKah a; at 0.05 level with Fat b. The relationship of Topmes a variables is significant at 0.01 level with Gender, Fat a, Fat b, AnaHr a, AnaHr b, Topmes b; at 0.05 level with Height. The relationship of Topmes b variables is significant at 0.01 level with Gender, Fat a, Fatb, Running Speed a, Running Speed b, Topmes a; at 0.05 with Height. The relationship of TSH variables is significant at 0.01 level with FT4 2. The relationship of FT4 variables is significant at 0.01 level with Gender, Bmi, FT4 2; at 0.05 with Weight. The relationship of FT4 2 variables is significant at 0.01 level with TSH, FT4. When the Group, Age and TSH 2 variables were examined, it was determined that there was no significant relationship with other variables.

## DISCUSSION AND CONCLUSION

Thyroid hormones are an important regulator of energy metabolism and there is evidence that there is an increase in the release of physical exercise (Günay 1999). Exercises and workouts cause an increase or decrease of certain hormones in the blood levels. During exercise, the level of thyroid hormone changes depending on the intensity and duration of the exercise. T3, T4 increase in long-term heavy exercise (Fox ve ark. 1988). Training increased the metabolism of tissues and increased thyroid hormones had the same effect, so it was investigated whether the training had an effect on thyroid functions and thus basal metabolism and It was found that resting metabolism did not change with training. For athletes, T4 (tyrosine) catabolism and also secretion have been shown to increase with exercise. In other words, both T4 use and hemodialysis increase in exercise (Akgün 1989). In a study done before, the anaerobic power test significantly increased the Taekwondo group values while it the did not affect TSH levels of football and cycling groups (Çakmakcı 2013). In the same study, the anaerobic power test has showed that the athletes of the cycling group did not affect the FT4 hormone levels, but the football and taekwondo group significantly increased the hormone levels (Çakmakcı 2013). Mastorakos and Pavlatou (2005) reported that the level of TSH has fallen immediately after exercise and that the decrease continued and reached its lowest level 24 hours after exercise. It was also found that TSH, T3 and T4 hormone levels were elevated after the marathon run (Sander ve Rocker 1988). As we have seen in literature surveys, there are many studies that support our work and otherwise. In our study, there was no significant difference between the comparison groups between morning, evening and control groups; it was determined that the relationship between TSH and FT4 was significant in the relation between variables. As a result, it is seen that the values of FT4 measured by the second measurement, that is, after the training, are related to the TSH hormone. Considering this aspect, the meaningful relationship with posttraumatic FT4 measurement is thought to be an indicator of the balance role of the organism after returning to normal, considering that the TSH hormone has functions such as regulation of body temperature and heart rate.

**RESOURCES**

1. Açıkada, Ç. Ergen, E. (1990). Bilim ve Spor. *Büro-Tek Matbaacılık, Ankara*, 17 (2).
2. Akgün N. Egzersiz Fizyolojisi, 3. Baskı, I. Cilt, Gökçe Ofset Matbaacılık, Ankara, 1989 : 181-190.
3. Bishop, D. (2003). Warm Up II. Performance changes following active warm up and how to structure the warm up. *Sports Medicine*, 33, 483-498.
4. Conconi, F., Ferrari, M., Ziglio, P. G., Droghetti, P., Codeca, L.: Determination of the aerobic threshold by a noninvasive field test in runners. *J. Appl. Physiol.*, 52: 869–873, 1982.
5. Conconi, F. Grazi, G. Casoni, I. (1996). The Conconi test: methodology after 12 years of application. *Int J Sports Med.*, 17, 509-519.
6. Çakmakcı, S. (2013). Farklı Branşlardaki Sporcularda Anaerobik Egzersizin Bazı Hormon Düzeylerine Etkisi. *Yüksek Lisans Tezi, Selçuk Üniversitesi Sağlık Bilimleri Enstitüsü, Konya*.
7. Dağlıoğlu, Ö. Hazar, M. (2009). Yüksek Hız Koşu Yüklemesinin Bazı Vücut Hormonlarının Ani Değişimine Etkisi. *Atabesbd*, 11 (2), 35-45.
8. Durnin, J.V.A.G. Womersly, J. (1974). Body Fat Assessed From Total Body Density and its Estimation From Skinfold Thickness: Measurements on 481 Men And Women Aged From 16 to 72 Years. *Br.J.Nutr*, 32, 77-97.
9. Fox, E.L. Bowers, R.W. Foss, M.L. (1988). The Physiological Basis Of Physical Education And Athletics. 4 Ed. Wn. C. Brown Publishers, New York
10. Galbo, H. Hummer, L. Petersen, I.B. Christensen, N.J. Bie, N. (1977). Thyroid And Testicular Hormone Responses To Graded And Prolonged Exercise In Man. *J. Appl Physiol* 36, 101-6.
11. Günay, M. (1999). Egzersiz Fizyolojisi. *Kültür Ofset Ankara*, 1851.

12. Kuter, M. Öztürk, F. (1992). Bir Erkek Basketbol Takımının Fiziksel Ve Fizyolojik Profili. *Spor Bilimleri II. Ulusal Kongresi Bildirileri, H.Ü. Spor Bilimleri ve Teknolojisi Yüksek Okulu Yayımı, Ankara*, 221–226.
  13. Mastorakos, G. Pavlatou, M. (2005). Exercise as a stress model and the interplay between the hypothalamus-pituitary-adrenal and the hypothalamus-pituitary-thyroid axes. *Horm Metab Res*, 37(9), 577-84.
  14. Renstrom, P. Kannus, P. (2000). Prevention of injuries in endurance athletes. In: *Endurance in Sport. R.J. Shepard Po Astrand (eds), Blackwell Science Ltd, Bodmin England*, 474.
  15. Rubai, B.Y. Moddy, J.M. (1991). Effects Of Respiration On Size and Function Of The Athletic Heart. *The Journal of Sports Medicine and Physical Fitness*, 2, 257-264.
  16. Samuel, A.A. Toriola, A.L. (1988). Effects Of Diferent Runnig Programmes On Body Fat And Blood Pressure In Schoolboys Aged 13-17 Years. *The Journal of Sports Medicine and Physical Fitness*, 3, 267-273.
  17. Sander, M. Rocker, L. (1988). Influence Of Marathon Running On Thyroid Hormones. *Int. J Sports Med.*, 9 (2), 123-6.
  18. Sepulveda, F. Oliveira, E. Oliveira, G. Macedo, E. Maciel, L. Costa, O. Oliveira, A. Freitas, F. M. (1989). Mode Echocardiography Study Of Twenty-Two Top Class Racing Syclists. *The Journal of Sport Medicine and Physical Fitness*, 2, 136-140.
  19. Takashi, A. Yasuo, K. Shıgekı, I. Hırdakı, K. Tetsud, F. (1992). Isometric and Isokinetic Knee Joint Performance In Japanese Alpine Ski Racers. *The Journal of Sport Medicine and Physical Fitness*, 4, 353-357.
  20. Who. (1985). Energy and protein reguirements, *Technical Report Series World Health Organization Geneva*, 724.
-



<http://doi.org/10.22282/ojrs.2018.28>

## RELIGION AND SPORT STUDIES IN TURKEY: AN ANALYSIS OF THE ONLINE SOURCES IN TURKISH

**Yakub GELEN<sup>\*</sup>, Pınar YAPRAK KEMALOĞLU<sup>\*\*</sup>**

Gazi University Faculty of Sport Sciences, Ankara, Turkey

\*[yakub.gelen.9@gmail.com](mailto:yakub.gelen.9@gmail.com), \*\*[pinaryaprak@gazi.edu.tr](mailto:pinaryaprak@gazi.edu.tr)

### ABSTRACT

The online databases have been increasingly become a primary source of information especially for an initial research. The aim of this study was to identify the religion and sport studies (RSS) available in Turkish either as an abstract or as a full text via online search. The studies in which the sport and religion topics were found as a primary focus were included in the current study. The electronic databases [Web of Science, Google Akademik, ULAKBIM and National Thesis Electronic Database (NTED)] were searched in 2015 and 2016. A content analysis was performed regarding the aims, methods, findings and affiliations. While the all

articles matching the criteria were open access, only the three out of seven theses identified in NTED were provided with full text open access. Most of the studies were produced from the sports and religion/Islam sciences in similar amount; majority of them were published in sport sciences journals. Despite a growing number of researches based in Turkey or in Turkish, the RSS have emerged as a context being subject to few scientific analyses nationally or internationally in relation to Turkey. This preliminary review of the literature may provide a reference point for the relevant researches and practices.

**Key Words:** Literature, Religion, Sport, Turkey

## **INTRODUCTION**

Social sciences recognize religion (as well as leisure) as one of the basic social institutions. Religion is in an interactive relationship with the fields of sports as with the other social units that constitute society (Johnstone 2001). Güler and Onat (1999) claims that contrary to what is suggested by many social scientists and philosophers (based on the social changes such as with industrialization and fast communication); development and revival of religions were observed since twentieth century especially in the Islamic countries, America, Asia and Far East, while in Europe, this was observed less intensely (Güler and Onat 1999).

“Religion has always been and continues to be woven into the fabric of cultures and civilizations in ways that are inextricable” (Moore 2007). Interpretations of religion or religious beliefs in a given society are significantly conditioned by the complexity of existing social patterns and relationships (Johnstone 2001). Thus, those changes in interpretations can be observed in individuals of same groups of societies depends on their unique interactions. In this context, “sociological dimensions of religion often stir/create controversy in sociology of sport classrooms” (Coakley 2007). It can be difficult to predict the perceptions about the various dimensions of religion and its possible relationship(s) with sport in a changing society, thus, it is essential to bring those dimensions and relationships into view based on scientific evidences (Canbaz 2004).

However, even in religion or sports related fields of science, sport and religion contexts are observed as not a widely shared and discussed scientific content in Turkish (Canbaz 2004, Eke 2014), compared to some other topics in Turkey. This is important, as in any context, especially in times where for example the political and institutional changes and new practical collaborations are being constituted including in the context of national governance of sport and religion in Turkey in terms of, for example, values education for youth, making religious and sports (and all other) sites accessible for people with disabilities or having sporting activities and information available for people with religious occupations.

Many philosophers address that the scientific gap in the context of religion and values may pose a threat and serious problems for humanity (Güler and Onat 1999). Hence, the prevalence and extent of the observed misevaluations regarding religion(s) and related issues today are distressing for their potential to increase vulnerabilities (Plener et al 2017). Recent

worrisome developments, for example, in relation to not only the refugees but also their religious identities have increasingly occupied the international social and academic agenda (Zunes 2017, Cleland et al 2017, Plener et al 2017). Moreover, these current investigations were extended to the sports contexts (Marshall 2016, Briskman and Latham 2017). Not only these current accounts but also the broader issues in relation to the sport and religion continued to remain on the agenda of global social change (Canbaz 2004, Benn et al 2017).

Today, the average number of readings per scientist continues to increase, “while the average time spent per reading is decreasing” (Tenopir et al 2009). Since the electronic alternatives to journals became more widespread, diverse sources have started to be included in reading patterns. A variety of information-seeking methods includes browsing, online searching, following citation links, getting recommendations from colleagues along with in library solutions (Tenopir and King 2000, 2002, Tenopir 2003a, b, Tenopir et al 2009). As a primary source of information especially for an initial research, scholarly papers found in online databases can inform us about the capacity of these initial sources. Based on the claims (Canbaz 2004, Eke 2014) about the lack of religion and sport studies (hereafter referred to as RSS) and the relevant assumption of the current study regarding lack of scholarly share on these issues, the aim of this study was to examine the extent of the RSS published online and in Turkish to provide an evaluation that constructive to the researchers who will build on the work in this field and hopefully as a small contribution reducing relevant vulnerabilities in societies.

## METHOD

This is a systematic review and content analysis of studies in which a primary focus of research is related to sport and religion. Web of Science, Google Akademik, ULAKBIM and national thesis electronic databases (NTED) were used as data sources. Therefore, the graduate thesis, articles and books as well were included in the current study.

The search was conducted with the combined Turkish keywords of “physical education, sport, religion, lehv, sunnah, islam, muslim, fikh”. The electronic databases were searched first in December 2015, second in September 2016 and last in December 2016. The content analysis of the studies was performed regarding their aims, methods and affiliations such as their years, language, main themes, universities or departments that they were produced. Further

communications were established to reach out the full texts or abstracts that were not available online. The articles that have their either abstract(s) or full texts available online were included in the Table 2 while all of the theses were shared in Table 1. It was indicated in Table 1 if their full texts were available online or collected by further communication. Moreover, it was marked whether these online studies were available in full text or abstract as an open access or not.

There might be more online studies that could not be identified due to several reasons for example, the limitations of the search engines or keywords. Moreover, studies which were not released online (for example İmamoğlu et al 1999, 2000) or not written in Turkish neither as an abstract nor as full text (Koca and Hacısöftaoğlu 2011) and not found via search in Turkish keywords (Saraç 2012) were not included in the tables. However, these types of studies still can be found in this study and in the reference list at the end of this article. The studies comply with the search criteria provided under appendix, separate from the reference list.

## FINDINGS

### Religion and Sport Theses

There were seven theses identified in NTED having the religion and sport related topic as their main theme (Table 1).

**Years:** Theses were carried out or submitted to the NTED system in 1994 (n:1), 2004 (1), 2008 (n:1), 2010 (n:1) and in 2014 (n:3).

**Languages & Accession:** All of the full texts of the theses were written in Turkish while only one of them (Yılmaz 1994) did not include an English abstract in addition to the Turkish abstract; this information is provided under the Language column in Table 1.

At the time of research (2015, 2016), three of the theses were provided as full text and open access in NTED while the others appeared as abstract(s) only. However, we could obtain three more of the full texts from the authors and advisor via personal communications. Usually, other than the NTED, all of the theses are archived in the library of the respective department and/or university where theses are carried out. There is only one thesis (Çalışır 2014) we could



not reach through personal communications and we could not travel to the respective city (Muğla) or somehow obtain from the library.

**Affiliations:** All of these graduate works were produced as master degree theses; two from the departments related to sport sciences and five from the departments related to sociology or philosophy of religion or “Basic Islam Sciences” (Table 1). However, one of them (Canbaz 2004), for example, was written in Basic Islam Sciences under the supervision of the professor with an academic affiliation in sociology of sport -though we did not review all of the professors’ background.

Overall, the seven theses are affiliated to four different universities; These are Atatürk University (n:2), Marmara University (n:2), Selçuk University (n:2) and Muğla Sıtkı Koçman University (1).

**Other:** There was one more thesis (Boybey 1996) in Turkish which was cited and used in the reference list of a relevant research found online (İmamoğlu et al 2013). However, this was an undergraduate thesis. Historically, neither undergraduate theses nor their systematic online recordings have been common practices in all universities in Turkey. Thus, they were not considered in the current study.

**Content:** Three of the thesis conducted questionnaires (Canbaz 2004, Akgül 2014, Çalışır 2014) and two of them approached to religion and sport more comprehensively, for example in the context of popular culture (Akgül 2014) and social change (Canbaz 2004). There are ten years between these two comprehensive studies. One of the three studies conducted with questionnaires focused on the relationship between religiosity and psychological health in athletes (Çalışır, 2014).

The four theses, on the other hand, tried to explain how sport (Yılmaz 1994, Eke 2014), play (Güvendi 2008) or hunting (Çetinkaya 2010) have involved in the particular aspects of the belief systems such as in sunnah, Qoran (Yılmaz 1994, Güvendi 2008, Çetinkaya 2010, Eke 2014) and in Shaolin Temple (Eke 2014).

### Religion and Sport Studies as Articles and Proceedings

The fifteen articles and seven proceedings were identified in GA and ULAKBIM having the religion and sport related topic as their main theme and complying with the criteria (Table 2). These were explained below.

**Years:** There is an increase in article publications regarding RSS recently; half of the articles were published since 2014 (Table 2). Overall articles were published in 2003 (n:1), 2004 (n:1), 2006 (n:1), 2008 (n:2), 2011 (n:2), 2014 (n:1), 2015 (n:2) and in 2016 (n:4).

**Languages & Accession:** The full texts of the articles were written both in English and Turkish (n:1), only in English (n:2) and only in Turkish (n:12). All of the articles, except the Akdemir (2008)'s, were provided with Turkish and English abstracts (Table 2). All of these articles were available online and free access (Table 2).

The number of the articles identified in GA and ULAKBIM were also appeared as proceedings in GA while some other articles presented in scientific meetings were identified through their indications in respective articles and not found in GA as proceedings. According to the online records, the last eight articles in Table 2 were both presented at a conference and published as an article while Akdemir (2008)'s study was presented in symposium (Akdemir 2006). There may be more articles in Table 2 presented at scientific meetings too or many more sources published previously but not meeting the criteria in terms of online availability of their abstracts or full texts (as in Akdemir 2006, Taşmektepligil et al 2011, İmamoğlu et al 2000, Üzümlü and Mirzeoğlu 2003). Akdemir (2008)'s study was included in lists at the end of article due to its content availability as full text article which enabled us to identify sport related content. However, there are other studies in literature with similar content, such as Keskin (2007)'s study on hunting, do not provide both full access and concerned key words searched in the current study. Therefore, it is the limitation of this research that such specific studies were not included for given reasons. Thus, the Table 2 includes such studies that can be reached for further content analysis; if they don't provide their relation in abstract, they were excluded.

There was no RSS research found in WoS in Turkish -neither as an abstract nor as a full text.

**Affiliations:** The fifteen articles were affiliated (by the authors) to the Ankara University (n:1), Atatürk University (n:1), Bartın University (n:2), Bülent Ecevit University (n:1), University of Copenhagen (n:1), Dokuz Eylül University (n:1), Fırat University (n:1), Gazi University (n:1), Harran University (n:1), Sakarya University (n:1) and Ondokuz Mayıs University (n:4). The ten out of fifteen articles were published in journals of sports sciences while five of them were published in their respective faculty of theology (n:3), education (n:1) and Turkic studies (n:1) journals. However, in overall articles, the authors' affiliations were equally distributed between sports sciences (n:7) and Islamic sciences (n:7), while it was with faculty of arts in one article (Table 2).

**Content:** The three articles in table used questionnaire or scale (Ünver et al 2014, Türkmen et al 2016, Bölükbaşı and Kılıcıgil 2004) while twelve of them were reviews or performed content analysis or interpretations in relation to religion or religious sources and/or practices (Adam 2003, Altınay 2006, Akdemir 2008, Pfister 2008, Sarıkavak 2011, Telkenaroğlu 2011, İmamoğlu et al 2013, Kuşçuzade 2015, Arslan 2015, İmamoğlu 2016, Arslan 2016, İmamoğlu and Dilek 2016).

Table 1. General Features of the Theses in NTED\*

No	Author	Date	Title	University	Department	Online Open Access to Full Text and Abstract in NTED*	Language
							***
1.	Ömer Yılmaz	1994	Sünnette Spor/Sport In Sunnah	Atatürk University	Institute of Social Sciences, Department of Basic Islam Sciences	Abstract: Yes	A: T
						Full Text: No.	F: T
						Obtained from the University's Library**.	
2.	Sedat Canbaz	2004	Değişen Toplumda Spor ve Din/Sport and Religion in the Changing Society	Marmara University	Department of Philosophy and Religion Sciences & Sociology of Religion.	Abstract: Yes	A: T&E
						Full Text: No.	F: T
						Obtained from the advisor.	
3.	Sümeyra Güvendi	2008	Fıkıhda Lehv (Oyun ve Eğlence)/ Lehv ( Game And Entertainment) in Canon Law	Selçuk University	Institute of Social Sciences Department of Basic Islam Sciences	Abstract: Yes	A: T&E
						Full Text: Yes	F: T
4.	Ömer Çetinkaya	2010	İslam Fıkıhında Avcılık ve Av Hükümleri / Hunting And Relevant Judgments in (Fiqh) Islamic Jurisprudence	Marmara University	Institute of Social Sciences Department of Basic Islam Sciences	Abstract: Yes	A: T&E
						Full Text: Yes	F: T
5.	Mehmet Haşim Akgül	2014	Popüler Spor Kültürü ve Din/ The Culture of Popular Sports and Religion	Selçuk University	Institute of Health Sciences, Sport Management Dept.	Abstract: Yes	A: T&E
						Full Text: Yes	F: T
6.	Özdemir	2014	Din-Spor İlişkisi: Shaolin Tapınağı Örneği/ Shaolin Temple as an Example of Relationship Between Religion and Sports	Atatürk University	Institute of Social Sciences, Department of Philosophy and Religion Sciences	Abstract: Yes	A: T&E
	Eke					Full Text: No. Obtained from the author.	F: T
7.	Melih	2014	Sporcularda Psikolojik Sağlık ve Dindarlık İlişkisinin İncelenmesi/ Investigation of the Relationship Between Psychological Health and Religiousness in Athletes	Muğla Sıtkı Koçman University	Institute of Health Sciences, Physical Education and Sport Department	Abstract: Yes	A: T&E
	Çalışır					Full Text: No.	F: T
						Could not obtain.	

\*NTED: National Electronic Thesis Database, \*\* All of the theses are expected to be available in their respectful university library. Here, we indicated how we accessed their full texts if they were not available in NTED.

\*\*\*Abbreviations under "Language" column; A: Abstract, F: Full Text, T: in Turkish, E: in English.

Table 2. General Features of the Online Articles

	Author(s)	Date	Headline	University	Journal (ing adı)	Databas e	O.O. A.*	Language**
1.	Hüdaverdi Adam	2003	İslam ve Spor/İslam and Sport	Sakarya University Faculty of Education/ Theology	Sakarya Üniversitesi Eğitim Fakültesi Dergisi	ULAKBIM	Yes	A: T&E F: T
2.	Zeynep Bölükbaşı, Ertan Kılıçgil	2004	Taekwondo ve Yüzme Branşlarındaki Bayan Sporcuların Dindarlık Boyutları/ Piety Dimension of Female Sportmen of Taekwondo and Swimming Branches	Ankara University, School of Physical Education and Sports	Sporometre Beden Eğitimi ve Spor Bilimleri Dergisi	GA	Yes	A: T&E F: T
3.	Ramazan Altınay	2006	Erken Dönem İslam Toplumunda At Yarışları/ Horse Races During the Early Period of the Islamic Society	Dokuz Eylül University, Faculty of Theology	D.E.Ü., İlahiyat Fakültesi Dergisi Sayı	GA	Yes	A: E&T F: T
4.	Hikmet Akdemir	2008	Kur'an Açısından Ekolojik Denge ve Avlanma	Harran University Faculty of Divinity, Basic Islamic Sciences, Dept of Qur'anic Exegesis	Harran U. İlahiyat Fakültesi Dergisi	GA	Yes	A: - F: T
5.	<a href="#">Gertrude Pfister</a> (Translated by Pınar Yaprak)	2008	<a href="#">Equality and social missions: Muslim women and their opportunities to participate in sport and physical activities/eşitlik ve sosyal misyonlar: müslüman kadınlar ve spor ve fiziksel aktivitelere katılım fırsatları</a>	University of Copenhagen, Department of Exercise and Sport Sciences (Translation: Marmara Univ. Sport Management Dept.).	Hacettepe J Sport Sci	GA	Yes	A: E&T F: E&T
6.	M.Rahmi Telkenaroglu	2011	İslam Ceza Hukukunda Hukuka Uygunluk Nedeni Olarak 'spor Faaliyetleri'/ "Sports Activities" as a Ground of Justification in Islamic Penal Legislation	Atatürk University, Faculty of Theology	Atatürk U. İlahiyat Fak. Dergisi	GA	Yes	A: T&E F: T
7.	Kazım Sarıkavak	2011	İslâm Filozoflarına Göre Beden Sağlığı/Physical Health According to Islamic Philosophers	Gazi University, Faculty of Arts	Gazi Türkiyat Tükoloji Araştırmaları Dergisi	GA	Yes	A: T&E F:T.
8.	Osman İmamoğlu, Mutlu Türkmen, Bilal Demirhan, M. Çebi	2013	İslamın Doğuşu ve Asrısaaadet Döneminde Sporun Önemi/ The significance of Sport During the Birth and Golden Age of Islam	Ondokuz Mayıs University, Faculty of Sport Sciences & Bartın University, School of PE	Vestnik Fiziçeskoy Kulturi i Sporta	GA	Yes	A: T&E F:T.
9.	Şaban Ünver, Gül Çavuşoğlu, İzzet İslamoğlu	2014	Spor Bilimler ve İlahiyat Fakültesi Öğrencilerinin Benlik Saygısı ve Psikosomatik Belirtilerinin Karşılaştırılması/ A Comparison of Self-Esteem of Sports Sciences and Theology Faculty Students	Ondokuz Mayıs University, Health Sciences Inst./PE/Faculty of Sport Sciences	IntJSCS**	GA,	Yes	A: T&E F: T
10.	Münir Kuşçuzade	2015	Sünette Spor, Sport in Al-Sunnah	Bartın University, Faculty of Islamic Sciences	IntJSCS**	GA, ULAKBIM	Yes	A: E&T F: T
11.	Ali Arslan	2015	Hiz. Peygamber (Sav)'in Spora Getirdiği Anlayış Çerçevesinde Hayvanları Hedef Yapma Yasağı/ The Prohibition of the Targeting of Animals in the Context of Prophet Muhammed (pbuh)'s Understanding of Sport	Bülent Ecevit University, Faculty of Theology	IntJSCS**	GA, ULAKBIM	Yes	A: T&E F:T

12	Mutlu Türkmen, Yunus Abdurahi moğlu, Serkan Varol, Mustafa Gökdağ	2016	İslami İlimler Fakültesi Öğrencilerinin Spora Yönelik Tutumlarının İncelenmesi (Bartın Üniversitesi Örneği)/ The Attitudes of the Students Attending to Faculty of Islamic Sciences towards Sports (The Sample of Bartın University)	Bartın University, School of PE, Faculty of Islamic Sciences	IntJSCS**	GA, ULAKBİM	Yes	A: E&T F: T
13	Osman İmamoğlu, Ahmet Naci Dilek.	2016	Namaz ve Yoganın İnsan Organizmasındaki Ortak Faydaları/ Common Benefits of Prayer and Yoga on Human Organism	Ondokuz Mayıs University, Faculty of Sport Sciences	IntJSCS**	GA, ULAKBİM	Yes	A: T&E F: E
14	Osman İMAMOĞLU	2016	Namazın Egzersiz ve Sportif Yönü İle Faydaları/ Benefits of Prayer as a Physical Activity	Ondokuz Mayıs University, Faculty of Sport Sciences	IntJSCS**	GA, ULAKBİM	Yes	A: T&E F: E
15	Cengiz Arslan	2016	Ahmet Yesevi Felsefesi Açısından Dünya’da Spor ve Barış/ Sport and Peace in the World in terms of Ahmet Yesevi Philosophy	Fırat University, School of Physical Education and Sports	IntJSCS**	GA, ULAKBİM	Yes	A: T&E F: T

\*O.O.A.: Online open access to full text. Abbreviations under O.O.A.: GA: Google Akademik. \*\*IntJSCS: International Journal of Science Culture and Sport, \*\*\*Abbreviations under “Language” column; A: Abstract, F: Full Text, T: in Turkish, E: in English.

Some of these twelve articles approached religion and sporting issues by especially focusing on early Islamic period (Altınay 2006, İmamoğlu et al 2013) and on socio-political or juridical issues (Pfister 2008, Telkenaroğlu 2011) while some others mainly approached by drawing on the Quran (Akdemir 2008), perspectives of notable personalities such as the prophet (Arslan 2015, Kuşçuzade 2015), Ahmet Yesevi (Arslan 2016) and Islamic Philosophers (Sarıkavak 2011). Pfister (2008)’s review is the only study that focuses on insights on Muslim women’s experiences and aspects of gender issues as full text open access in both Turkish and English languages.

### Books, Studies in English and Some Other Sources

The thesis of Eke (2014) on Shaolin Temple, sports and religion was also published as a book in 2015, titled as “Kung Fu and Zen in the Shaolin Temple”. As a book chapter, Akyüz’s content was found as a hard copy which is unavailable online (Akyüz, 1994, 2007); However, there were web pages ([http://www.tulipandrose.net/Depo/PDF/Spor\\_\(Asri\\_Saaddette\).pdf](http://www.tulipandrose.net/Depo/PDF/Spor_(Asri_Saaddette).pdf)) and power point presentation ([http://www.tulipandrose.net/Depo/PDF/Spor\\_\(Asri\\_Saaddette\).pdf](http://www.tulipandrose.net/Depo/PDF/Spor_(Asri_Saaddette).pdf)) that were available as online free access and included the content of this book chapter.

As indicated, there was no Turkish research found in WoS. However, there was for example a study with Turkish address by Saraç (2012), similar to the thesis by Çalışır (2014) due to its combined survey structure using religiosity scale. While Çalışır's study was in relation to the psychological health, Saraç (2012)'s research was in relation to homophobic attitudes.

Although the purpose of the current study did not include the English literature search, it was tested what can be found and if it is accessible for Turkish readers by simple search conducted in GA with the focus on and key words of “Turkey”, “sport” and “religion” in English. There were 98 pages featured, though most were irrelevant depend on the search criteria. The undergraduate student who uses Turkish as a primary means of language and limited English have identified the studies focusing on religion and sport and has affiliations with Turkey or Turkish language among 98 pages list. However, there was, for example, a relevant book chapter in English which could not be identified by the students even though it had a Turkish title but not an abstract or full text in Turkish. The reasons explained by the students for this were for example, they thought it must have been an irrelevant study, because, there were no sport related keywords at the GA search summary, and the student was not familiar with the names and affiliations of the researcher and the concerned study featured in latter pages where usually irrelevant results were featured.

There are only few other sources that were not listed at the end of the article and in tables such as the English sources above and the book published by directorate of religious affairs (Turan 1985), or considerable amount of proceedings online as titles only or with abstracts or maybe full texts in hard copy books of abstracts that were usually not found in the online search engines. However, they were found for example in reference lists of online available sources (such as Hafez Efsal İsmail no date of publication, Turan 1985, Boybey 1996) and with direct search of their titles online, sometimes in stores that provide rare books or through personal familiarity or snowball sampling way of search.



## Discussion

Religion, together with the sports or leisure (and other basic social institutions including family, education, politics, and economy) has a role in adoption, maintenance and spread of the morals and values (Kuter and Kuter 2012). Moreover, sporting memberships can become central cultural identity especially among males through the soccer teams, alongside religion or secularism or any other ethnic, political, and cultural identities in contemporary Turkey (McManus 2013); as McManus (2013) states “For the most fanatical, it is the primary identity: Besiktas, fan first, Turk or Muslim second”. Religion is also used intentionally, such as to trigger culture wars by exploiting vulnerabilities through for example false representation of the facts, demonization of the other and the self-righteous perspectives; more importantly, the most profound victims of such exploitations are our children (Moore 2007). Walseth and Pfister (2003)’s study “revealed that the different interpretations of Islam had consequences for the informants’ participation in sport”. Issues “related to the use of the veil, gender segregation, the concept of ‘excitement’ (non-sexual movements) and the power relationship between women and men” were pointed out (Walseth and Pfister). Therefore, there is a need for ongoing contributions of social sciences which can play a significant role confronting such/relevant exploitations.

Based on the assumption regarding lack of scholarly share in general on these issues in Turkey; we aimed to identify the religion and sport studies (RSS) available in Turkish either as an abstract or as a full text via online search in this study. The theses, articles, proceedings and scholarly books in which the sport and religion topics found as a primary focus were included in the current study. Studies found in the electronic databases (WoS, GA, ULAKBIM, NTED) had covered diverse issues such as the meanings, value and importance of sport from the point of religion including Qur’an, Islamic jurisprudence, sunnah or other leading religious or Islamic characters. Moreover, they examined the relationships between the religion, usually the Islam and sport. There is considerably less but some instructive studies provided in Turkish which is useful for further inquiries. However, considering the quality and quantity of what is produced on religion, sport and Turkey especially in English literature, there is for sure need for further critical analysis reflecting Turkish contexts.



Despite the similarities, it seems that the different cultures of scientific approaches as well as the reflexivity in general plays an important role in the studies for example in terms of their use of topics, methodology and perspectives. Because of the “ways of seeing” can change radically, need of referring reflexivity becomes accentuated, especially when walking across the fields of different cultures of science; the studies of religion may be one of the most critical fields in this context (Flanagan 2007). While studies point for example “there are many historically formed prejudices and stereotypes about Turkey in European societies” (Oner 2015), many Turkish scholars’ imagination may not be independent from (such) prejudices since the polarization within societies mostly arise from political and religious memberships (Bilgiç et al 2014). Another argument in terms of studies of religion was held in the network of sociology of sport, a member’s statement pointed for example to the threats to research freed from dogma. Moreover, associated (sports and religion) organizations were also criticized for focusing on spreading religious beliefs in connection with sports events and involvement and not much to what might be identified as ethical problems in sports (Coakley 2007). These (sometimes contested) aspects are very crucial when constructing the study of religion and thinking about reflexivity, because, for example, the religion is one of the prominent elements for people’s prejudiced, unfair or intolerant attitudes (Oner 2015), (as a field of study) is not always comply with the traditions of science, and hosting many contested perspectives and results (Thompson 2004).

Local or multilingual scholarly papers play an important role in academic life for several reasons. What is in share in one language may not be in another one. This is important not only for the (lack of) share of the information but also for the (lack of the) elimination of the bias of the analyses and in the reflexivity (for not all scholarly writings are taken into account and for they are not open for the critics of all scholars who use different languages). According to the study in Turkey regarding the knowledge and attitudes of academicians about foreign language; 75% of the academicians thought that they understood the studies written in English; in addition, the 99 academicians’ level of Turkish language use in their academic lives was 70% and above, while 19 academicians had 60, 50 or 40% use of Turkish (Yavuzer and Göver 2012). Moreover, it seems like the language is the primary means of limitation since all of the articles matching the criteria were open access (only the three out of seven theses

identified in NTED were provided with full text open access while others appeared as abstracts only, but we were able to collect the most of the papers with further communications).

There is an increase in Turkish article publications regarding RSS recently. Although we did not compare in this study, there are apparently more studies with a main focus on religion and sport in Turkish than in English in the context of Turkey. However, there is a scarcity of Turkish scholarly papers of RSS considering the greater amount of overall RSS in English. When fields are not developed equally in different languages, vulnerabilities may increase more at different social categories. For example, higher education students or graduates may struggle more than the academicians to access scientific information in foreign languages. Although the reading patterns of scientists and non-scientists were relatively similar, non-scientists read less articles and scientists are more likely to have an additional personal or institutional (such as library) subscriptions (Belefant-Miller and King 2001, Tenopir et al 2009). The reflections of under-developed academic lines may be more destructive in several societal levels.

While scholarly studies in Turkish are as less as revealed here, other writings online with or without indication of source, such as the articles in blogs and forums, have been increasingly taking place in Turkish websites. This may mean an increase in awareness, stimulation of the demand for the issue or spread of misinformation and misinterpretations to the mass. The World Wide Web is a fruitful environment enables the massive diffusion and reproduction of misinterpretations and unverified rumors (Vicario et al 2016). Vicario et al (2016)'s massive quantitative analysis of Facebook showed that "information related to distinct narratives -conspiracy theories and scientific news- generates homogeneous and polarized communities (i.e., echo chambers) having similar information consumption patterns" and the model of rumor spreading reveals that "homogeneity and polarization are the main determinants for predicting cascades' size". This reminds us the size and variety of the unverified, non-scientific information; even in scholarly papers, the issues regarding reflexivity appear more problematic in such conditions. It can be said that it is a critical time of period to deal with related vulnerabilities which (may) raise from the lack of RSS share within academia and society and may lead the elements of society to build on either sand or solid foundations.

Although the quality and the coverage capacity of the online sources and databases have been criticized (Vicario et al 2016, Prins et al 2016), they have increasingly become a

primary source of information especially for an initial research. At such times with limited research and having online accessibility, they may be the only sources that readers are exposed today. Electronic articles were accounted for the majority of readings particularly among science faculty (Tenopir et al 2009, King et al. 2003).

In search of what is available online regarding RSS, the most of the studies was found in GA. While studies critical of Google Scholar (GS) point at its reliability of data, since GS indexes non-scholarly sources, preprint versions and publications that are not peer-reviewed as well, the reliability of the GS data can be improved with careful evaluations (Prins et al 2016). The restrictions by the use of GS includes such as “the intensive manual data handling and cleaning, necessary for a feasible and proper data collection” (Prins et al 2016).

It is claimed that “library provided electronic journals are the single most common source for article readings today by science faculty” (Tenopir et al 2009) while this can change in particular times and by (re)search groups. Sport related scholars for example familiar with journals in particular indexes such as SPORTDiscuss, EBSCO, WoS and others as well which have been usually known for their coverage of journals in English. There is no religion and sport research found in Turkish in WoS in the current research, while there was in English. Therefore, for the current research, GA or GS was found useful for purposes of accessing scholarly papers and others in local language. It was also found promising to use GS in addition to other research indices especially as a resource freely available to anyone with Internet connectivity, “for fields with lower degrees of coverage in WoS, in particular for fields that produce more diverse types of output than just research articles”, to cover other modes of scholarly communication (Prins et al 2016) and especially for a relatively recent article, author or subject area (Bauer and Bakkalbaşı 2005, Prins et al 2016).

Interdisciplinarity “considers a variety of intellectual and practical questions not normally asked in ordinary disciplinary pursuits” (Brewer 1999). While more scholarly works have been produced in Islamic sciences, majority (two-thirds) of the articles were published in sport sciences journals. It was the journals of the Islamic sciences in the latter case. RSS Publications in sport sciences have increased since 2013 or 2014. However, still the Islamic sciences have produced scholarly shares and set some of the foundations for RSS more and since earlier periods. Still, on some issues, such as Pfister (2008)’s account of Muslim women and sport, there are few studies in Turkish; More of these associated accounts (such as in Benn

et al (2011)'s book which consist of women's accounts from fourteen different nations including Turkey), can be found in English literature (e.g. Dagkas and Benn 2006, Benn et al 2011, 2017), in a way that reframed with concepts of Muslim, Islam and as such, while such accounts of religion can be found in local (Turkish) scholarly papers of sports and sport sociology usually without a religion-oriented contextualization. Brewer (1999)'s statement below on contextualization makes us think that RSS is in its infancy period in terms of its many dimensions.

Contextuality means “understanding the relationship between the parts and whole of a problem. It also means having a clear sense and appreciation of the past, present, and future of events as they interact and change through time. Being contextual requires a comprehensive framework to direct one's attention to possibly significant phenomena in a specific spatial and temporal setting. It also requires one to maintain a tentative, evolving appreciation of the whole. While some having an environmental bent appreciate these requirements, wide-spread attainment of them remains a challenge” (Brewer 1999).

## **Conclusion**

When considering the overall literature based in Turkey or in Turkish including the studies found in WoS, ULAKBIM, GA search engines and NTED, sport and religion has emerged as a context being subject to few scientific analyses. This may be an unexpected or thought provoking result for the scholars who considered the religion and sport as a well developed line of study. We suggest that there is a need for ongoing contributions of social sciences which can play a significant role confronting relevant exploitations -keeping in mind every aspect of society. We recommend further studies to explore more of the currently available studies, provide critical content in local languages to shed light on for example the quality of the literature, the ways of the studying, understanding religion and sport issues and how to engage in better actions in science and society.

There seems to be disciplinary differences and similarities in the coverage of the RSS. While the numbers of articles produced have been equally distributed between the sports and

Islamic sciences, the sports sciences journals have hosted RSS more than the journals in Islamic sciences or in any other field. There may be critical reflections and specific evaluations in future based on the different cultures, methodologies and interpretations of these studies.

Although the quality and the coverage capacity of the online databases have been criticized, they have been increasingly become a primary source of information especially for an initial research. In the context of RSS, alternative and additional sources to online databases are continue to be important because not only the RSS have been scarce in literature, but also the online and linguistic access to the related journals or studies have been a recent issue. Still, not all of the older journals have an online access especially to their older issues. In near future, those possible unknown older publications too may come to light for the researchers' re-evaluations, since more journals recently put their older archives on the internet gradually. Further research could be conducted to review for example the studies in English and in other languages, in different databases and keywords. There is also a need for further research for the contents which were not open access and/or accessible online as well as in depth analysis of listed studies in this research. Due to the significant limitations in the research process (especially time, late arrivals of full text data, etc.), we did not include in depth systematic analysis within the current research.

There were less but some instructive studies provided in Turkish useful for further studies. However, considering the quality and quantity of what is produced on religion, sport and Turkey especially in English literature, there is for sure need for further critical analysis reflecting Turkish contexts.

**Conflict of Interest:** There is no conflict of interest.

**Acknowledgments:** We thank all of the authors cited in the current study who shared about their studies, provided their full texts or information.

## References

1. Bakkalbasi N., Bauer K., Glover J., Wang L. (2006). Three options for citation tracking: Google Scholar, Scopus and Web of Science. *Biomedical Digital Libraries*, 3:7. Accessed: 11.01.2017, from <http://www.bio-diglib.com/content/3/1/7>.
2. Benn T., Pfister G., Jawad H. (2017). Reflections on Muslim Women and Sport. In: *Sport, Education and Social Policy: The state of the social sciences of sport*. Ed: Gudrun Doll-Teppe, Katrin Koenen, Richard Bailey. NY: Routledge.
3. Belefant-Miller H. and King D.W. (2001). How, what and why science faculty read. *Science and Technology Libraries*, 19(2):91-112.
4. Benn T., Pfister G., Jawad H. (2011). *Muslim Women and Sport. International studies in physical education and youth sport*. London: Routledge.
5. Bilgiç M.S., Koydemir F.S., Akyürek S. (2014). Türkiye’de Kimlikler Arası Kutuplaşmanın Sosyal Mesafe Üzerinden Ölçümü ve Toplumsal Güvenliğe Etkisi (Measuring Polarization Among Identity Groups in Turkey Through Social Distance and Its Effect on Societal Security). *Bilge Strateji*, 6(11):163-205.
6. Boybey C. (1996). İslamiyetin spora bakış açısı. İnönü University Undergraduate Thesis (Mezuniyet Tezi).
7. Brewer G.D. (1999). The challenges of interdisciplinarity. *Policy Sciences*. 32(4): 327–337
8. Briskman L., and Latham S. (2017). Refugees, Islamophobia, and Ayaan Hirsi Ali: Challenging social work co-Option. *Journal of Women and Social Work*. 32(I):108-111.
9. Coakley, J. (2007). *Sport in Society. Issues and Controversies*. Ninth Edition. Boston: McGrawHill Higher Education.
10. Dagkas S. and Benn T. (2006). Young Muslim Women’s experiences of Islam and Physical Education in Greece and Britain: A Comparative Study. *Sport, Education and Society*. 11(1):21-38.
11. Flanagan K. (2007). *Sociology in Theology: Reflexivity and Belief*. NY: Palgrave Mcmillan.
12. Güler İ. and Onat H. (2005). *Dine Yeni Yaklaşımlar (New Perspectives towards Religion)*, 6. Baskı. Eskişehir: Anadolu Üniversitesi Yayını.
13. Hafez Efzal İsmail (byy, tsz). *Islam and sport*.

14. Keskin Y.Z. (2007). Hadislere göre avcılık ve avlanma esasları. *Hadis Tetkikleri Dergisi*, V(1):33-48.
15. Koca C. and Hacısoftaoğlu I. (2011). *Religion and the state (Din ve Devlet)*: The Story of a Turkish Elite Athlete. In: (Ed. Benn T., Pfister G., Jawad H.) *Muslim Women and Sport*. London&NY: Routledge.
16. Cleland J., Anderson C., & Aldridge-Deacon J. (2017). Islamophobia, war and non-Muslims as victims: an analysis of online discourse on an English Defence League message board. *Ethnic and Racial Studies*, DOI: 10.1080/01419870.2017.1287927.
17. Johnstone RL. (2001). *Religion in Society: A Sociology of Religion*. Sixth Edition. New Jersey: Prentice Hall. pp.33.
18. King D.W., Tenopir C., Montgomery C.H. and Aerni S.E. (2003). Patterns of journal use by faculty at three diverse universities. *D-Lib Magazine*, 9(10). Accessed: 11.01.2017, from: [www.dlib.org/dlib/october03/king/10king.html](http://www.dlib.org/dlib/october03/king/10king.html).
19. Marshall DJ. Islam, Soap Operas, and Girls' Access to Space in Balata Refugee Camp. In: Eds. Nancy Worth, Claire Dwyer, Tracey Skelton, *Identities and Subjectivities*. Volume 4 of the series *Geographies of Children and Young People* pp 293-313. Singapore: Springer Science+Business Media.
20. McManus J. (2013). Been there, done that, bought the t-shirt: Beşiktaş, fans and the commodification of football in Turkey. *Int J Middle East Stud*, 45:3–24 doi:10.1017/S0020743812001237.
21. Moore DL. (2007). *Overcoming Religious Illiteracy: A Cultural Studies Approach to the Study of Religion in Secondary Education*. NY: Palgrave Macmillan.
22. Plener P.L., Groschwitz R.C., Brähler E., Sukale T., Fegert J.M. (2017). Unaccompanied refugee minors in Germany: attitudes of the general population towards a vulnerable group. *Eur Child Adolesc Psychiatry*. DOI 10.1007/s00787-017-0943-9.
23. Prins A.M., Costas R., Leeuwen T.N.V., Wouters P.F. (2016). Using Google Scholar in research evaluation of humanities and social science programs: A comparison with Web of Science data. *Research Evaluation*, 25(3):264–270, <https://doi.org/10.1093/reseval/rvv049>.



24. Saraç L. (2012). The relationships between homophobic attitudes and religiosity among Turkish physical education teacher majors. *Physical Education and Sport Pedagogy*. Accessed: <http://www.tandfonline.com/loi/cpes20>
25. Taşmektepligil M.Y., İmamoğlu O., Küçük H. (2011). Osmanlı Devletinde Sporun Sosyolojik Yaklaşım İçinde Değerlendirilmesi. 9. Uluslararası Türk Dünyası Sosyal Bilimler Kongresi. Devlet İktisat Üniversitesi, Bakü Azerbaycan.
26. Tenopir C. and King D.W. (2000). Towards Electronic Journals: Realities for Scientists, Librarians, and Publishers. Washington, DC: Special Libraries Association.
27. Tenopir C. and King D.W. (2002). Reading behaviour and electronic journals. *Learned Publishing*, 15(4): 259-65.
28. Tenopir C. (2003a). Use and Users of Electronic Library Resources: An Overview and Analysis of Recent Research Studies. Washington, DC: Council on Library and Information Resources, available at: [www.clir.org/pubs/reports/pub120/pub120.pdf](http://www.clir.org/pubs/reports/pub120/pub120.pdf).
29. Tenopir C. (2003b). Electronic publishing: research issues for librarians and users. *Library Trends*, 51(4):614-35.
30. Tenopir C. King DW., Edwards S. Wu L. (2009). Electronic journals and changes in scholarly article seeking and reading patterns. *Aslib Proceedings*, 61(1):5-32. <http://dx.doi.org/10.1108/00012530910932267>
31. Thompson I. (2004). Odaktaki Sosyoloji: Din Sosyolojisi (Sociology in Focus: Religion). (Original date of publication 1985). Translated by: Bekir Zeki Çoban. İstanbul: Birey Yayıncılık.
32. Turan A. (1985). İslamiyette Spor ve Önemi. Ankara: Diyanet İşleri Başkanlığı Yayınları.
33. Oner S. (2015). The ‘Erasmus generation’ and Turkey: the effect of the Erasmus programme on perceptions about Turkey and its EU membership bid. *Epiphany: Journal of Transdisciplinary Studies*, 8(3):107-127.
34. Üzümlü H. and Mirzeoğlu N. (2003). İnanç ve Tutumlarda Sporun Yeri ve Önemi. Beden Eğitimi ve Sporda Sosyal Alanlar Kongresi Bildiriler Kitabı. Yıldırım İ. (Ed). 10-11 Ekim, Gazi Üniversitesi, Ankara.
35. Vicario M.D., Bessi A, Zollo F., Petronic F., Scalaa A., Caldarelli G., Stanleyle H.E., and Quattrociochi W. (2016). The spreading of misinformation online. *PNAS*, 113(3): 554-559. Accessed from: <http://www.pnas.org/content/113/3/554.full.pdf>



36. Yavuzer G. (2012). Akademik Personelin Yabancı Dil Durumu ve Yabancı Dil Sınavlarına Bakışı: Nevşehir Örneği (The foreign language level of academic staff and their attitudes toward foreign language exams: Nevşehir university case). *Nevsehir University Journal of Social Sciences*, 1:136-158.

37. Zunes S. (2017). Europe's Refugee Crisis, Terrorism, and Islamophobia. *Peace Review*, 29:1:1-6, DOI: 10.1080/10402659.2017.1272275.

38. Walseth K., Fasting K. (2003). Islams's view on physical activity and sport. Egyptian women interpreting Islam. *International Review for the Sociology of Sport* 38:1:45-60.

### Appendix A:

**The chronological list of religion and sport studies available as an abstract or full text with online search in Turkish (see the search criteria under the methods section and reference list for more relevant studies)**

#### A.1. Master Theses

1) Yılmaz Ö. (1994). Sünnette Spor (Sport in Sunnah). Atatürk Üniversitesi, Sosyal Bilimler Enstitüsü, Temel İslam Bilimleri Anabilim Dalı, Yüksek Lisans Tezi, Danışman: Yrd. Doç. Dr. İbrahim Bayraktar, Erzurum.

2) Canbaz S. (2004). Değişen Toplumda Din ve Spor (Sport and religion in the changing society). Marmara Üniversitesi, Sosyal Bilimler Enstitüsü, İlahiyat Anabilim Dalı, Din Sosyolojisi Bilim Dalı, Yüksek Lisans Tezi, Danışman: Prof. Dr. Mehmet Tayfun Amman, İstanbul.

3) Güvendi S. (2008). Fıkıhda Lehv (Oyun ve Eğlence). [Lehv (Play and Pleasure) in Fiqh]. Selçuk Üniversitesi, Sosyal Bilimler Enstitüsü, Temel İslam Bilimleri Ana Bilim Dalı, İslam Hukuku Bilim Dalı, Yüksek Lisans Tezi, Danışman: Prof. Dr. Hüseyin Tekin Gökmenoğlu, Konya.

4) Çetinkaya Ö. (2010). İslam Fıkıhında Avcılık ve Av Hükümleri (Hunting and Relevant Judgments in (Fiqh) Islamic Jurisprudence). Marmara Üniversitesi, Sosyal Bilimler Enstitüsü, Temel İslam Bilimleri Anabilim Dalı, İslam Hukuku Bilim Dalı, Yüksek Lisans Tezi, Danışman: Prof. Dr. Celal Yeniçeri İstanbul.

- 5) Eke Ö. (2014). Din-Spor İlişkisi (Shaolin Tapınağı Örneği) (Relationship Between Religion and Sports: Case of Shaolin Temple) Atatürk Üniversitesi, Sosyal Bilimler Enstitüsü, Felsefe ve Din Bilimleri Anabilim Dalı, Yüksek Lisans Tezi, Danışman: Prof. Dr. Kemal Polat, Erzurum.
- 6) Akgül M.H. (2014). Popüler Spor Kültürü ve Din (The Culture of Popular Sports and Religion). Selçuk Üniversitesi, Sağlık Bilimleri Enstitüsü, Spor Yöneticiliği Anabilim Dalı, Yüksek Lisans Tezi, Danışman: Doç. Dr. Turgut Kaplan.
- 7) Çalışır M. (2014). Sporcularda Psikolojik Sağlık ve Dindarlık İlişkisinin İncelenmesi. (Investigation of the Relationship Between Psychological Health and Religiousness in Athletes). Muğla Üniversitesi, Sağlık Bilimleri Enstitüsü, Beden Eğitimi ve Spor Ana Bilim Dalı, Yüksek Lisans Tezi, Danışman: Doç. Dr. Fahri Akçakoyun, Muğla.

## A.2. Proceedings

1. İmamoğlu O., Türkmen M., Demirhan B, Çebi M. (2013). İslamın doğuşu ve Asrısaaet Döneminde Sporun Önemi (The Significance of Sport During the Birth and Golden Age of Islam). The State Republic Center of National Games, Development of Kyrgyz Republic. Çolpan-Ata-Issık- Köl, Kyrgyzstan.
2. Kuşçuzade M. (2015). Sünette Spor. (Sports In Al-Sunnah). 4th International Conference on Science Culture and Sport. 22-26 May, Ohrid, Macedonia.
3. İmamoğlu O., Türkmen M., Akdenk M., Çebi M. (1999/2000). Osmanlı Devletinin Spor Politikasını Etkileyen Unsurlar. Osmanlı Devleti'nin Kuruluşunun 700. Yılı Münasebetiyle Osmanlıda Spor Sempezyomu, Alaaeddin Keykubat Kampusu, 26-27 Mayıs, Konya (full text provided with further communication and published as open access article as below).
4. Imamoğlu O., Dilek A.N. (2016). Namaz ve Yoganın İnsan Organizmasındaki Ortak Faydaları. 5th International Conference on Science Culture and Sport. 13-15 April, Turkistan, Kazakhstan.
5. Arslan C. (2016). Ahmet Yesevi Felsefi Açısından Dünya'da Spor ve Barış.( Sport And Peace in the World in terms of Ahmet Yesevi Philosophy). 5th International Conference on Science Culture and Sport. 13-15 April, Turkistan, Kazakhstan.

6. Imamoğlu O. (2016). Namazın Egzersiz ve Sportif Yönü İle Faydaları. 5th International Conference on Science Culture and Sport. 13-15 April, Turkistan, Kazakhstan.
7. Türkmen M., Abdurrahimoğlu Y., Varol S., Gökdağ M. (2016). İslami İlimler Fakültesi Öğrencilerinin Spora Yönelik Tutumlarının İncelenmesi (BARTIN ÜNİVERSİTESİ ÖRNEĞİ). 5th International Conference on Science Culture and Sport. 13-15 April, Turkistan, Kazakhstan.
8. Akdemir H. (2006). Kur'an açısından ekolojik denge ve avlanma. Turk Kulturunde Av ve Avlanma Sempozyumu. M.U. Turkiyat Araştırma ve Uygulama Merkezi, 15.11.2006, İstanbul. [http://arpacik.net/icerik\\_yazar.asp?Icerik=583&Yazar=815](http://arpacik.net/icerik_yazar.asp?Icerik=583&Yazar=815) (abstract is not found in proceedings; published as an article below).

### A.3. Articles

1. Adam H. (2003). İslam ve spor (Islam and sport). Sakarya Üniversitesi Eğitim Fakültesi Dergisi, 6:335-359.
2. Bölükbaşı Z., Kılıcıgil E. (2004). Taekwondo ve yüzme branşlarındaki bayan sporcuların dindarlık boyutları. (Piety Dimension of female sportmen of taekwondo and swimming branches). *Sportmetre Beden Eğitimi ve Spor Bilimleri Dergisi*, II(2): 61-72.
3. Altınay R. (2006). Erken dönem islam toplumunda at yarışları (Horse races during the early period of the islamic society). D.E.Ü. *İlahiyat Fakültesi Dergisi*, sayı 17, İzmir2006, ss.129-144.
4. Akdemir H. (2008). Kur'an acisindan ekolojik denge ve avlanma. *Harran U. İlahiyat Fakultesi Dergisi*, 13:(20):193-200.
5. Pfister G. (2008). Eşitlik ve sosyal misyonlar: Müslüman kadınlar ve spor ve fiziksel aktivitelere katılım fırsatları (davetli derleme), (Equality and social missions: Muslim women and their opportunities to participate in sport and physical activities [invited review]), Translated by: Pınar Yaprak. *Hacettepe J. of Sport Sciences*, 19(4):250-260.

6. Telkenaroğlu M.R. (2011). İslam ceza hukukunda hukuka uygunluk nedeni olarak “spor faaliyetleri”. (“Sports activities” as a ground of justification in Islamic penal legislation). *Atatürk Üniversitesi İlahiyat Fakültesi Dergisi*, 36:71-104.
7. Sarıkavak K. (2011). İslam filozoflarına göre beden sağlığı (Physical health according to Islamic philosophers). *Gazi Türkiyat Türkoloji Araştırmaları Dergisi*, 8:201-208.
8. İmamoğlu O., Türkmen M., Demirhan B., Çebi M. (2013). İslamın doğuşu ve Asrısaaadet Döneminde Sporun Önemi (The Significance of Sport During the Birth and Golden Age of Islam). *Vestnik Fiziçeskoj Kulturi i Sporta*, pp: 102-107.
9. Ünver Ş., Çavuşoğlu G., İslamoğlu İ. (2014). Spor Bilimleri ve İlahiyat Fakültesi Öğrencilerinin Benlik Saygısı ve Psikosomatik Belirtilerinin Karşılaştırılması. (A Comparison of Self-Esteem of Sports Sciences and Theology Faculty Students). *International Journal of Science Culture and Sport (intJSCS)*, special issue 2:2148-1148.
10. Kuşçuzade M. (2015). Sünette Spor (Sports in Al-Sunnah). *International Journal of Science Culture and Sport (intJSCS)*, Special Issue 4:2148-1148.
11. Arslan A. (2015). Hz. Peygamberin (sav)’in Spora Getirdiği Anlayış Çerçevesinde Hayvanları Hedef Yapma Yasağı. (The Prohibition of the Targeting of Animals in the Context of Prophet Muahmmmed(phub)’s Understanding Of Sport). *International Journal of Science Culture And Spor(intJSCS)*, Special Issue 3:442-451.
12. İmamoğlu O. (2016). Namazın Egzersiz ve Sportif Yönü ile Faydaları. (Benefits of Prayer as a Physical Activity). *International Journal of Science Culture and Spor(intJSCS)*, 4(special issue 1):2148-1148.
13. Arslan C. (2016). Ahmet Yesevi Felsefi Açısından Dünya’da Spor ve Barış. (Sport and Peace in the World in terms of Ahmet Yesevi Philosophy). *International Journal of Science Culture and Sport (intJSCS)*, 4 (special issue: 1):2148-1148.
14. Türkmen M., Abdurrahimoğlu Y., Varol, S., Gökdağ, M.(2016). İslami ilimler fakültesi öğrencilerinin spora yönelik tutumlarının incelenmesi (Bartın üniversitesi örneği) (The attitudes of the students attending to faculty of Islamic sciences towards sports [The Sample of Bartın University]). *International Journal of Science Culture and Sport (intJSCS)*, 2(1):2548-9373.

15. İmamoğlu O., Dilek A.N. (2016). Namaz ve Yoganın İnsan Organizmasındaki Ortak Faydaları (Common Benefits of Prayer and Yoga on Humman Organism). International Journal of Science Culture and Sport (intJSCS), 4(special issue 2):639-651.

#### **A.4. Books or Book Chapters**

1. Akyüz V. (1994). Asr-ı Saadette Spor. In: V. Akyüz, *Bütün Yönleriyle Asr-ı Saaddette İslam* (s. 497-512). İstanbul: Beyan Yay.
2. Akyüz V. (2007). Asr-ı Saadette Spor. In: V. Akyüz, *Bütün Yönleriyle Asr-ı Saaddette İslam*. İstanbul: Ensar Neşriyat, 2. baskı.
3. Eke Ö. (2015). *Shaolin Tapınağı'nda Kung Fu ve Zen*. Ankara: Gece Kitaplığı Yayınları.



<http://doi.org/10.22282/ojrs.2018.29>

## **ALIENATION IN TURKISH FOOTBALL: THE OPINION OF TURKISH SPORT PUBLIC ABOUT THE NUMBER OF FOREIGN FOOTBALL PLAYERS IN TURKISH FOOTBALL**

**Yüce ARIF\* Balcı VELİTTİN\*\***

\*Anadolu Üniversitesi Spor Bilimleri Fakültesi

\*\* Ankara Üniversitesi Spor Bilimleri Fakültesi

### **ABSTRACT**

Nowadays, billions of people are following football game all over the world. The game has become multi-layered sport activity with social, economic, and politic dimensions. This multi-dimensional point has attracted attention in Turkish sport public as well as all over the world. Foreign football players in the world football leagues are one of the issue that discussed in this multi-dimensional structure. Limiting foreign players is started at 1951 in Turkish football (Doğan et al., 2004, s.32) and it has been discussed since then today in Turkish sport public.

The purpose of this research was considering positive or negative effects of

foreign football players that played in Turkish professional football leagues on Turkish football under sport public opinion. The results of the research regarding sport public opinion indicated that high number of foreign football player increased the quality of football and promotion of Turkish league, increased the competitive strength of Turkish teams in international organisations on club basis. Also, participants believed that foreign players contribute promotional activities of Turkey, and development of football market. On the other hand, participants believed that, numerous foreign players have negative effects on economic situations of clubs, as well as on national team, and youth set up.

**Key Words:** Turkish Football, Foreign Football Players, Limiting foreign football players.

## **INTRODUCTION**

Historically, football game which is played between two teams consisting of eleven players according to certain rules (Savaş, 1997, s.145) have spread from China to Central Asia (Goldblatt, 2007; Stemmler, 2000; Yıldırım, 1997), from Mainland Europe to America (Boniface, 2010; Lennox, 2009; Wahl, 1990; Mason, 1981). Today football has transformed into an event where billions of people follow, watch, and participated.

Modern football had entered to Turkish society at the end of nineteenth century (Dağlaroğlu and San, 1960, s.3-6). In 1901, when a Turkish football team called “Black Stocking” was found, Turkish people collectively plays football. After professionalism was accepted in 1951 in Turkey, football had become an occupation and developed over time (Sümer, 1988, p.43-47). In this process, gradually accepting foreign football players into Turkish football in ruled and organised way can be considered together with professionalism process. Throughout this process, first official foreign transfer in Turkish football was Oscar Garo who transferred to Adalet team.

In 1951, Turkish Football Federation (TFF) had allowed only one foreign football player (Doğan et al., 2004, p.32) and this application continued until 1966. In 1966, the number of foreign football players were increased to two, in 1989 to three, and in 1996 to four with 3+1 rule (three football players in first ten + one reserve player). Over time, number of foreign players in Turkish Super League had increased to 200 (Table 1).

**Table 1:** Number of Foreign Players in Turkish Super League Based on Years

Season	Foreign football player	Season	Foreign football player
1993-1994	65	2003-2004	131
1994-1995	66	2004-2005	137
1995-1996	61	2005-2006	137
1996-1997	85	2006-2007	126
1997-1998	92	2007-2008	130
1998-1999	96	2008-2009	157
1999-2000	101	2009-2010	163
2000-2001	124	2010-2011	200
2001-2002	140	2011-2012	186
2002-2003	137	2012-2013	186

Source: Yıldırım, 2008; transfermarkt.com, 2013.

Such increase in number of foreign players in time led TFF to make certain correction and limit teams. When limitations over the years are considered, most prominent factors are the number of foreign players and their qualities. Knowing both positive and negative effects of those foreign players mentioned in required regulations on Turkish football is also considered as an important topic and is important for the future.

In this sense, the main objective of this research was to evaluate positive and negative effects of high number of foreign football players in Turkish professional football league on Turkish football clubs and national team under public opinion perspective. Under this scope, the objective was to test opinions of individuals of sport society for different variables including age, gender, occupation, football interest levels, and knowledge levels regarding Turkish professional football leagues and football players in these leagues, identify proportional distributions, and determine whether there are differences between perspectives.

### **HYPOTHETICAL FRAMEWORK**

Starting from the beginning of 2000s, foreign football player limits in Turkish football was extended and teams had the opportunity to sign contracts with higher number of football players. However, it can be seen that there are certain limitation regarding number of foreign football players in the field.

In 2001-2002 football season, 5+1+2 system was adopted. According to this system, teams could make a contract with total of 8 players. However, at most 5 foreign players could be on field, and 1 player will stay at bench (Altay et al., 2011). In 2005-2006, 6 foreign player was accepted in Super League.

In July 2007, number of foreign players were changed as 6+1 which will be effective starting from 2007-2008 football season. TFF had once more changes foreign football player limits in January 2008. According to this change, 6 football players could play simultaneously, and 2 football players will wait in bench. During 2008-2009 and 2009-2010 seasons, 6+2 was still applied, but TFF made a chance and accepted 6+2+2 rule in 2010-2011 season. According to this rule, clubs could made contract with at most 10 foreign players, and among those players at most 8 could be included in 18-player match squad. In 2011-2012 and 2012-2013 seasons, clubs signed contracts with foreign players without any limitation.



However, 6+2 rule continued in 18 match line-up (Table 2).

In 2012-2013 season, 6+2 rule was valid. However, TFF offered a status where number of foreign players will be decreased gradually, and this will change based on years. According to this status:

- In 2013-2014, clubs could made contract with at most 10 foreign players, and names of 6 foreign player could be included in match lists.
- In 2014-2015, clubs could made contract with at most 8 foreign players, and names of 5 foreign player could be included in match lists (TFF, 2012 Status).

Especially starting from the beginning of 2000s, in addition to such changes to prevent number of foreign players and to guide teams to local players, starting from 2008-2009, TFF considered that making contracts with high amount of foreign players will benefit to youth set up and made “youth set up fund” payments mandatory for clubs with high foreign player in their team. Additionally, TFF made it mandatory to include at least one below 23 years old football player in the 18-player match list.

**Table 2:** Foreign Football Player Limitation in Turkish Football Based on Years

Season	Rule	On field	At bench	Number of contract
2007-2008	6+1	6	1	7
2008-2009	6+2	6	2	8
2009-2010	6+2	6	2	8
2010-2011	6+2+2	6	2	10
2011-2012	6+2	6	2	Unlimited
2012-2013	6+2	6	2	Unlimited

**Source:** Turkish Football Federation 2007-2012 Football Season Leagues Match Status

Foreign player limitations in Turkish football as stated above had always been an interesting subject and discusses by Turkish sports public opinion. In Communication Dictionary, public opinion was defined as “total of evidence of public against subjects related with public things; expressions of members of public regarding political or current events” (Mutlu, 1994, p.117). When communication and social literature was reviewed, although unanimous definition was absent, public opinion concept was often stated as “common judgement of people within certain society about certain facts or beliefs” (Vural, 1999, p.45).

Since people and institutes from different segments of the public are concentric with sports and sports organisations, Şahan and Çınar (2004, p.313-321) defined sports public opinion as the society itself, and stated that everyone from media, state institutions, sport clubs, amateur and professional sport players, and audience were included in sport public opinion.

## RESEARCH METHOD

This research was designed as descriptive way and data were collected with a survey. Survey forms were created based on feedback from pre-assessment forms developed by the researchers. Survey to collect research data had two sections. In the first section, participants were asked 7 questions regarding personal information, football interest levels, as well as Turkish professional football leagues, and football players in those leagues in terms of knowledge levels. In the second section, participants were given 20 items in five-point Likert scale format regarding effects of high number of foreign players that professionally participate to Turkish leagues on Turkish football.

To analyse and interpret data, point ranges were equally divided in 0.80 ( $5-1=4$ ;  $4/5=0.80$ ) form. Accordingly, options and point ranges were determined as Strongly Agree (4.20-5.00), Agree (3.40-4.19), Slightly Agree (2.60-3.39), Disagree (1.80-2.59), and Strongly Disagree (1.00-1.79).

To test reliability and validity of measurement tool, before the research, the survey was applied to participants that are five times the number of questions. Pre-test stage was applied to 104 people, results were transferred to computer environment, and later added into the study and evaluated. Item total correlation analysis, and factor analysis were applied for structure validity of measurement tool. Before factor analysis, to test whether data were suitable for factor analysis, Kaiser-Meyer-Olkin (KMO) value was found as (0.944). According to Sipahi et al. (2007, p.80), minimum KMO values should be (0.60) for factor analysis. In this study, (0.944) KMO values indicated that data were suitable for factor analysis. On the other hand, Barlett test result for factor analysis of 20 item were found as ( $\chi^2 = 28690.765$   $p < 0.001$ ). KMO and Barlett test results indicated that factor analysis could be

applied on this data set. Three factors were proposed as a result of exploratory factor analysis. Contribution of these three factors on variance was 59.910%. However, according to Büyüköztürk (2012, p.124), most important component to determine factor number was the significance of contribution of each factor to total variance. Accordingly, contribution of the first factor was determined as 43.739%. When contribution of proposed second and third factor to variance were analysed, it was clear that the contribution was gradually decreasing. At the same time, scree plot was also investigated and contribution of second and third factors on variance were identified as both small and approximately same. Therefore, uniting the items in the survey form under one factor was decided. Büyüköztürk (2012, p.171) stated that to determine whether an item should be included in the scale, factor load value of (0.45) or higher was a good measurement for selection, and for item-total correlation value of (0.30) or higher was distinctive for individuals. Accordingly, criteria were selected as (0.45) or higher for factor load value of items, and (0.30) or higher for item-total correlation values.

For reliability, item total point reliability, and alpha coefficients were investigated. Accordingly, correlation value was found between (0.411) and (0.754) range. Alpha ( $\alpha$ ) internal consistency value was calculated as (0,929).

Kalaycı (2005, p.405) stated that scales between 0.80 and 1.00 were considered as high-reliable scales. Therefore, the scale was accepted as valid and reliable. Accordingly, universe of the research was determined as football players, trainers, managers, media members, sport writers, commenters, fans, and individual who are interested in any brand of sports and has knowledge about Turkish football who were accepted as sport public opinion and were older than 15 years old, and lived in Turkey.

The number of individuals that form the Turkish sport public opinion was estimated high. Since there was no clear evidence regarding the exact numbers, general population over 15 years old in Turkey were considered. Based on this data, total population in Turkey over 15 years old was 50,364,653 according to 2012 census (TÜİK, 2012).

To determine adequate sample size for the study, “Hypothetical Sample Size for Different Sized Samples” table was adopted. In the table, 600 sample were determined for 25,000,000 people universe at 95% reliability level with 4% tolerance value (Balci, 1995, p.110). Based on population in Turkey that are over 15 years old (50,364,653), total number

of individuals of the sample were determined as 2000 or higher.

Sample of this research consisted of randomly selected total of 2602 individuals who were fans, students, football players, trainers, media members, managers, sport trainers, sport writers, and audience that were interested in football or any other sport branch, had knowledge about Turkish football, and football interest level.

Survey form created with data collection tool was presented for sport public opinion on Internet in electronic environment. Online survey was advertised on various internet sites, and were announced to participants using social network sites. To avoid any issues with reliability of the research, completing the survey from same computer or using the same IP address were blocked. Among all surveys, incomplete or false surveys were excluded from evaluation. At the same time, participant surveys with “I don’t know” and “Little” answers to “What is your knowledge level about Turkish professional football league?”, and “What is your knowledge level about football players in Turkish professional football league?” were excluded from evaluation for the purpose of the research. Total of 3917 individuals had viewed the online survey link to answer the questions. However, the number of individuals who had completed the survey, provided the necessary guidance, and evaluated was 2602.

## FINDINGS

When demographical properties of the participants were investigated, 120 (4.6%) were female, 2482 (95.4%) were male. The age of the participants varied between 20 or below and 51 or more and the age distribution was 63.6% between 21-30, 40.4% were students, 21.5% were private sector employees, and 12.8% were public sector employees.

**Table 3:** Demographical Properties of Participants

Gender	f	%	Vocational	f	%
Female	120	4.6	Student	1051	40.4
Male	2482	95.4	Football Player	213	8.2
<b>Total</b>	<b>2602</b>	<b>100</b>	Trainer	136	5.2
Age			Sport Trainer	99	3.8
20 and more	495	19	Media	182	7.0
Between 21-30	1656	63.6	Public Worker	333	12.8
Between 31-40	382	14.7	Private Sector	560	21.5
Between 41-50	59	2.3	Other	28	1.1
51 and more	10	0.4	<b>Total</b>	<b>2602</b>	<b>100%</b>
<b>Total</b>	<b>2602</b>	<b>100%</b>			

When Turkish Professional Football League knowledge level of participants were investigated, it was clear that 57.5% was “very good”, and 35.8% was “good”. Those two participants groups formed 93.3% of the total participants. When football players in Turkish professional football league knowledge levels of participants were investigated, participants were mostly denser in “good” (41.1%) and “very good” (47.1%) levels.

**Table 4:** Turkish Professional Football League Knowledge Level of Participants

League Knowledge Level Distribution			Football Players in Turkish Professional Football League Knowledge Levels of Participants		
Knowledge Levels	f	%	Knowledge Levels	f	%
Intermediate	175	6.7	Intermediate	308	11.8
Good	932	35.8	Good	1069	41.1
Very Good	1495	57.5	Very Good	1225	47.1
<b>Total</b>	<b>2602</b>	<b>100%</b>	<b>Total</b>	<b>2602</b>	<b>100%</b>

When types of associations between participants and how they relate themselves with football was investigated, it was seen that most of the participants (60.9%) had defined themselves as “fans”. Lowest number of participants were observed in “Manager” (0.7%) group.

**Table 5:** Types of Association Between Participants and Football

Interest Level	f	%
Fans	1585	60.9
Amateur Football Players	390	15
Professional Football Players	30	1.2
Manager	19	0.7
Media (Press - Publication)	214	8.2
Trainer	145	5.6
Only Audience	203	7.8
Other	16	0.6
<b>Total</b>	<b>2602</b>	<b>100%</b>

Table 6 indicated answers of participants regarding number of foreign football players in Turkish professional football league. Answers of participants to each item were presented in results and discussion section.

**Table 6:** Frequency and Percentage Distribution of Participants Regarding Statements About Number of Foreign Football Players

Hypothesis: High number for foreign football players in Turkey...	(1) I do not agree.		(2) I slightly agree.		(3) I moderately agree		(4) I Agree		(5) I Strongly agree.	
	f	%	f	%	f	%	f	%	f	%
1. It will prevent football players from youth setup.	961	36.9	644	24.7	571	21.9	270	10.3	156	6
2. It will decrease game quality.	196 7	75.6	468	17.9	117	4.5	33	1.27	17	0.6 5
2. It will decrease league quality.	201 0	77.2	417	16	123	4.7	38	1.5	14	0.5
4. It will increase football player transfer costs.	789	30.3	409	15.7	555	21.3	470	18.1	379	14. 6
5. It will prevent development of unique Turkish football culture.	997	38.3	604	23.2	500	19.2	275	10.6	226	8.7
6. It will cause economic problems in clubs.	674	25.9	521	20	628	24.1	450	17.3	329	12. 6
7. It will be hard to achieve national success.	925	35.5	538	20.7	483	18.6	342	13.1	314	12.

										1
8. It will benefit development of Turkish football.	175	6.7	301	11.6	686	26.4	727	27.9	713	27.4
9. Turkish league football will become more enjoyable and fun.	70	2.7	140	5.4	534	20.5	831	31.9	1027	39.5
10. It will contribute to development of football market.	95	3.7	201	7.7	587	22.6	841	32.3	878	33.7
11. It will contribute to promotion of Turkey.	81	3.1	134	5.1	419	16.1	772	29.7	1196	46
12. It will prevent clubs to make future plans.	1189	45.7	678	26.1	410	15.8	176	6.8	149	5.7
13. It will prevent raising quality and elite football players in Turkey.	1266	48.7	610	23.4	350	13.5	218	8.4	158	6.1
14. It will prevent raising trainers in Turkey.	1775	68.2	484	18.6	219	8.4	78	3	46	1.8
15. It will cause managers and mediators to earn more money.	459	17.6	443	17	639	24.6	513	19.7	548	21.1
16. It will cause ineffective use of club resources.	696	26.7	626	24.1	604	23.2	385	14.8	291	11.2
17. It will negatively affect motivation of football players in youth setup.	1049	40.3	594	22.8	463	17.8	274	10.5	222	8.5
18. It will increase competitive strength of the team in international organisations.	93	3.6	132	5.1	353	13.6	731	28.1	1293	49.7
19. It will help Turkish players to be noticed by international market.	273	10.5	375	14.4	631	24.3	592	22.8	731	28.1
20. It will decrease the chances of Turkish football players to play in games.	683	26.2	604	23.2	635	24.4	373	14.3	307	11.8

## RESULTS AND DISCUSSION

In this study where the objective was to determine positive or negative effects of foreign football players in Turkish professional football leagues on Turkish football in terms of sport public opinion, results and related evaluations were presented as follows:

In this study, individuals who believed to form sport public opinion were

Mostly male (95.4%),

Denser between “20 or lower” and “21-30 years old” range (82.6%),

Mostly university graduates (63.9%),

Mostly students (40.4%),

Mostly have very good and good level of professional league knowledge (93.3%),

Mostly have very good and good level of football players in professional league knowledge (88.2%),

Fans (60.9%), football players (16.2%), and media members (8.2%).

Sport public opinion demographic properties stated above are parallel with Şahan (2001), Bahadır (2006), Baş (2007), and Özsoy (2007). Therefore, it could be stated that majority of people who are interested in football in Turkey were male. At the same time, age range density of participants of the study were in line with TÜİK (2012) data. According to TÜİK (2012) values, highest population range was the same with the results of this study. In the light of these data and data obtained from current study, it could be said that individuals who form sport public opinion were denser between “21-30 years old” range.

When the answers of participants to second section of the survey were investigated, following results were obtained.

General attitude towards “It will prevent football players from youth setup.” was determined at “Slightly Agree” ( $\bar{X} = 2.24$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players, gender, occupation, and football interest levels. While 36.93% of individuals of sport public opinion disagreed with this statement, 63.07% agreed at certain levels. To evaluate development of football players in youth setup, it is important to consider current state of previous youth setup players in Turkey. Based on January 2013 report of The International Centre for Sports Studies, with 9.3% ratio Spor Toto Super League was the second league with lowest number of youth setup football players (Besson et al., 2013, p.47). Spor Toto Super League was the second league that gave lowest time to youth setup football players in Champions League and Europe League based on UEFA report (UEFA, 2010). Results of both reports were in line. In this sense, it could be commented that clubs in Turkish professional football league fail to provide necessary change to youth setup football players. However, it would be incorrect to link development of youth setup football players to existence of foreign players or transferred players. Including players from youth setup to the main team of the club, and increasing the maximum number in Turkey will benefit to development of these



players. Additionally, various factors including quality and quantity of trainers in youth setup, facilities, education programs will contribute to development of those players.

General attitude of participants towards “It will decrease game quality.” was at “Strongly Disagree” ( $\bar{X}=1.33$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players levels. 75.6% of individuals of sport public opinion believed that number of foreign players had no decreasing effect on game quality. Football players should regularly play in the game to effect game quality. When performance of foreign football players on different seasons of Super League were considered, 51% of goals during 2010-2011 season, 52% of goals during 2011-2012 season, and 54% of goals during 2012-2013 season were scored by foreign football players in teams. Additionally, highest goal-scorer of 10 teams in Super League were foreign players. Although statistical information indicated that foreign players had positive effect on their teams, it could be evaluated as negative effect for National team and Turkish football (Çetin, 2013, p.22). Number of scored goals could be considered as an important data set even though there are other measures.

General attitude of participants towards “It will decrease league quality.” was at “Strongly Disagree” ( $\bar{X}=1.32$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players levels. 77.2% of individuals of sport public opinion believed that number of foreign players had no decreasing effect on league quality. It could be viewed as that existence of foreign football players that increase the quality of the game will increase the quality of the league. Yet, quality of foreign players in teams or foreign players that will be transferred plays a determinative role here. In the past, it is possible to say that there were high number of foreign football players who came to and lived in Turkey. Numerous African and South American football players who have lower costs compared to European players were transferred to Turkish leagues. It is an undeniable truth that disappointment of these transfers is higher than successful players (Akşar, 2013). Therefore, it would be correct to state that quality of foreign football players in teams can be considered as an important factor to determine the quality of league.

General attitude towards “It will increase football player transfer costs.” statement was at “Slightly Agree” ( $\bar{X}=2.71$ ) level. It was identified that answers to this statement showed

difference for knowledge level about football leagues and football players, gender, occupation, education, age, and football interest levels. 69.7% of individual of sport public opinion believed that high number of foreign football players will increase the transfer costs. According to FIFA (2012) “Global Transfer Market” report in 18 April 2013, with 78 million dollars, Turkey was third country around the world that spend large amount of money to transfer. Although astronomic transfer fees are paid to local football players in Turkey, generally, transfer costs are associated with foreign players. When considered in this sense, it could be said that high number of foreign players may increase the costs. Akşar (2013) stated that fees or salary of the football players should be increased to attract, especially old football players and players who no longer attract attention of super leagues, to second class country leagues, thus, most of the important stars could come to Turkey with high salary and fee even though they had low and even zero transfer fees. It could be said that these data and sport public opinion were parallel.

General attitude of participants towards “It will prevent development of unique Turkish football culture.” statement was at “Disagree” ( $\bar{X}=2.28$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players, gender, and football interest levels. 38.35% of individuals of sport public opinion disagreed with “It will prevent development of unique Turkish football culture.” statement where 61.7% of individuals agreed at certain levels. Before football was industrialised and foreign football player transfers were common, it was known that each national football team had unique football understanding and Ecole. However, changes in economic conditions and economic factors at the centre of football, had affected this unique structure of countries, clubs, and national teams. In this sense, it is impossible to mention unique football player for Turkish football because of frequent technical trainer changes, and instability among football players. According to Kapsal (2013), the formation of football understanding unique to Turkish football can be formed at the level of clubs, with big teams adopting young and Turkish player-supported teams understanding together with good planning, and understanding of football and showing patience for stability. Today, it is impossible to talk about unique Turkish football understanding because of high number of foreign players and low level of youth setup football players,

General attitude towards “It will cause economic problems in clubs.” statement was at

“Slightly Agree” ( $\bar{X}=2.71$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players, gender, occupation, education, age, and football interest levels. 74.1% of individuals of sport public opinion stated that high number of foreign football players will cause economic problems in clubs. In Turkey, transfers fees and payments to players was always higher for foreign players compared to Turkish football players. The clubs that want those football players, made these payments without any boundaries, and under certain circumstances asked sponsors for the high transfer fees. In addition, these situations, sending away the football players that were transferred with big promises, indemnifications that must be paid in case of termination of contracts etc. creates additional economic burden on teams. During process between 2000-2001 and 2012-2013 season, Beşiktaş Gymnastic Club, Fenerbahçe, and Galatasaray Sports Club had experienced 420.8 million Euro transfer loss. To close this economic gap, clubs intensively turned to foreign resources or opened in the Istanbul Stock Exchange (Akşar, 2013). All these initiatives and high fees for foreign football players clearly showed that clubs experienced economic problems.

General attitude towards “It will be hard to achieve national success.” statement was at “Disagree” ( $\bar{X}=2.46$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players, gender, occupation, age, and football interest levels. 35.5% of individuals of sport public opinion strongly disagreed with this statement while 65.5% at different levels agreed that high number of foreign football players will make national success harder. In all countries where limitations and independence about number of foreign football players were discussed, the first question and consideration that comes to mind was the success of national teams. For example, within five major leagues (England Premier League, Spain La Liga, Germany Bundesliga, France Ligue 1, Italy Serie A), according to British national team football coach Roy Hodgson where highest number of foreign players exists, they were worried about the future of British National Team (Ashton, 2013:

*“Most of the games today have no British players... Premier League should be careful about British players since two third of the football players are foreign. We are one of the countries that raise lowest amount of young football players, and this is problematic for national team and positions us in a disadvantaged form.”*

Another example can be given as statements of Sergio Campana, President of Italian Professional Football Federation. After an unsuccessful season of Italian national team and club teams, Campana argued that number of foreign players should be decreased to develop Italian football (ESPN, 2009). In our country, similar discussions were constantly made. Regarding number of foreign football players in Turkey, national team football coach Abdullah Avcı stated that;

*“In the past, Turkish teams were successful with 3 foreign players. Lower number of foreign players will contribute us more. 5 foreign players will be pleasing.”* (Ntvspor, 2012).

There are different views on this subject. When this subject was asked to Fatih Terim during his time as national team football coach, he stated that number of foreign players should be set free based on certain criteria like England (Hürriyet, 2013). When FIFA World ranking was considered in terms of national team, first two which were Germany and Spain had high success rates although there is no foreign player limitation in those countries. At this point, it is possible to state that successes on national team level are linked with youth setup team.

General attitude towards “It will contribute to development of football market.” was at “Strongly Agree” ( $\bar{X}=3.85$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues, football players, and gender levels. 96.3% of individuals of sport public opinion thought that high number of foreign players will contribute to development of football market. Changes in the number of foreign players will undoubtedly reflect to local market. It was mentioned that high transfer fee for local football players due to limitations on foreign football players restricted transfer movements of young football players and prevented their development. Similar factor could be seen in different form. At this point, normal fees of football players would positively affect local transfer and contribute to development of this market. Another matter was the various forms of income including sponsorships, publications agreements, combined ticket sales, licences goods sales etc. There are various examples of this marketing technique around the world, and these techniques was recently initiated in our country. According to most valuable 50 football clubs report of Brand Finance on May, 2013; Galatasaray Sport Club ranked 17th with 116 million dollar value, Fenerbahçe Sport Club ranked 22nd with 95 million dollar value, and Beşiktaş

Gymnasium Club ranked 36th with 71 million dollar value (Brand Finance, 2013). Especially Galatasaray and Fenerbahçe being in top 25 of this list was mostly related with their success in European level and have world-class foreign football players in the team. As these football players played in Turkey, interest of audience from other countries to Turkish league can be increased and marketability of the league to different countries may increase.

General attitude towards “It will contribute to promotion of Turkey” was at “Strongly Agree” ( $\bar{X}=4.10$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players, occupation, age, education, and football interest levels. 96.3% of individuals of sport public opinion thought that high number of foreign players will contribute to promotion of Turkey. As transferred football players had successful career and reputation, happiness and success of those players in Turkey will undoubtedly positively effect promotion of our country. In addition to Turkish press, press from football players country as well as international press follows statistics of those football players and notifies the audience in different countries. Thus, these press organs are contributing to promotion of Turkey and Turkish league. Last example about this subject can be given as transfer of Didier Drogba, and Wesley Sneijder to Galatasaray club. Starting from the transfer of these football players, Galatasaray club and Turkish Super League was in sight. In addition to media side, it could be commented that foreign football players in Turkey had opened new doors to other star football players that may be transferred to Turkey. Yıldırım (2008, p.76) declared that foreign football players highly adopt “I positively promote Turkey when I go back to my country” statement.

General attitude towards “It will prevent clubs to make future plans.” statement was at “Disagree” ( $\bar{X}=2.01$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players levels. 55.3% of individuals of sport public opinion agreed at different levels that high number of foreign players will prevent clubs to make plans while 44.7% declared they disagree with this opinion. Economic problems caused by clubs paying astronomic transfer fees for foreign players and fail to achieve expected results are considered normal. While the clubs desire to end the contract with football players who were unable to provide the expected performance, clubs are subjected to high compensation or free the players without transfer fee. Indeed, in last 14 seasons, Galatasaray, Fenerbahçe, and Beşiktaş were forced to send total of three hundred

whom they have transferred with certain fee to other countries without demanding any transfer fee (Yaycılı and Saboviç, 2012). Those chain of problems causes excessive debt and economic crises. Akşar (2013) stated that transfer gaps are the main factors of football club crises. Therefore, it could be commented that since main objective of teams with high amount of debt is to pay the debt and continue existing, these clubs are forced to make different plans. By adopting correct planning with club management, as well as correct resource management during foreign player transfers, possible problems could be prevented.

General attitude towards “It will prevent raising quality and elite football players in Turkey.” was at “Disagree” ( $\bar{X}=2.00$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players, gender, occupation, age, and football interest levels. 51.3% of individuals of sport public opinion agreed at different levels that high number of foreign players will prevent quality and elite football players in Turkey while 48.7% disagreed with this view. As discusses before, it would be unfair to link insufficient development of young and quality football players in Turkey or limited number of such players to number of foreign players. If this topic is handled from a different perspective, existence of foreign players in Turkey will undoubtedly help development of local football players as foreign players will contribute with their experience. On the other hand, high fees players to players due to foreign passport instead of football level will be selected over Turkish players and raising quality and elite football players will be prevented. The important thing here is to select football players based on their talents or giving equal chances to Turkish football players as foreign players.

General attitude towards “It will cause managers and mediators to earn more money.” statement was at “Slightly Agree” ( $\bar{X}=3.10$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players, and football interest levels. 82.4% of individuals of sport public opinion believed at different levels that high number of foreign players will cause managers and mediators to earn more money. When football transfers, especially foreign football transfers are mentioned in our country, there is always the element of manager. Yıldırım (2008, p.81) identified that Turkish football players had “clubs are negatively affected when club managers and promoters intervene with foreign football player transfers” statement. It is known that in our league, teams pay high fees to managers. It is also possible to state that certain transfers failed to

happen due to high manager fees. In 2013, president of Erciyesspor that manager to play in Super League Ziya Eren stated that;

“Unfortunately, there is manager abuse in Turkey. Managers are increasing the prices. They are taking their 10 percent share and negotiations with many of the players are broke down because of managers.” (Ensari and Öztürk, 2013).

However, these high prices can be seen in other countries. For example, in England 77 million pound was paid to managers between 01 October 2011-30 September 2012 (Dinçer, 2012). In this sense, number of transfers are directly proportional with money earned by mediators and will vary.

General attitude towards “It will cause ineffective use of club resources.” statement was at “Slightly Agree” ( $\bar{X}=2.60$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players, and football interest levels. 26.7% of individuals of sport public opinion disagreed with this opinion and 73.3% believed that high number of foreign players will cause clubs to ineffectively use resources. As stated earlier, it is impossible to state that material resources of the clubs in our country are adequately manager. When clubs desire to be successful in short time and impatience of fans are combined, resource use is often unhealthy. Kuper and Szymanski (2010; p.77) stated that clubs spend large amount of their money to incorrect transfers. Based on the analysis results, authors also stated that there was no balanced correlation between money spend on transfers and last status at the end of league. Since 2013, economic structure of Turkish football and clubs is corroborative. Using facility, youth setup investments, and corporate management resources adequately for long-term success and to generate new income resource will be more permeant, and beneficial than short-term results.

General attitude towards “It will increase competitive strength of the team in international organisations.” was at “Strongly Agree” ( $\bar{X}=4.15$ ) level. It was identified that answers to this statement showed difference for knowledge level about football leagues and football players levels. 96.4% of individuals of sport public opinion agreed that high number of foreign players will increase competitive advantage of the team in international organisations. It will be beneficial to evaluate conditions of the competitor countries to talk about international competitive strength of our teams. The most prestigious organization



based on the clubs is Champions League, and champions of the last 5 seasons starting from 2013 are as follows; Barcelona (Spain), Chelsea (England), Inter Milan (Italy) and Bayern Munchen (Germany). In none of these countries, there is no limitation for number of foreign players. However, there are certain criteria. In this sense, it could be commented that limitations on Turkish team may bring disadvantaged against other teams in international organisations. To increase the competitive strength of our team, loosening number of foreign football players may compensate competitive conditions. It could be said that contribution of foreign players on Fenerbahçe's UEFA Europa League semi-final in the 2012-2013 season, Galatasaray's Champions League quarter-finals is high. Karaca (2008) stated that according to analysis, foreign football players have positive effects on club teams in international games. In terms of all these aspects, quality foreign football players in Turkish teams will positively contribute to competitive advantage of the team with their experience and performance.

## REFERENCES

- Akşar, T. (2013). Krizdeki Futbol. İstanbul: Literatür.
- Altay, İ., Ünlü, S. & Karadeniz, F. (2012, 24 Kasım). Kimler Geçti Kimler Var. [www.sabah.com.tr](http://www.sabah.com.tr)
- Ashton, N (2013, 17 Nisan). Hodgson questions “Englishness” of Premier League. [www.dailymail.co.uk](http://www.dailymail.co.uk)
- Bahadır, Z.(2006). Futbol Seyircisinin Sosyo-Ekonomik ve Kültürel Yapısının Şiddet Eylemine Etkisi(Konyaspor Örneği). (Yayınlanmamış yüksek lisans tezi). Niğde Üniversitesi/Sosyal Bilimler Enstitüsü, Niğde.
- Balcı, A. (1995). Sosyal Bilimlerde Araştırma: Yöntem, Teknik ve İlkeler. Ankara: Pegem Akademik.
- Baş, M. (2008). Futbolda Taraftar ve Takım Özdeşleşmesi-Trabzonspor Örneği. (Yayınlanmamış doktora tezi). Gazi Üniversitesi/Sağlık Bilimleri Enstitüsü, Ankara.
- Besson, R., Poli, R. & Ravanel, L. (2013). Demographic Study 2013. Erişim: [[http://www.footballobservatory.com/IMG/pdf/DS2013\\_excerpt-2.pdf](http://www.footballobservatory.com/IMG/pdf/DS2013_excerpt-2.pdf)] Erişim Tarihi: 04.05.2013.
- Boniface, P. (2010). Football et Mondialisation. Paris: A. Colin.



Brand Finance (2013). Football 50, The Annual Report On The World's Most Valuable Football Brands. Erişim: [http://www.brandfinance.com/images/upload/brandfinance\_football\_50\_high\_res.pdf] Erişim Tarihi: 03.06.2013.

Büyüköztürk, Ş. (2012). Sosyal Bilimler İçin Veri Analizi El Kitabı. Ankara: Pegem Akademik.

Çetin, C. (2013). Spor Toto Süper Lig Yabancı Oyuncu Dosyası. Tamsaha Dergisi. 2013 Haziran sayısı. Erişim: [http://www.tff.org/Resources/Tamsaha/104/#/22/] Erişim Tarihi : 12.06.2013

Dağlaroğlu, R. & San. T. (1960). Türk Futbol Tarihi. Ankara: Türk Ticaret Bankası.

Dinçer, O. (2012, 1 Aralık). Menajerleri zengin ettiler. <http://skorer.milliyet.com.tr>

Doğan, M., Doğan, A., Serbest, M. (2004) Profesyonel Türk Futbolcuların Türkiye 1. Süper Liginde Oynayan Yabancı Uyruklu Futbolcularla İlgili Düşünceleri Üzerine Bir Çalışma. Atatürk Üniversitesi Beden Eğitimi ve Spor Bilimleri Dergisi. 6 (1) 30-39.

Ensari, O. & Öztürk, D. (2013, 4 Haziran). Erciyesspor başkanı Eren: Yabancı sayısı artmalı. [www.dha.com.tr](http://www.dha.com.tr)

ESPN Staff (2009,12 Ağustos). Italian Chief Wants Limit on Foreigners. <http://espnfc.com>

FIFA(2012). Global Transfer Market Report 2012. Erişim [http://www.fifatms.com/en/Reports/] Erişim Tarihi 10.06.2013.

Goldblatt, D. (2007). The Ball is Round: A Global History of Football. New York: Penguin.

Hürriyet (2013, 10 Mayıs). Yabancı oyuncu sayısı serbest bırakılmalı. [www.hurriyet.com.tr](http://www.hurriyet.com.tr)

Kalaycı, Ş. (2005). SPSS Uygulamalı Çok Değişkenli İstatistik Teknikleri. Ankara: Asil.

Kapsal, R. (2013, 7 Mayıs). Ülke futbolu ve ekol. [www.hurriyet.com.tr](http://www.hurriyet.com.tr)

Karaca, O. (2008). The Impact of Foreign Players on International Football Performance. (Paper No. 11064). Munich: Munich Personal RePEc Archive.

Kozanoglu, C. (1998) Beyond Edirne: Football and The National Identity Crisis in Turkey. Gary Armstrong and Richard Giulianotti (Ed.), Football Cultures and Identities içinde (s.177). London: MacMillian.

Kuper S. & Szymanski, S. (2010). Soccernomics. London: HarperCollins.

Lennox, D. (2009). Now You Know Soccer. Toronto: Dundurn.

Mason, T. (1981). Association Football and English Society 1863-1915. Brighton: Harvester.

Mutlu, E. (1994). İletişim Sözlüğü. Ankara: Ark.

NTV Spor (2012, 18 Ocak). Avcı: Yabancı sayısı 5 olursa seviniriz. [www.ntvspor.net](http://www.ntvspor.net)

Özsoy, S. (2007). Kamuoyunun Spor Medyasından Beklentilerinin Nitel ve Nicel Yönden Değerlendirilmesi. (Unpublished doctoral thesis). Abant İzzet Baysal Üniversitesi/ Sosyal Bilimler Enstitüsü, Bolu.

Şahan, H. (2001). Türkiye’de Spor Yazarlığı ve Futbol Kamuoyu Üzerine Etkileri. (Unpublished graduate thesis). Selçuk Üniversitesi/Sağlık Bilimleri Enstitüsü, Konya.

Şahan, H. ve Çınar, V. (2004). Kitle İletişim Araçlarının Spor Kamuoyu Üzerine Etkisi. Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 12, 313-321.

Savaş, İ. (1997). Spor Genel Kültür, İstanbul: İnkılap.

Sipahi, B., Yurtkoru, E. S. & Çinko, M. (2008). Sosyal Bilimlerde SPSS’le Veri Analizi, Ankara: Beta.

Stemmler, T. (2000). Futbolun Kısa Tarihi. Necati Aça (Çev.). Ankara: Dost.

Sümer, R. (1988). Sporda Demokrasi: Belgeler – Yorumlar. Ankara: Güven.

transfermarkt.com. (2013) Erişim:

[[http://www.transfermarkt.com.tr/de/premierleague/gastarbeiter/wettbewerb\\_GB1\\_2012.html](http://www.transfermarkt.com.tr/de/premierleague/gastarbeiter/wettbewerb_GB1_2012.html)], Erişim Tarihi: 19.03.2013.

TÜİK (2012). Türkiye İstatistik Kurumu, Adrese Dayalı Nüfus Kayıt Sistemi Sonuçları, 2012 İstatistiksel Tablolar. Erişim: [<http://www.tuik.gov.tr/PreHaberBultenleri.do?id=13425>] [http://www.tuik.gov.tr/VeriBilgi.do?alt\\_id=39](http://www.tuik.gov.tr/VeriBilgi.do?alt_id=39) il-yaş grubu ve cinsiyete göre nüfus Erişim Tarihi: 17.04.2013.

Türkiye Futbol Federasyonu (TFF), 2007-2013 Futbol Sezonları Lig Müsabakaları Statüleri, Erişim: [<https://www.tff.org/default.aspx?pageID=133>], Erişim Tarihi: 03.03.2013.

UEFA (2010). The European Club Footballing Landscape, Club Licensing Benchmarking Report 2010. Erişim: [[http://www.uefa.com/MultimediaFiles/Download/Tech/uefaorg/General/01/74/41/25/1744125\\_DOWNLOAD.pdf](http://www.uefa.com/MultimediaFiles/Download/Tech/uefaorg/General/01/74/41/25/1744125_DOWNLOAD.pdf)] Erişim Tarihi: 31.05.2013.

Vural, A., M. (1999). Yerel Basın ve Kamuoyu. Eskişehir: Anadolu Üniversitesi.

Wahl A. (1990). Tous droits de traduction et d’adaptation réservés pour tous pays. Paris: Gallimard.

Yaycı, A. & Saboğlu, F. (2012, 5 Eylül). Porto 383 milyon Euro kazanç 3 büyükler 366 milyon Euro zarar. [www.hurriyet.com.tr](http://www.hurriyet.com.tr)

Yıldıran, İ. (1997). Tepük Futbol Mudur?: XI. Yüzyıl Türk Spor Faaliyetlerinden “Tepük” Oyununu Mahiyeti Üzerine Bir Araştırma. *Gazi Beden Eğitimi ve Spor Bilimleri Dergisi*, 2 (1), 54-62.

Yıldırım, E. (2008). Profesyonel Ligdeki Yabancı Futbolcuların, Türkiye’de Futbol Oynamalarına İlişkin, Ekonomik, Sosyal ve Kültürel Açidan Görüşleri ve Yerli Futbolcuların Yabancı Futbolculara Bakış Açılar. (Unpublished doctoral thesis). Gazi Üniversitesi/Sağlık Bilimleri Enstitüsü, Ankara.