



Cyprus Mental Health  
Institute

ISSN 1302-7840  
E-ISSN 2667-8225

# Cyprus Turkish Journal of Psychiatry & Psychology

*Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi*



*Vol/ Cilt 6. Issue/Sayı:2, June 2024*

Investigating Social and Psychological Adaptation Among International Students: A Study of Factors Influencing Wellbeing  
*Uluslararası Öğrenciler Arasında Sosyal ve Psikolojik Uyumun Araştırılması: İyi Oluşu Etkileyen Faktörler Üzerine Bir Çalışma*  
Determining the Influence of Extrajudicial Justice on Perception of Police among Nigerian Citizens: A Scale Development Study  
*Nijerya Vatandaşları Arasında Yargısız Adaletin Polis Algısı Üzerindeki Etkisinin Belirlenmesi: Bir Ölçek Geliştirme Çalışması*

Investigation of the Relationship Between Attention Level and Reading Speed in Children  
*Çocuklarda Dikkat Düzeyi ile Okuma Hızı Arasındaki İlişkinin İncelenmesi*

Stress, Caregiving Burden and Family Functioning in Families Whose Children Have Been Diagnosed with Cancer  
*Çocuklarına Kanser Teşhisi Konmuş Ailelerde Stres, Bakım Verme Yükü ve Aile İşlevselliği*

Trauma Exposure and Hopelessness as Predictors of Post-Traumatic Stress Disorder and Depression among War Veterans in South-East Nigeria  
*Güneydoğu Nijerya'daki Savaş Gazileri Arasında Travma Sonrası Stres Bozukluğu ve Depresyonun Belirleyicileri Olarak Travmaya Maruz Kalma ve Umutsuzluk*

Examining the Predictive Role of Depression on Smartphone Addiction  
*Depresyonun Akıllı Telefon Bağımlılığı Üzerindeki Yordayıcı Rolünün İncelenmesi*

Comparison of State Anxiety Levels of Strong and Weak Competitors in the Iraqi First League Basketball  
*Irak Birinci Ligi'nde Basketbol Oynayan Güçlü ve Zayıf Rakiplerin Durumluk Kaygı Düzeylerinin Karşılaştırılması*

A Review of the Literature on the Influence of Peer Support Programs on Student Mental Health and Well-Being  
*Akran destek programlarının öğrenci ruh sağlığı ve refahı üzerindeki etkisine ilişkin literatürün gözden geçirilmesi*

What should be the Focus of the Trauma-Related Interventions? Solutions-Exceptions or Details of Trauma: A Literature Study  
*Travma Bağlantılı Müdahalelerin Odağı Ne Olmalı? Çözümler-İstisnalar ya da Travmanın Detayları: Bir Literatür Çalışması*



# *Bağımlılık Tedavisinde* **YENİ UMUT**



*Pembe Köşk Psikiyatri Hastanesi*



Değirmen Sokak, No: 7 Karşıyaka / Girne / KKTC

Tel: (+90)548 883 83 07 - E-mail: info@pembekoskhastanesi.com - www.pembekoskhastanesi.com



# Cyprus Turkish Journal of Psychiatry & Psychology

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi

Vol.6, Issue 2, June 2024 / Cilt.6, Sayı:2, Haziran 2024

QUARTERLY / ÜÇ AYDA BİR YAYIMLANIR

EDITORIAL IN CHIEF / YAYIN YÖNETMENİ

Prof. Dr. Mehmet Çakıcı

## DEPUTY EDITORS / YAYIN YÖNETMENİ YARDIMCILARI

Prof. Dr. Kültegin Ögel

Prof. Dr. Tamer Aker

Assoc. Prof. Dr. Zihniye Okray

## EDITORIAL ADVISORY BOARD / YAYIN DANIŞMA KURULU

Prof. Dr. Peter R. Martin, Nashville / ABD

Prof. Dr. Ebru Çakıcı, Nicosia / Cyprus

Prof. Dr. Nesrin Dilbaz, İstanbul / Turkey

Prof. Dr. Jair C. Soares, Houston / ABD

Prof. Dr. Orhan Doğan, İstanbul / Turkey

Prof. Dr. Vlada Pishchic, Rostov / Rusya

Prof. Dr. Saba Abacı, New York/USA

Prof. Dr. Antonio Prunas, Milan / Italy

Prof. Dr. Fatmagül Cırhınlioğlu, Nicosia / Cyprus

Prof. Dr. Figen Karadağ, İstanbul / Turkey

Prof. Dr. Lut Tamam, Adana / Turkey

Prof. Dr. Özlem Kararımak, İstanbul / Turkey

Prof. Dr. Alim Kaya, Famagusta / Cyprus

Prof. Dr. Münevver Yalçınkaya, Nicosia / Cyprus

Prof. Dr. Oğuz Polat, İstanbul / Turkey

Assoc.Prof. Dr. Rabia Bilici, İstanbul / Turkey

Assoc.Prof. Dr. İbrahim Taymur, Bursa / Turkey

Assoc.Prof.Dr. İrem Erdem Atak, İstanbul / Turkey

Assoc.Prof.Dr. Elif Mutlu, İstanbul / Turkey

Assoc.Prof.Dr. Ülgen H. Okyayuz, Nicosia / Cyprus

Assoc.Prof.Dr. Aylin Özbek, İzmir / Turkey

Assoc.Prof.Dr. Merih Altıntaş, İstanbul / Turkey

Assoc.Prof.Dr. Tayfun Doğan, İstanbul / Turkey

Assoc.Prof.Dr. Bahar Baştuğ, Ankara / Turkey

Assoc.Prof.Dr. Sibel Dinçyürek, Famagusta / Cyprus

Assoc.Prof.Dr. İpek Sönmez, Nicosia / Cyprus

Assoc.Prof.Dr. Utku Beyazıt, Antalya / Turkey

Assoc.Prof.Dr. Sultan Okumuşoğlu, Lefke / Cyprus

Asst.Prof.Dr.Besedova Petra, Hradec Kralove/Czech Republic

Asst.Prof.Dr. Kuzeymen Balıkcı, Nicosia / Cyprus

Asst.Prof.Dr. Deniz Ergün, Nicosia / Cyprus

Asst.Prof.Dr. Ezgi Ulu, Nicosia / Cyprus

Asst.Prof.Dr. Meryem Karaaziz, Nicosia / Cyprus

Asst.Prof.Dr.Füsun Gökkaya, Nicosia / Cyprus

Asst.Prof.Dr.Aslı Niyazi, Kalkanlı / Cyprus

Asst.Prof.Dr. Hande Çelikay Söyler, İzmir / Turkey

Asst.Prof.Dr. Asuman Bolkan, Kyrenia / Cyprus

Asst.Prof.Dr. Ayhan Çakıcı Eş, Nicosia / Cyprus

Asst.Prof.Dr. Zafer Bekiroğulları, Londra / İngiltere

Asst.Prof.Dr. Başak Bağlama, Nicosia / Cyprus

Asst.Prof.Dr. Linda Fraim, Kyrenia / Cyprus

Asst.Prof.Dr. Çiğdem Dürüst, Kyrenia / Cyprus

Asst.Prof.Dr. Ömer Gökel, Nicosia / Cyprus

Asst.Prof.Dr. Güley Bilgi Abatay, Kyrenia / Cyprus

Asst.Prof.Dr. Şenel Çıtak, Ordu / Turkey

Asst.Prof.Dr. Pınar Dursun, Afyon / Turkey

Dr. Bingül Subaşı, Nicosia / Cyprus

Dr. Damla Alkan, Nicosia / Cyprus

Dr. Gloria Manyeruke, Harare / Zimbabwe

Dr. Fatoş Özeylem, Mağusa / Cyprus

Dr. Nurlaila Effendy, Mandala / Indonesia

Dr. Zümrüt Gedik, İzmir / Turkey

Dr. Oğuzhan Kılınçel, İstanbul / Turkey

Dr. Enes Sargedik, Düzce / Turkey

Dr. Gülçin Karadeniz, İstanbul / Turkey

**Dil Editörü / Language Editor:** MSc.Zuhal Koreli

**Dış İlişkiler Editörü / Foreign Relations Editor:** MSc. Atakan Taşkiran

**İstatistik Editörü / Statistics Editor:** Assist Prof. Ayhan Çakıcı Eş

**Web Editörü / Web Editor:** MSc.Nur Şeyda Peker

**Owner / Sahibi:** Ebru Çakıcı

**Broadcast Manager / Sorumlu Yazı İşleri Md.:** Mehmet Eş

**Press / Baskı :** Kıbrıs Haberatör Basın Yayın

**Number:** +90 542 855 33 93

**E-mail:** ktpddergisi@gmail.com

**Web Page /Web Sitesi:** http://www.ktpddergisi.com/

©Cyprus Turkish Journal of Psychiatry and Psychology is published by Cyprus Mental Health Institute

Emerging Sources Citation Index (ESCI), Scopus, International Committee Of Medical Journal Editors (ICMJE), EBSCOhost, Oricid, Open Access, Creative Commons, Cite Factor, Scientific Indexing Services (SIS), Researchbıb, Directory Of Research Journal Indexing (DRJI), Eurasian Scientific Journal Index (ESJI), Dergipark, Turkish Psychiatry Index, Turkish Medline, Idealline, İntihal.Net, International Scientific Indexing (ISI), Index Copernicus, Journal Factor (JF), Google Scholar, Crossref, Asos Index, Systematic Impact Factor (SIF), OCLC Worldcat, Safetylit, Europub, Advanced Sciences Index, Rootindexing, Cosmos, Scilit, Sherpa Romeo, Turkish Citation Index, J- Gate, Internet Archive, Isnad, Infobase Index, APA PsycInfo, Cabells Journalytics

Cyprus Turkish Journal of Psychiatry and Psychology is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.



**CONTENTS / İÇİNDEKİLER****EDITORIAL / EDİTÖRDEN**

Editorial Mehmet Çakıcı .....104

**ORIGINAL ARTICLES / ARAŞTIRMALAR**

Investigating Social and Psychological Adaptation Among International Students: A Study of Factors Influencing Wellbeing  
*Uluslararası Öğrenciler Arasında Sosyal ve Psikolojik Uyumun Araştırılması: İyi Oluşu Etkileyen Faktörler Üzerine Bir Çalışma*  
Gloria Manyeruke, Ebru Tansel .....105

Determining the Influence of Extrajudicial Justice on Perception of Police among Nigerian Citizens: A Scale Development Study  
*Nijerya Vatandaşları Arasında Yargısız Adaletin Polis Algısı Üzerindeki Etkisinin Belirlenmesi: Bir Ölçek Geliştirme Çalışması*  
Ezgi Ulu, Chinwendu Enechi, Chinyereugo Ezeonuegbu, Nuriye Sancar .....116

Investigation of the Relationship Between Attention Level and Reading Speed in Children  
*Çocuklarda Dikkat Düzeyi ile Okuma Hızı Arasındaki İlişkinin İncelenmesi*  
Sema Kumrulu, Fatih Bal, .....126

Stress, Caregiving Burden and Family Functioning in Families Whose Children Have Been Diagnosed with Cancer  
*Çocuklarına Kanser Teşhisi Konmuş Ailelerde Stres, Bakım Verme Yükü ve Aile İşlevselliği*  
Çağla Özkan, Gönül Taşcıoğlu, Hande Çelikay Söyler .....137

Trauma Exposure and Hopelessness as Predictors of Post-Traumatic Stress Disorder and Depression among War Veterans in South-East Nigeria  
*Güneydoğu Nijerya'daki Savaş Gazileri Arasında Travma Sonrası Stres Bozukluğu ve Depresyonun Belirleyicileri Olarak Travmaya Maruz Kalma ve Umutsuzluk*  
Sunday Ejikeme Nwoye, Gabriel E. Nweke .....147

Examining the Predictive Role of Depression on Smartphone Addiction  
*Depresyonun Akıllı Telefon Bağımlılığı Üzerindeki Yordayıcı Rolünün İncelenmesi*  
Mehmet Enes Sağlar, Feridun Kaya, Yüksel Eroğlu, Durmuş Sinan, Yılmaz Çelik, Cafer Tosun .....156

Comparison of State Anxiety Levels of Strong and Weak Competitors in the Iraqi First League Basketball  
*Irak Birinci Ligi'nde Basketbol Oynayan Güçlü ve Zayıf Rakiplerin Durumluk Kaygı Düzeylerinin Karşılaştırılması*  
Deniz Erdağ, Sizar Salim Sadiq, Mustafa Behlül, Birgül Harmancı .....166

**REVIEW ARTICLES / DERLEMELER**

A Review of the Literature on the Influence of Peer Support Programs on Student Mental Health and Well-Being  
*Akran destek programlarının öğrenci ruh sağlığı ve refahı üzerindeki etkisine ilişkin literatürün gözden geçirilmesi*  
Omotoyosi Oduwaye, Askin Kiraz, Yasemin Sorakin .....177

What should be the Focus of the Trauma-Related Interventions? Solutions-Exceptions or Details of Trauma: A Literature Study  
*Travma Bağlantılı Müdahalelerin Odağı Ne Olmalı? Çözümler-İstisnalar ya da Travmanın Detayları: Bir Literatür Çalışması*  
Sultan Okumuşoğlu .....183

**CORRECTIONS/DÜZELTMELER** .....191

**INSTRUCTION FOR AUTHORS/ YAZARLARA BİLGİLER** .....192



## EDITORIAL / EDİTÖRDEN

### Mehmet Çakıcı

#### Değerli Okuyucular,

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi olarak 2024 yılının Haziran sayısını yayınlamış olmaktan büyük mutluluk duyuyoruz. Dünyada çatışmalar ve savaşlar giderek yaygınlaşmaya başladı. Dünyanın daha güzel bir gidişatı olması gerekirken insanlık daha ters bir yola girmeye başladı. Burada da binlerce insan hayatını kaybediyor ve evsiz kalıyor. Her bir yaşanan olay yarattığı travmalar ile insanların ruh sağlıklarını derinden etkiliyor. Şiddet azalacağına giderek artıyor. Yaşanan ruhsal problemlerde giderek daha da yaygın hale geliyor. Tüm bu şiddet döngüsünde gelişen teknoloji ve yapay zekâ da yerini alıyor. Tabii böyle olunca da şiddetin boyutu da giderek artıyor. İnsanlık dramları daha da her geçen gün artıyor. Bazıları üçüncü dünya savaşından dahi söz etmeye başladı. Bir çılgınlık yapılarak nükleer silahlar dahi bu savaşlarda ortaya çıkabilir. Peki biz ruh sağlığı uzmanları bu noktada ne yapabilir diye insanların aklına sorular gelebilir. Aynı geçmişte Einstein'ın Freud'a sorduğu gibi bir soru bugün de kafalarda yer alabilir. Aslında buna yanıtımız çok da geçmişteki gibidir. Biz ruh sağlığı uzmanları bunu engelleyemeyeceğiz. Yalnızca biz uzmanlar insanların ruhsal yaralarını sarmaya çalışan bir noktada olacağız. Bu aslında çok düşündürücü ve üzücü bir nokta olarak düşünülebilir. Bizler elimizden geleni yapmaya hümanizmi ve barışı ön planda tutan duruşumuza devam edeceğiz. Yaraları tedavi etmeye devam edeceğiz. Uygulamalarımızı ve tedavi olanaklarımızı artırmaya çalışacağız. Bu nedenledir ki daha çok kaliteli ve iyi eğitilmiş ruh sağlığı uzmanına ihtiyaç olacaktır. Ruh sağlığı alanındaki bilimi de geliştirmeye devam edeceğiz. Dergimiz de ruh sağlığı alanındaki bu gelişimi desteklemeye devam edecektir. Dergimiz kendi yerel bölgesi olan Kıbrıs'ta psikiyatri ve psikoloji alanındaki en geniş ağa sahip indekslerde ilk sırada olmaya devam etmektedir. Scimago'da 9 Türk psikiyatri dergisi arasında 8. Sıradadır. Klinik Psikoloji'de ise Türk Dergileri arasında ikinci sırada, Ortadoğu'da ise Klinik Psikolojide 5. Sıradadır. Dergimizin SCOPUS ve Web of Science listelerinde bulunması yanında bu indekslerde Q4'den Q3'e yükselmesi ve Tr Dizin içerisinde de yer alması bundan sonraki hedefleri arasındır. Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi olarak tüm katkı koyan herkese teşekkür ederiz.

#### Dear Readers,

As the Cyprus Turkish Journal of Psychiatry and Psychology, we are very pleased to have published the June 2024 issue. Conflicts and wars have become increasingly common in the world. While the world should be on a better course, humanity has begun to take a more adverse path. Here too, thousands of people lose their lives and become homeless. Each incident deeply affects people's mental health with the traumas it creates. Violence is increasing rather than decreasing. Psychological problems are becoming more and more common. Developing technology and artificial intelligence also take their place in this entire cycle of violence. Of course, when this happens, the extent of violence gradually increases. Human tragedies are increasing day by day. Some even started talking about the Third World War. Even nuclear weapons can emerge in these wars by doing something crazy. People may have questions about what we mental health professionals can do at this point. A question like the one Einstein asked Freud in the past may still be on our minds today. Our answer to this is much the same as in the past. We mental health professionals will not be able to prevent this. Only we experts will be at a point where we are trying to heal people's psychological wounds. This can be considered a very thought-provoking and sad point. We will do our best and continue our stance that prioritizes humanism and peace. We will continue to treat the wounds. We will try to increase our applications and treatment opportunities. For this reason, there will be a need for more qualified and well-trained mental health professionals. We will also continue to advance the science of mental health. Our journal will continue to support this development in the field of mental health. Our journal continues to be at the top of the indexes with the widest network in the field of psychiatry and psychology in its local region, Cyprus. It is ranked 8th among 9 Turkish psychiatry journals in Scimago. It ranks second among Turkish journals in Clinical Psychology and 5th in Clinical Psychology in the Middle East. In addition to being included in the SCOPUS and Web of Science lists, our journal's future goals include increasing it from Q4 to Q3 in these indexes and being included in the Tr Index. As the Turkish Cypriot Journal of Psychiatry and Psychology, we would like to thank everyone who contributed.

<sup>1</sup>Prof. Dr., Cyprus Science University, Economics, Administrative and Social Sciences Faculty, Department of Psychology, Kyrenia, TRN Cyprus, Orcid Id: <https://orcid.org/0000-0002-7043-183X>

**Address of correspondence/Yazışma adresi:** Dr. Fazıl Küçük Street, 80, Cyprus Science University, Economics, Administrative and Social Sciences Faculty, Department of Psychology, Kyrenia, TRN Cyprus. **E-mail:** editör.ktpp@gmail.com

© 2024 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology ([www.ktppdergisi.com](http://www.ktppdergisi.com)). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes. <http://creativecommons.org/licenses/by/4.0/>



RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# Investigating Social and Psychological Adaptation Among International Students: A Study of Factors Influencing Wellbeing

## Uluslararası Öğrenciler Arasında Sosyal ve Psikolojik Uyumun Araştırılması: İyi Oluşu Etkileyen Faktörler Üzerine Bir Çalışma

Gloria Manyeruke<sup>1</sup>, Ebru Tansel<sup>2</sup>

### Abstract:

The challenges experienced by international students have drawn increasing attention as the body of international students continues to increase globally. The current study investigated the academic, sociocultural and psychological adaptation and well-being of international university students in North Cyprus. The sample of 524 university students was selected using convenience sampling. The sample comprised of local Turkish Cypriot students, and international students both from Türkiye and other countries. SPSS version 23 was used to analyze the data, specifically, the Kruskal Wallis, Mann Whitney U and hierarchical regression analysis were employed. The study revealed that academic adaptation and proficiency in the language of instruction were significant predictors of psychopathology. This emphasizes the value international university students place on academic attainment as their primary goal for migration. Psychopathology and academic adaptation have a dual-causal relationship with each other. The results suggest that ethnicity is linked to mental health outcomes. Students from Türkiye reported higher psychopathology scores than international students from other countries. The research outlined several factors that predict better adaptation. Integrative acculturation orientation and higher perceived financial status predicted sociocultural adaption. However, high home culture orientation was predictive of poor psychological adaptation. The finding suggests that efforts towards cultural integration are essential for well-being. The student who explores the local culture while staying secure in their ethnic identity and culture will experience less pathology.

**Keywords:** Acculturation, adaptation, international students, psychopathology, cultural distance.

<sup>1</sup>Assist. Prof. Dr. Near East University, Faculty of Arts and Science, Psychology Department, Lefkoşa, TRN Cyprus, e-mail: Gloria.manyeruke@neu.edu.tr Orcid Id: 0000-0001-6226-3779

<sup>2</sup>Prof. Dr. Cyprus Science University, Department of Economics, Administrative and Social Sciences, Psychology Department Girne-TRN Cyprus, e-mail: dr.ebrutansel@gmail.com Orcid: 0000-0002-6106-5911

**Address of Correspondence/Yazışma Adresi:** Gloria Manyeruke, Near East University, Faculty of Arts and Science, Psychology Department, Lefkoşa-Kıbrıs, Mersin 10 – Turkey, E-mail: Gloria.manyeruke@neu.edu.tr

**Date of Received/Geliş Tarihi:** 13.12.2023, **Date of Revision/Düzeltilme Tarihi:** 05.03.2024, **Date of Acceptance/Kabul Tarihi:** 20.05.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Manyeruke, G. & Tansel, E. (2024). Investigating social and psychological adaptation among international students: A study of factors influencing wellbeing. *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 105-115

© 2024 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktppdergisi.com). This article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes.

<http://creativecommons.org/licenses/by/4.0/>

Manyeruke, G. & Tansel, E. (2024).

**Öz:**

Uluslararası öğrencilerin sayısı küresel olarak arttıkça, uluslararası öğrencilerin yaşadığı zorluklar da giderek daha fazla ilgi çekmektedir. Bu çalışma, Kuzey Kıbrıs'taki uluslararası üniversite öğrencilerinin akademik, sosyokültürel ve psikolojik uyumlarını ve iyi oluşunu araştırmaktadır. Kolayda örnekleme yöntemi kullanılarak 524 üniversite öğrencisinden oluşan örneklem seçilmiştir. Örneklem Kıbrıslı Türk yerel öğrencilerden ve Türkiye ve diğer ülkelerden gelen uluslararası öğrencilerden oluşmuştur. Verilerin analizinde SPSS 23 kullanılmıştır, Kruskal Wallis, Mann Whitney U ve hiyerarşik regresyon analizi yapılmıştır. Çalışma, akademik uyum ve eğitim dilindeki yeterliliğin psikopatolojinin önemli yordayıcıları olduğunu ortaya çıkardı. Bu, uluslararası üniversite öğrencilerinin göç için birincil hedef olarak akademik başarıya verdikleri değeri vurgulamaktadır. Psikopatoloji ve akademik uyum birbiriyle ikili nedensel bir ilişkiye sahiptir. Sonuçlar etnik kökenin zihinsel sağlık sonuçlarıyla bağlantılı olduğunu göstermektedir. Türkiye'den gelen öğrenciler diğer ülkelerden gelen uluslararası öğrencilere göre daha yüksek psikopatoloji puanları bildirdiler. Araştırma, daha iyi adaptasyonu öngören çeşitli faktörleri ortaya koymuştur. Bütünleştirici kültürleşme yönelimi ve daha yüksek algılanan mali durum, sosyokültürel uyumu arttırmaktadır. Yüksek ev kültürü yönelimi, zayıf psikolojik uyumun yordayıcısıdır. Bulgular, kültürel entegrasyona dönük çabaların iyilik hali için gerekli olduğunu göstermektedir. Etnik kültürü ve kimliği içinde güvende kalarak yerel kültürü keşfeden öğrenci daha az patolojiyle karşılaşacaktır.

**Anahtar Kelimeler:** Kültürleşme, uyum, uluslararası öğrenciler, psikopatoloji, kültürel mesafe.

**Introduction**

Tertiary education has become an integral part of survival in modern-day society however, it poses its own challenges to the developing individual. University students are believed to experience greater levels of stress, anxiety, and psychological distress than the rest of the general population and other occupational groups (Stallman, 2010). Among the subdivisions of university students, international students have been identified as one of the most vulnerable groups to mental health problems (Chen et al., 2020). On entering tertiary education students must adjust to the academic requirements of higher education as well as the added responsibility of living away from family. For international students, cross-cultural adjustment stress is also added to their potential stressors (Yusoff & Chelliah, 2010). Challenges for this group of students include adjusting to the host environment, acculturative stress, lack of belonging, depression, and stress (Brunsting et al., 2018). These psychosocial challenges are associated with poor academic integration, poor academic achievement, and even suicidal ideation (Brunsting et al., 2018).

It is estimated that by 2030 the international student body will amount to 6.9 million (Choudaha & Van Rest, 2018). International students are important in improving relationships between countries, reducing prejudice, hostility, discrimination, and intergroup conflicts (Kornienko et al., 2017). This necessitates research to help these students adapt to tertiary education. Sociocultural, psychological, and academic adaptation are the three dimensions of adaptation relevant to international students. Sociocultural adaptation is the ability to effectively deal with daily life in the host culture while psychological adaptation encompasses a clear sense of individual and cultural identity, subjective satisfaction with the host culture as well as good psychological health (Berry, 1997). Academic adaptation on the other hand is concerned with adjusting to the academic institution (Souza et al., 2021). Central to academic adaptation is how the individual interacts with and incorporates the

experience of being inserted into a new academic environment and vocational transitions.

Acculturation refers to the process of adopting the cultural values and practices that are distinct from the individual or the group's home culture. Adapting to the prevailing culture of society involves social, psychological, and cultural change. The acculturation process can either be positive or negative. Positive acculturation increases the chances of survival, opportunities as well as psychological health as the individual interacts with a culture and people foreign to them. Negative consequences can be attributed to the challenges inherent to change and adapting to new society and cultural expectations (Berry et al., 1987). A successful temporary stay in an alien culture is often understood as a question of adjustment.

Qualitative research has revealed that international students often experience social isolation, academic difficulties and cultural adjustment challenges (Wu et al., 2015). The academic challenges they face are associated with communicating with staff, lecturers and other students or even isolation from other groups. International students have to learn to think and behave in ways considered appropriate by the resident population. Hussain and Shen (2019) identified 3 challenges that delimit international students' academic adaptation which include proficiency in the local language, academic, and socio-cultural challenges. International students experience various problems which range from culture shock, loneliness, homesickness, problems comprehending lectures, food and lodging problems, and challenges interacting with the local population and understanding host nation society norms (Hussain & Shen, 2019). Despite this multitude of challenges, the majority of international students successfully graduate from university.

The current research aims to compare academic adaptation and psychological well-being between local and international university students. Few studies compare local and international student samples when exploring adaptation (Volkova & Kolesov, 2022) while most focus

on international students (Bethel et al., 2020; Sheng et al., 2022). The first hypothesis states that local students have better academic adaptation and psychological well-being than international students. The second hypothesis assumes that among international students, the students from Türkiye have less cultural distance from the local culture therefore, they experience better academic, sociocultural, and psychological adaptation as well as psychological well-being. The third hypothesis assumes that cultural distance predicts adaptation and psychopathology.

## Methods

The current research is quantitative research that utilizes a comparative research model to investigate the difference in psychological, sociocultural and academic adjustment between international students from Türkiye and international students from other countries. Comparative research is employed to analyze phenomena and assess similarities and distinctions (Drobnič, 2014). A comparison is also carried out between local students and the two groups of international students.

### Participants and sampling

The data for this study was collected from a sample of international and local students. The participants were divided into 3 categories. The first group was international students from Türkiye, the second group was comprised of international students from other countries while the third group, a sample of local students was used as the control group on the measures of psychological health and academic adaptation. The researcher employed convenience sampling to determine the sample for this study. 384 is the optimal sample size for an infinite population size, for a confidence level of 95% and 5% error (Pathak, 2013). To increase the reliability of results a sample of 524 students was used. The average age of the sample was 21.76, with a minimum age of 16 and a maximum of 42 years. 322 (59.2%) were Muslims, 165 (30.3%) were Christian and other religions 10.1% (n=55).

### Measures

The socio-demographic variables included age, marital status, gender, perceived financial status, average expenditure a month, source of income, first language, English proficiency, Turkish proficiency, access to leisure activities, native country, religion and grade point average (GPA). In the study, acculturation measures, Academic Adjustment Scale and Symptom Checklist-90 places were applied. Turkish versions of all scales were provided for the Turkish students.

The acculturation measures include 4 scales designed by Demes and Geeraert (2014). The scales include the Brief Sociocultural Adaptation scale, Brief Psychological adaptation scale, Brief Perceived Cultural Distance Scale and the Brief Acculturation orientation scale. Demes and Geeraert (2014) translated the acculturation measure in Turkish language.

### The Brief Sociocultural Adaptation scale (BSAS)

The BSAS is a 12-item scale measured on a seven-point Likert-type scale. The scale seeks to identify the main dimension of adjustments immigrants face. The scale has a reliability of 0.85 Cronbach's alpha. The reliability score of the Turkish translation was 0.84 (Demes & Geeraert, 2014).

### The Brief Psychological Adaptation Scale (BPAS)

The BPAS has 8 items that were designed to measure challenges in adaptation such as the anxiety of interacting with the indigenous population and missing friends and family. The scale uses a seven-point Likert scale. The BPAS has a reliability of 0.72 (Demes & Geeraert, 2014). It has a reliability coefficient of 0.84 (Demes & Geeraert, 2014).

### The Brief Perceived Cultural Distance Scale (BPCDS)

The BPCDS was designed to compare difference between the home country and host country of the participants on the aspect of food, language and climate among others. The scale has 12 items measured on a seven-point Likert scale. The reliability coefficient of the BPCDS is 0.79. The Turkish version had a reliability coefficient of 0.87 (Demes & Geeraert, 2014).

### The Brief Acculturation Orientation Scale (BAOS)

The BAOS has 8 items measured on a seven-point Likert scale. It measures acculturation orientation towards the host as well as the home country independently. The reliability scores of home factors are 0.79 and 0.80 for host factors. The Turkish versions have reliability coefficients of 0.86 for home orientation and the BAOS host orientation of 0.89 (Demes & Geeraert, 2014).

### Academic Adjustment Scale (AAS)

It is a nine-item scale measured measuring responses on a Likert-type scale. The scale has 3 subscales: academic lifestyle, academic achievement, and academic motivation. The academic adjustment scale is reliable at above 0.70 alpha Cronbach coefficient which is constant after the test-retest revealing the stability of the factors being measured. This scale was designed by Anderson et al. (2016).

The scale was translated to Turkish and the reliability-validity study was made by the authors. A Turkish version of this scale was provided through a forward and backward translation of the scale. The reliability of the Turkish translation of the SSAAS was investigated using measures of internal consistency and a score of 0.603 Cronbach Alpha was attained. The internal consistency scores for each subscale were found to be 0.289 Cronbach Alpha for lifestyle, 0.615 Cronbach Alpha for achievement, and 0.453 Cronbach Alpha for motivation. Item analysis was carried out by correlating each item to the total and all items were significantly correlated to the total ( $p=0.000$ ). 27% sub-upper group consistency revealed that there were significant differences were found between the two groups ( $p=0.025$ ). Structural validity of the Turkish translation of the SSAAS was carried out and all subscales were found to be significantly correlated to each other ( $p=0.000$ ).

### Symptom checklist 90- revised (SCL-90-R)

The SCL-90 is a measure of psychopathology designed by Derogatis in the 1970s (Derogatis & Unger, 2010). The measure is a self-report inventory containing 90 items. The items represent ten subscales measuring psychiatric namely, obsessive-compulsive, phobic anxiety, anxiety, somatization, hostility, depression, paranoid ideation, psychoticism, interpersonal sensitivity and general symptoms. A Likert-type scale is used to measure distress. The scores on the scale range from 0 representing not at all to 4 meaning quite a bit. Buckelew et al. (1988) reported that the scale had good internal consistency. The Cronbach's Alpha coefficient  $\alpha$  ranges between 0.77 and 0.90. The repeated measures reliability of the SCL-90



ranged between 0.80 to 0.90 at weekly intervals. A Turkish version of the Symptom Checklist was employed to measure psychological health among Turkish-speaking students. The translation was carried out by Dag (1991) and it has a reliability of 0.97 Cronbach alpha.

#### Procedure

The study commenced after receiving ethics approval from the Near East University ethics committee (application number: DÜ/SB/2019/414, date: 17.04.2019). The data was collected using a structured questionnaire.

The sociodemographic data questionnaire academic adaptation scale and SCL-90 were administered to all participants while data for the adaptation scales was collected from the two sample groups of international students.

#### Data Analysis

The quantitative data collected was analysed through of the use of SPSS version 23. Normality was tested using measures of Kurtosis and Skewness. The data was not normally distributed. The Mann-Whitney test was used to determine differences between local and international students as well as differences between the different groups of international students. Hierarchical regression analyzed causes or psychopathology and adaptation problems.

#### Results

The Mann-Whitney test represented in Table 1 reveals that there are significant differences in academic adaptation between local and international students but no significant differences in psychopathology.

**Table 1. Comparison of academic adjustment and psychopathology between local and international students.**

Variable	Students group	n	Mean rank	U	Z	P
Academic adaptation	Local	35	311.91	6373.00	-.685	0.020*
	International	476	251.89			
Somatization	Local	34	235.53	7413.00	-6.85	0.493
	International	469	253.19			
Obsessive-compulsive	Local	34	222.29	6993.00	-1.253	0.210
	International	470	254.69			
Interpersonal sensibility	Local	34	221.04	6920.50	-1.214	0.225
	International	465	252.12			
Depression	Local	34	227.49	7139.50	-.944	0.345
	International	465	251.65			
Anxiety	Local	35	230.09	7423.00	-.908	0.364
	International	470	253.10			
Anger hostility	Local	34	242.25	7641.50	-.486	0.627
	International	473	254.84			
Phobic anxiety	Local	35	251.16	8160.50	-.078	0.938
	International	470	253.14			
Paranoid ideation	Local	35	237.24	7673.50	-.564	0.573
	International	470	251.50			
Psychotism	Local	35	209.70	6709.50	-1.700	0.089
	International	463	252.51			
SCL 90 total	Local	30	208.53	5791.00	-.638	0.523
	International	415	224.05			

\*p<0.05\*\*p<0.01

**Table 2. Comparison of adaptation and psychological health between international students from Turkiye and other international students in TRNC**

Variable		N	Mean Rank	U	p
Academic adaptation	Turkish	257	231.92	26451.0	0.225
	Other	220	247.27		
Sociocultural adaptation	Turkish	175	175.51	153150.	0.105
	Other	194	193.56		
Psychological adaptation	Turkish	176	166.45	13728.50	0.001**
	Other	193	201.92		
Cultural distance	Turkish	170	145.42	10186.0	<0.001**
	Other	182	201.92		
Home Orientation	Turkish	176	145.42	16650.5	0.877
	Other	190	205.53		
Host orientation	Turkish	177	183.33	17167.0	0.998
	Other	194	184.82		
Somatization	Turkish	258	255.38	22218.50	<0.001**
	Other	212	211.30		
Obsessive-compulsive	Turkish	259	260.49	21110.0	<0.001**
	Other	212	206.08		
Interpersonal sensibility	Turkish	261	250.02	22439.50	0.003*
	Other	205	212.46		
Depression	Turkish	259	252.30	21938.0	<0.001**
	Other	207	209.98		
Anxiety	Turkish	262	247.12	23680.0	0.022*
	Other	206	218.45		
Anger hostility	Turkish	262	257.97	22408.50	<0.001**
	Other	212	212.20		
Phobic anxiety	Turkish	260	247.12	24539.50	0.048*
	Other	211	222.30		
Paranoid ideation	Turkish	257	246.88	23418.00	0.017*
	Other	209	217.05		
Psychoticism	Turkish	257	243.45	23785.5	0.050*
	Other	207	218.91		
Psychopathology total	Turkish	230	228.36	16822.5	<0.001**
	Other	186	183.94		

\*p&lt;0.05\*\*p&lt;0.01

The Mann-Whitney test results tabulated in Table 2 reveal no significant differences were seen in the total score of academic adaptation.

Significant differences were seen in psychological adaptation and cultural distance, where students from

Turkiye had significantly lower cores. There were no significant differences in sociocultural adaptation home orientation, or host orientation.

There were significant differences in psychopathology and all its subscales.

**Table 3.** Hierarchical Regression Analysis for Variables Predicting Psychopathology.

Variables	Model 1 (R <sup>2</sup> =0.065)			Model 2 (R <sup>2</sup> =0.152)		
	B	SE	β	B	SE	B
Cultural distance	-0.117	3.547	-0.002	1.376	3.857	0.027
Home orientation	-2.373	3.563	-0.051	-1.414	3.500	-0.031
Host orientation	7.168	3.693	0.146	5.157	3.799	0.105
Academic Adaptation	-1.895	0.835	-0.155*	-1.832	0.826	-0.150*
Sociocultural Adaptation	-8.313	4.671	-0.129	-6.776	4.791	-0.105
Psychological Adaptation	-4.235	4.872	-0.059	-1.696	4.890	-0.024
Age				-2.626	1.711	-0.117
Year of study				4.591	4.419	0.078
CGPA				-5.564	5.171	-0.078
Average expenditure				14.568	8.360	0.226
Financial status				-10.564	7.902	-0.095
Source of income				6.719	7.173	0.063
Proficiency in the language of instruction				-25.142	8.898	-0.204*
Access to leisure activities				2.848	6.847	0.029
Religion				-1.414	7.382	-0.013

In Table 3 the first model with acculturation measures accounts for 7% variance in psychopathology. Academic adaptation is the only measure with a significant beta weight. Model 2 introduced demographic factors. The

model accounts for 15% variance in mental health, academic adaptation and proficiency in the language of instruction have significant beta weights.

**Table 4.** Hierarchical Regression Analysis for Variables Predicting Academic Adaptation.

Variables	Model 1 (R <sup>2</sup> =0.061)			Model 2 (R <sup>2</sup> =0.082)			Model 3 (R <sup>2</sup> =0.118)		
	B	SE	B	B	SE	B	B	SE	B
Sociocultural adaptation	0.896	0.378	0.170*	0.771	0.378	0.146*	0.669	0.404	0.127
Psychological adaptation	0.347	0.398	0.059	0.286	0.395	0.049	0.379	0.412	0.064
Cultural distance	0.230	0.290	0.054	0.223	0.287	0.053	0.319	0.325	0.076
Home orientation	0.519	0.290	0.137	0.477	0.287	0.053	0.433	0.294	0.114
Host orientation	-0.428	0.301	-0.107	-0.328	0.301	-0.082	-0.408	0.321	-0.102
Psychopathology				-0.012	0.005	-0.149*	-0.013	0.006	-0.159*
Age							-0.198	0.145	-0.107
Year of study							0.165	0.374	0.034
CGPA							0.425	0.437	0.073
Average expenditure							0.216	0.711	0.041
Financial status							.0639	0.668	0.070
Source of income							0.833	0.604	0.096
Proficiency in Language of instruction							-0.275	0.756	-0.027
Access to leisure activities							-0.117	0.578	-0.014
Religion							-0.841	0.620	-0.097

In table 4 the first model analysis the impact of acculturation measures on academic adaptation. Acculturation measures account for a 6% variance on academic adaptation, only sociocultural adaptation had a significant beta weight. In the second model psychopathology is added, resulting in an 8% variance in

academic adaption scores. Sociocultural adaptation and psychopathology had a significant beta weight. In the third model demographic variables were had. The third model shows a 12% variance in academic adaptation, only psychopathology had a significant beta weight.

**Table5. Hierarchical Regression Analysis for Variables Predicting Sociocultural Adaptation**

Variables	Model 1 (R <sup>2</sup> =0.161)			Model 2 (R <sup>2</sup> =0.172)			Model 3 (R <sup>2</sup> =0.223)		
	B	SE	B	B	SE	B	B	SE	β
Psychological adaptation	0.13	0.071	0.123	0.129	0.071	0.115	0.072	0.071	0.065
Cultural distance	0.050	0.052	0.062	0.049	0.052	0.061	0.044	0.056	0.055
Home orientation	0.134	0.051	0.186*	0.128	0.051	0.178*	0.115	0.051	0.160*
Host orientation	0.147	0.053	0.193*	0.158	0.053	0.207*	0.171	0.055	0.224*
Academic Adaptation	0.029	0.012	0.115*	0.025	0.012	0.131*	0.020	0.012	0.106
Psychopathology				-0.002	0.001	-0.114	-0.001	0.001	-0.094
Age							-0.031	0.025	-0.088
Year of study							-0.011	0.065	-0.012
CGPA							-0.075	0.076	-0.067
Average expenditure							0.066	0.123	0.066
Perceived Financial status							0.318	0.114	0.183*
Source of income							0.074	0.105	0.045
Proficiency in language of instruction							0.098	0.134	0.051
Access to leisure activities							-0.112	0.100	-0.073
Religion							0.040	0.108	0.025

Table 5 shows that there is a 16% variance in sociocultural adaptation in model 1, home orientation, host orientation and academic adaptation had significant beta weights. In model 2 psychopathology is added resulting in a 17% variance in sociocultural adaptation. The same 3 variables

had significant beta weights. The last model included demographic variables and showed 22% variance in sociocultural adaptation. Home orientation, host orientation and financial status had significant beta weights.

**Table6. Hierarchical Regression Analysis for Variables Predicting Psychological Adaptation**

Variables	Model 1 (R <sup>2</sup> =0.048)			Model 2 (R <sup>2</sup> =0.051)			Model 3 (R <sup>2</sup> =0.089)		
	B	SE	B	B	SE	B	B	SE	β
Cultural distance	0.066	0.050	0.091	0.065	0.050	0.091	0.025	0.056	0.035
Home orientation	-0.117	0.049	-0.181*	-0.118	0.049	-0.184*	-0.120	0.050	-0.186*
Host orientation	0.027	0.052	0.040	0.033	0.052	0.049	0.039	0.055	0.057
Academic Adaptation	0.010	0.0012	0.060	0.009	0.012	0.050	0.011	0.012	0.065
Sociocultural Adaptation	0.127	0.065	0.140	0.120	0.066	0.133	0.070	0.069	0.078
Psychopathology				-0.001	0.001	-0.060	0.000	0.001	-0.025
Age							0.007	0.025	0.024
Year of study							0.033	0.064	0.040
CGPA							-0.010	0.075	-0.010
Average expenditure							-0.046	0.121	-0.051
Financial status							0.056	0.114	0.036
Proficiency in language of instruction							0.118	0.130	0.069
Access to leisure activities							-0.051	0.099	-0.037
Religion							0.178	0.106	0.121

Table 6 reveals that acculturation measures account for 5% variance in psychological adaptation in model 1. Only home orientation had a significant beta weight. Model 2 adds psychopathology and variance remains at 5% with home orientation as the only variable with a significant beta weight. The third model introduces demographic data. The model accounts for 11% variance in psychological adaptation, only home orientation had a significant beta weight.

**Discussion**

The current study aims to investigate the influence of adaptation and acculturative factors on the psychological well-being of international students in the Turkish Republic of Northern Cyprus. The initial analysis compared the academic adaptation and psychological

well-being of local and international students. The results reveal significant differences in academic adaptation but no significant differences in psychopathology. Local students had significantly better academic adaptation. This is contrary to research by Volkova and Kolesov (2022) who found no significant differences in academic adaptation between local and international students at an English medium school in Russia. These results were attributed to the adoption of an inclusive and student-centered approach to education by educational institutions. Academic adaptation is a multifaceted process that involves adjusting to the standards, processes, and values of the new institution, teaching formats, time management, preparing for employment, intrapersonal as well as interpersonal dynamics (Matta, et al., 2017; Oliveira et al., 2014). Familiarity with the social and cultural frameworks

in which the institutions operate allows local students to have a more seamless transition into tertiary education. Transitions in social, vocational, and personal frameworks are also inherent in academic adaptation (Souza et al., 2021). Local students may also not experience some of the changes associated with academic adjustment for university students such as residing away from home, language proficiency and establishing new interpersonal relationships.

The results of the study revealed that there were no significant differences in psychopathology between local and international students. This is contrary to most research which suggests that international students have poorer psychological health than local students (Forbes-Mewett & Sawyer, 2016; Skromanis et al., 2018). Often the differences are attributed to poor access to targeted and culture-sensitive health care services as well as less help-seeking behaviors. The differences seen in the results of this research suggest that international and local students are given equitable access to healthcare services and culture-sensitive mental health support.

The study compared the psychopathology between international students from Türkiye and other countries. International students from Türkiye had higher scores of psychopathologies. These results are in contrast with other research that suggests that reduced cultural distance and ethnic density are protective factors against mental health problems (Galchenko & Vijer, 2007; Feng et al., 2013). Feng et al. (2013) suggests that ethnic density increases social interaction which in turn acts as a protective factor against psychological problems while reduced cultural distance improves adaptation and psychological health (Galchenko & Vijer, 2007). Although students from Türkiye have a high ethnic density in North Cyprus, they are seen to experience more psychological problems. The mental health challenges among international students from Türkiye students may be attributed to increased perceived discrimination (Ladum & Burkholder, 2019). The relationship between discrimination and psychological health problems is well-established in the literature (Okolie & Manyeruke, 2024).

Furthermore, the World Health Organization reported that there has been an exponential increase in mental health problems among individuals in Türkiye because of repeated natural disasters, economic challenges as well as migration (WHO, 2023). Since 2020, 10 natural disasters were documented predominantly earthquakes, but floods, a wildfire and a snow avalanche were also listed (ADRC, 2019). Natural disasters are a source of psychological trauma and impair mental health (Ergun & Senguz, 2022; Bulut, 2023). Furthermore, sociocultural factors like migration and economic problems have been associated with psychological challenges (Çakici et al., 2017). The results also suggest that there may be ethnic differences that influence psychological well-being. Campbell et al. (2022) also identified ethnicity has been identified as a factor that can affect psychological health (Campbell et al., 2022; Chang et al., 2014; Kodish et al., 2022). Some ethnic differences can be attributed to access to mental health services and help-seeking patterns (Chiu et al., 2018).

The data suggests that academic adaptation and proficiency in the language of instruction are significant predictors of psychopathology. Similarly, Silva et al. (2021) identified academic adaptation as a predictor of psychopathology. Numerous studies also outlined the

relationship between academic adaptation and mental health problems like depression and anxiety (Xie et al., 2022; Maroco et al., 2020; Çakici Eş et al., 2020). This suggests that experiences within the academic context such as understanding the structure of tertiary education and enjoying educational processes are important for mental health. Furthermore, poor language skills have frequently been linked to mental health problems (OASH, 2023; Miteva et al., 2022). It should also be noted that the predictive relationship between psychopathology and academic adaptation is two-way. The results reveal that psychopathology also predicts poor academic adaptation. According to Qin (2019), an increasing number of international students indicate that mental health problems affect their academic performance.

The study compared psychological, sociocultural, and academic adaptation, cultural distance as well as acculturation orientation between international students from Türkiye and other countries. Significant differences were seen in psychological adaptation, and cultural distance but not sociocultural adaptation, academic adaptation, and acculturation orientation. International students from Türkiye have significantly less cultural distance from the local culture. Cultural distance focuses on differences in language, religion, climate, family structure, values, wealth and lifestyle between two cultures. Turkish Cypriots, the inhabitants of North Cyprus have a shared history with citizens of Türkiye. The history of Türkiye and Cyprus can be traced back as far back as 1571 as part of the conquest of the Ottoman Empire. Turkish immigrants settled in Cyprus and brought the religious practices, social and political models of the Ottoman to Cyprus. Türkiye and North Cyprus share a linguistic, historical, cultural and religious background (Ladum & Burkholder, 2019).

The results reveal that international students from other countries had significantly higher psychological adaptation scores than international students from Türkiye. This is congruent with results of a study by Ladum and Burkholder (2019) which suggests that higher Turkish proficiency increases acculturative stress and unmet expectations which predict poor emotional responses. It is suggested that better proficiency in the local language leads to increased perception of discrimination which has a negative effect on psychological adaptation. Furthermore, local language proficiency increases interaction with the local population which in turn increases experiences of discrimination (Ladum & Burkholder, 2019). Gokbulut et al. (2019) state that students from Türkiye in North Cyprus expect equal opportunities as local students, freedom of cultural expression, socialization, and positive support from society and instructors. Discriminatory practices frustrate expectations of ingroup membership in the context of continued close economic and political ties between Türkiye and North Cyprus.

Furthermore, the results show that home culture orientation was a significant predictor of psychological adaptation. This is similar to research by Lucena et al. (2020) that stated that home culture orientation was associated with poor psychological and sociocultural adaptation. Being more home culture-oriented makes the individual less likely to adopt an integrative acculturative approach which is associated with better adaptation (Berry, 1997). The individual may withdraw from the host

culture and place more reliance on the home culture, against the potential for acculturation and adaptation. Home culture orientation is associated with the social perception of discrimination, isolation, hopelessness, pessimism, and other maladaptive behavioral strategies (Demes & Geeraert, 2014; Maydell-Stevens et al., 2007).

The findings show that higher home and host culture orientation as well as perceived financial status were significant predictors of sociocultural adaptation. According to Berry (1997), cultural integration is characterized by an individual adopting the host culture's norms and also maintaining their home culture. This leads to biculturalism which increases the resources the individual employs solve emerging problems. This integrative approach is viewed to be adaptive for immigrants. Financial status also enables the individual to experience the host culture in more positive ways. This is similar to the assertion by Yerken et al. (2022), that financial dissatisfaction is associated with sociocultural adaptation problems.

### Conclusion

The current study investigated the factors that affect adaptation among international students and how adaptation and acculturative factors affect psychopathology among international students. The results suggest that poorer academic adaptation, poor proficiency in the language of instruction as well as being from Türkiye were all associated with greater psychopathology. Educational attainment is the foremost objective for international students which explains the predictive relationship shared between academic adaptation and mental health. The results suggest a link between ethnicity and mental health.

The study reveals that integrative acculturation orientation (host and home culture orientation) as well as perceived financial status predict sociocultural adaptation. Having a high home culture orientation was associated with poor psychological adaptation while psychopathology predicted academic adaptation. It should be noted that

psychopathology and academic adaptation have a two-way causal relationship.

In light of the challenges being experienced by students from Türkiye, universities should provide psychological support that is tailored for Turkish students such as support groups for natural disaster victims, financial relief programs, and discrimination protocols should be put in place for reporting and addressing such problems.

### Declarations

#### Ethics Approval and Consent to Participate

The study obtained permission from the Ethics Committee of Near East University with application number DÜ/SB/2019/414, date: 17.04.2019. Ethical rules were followed during the study, and consent forms were obtained from the participants. Approval was also obtained from the Near East University Board of Directors for data collection at the schools.

### Publication Permission:

Not applicable.

### Availability of Data and Materials:

Not applicable.

### Conflict of Interest:

The authors declare that they have no conflict of interest.

### Financing:

Not applicable.

### Author Contributions:

GM contributed to the conceptualization, writing of the method, data collection, analysis, and interpreted data. ET contributed to the conceptualization of the research, analysis of data, translations, editing, and proofreading of the article. Both authors have read and approved the final version of the article.

## References

ADRC (2019). *Information on Disaster Risk Reduction of the Member Countries*.

<https://www.adrc.asia/nationinformation.php?NationCode=792&Lang=en&NationNum=39>

Anderson, J. R., Guan, Y., & Koc, Y. (2016). The academic adjustment scale: Measuring the adjustment of permanent resident or sojourner students. *International Journal of Intercultural Relations*, 54, 68–76. <https://doi.org/10.1016/J.IJINTREL.2016.07.006>

Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative Studies of Acculturative Stress. *The International Migration Review*, 21(3), 491–511. <https://doi.org/10.2307/2546607>

Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review*, 46(1), 5–34.

<https://doi.org/10.1111/j.1464-0597.1997.tb01087.x>

Bethel, A., Ward, C. & Fetvadjev, V. H. (2020) Cross-Cultural Transition and Psychological Adaptation of International Students: The Mediating Role of Host National Connectedness. *Front. Educ.* 5, 539950. doi: 10.3389/educ.2020.539950

Brunsting, N. C., Zachry, C., & Takeuchi, R. (2018). Predictors of undergraduate international student psychosocial adjustment to US universities: A systematic review from 2009-2018. *International Journal of Intercultural Relations*, 66, 22–33. <https://doi.org/10.1016/J.IJINTREL.2018.06.002>

Buckelew, S., Burk, J., Brownlee-Duffeck, M., Frank, R., & DeGood, D. (1988). Cognitive and somatic aspects of depression among a rehabilitation sample: Reliability and validity of SCL-90-R research subscales. *Rehabilitation Psychology*, 33(2), 67–75. doi:10.1037/h0091679

- Bulut, A. (2023). The Relationship between Natural Disasters and Mental Health, *Cyprus Turkish Journal of Psychiatry & Psychology*, 5(3), 265-273.
- Çakıcı Eş, A., Öneri Uzun, G. & Güldal Kan, Ş. (2020). Investigation of Loneliness and Anxiety Processes of University Students. *Cyprus Turkish Journal of Psychiatry and Psychology*, 2(2): 68-74. doi:10.35365/ctjpp.20.02.10
- Çakıcı, M., Gökçe, Ö., Babayiğit, A., Çakıcı, E., & Eş, A. (2017). Depression: point-prevalence and risk factors in a North Cyprus household adult cross-sectional study. *BMC Psychiatry*, 17(1), 387. <https://doi.org/10.1186/s12888-017-1548-z>
- Campbell, F., Blank, L., Cantrell, A., Baxter, S., Blackmore, C., Dixon, J., & Goyder, E. (2022). Factors that influence mental health of university and college students in the UK: a systematic review. *BMC Public Health*, 22(1), 1778. <https://doi.org/10.1186/s12889-022-13943-x>
- Chang, T. E., Weiss, A. P., Marques, L., Baer, L., Vogeli, C., Trinh, H. T., Clain, A. J., Blais, M. A., Fava, M., & Yeung, A. S. (2014). Race/ethnicity and other social determinants of psychological well-being and functioning in mental health clinics. *Journal of Health Care for the Poor and Underserved*, 25(3), 1418–1431. <https://doi.org/10.1353/hpu.2014.0138>
- Chen, J. H., Li, Y., Wu, A. M. S., & Tong, K. K. (2020). The overlooked minority: Mental health of International students worldwide under the COVID-19 pandemic and beyond. *Asian Journal of Psychiatry*, 54, 102333. <https://doi.org/10.1016/j.ajp.2020.102333>
- Chiu, M., Amartey, A., Wang, X., & Kurdyak, P. (2018). Ethnic Differences in Mental Health Status and Service Utilization: A Population-Based Study in Ontario, Canada. *Canadian journal of psychiatry. Revue canadienne de psychiatrie*, 63(7), 481–491. <https://doi.org/10.1177/0706743717741061>
- Choudaha, R. & Van Rest, E. (2018). *Megatrends shaping the future of global higher education and international student mobility*. Study Portals. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/<https://www.studyportals.com/wp-content/uploads/2018/01/Report-Envisioning-Pathways-to-2030-Studyportals-2018.pdf>
- Dag, I. (1991). Reliability and validity of the Symptom Checklist (SCL-90-R) for university students. *Türk Psikiyatri Dergisi*, 2, 5-12
- de Lucena, M. S., Hoersting, R. C., & Modesto, J. G. (2020). The sociocultural and psychological adaptation of Syrian refugees in Brazil. *PSICO*, 51(3), 1–12.
- Demes, K. A., & Geeraert, N. (2014). Measures matter: Scales for adaptation, cultural distance, and acculturation orientation revisited. *Journal of Cross-Cultural Psychology*, 45(1), 91–109. <https://doi.org/10.1177/0022022113487590>
- Derogatis, L. R., & Unger, R. (2010). Symptom checklist-90-revised. *The Corsini Encyclopedia of Psychology*, 1–2. doi: 10.1002/9780470479216.corpsy0970
- Drobnič, S. (2014). Comparative Analysis. In: Michalos, A.C. (eds) *Encyclopedia of Quality of Life and Well-Being Research*. Springer. [https://doi.org/10.1007/978-94-007-0753-5\\_492](https://doi.org/10.1007/978-94-007-0753-5_492)
- Ergün, D. & Şenyüz, S. (2022) Prolonged grief disorder among bereaved survivors after the 2011 Van Earthquake in Turkey. *Death Studies*, 46(6), 1364371, DOI: 10.1080/07481187.2021.1884624
- Feng, X., Astell-Burt, T., & Kolt, G. S. (2013). Do social interactions explain ethnic differences in psychological distress and the protective effect of local ethnic density? A cross-sectional study of 226 487 adults in Australia. *BMJ open*, 3(5), e002713. <https://doi.org/10.1136/bmjopen-2013-002713>
- Forbes-Mewett, H. & Sawyer, A. (2016). International Students and Mental Health. *Journal Of international students*, 6(3), 661-677. <https://doi.org/10.32674/jis.v6i3.348>
- Galchenko, I., & van de Vijver, F. J. R. (2007). The role of perceived cultural distance in the acculturation of exchange students in Russia. *International Journal of Intercultural Relations*, 31(2), 181–197. <https://doi.org/10.1016/j.ijintrel.2006.03.004>
- Gökbulut, B., Yeniasır, M. & Karabacak, H. E. (2019). Opinions and Expectations of Turkish and Foreign National Students Studying at Northern Cyprus Universities Concerning Multicultural and Inclusive/Integrated Education Settings. *Education Sciences*, 9(1):9. <https://doi.org/10.3390/educsci9010009>
- Hussain, M. & Shen, H. (2019). A Study on Academic Adaptation of International Students in China. *Higher Education Studies*, 9(4), 80-91. DOI: 10.5539/hes.v9n4p80
- Kodish, T., Lau, A. S., Gong-Guy, E., Congdon, E., Arnaudova, I., Schmidt, M., Shoemaker, L., & Craske, M. G. (2022). Enhancing Racial/Ethnic Equity in College Student Mental Health Through Innovative Screening and Treatment. *Administration and Policy in Mental Health*, 49(2), 267–282. <https://doi.org/10.1007/s10488-021-01163-1>
- Kornienko, A. A., Shamrova, D. P., Kvesko, S. B., Kornienko, A. A., Nikitina, Y. A., & Chaplinskaya, Y. I. (2017). Adjustment and Adaptation Problems Experienced by International Students in Aspect of Quality Management. In F. Casati, G. A. Barysheva, & W. Krieger (Eds.), *Lifelong wellbeing in the world-Wellso-2016* (pp. 359-361). Future Academy. DOI: 10.15405/epsbs.2017.01.48
- Ladum, A., & Burkholder, G. (2019). Psychological Adaptation of International Students in the Northern Part of Cyprus. *Higher Learning Research Communications*, 9 (1). DOI: 10.18870/hlrc.v9i1.436
- Marôco J, Assunção H, Harju-Luukkainen H, Lin S-W, Sit P-S, Cheung K-c, et al. (2020) Predictors of academic efficacy and dropout intention in university students: Can engagement suppress burnout? *PLoS ONE* 15(10). <https://doi.org/10.1371/journal.pone.0239816>
- Matta, C. M. B., Lebrão, S. M. G., & Heleno, M. G. V. (2017). Adaptação, rendimento, evasão e vivências acadêmicas no ensino superior: revisão da literatura. *Psicologia Escolar e Educacional*, 21(3), 583–591. doi:10.1590/2175-353920170213111118
- Maydell-Stevens, E., Masgoret, A. & Ward, T. (2007). Problems Of Psychological And Sociocultural Adaptation Among Russian-Speaking Immigrants in New Zealand.

*Social Policy Journal Social Policy Journal of New Zealand: te puna whakaaro*, 30, 178-198.  
Fhdl.handle.net%2F10536%2FDRO%2FDU%3A30034195

Miteva, D., Georgiadis, F., McBroom, L., Noboa, V., Quednow, B. B., Seifritz, E., Vetter, S., & Egger, S. T. (2022). Impact of language proficiency on mental health service use, treatment and outcomes: "Lost in Translation". *Comprehensive Psychiatry*, 114, 152299. <https://doi.org/10.1016/j.comppsy.2022.152299>

OASH. (2023). *Healthy People 2030*. OASH. <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/language-and-literacy>

Okolie, S. O. & Manyeruke, G. (2024). The impact of discrimination on the psychological well-being and ethnic identity of international students in North Cyprus. *Environment and Social Psychology*, 9(5): 2247. doi: 10.54517/esp.v9i5.2247

Oliveira, C. T., Wiles, J. M., Fiorin, P. C., & Dias, A. C. G. (2014). Percepções de estudantes universitários sobre a relação professor-aluno. *Psicologia Escolar e Educacional*, 18(2), 239–246. doi:10.1590/2175-3539/2014/0182739

Silva, G. O., Aredes, N. D. A., & Galdino-Júnior, H. (2021). Academic performance, adaptation and mental health of nursing students: A cross-sectional study. *Nurse education in practice*, 55, 103145. <https://doi.org/10.1016/j.nepr.2021.103145>

Pathak, R. R. (2013). Sample size: from formulae to concepts: II. *International Journal of Basic and Clinical Pharmacology*, 2(1), 94-95. doi: 10.5455/2319-2003.ijbcp20130119

Qin, X. (2019) Common Factors of Mental Health Challenges Among International Students. In P. Burak, *Addressing Mental Health Issues Affecting International Students*. NAFSA. <https://www.nafsa.org/sites/default/files/media/document/addressing-mental-health-chapter-1.pdf>

Sheng, L., Dia, J. & Lei, J. (2022). The impacts of academic adaptation on psychological and sociocultural adaptation among international students in China: The moderating role of friendship. *International journal of intercultural relations*, 89, 79-89. <https://doi.org/10.1016/j.ijintrel.2022.06.001>

Skromanis, S., Cooling, N., Rodgers, B., Purton, T., Fan, F., Bridgman, H., Harris, K., Presser, J., & Mond, J. (2018). Health and Well-Being of International University Students, and Comparison with Domestic Students, in Tasmania, Australia. *International journal of environmental research and public health*, 15(6), 1147. <https://doi.org/10.3390/ijerph15061147>

Souza, A. P. de, Murgu, C. S., & Barros, L. de O. (2021). Academic adaptation in university students: Associations with stress and sleep quality. *Psicologia: Teoria e Prática*, 23(3), 1–21. doi:10.5935/1980-6906/ePTPPA13275

Stallman, H. M. (2010). Psychological distress in university students: A comparison with the general population. *Australian Psychologist*, 45(4), 249-257. DOI: 10.1080/00050067.2010.482109

Volkova, N. V., & Kolesov, A. A. (2022). Adaptation Challenges of Domestic and International Students in a Russian English-Medium Instruction University. *Journal of international students*, 12(2). <https://doi.org/10.32674/jis.v12i2.3594>

WHO (2023). Türkiye, Supporting Turkish mental health policy and service delivery. WHO <https://www.who.int/about/accountability/results/who-results-report-2020-mtr/country-story/2020/supporting-turkish-mental-health-policy-and-service-delivery#:~:text=In%20the%20last%20years%2C%20the,downturn%20and%20COVID%2D19%20pandemic>

Wu, H., Garza, E. & Guzman, N. (2015). International Student's Challenge and Adjustment to College. *Education Research International*. <https://doi.org/10.1155/2015/202753>

Xie L, Zou W and Wang H (2022) School adaptation and adolescent immigrant mental health: Mediation of positive academic emotions and conduct problems. *Front. Public Health* 10, 967691. doi: 10.3389/fpubh.2022.967691

Yerken, A., & Nguyen Luu, L. A. (2022). A stepping stone to the "West": Academic adaptation of international students from post-Soviet countries in Hungary. *International Journal of Intercultural Relations*, 89, 183–194. <https://doi.org/10.1016/J.IJINTREL.2022.06.005>

Yusoff, Y. M. & Chelliah, S. (2010). Adjustment in International Students in Malaysian Public University. *International Journal of Innovation, Management and Technology*, 1(3).





RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# Determining the Influence of Extrajudicial Justice on Perception of Police among Nigerian Citizens: A Scale Development Study

## Nijerya Vatandaşları Arasında Yargısız Adaletin Polis Algısı Üzerindeki Etkisinin Belirlenmesi: Bir Ölçek Geliştirme Çalışması

Ezgi Ulu<sup>1</sup>, Chinwendu Enechi<sup>2</sup>, Chinyereugo Ezeonuegbu<sup>3</sup>, Nuriye Sancar<sup>4</sup>

### Abstract:

This study aims to conduct the validity and reliability study of the Extrajudicial Justice Scale for Nigerian citizens. Sample of the study consisted of 600 Nigerians who were over 18 years old and who volunteered to participate in the study. As a result of comprehensive validity and reliability analysis, the scale consists of 14 items and 4 factors called "Illegal execution", "Indictment", "Unlawful arrest" and "Intimidation". Cronbach's Alpha value of the scale was found to be 0.859 and Cronbach's Alpha values for the factors were found to be 0.782 for Illegal execution, 0.714 for Intimidation, 0.728 for Unlawful arrest, and 0.738 for Indictment. According to the results of the validity and reliability analysis, the Extrajudicial Justice Scale can be used as a valid and reliable instrument for Nigerian citizens to determine the influence of extrajudicial justice on the perception people have about the police. Considering that there is no scale used to assess extrajudicial justice in Nigeria, it is thought that this study will guide future research on the subject and reveal its importance for society.

**Keywords:** Extrajudicial, Justice, Police, Nigeria, Nigerian citizens, Scale development.

<sup>1</sup>Assoc. Prof. Dr., Near East University, Faculty of Arts and Science, Psychology Department, Lefkoşa-TRN Cyprus, e-mail: ezgi.ul@neu.edu.tr, Orcid Id: 0000-0001-6418-8995

<sup>2</sup>MSc., Near East University, Faculty of Arts and Science, Psychology Department, Lefkoşa-TRN Cyprus, e-mail: chinwenduenechi212@gmail.com Orcid Id: 0009-0007-4484-8045

<sup>3</sup>PhD., Chukwuemeka Odumegwu Ojukwu University, PMB PMB 6059 Igbariam, Anambra State, Nigeria, e-mail: chinyereugowisdom@gmail.com, Orcid Id: 0009-0005-4459-0449

<sup>4</sup>Assoc.Prof. Dr. Near East University, Faculty of Arts and Science, Mathematics Department Lefkoşa-TRN Cyprus E-mail: nuriye.sancar@neu.edu.tr, Orcid Id: 0000-0002-4276-4653

**Address of Correspondence/Yazışma Adresi:** Near East University, Faculty of Arts and Science, Psychology Department, Lefkoşa- Mersin 10 Turkey, E-mail: ezgi.ul@neu.edu.tr

**Date of Received/Geliş Tarihi:** 12.03.2024, **Date of Revision/Düzelme Tarihi:** 12.05.2023, **Date of Acceptance/Kabul Tarihi:** 01.06.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Ulu, E., Enechi, C., Ezeonuegbu, C., & Sancar, N. (2024). Determining the Influence of Extrajudicial Justice on Perception of Police among Nigerian Citizens: A Scale Development Study. *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 116-125

© 2024 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktpdgerisi.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes. <http://creativecommons.org/licenses/by/4.0/>

## Öz:

Bu çalışmanın amacı Nijerya vatandaşları için Yargısız Adalet Ölçeğinin geçerlilik ve güvenilirlik analizini yapmaktır. Çalışmanın örneklemini 18 yaş üstü ve çalışmaya katılmaya gönüllü olan 600 Nijeryalı oluşturmaktadır. Kapsamlı geçerlilik ve güvenilirlik analizi sonucunda ölçek 14 madde ve "Yasadışı infaz", "İddianame", "Yasadışı tutuklama" ve "Gözdağı" olmak üzere 4 faktörden oluşmaktadır. Ölçeğin Cronbach Alfa değeri 0.859, faktörlere ait Cronbach Alfa değerleri "Yasadışı infaz" için 0.782, "Gözdağı" için 0.714, "Yasadışı tutuklama" için 0.728 ve "İddianame" için 0.738 olarak bulunmuştur. Geçerlik ve güvenilirlik analizi sonuçlarına göre, yargısız adaletin insanların polise ilişkin algıları üzerindeki etkisini belirlemeye yönelik Nijerya vatandaşları için Yargısız Adalet Ölçeği geçerli ve güvenilir bir araç olarak kullanılabilir. Nijerya'da yargısız adaleti değerlendirmek için kullanılan bir ölçek olmadığı göz önünde bulundurulduğunda, bu çalışmanın konuyla ilgili gelecekteki araştırmalara yol göstereceği ve toplum için önemini ortaya koyacağı düşünülmektedir.

**Anahtar Kelimeler:** Yargısız Adalet, Polis, Nijerya, Nijerya vatandaşları, Ölçek geliştirme.

## Introduction

Several constitutions that were successfully passed have made their own provisions and included the right to life in Nigeria as certainly a permissible derogation (Igwe, 2020). The issue of extrajudicial justice whether arbitrary and summary executions surpass any other illegal kind of killing done by government forces, as other kinds of killings by any other group, individual or any other person in which the government fails to look into and carry out legal actions (Tsai and Venkataramani, 2015). Long ago; since Nigeria's independence, a lot of researchers gave a volume of wide range opinions that could be considered as valid contributors to negations of the view of law enforcement, this focuses extensively on certain demographics like; corruption, bribery and abuse in the community (Callanan and Rosenberger, 2011; MacAlister, 2011). Some of the literature has cited that varieties of citizens generally may have positive views about the law enforcement agencies (Benedict, Brown and Bower, 2000; Chermak, McGarrell and Weiss, 2001). There are numerous other literatures reporting the public views of law enforcement agencies to be generally negative, rude, ruthless and even abusive (Callanan and Rosenberger, 2011; MacAlister, 2011). The citizens view law, law enforcement, judges, and every other government justice system to be biased (Tyler, 1988). On this note, extrajudicial killing is defined to be a killing done deliberately and not legally acceptable by any constitutional authority in the court of law accordingly and as regards to the judiciary and seems rigid to the view of the people (Tsai and Venkataramani, 2015).

However, extrajudicial justice means the type of killings which is said to be done outside proper judicial procedures, either by the consent of the public or public officials (Rodley, 2012). Extrajudicial justice can be regarded as an activity of any sort that induces an individual's death without having to go through any kind of procedure in legal order and trials (Wulandari and Arivani, 2022). "Killing the civilians and knowing that nothing will happen" becomes the bitter truth of the current situation of

extrajudicial justice in Nigeria (Odunaike, Lalude and Odusanya, 2021). It is found that race, age, physical or any form of contact with these government enforcement agencies and the general populations were the basic consistent targets found to have an impact and most likely a significant predictor prior to extra-judicial justices (Brown and Benedict, 2002). In reporting this extrajudicial justice, a study found that Africans in general are less likely to come forward with evidence and report these crimes than those in other non-African countries (Guder, 2021). The purpose of this study is to determine the Nigerian validity and reliability of the Extrajudicial Justice Scale for Nigerian citizens. Ultimately, this study sought an answer to the following question: "Are the psychometric properties of the Extrajudicial Justice Scale for Nigerian citizens valid and reliable?"

## Method

### Population and sample

According to Bayer and Baykal (2018) when determining the sample size, it is suggested to recruit 5-10 times the number of items on the scale. Due to this fact and since the scale consisted of 28 items, it was planned to include at least 300 Nigerian citizens. The study data was collected from the citizens of Nigeria from the Onitsha region which were basically from the Igbo, Hausa, Fulani, Yoruba and other minority ethnic groups. A total of 600 volunteered citizens above 18 years of age participated in the research by using the convenience sampling method (Sedgwick, 2013). The convenience sampling method is a non-probability sampling technique in which the researcher selects accessible and available participants. This sampling method has been used by considering the limitation of the research time and resources of the study. In the context of our research, convenience sampling has been used as it allowed us to quickly and effectively collect data from a variety of participants who were easily reachable within our local

community. The data was collected by structured questionnaires. In the data, there were no missing observations. Multivariate outlier observations were

analyzed using Mahalanobis distance. No outlier data points were identified in the dataset according to Mahalanobis distance values.

**Table 1.** Demographic information of the participants

Demographic variable	Participant	Percentage
<b>Gender</b>		
Male	326	54.3%
Female	274	45.7%
<b>Age</b>		
18 - 30 years	278	46.3%
31 - 45 years	195	32.5%
46 - 60 years	96	16%
61 - 75 years	31	5.2%
<b>Ethnicity</b>		
Igbo	465	77.5%
Hausa/Fulani	85	14.2%
Yoruba	15	5.5%
Other minorities	10	3.7%
<b>Religion</b>		
Christian	450	75%
Muslim	100	16.7%
Traditionalists/others	50	8.3%
<b>Educational Background</b>		
Secondary School	436	72.7%
Graduate	123	20.5%
Postgraduate (MSc)	31	5.2%
Postgraduate (PHD)	10	1.6%

Table 1 denotes that the participants were generated by the population of the region in the context of personal informations such as the gender and age group. Also, certain demographics were classified such as the ethnic group, religion and educational background.

#### **Development Process of Extrajudicial Justice Scale**

During the first stage, a detailed 27-item pool was carefully created to capture all aspects of extrajudicial justice and how it affects Nigerian citizens' perceptions of the police. The content validity of these items was performed to examine whether the items accurately reflect the concept being measured after the item pool had been created. First, these initial 27 items which were on trial were reviewed and evaluated by 8 experts (4 forensic psychologists, 2 psychologists, 2 legal experts). The second phase involved a detailed assessment of the scale's content validity using the Content Validity Ratio (CVR) and Content Validity Index (CVI). Specialists rated each component on a 1 to 3 scale, distinguishing between "not essential," "helpful but not essential," and "essential." Items meeting Lawshe's criterion for CVR scores (critical value of 0.75) were retained, while others were eliminated

(Lawshe, 1975). Evaluation of clarity, simplicity, relevance, and ambiguity utilized the Item Content Validity Index (I-CVI) and Scale Content Validity (S-CVI/Ave) on a 4-point scale (Polit et al.; 2007 Yaghmaie, 2003). Adjustments were made for values outside the acceptable range, and I-CVI scores  $\geq 0.78$  were deemed acceptable. S-CVI/Ave values  $\geq 0.90$  were considered adequate. After item elimination, average CVR and I-CVI values for the full scale were determined. Based on expert feedback, twelve items deemed less appropriate were removed, resulting in the creation of a 15-item Extrajudicial Justice Scale, aligning with the suggestions of eight experts. The Extrajudicial Justice Scale has a 5-point Likert scale (which shows a score of 1 representing "I strongly agree" and a score of 5 representing "I strongly disagree") A questionnaire was created including a demographic section (gender, age, gender, ethnicity, religion, education level) and Extrajudicial Justice Scale. And, the questionnaire also included the Police perception scale (Nadal, Kristin & David, 2015 was used) to check the criterion validity of the Extrajudicial Justice Scale.

### Data collection and procedure

The sum of all the measures in this study was applied to selected participants in the area of interest with the help of some research assistants who visited the geographical area where the participants were needed to be in this study and collected the data for this study, using convenience sampling method for participants who are available and willing to be part of the study in the communities. In the beginning, the participants were all given an overview of what they were expected to do including an informed consent form, this document was attached to the front page of the instrument and described the process of the study, also it entails the merits and demerits and the advantages of the study, then part of the scale includes that it should be answered independently and truthfully. In addition, the participants were informed of the instruments and also, they were given the instrument: the extrajudicial justice scale. The instrument administration session lasted for 20-30 minutes and participants were debriefed after the completion of their session with an appreciation for participating in the study.

### Ethical consideration

Approval to conduct the study was obtained by the Social Science Ethics Committee, Near East University Ethics Review Board (Decision No: NEU/SS/2023/1587, Date: 22.05.2023). Before the study, participants were informed about data confidentiality to avoid any fear of being labeled or arrested by the police. In addition, before starting the study, informed consent was obtained from the participants to show that participation was the free choice of the individuals that there was no obligation to participate in the study, and that they could withdraw from the study at any time.

### Data Analysis

From the Exploratory Factor Analysis (EFA) using Principal Component Analysis (PCA). The sample group was divided accordingly into two categories randomly ( $n_1$  given = 300;  $n_2$  given = 300). The Exploratory Factor Analysis (EFA) was observed for the first group and then the Confirmatory Factor Analysis (CFA) on the other group. In the context of this study, first; the degree of the content validity impact of the scale was carefully analyzed and checked. Then, the Bartlett Sphericity Test and Kaiser-Meyer Olkin (KMO) coefficients were evaluated and from this information, it was determined as regards to if the dataset was intact and duly convenient for carrying out factor analysis and considering the Explanatory Factor Analysis which was coined from the basics of Principal Component Analysis (PCA) which was also in line with the oblimin rotation that was applied to determine the exact features in order to obtain the construct validity of the scale. At the end of factor analysis, the whole of the sub-factors, including the items in the scale in each of these sub-factors was carefully separated and analyzed for the determination of the scale's reliability. For the

aim of evaluating the reliability analysis in this process, the Spearman-Brown Coefficient and then the Cronbach Alpha of all the items were duly noted and evaluated as scores of internal consistencies. The Pearson's ( $r$ ) and the Intraclass (ICC) correlation coefficients were also present and they were organized and then calculated for the retest reliability. Furthermore, the convergent validity and the discriminant validity were duly investigated with basic calculations and comparisons. Also, the total items which were in correlation and the Cronbach Alpha of each of the items were listed duly and added for the item analysis, the t-test of the citizens was applied to assess the items of the scale and to determine if they have value and discrimination between the lower and the then the upper participants. Finally, the CFA Confirmatory Factor Analysis was used to check the accuracy values of all the factors which were obtained by the EFA Explanatory Factor Analysis, ie all the analysis involved were conducted using the SPSS (the 24 version) and the windows software (the 4.1.1 R Studio version).

### Results

#### Explanatory Factor Analysis

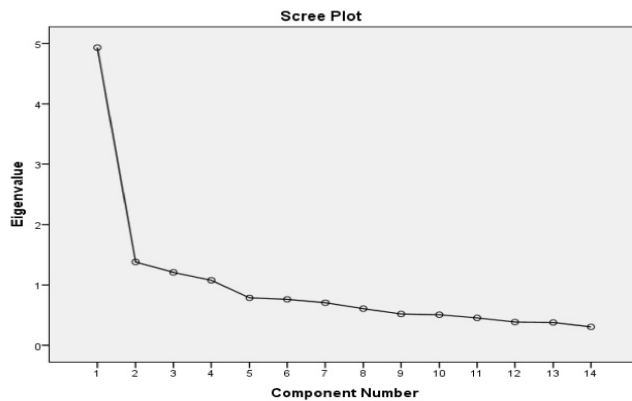
Our sample size was sufficient for the analysis, as the Kaiser-Meyer-Olkin Measure of Sampling Adequacy reported a value of 0.908. Moreover, due to Bartlett's sphericity test, it can be concluded that the dataset follows a normal distribution and is appropriate for analysis ( $\chi^2(15) = 1420.398$ ,  $p < 0.001$ ). The scale did not include any items with a communality of less than 0.2. Furthermore, because the factor loading was low—0.304—the item “The use of lethal force that is likely to cause serious bodily injury or death to another person is often used in the arrest of suspects” was eliminated.

The other 14 items were collected under four dimensions according to the number of eigenvalues that are greater than or equal to 1 as seen in Table 2. For the scale, the explained variance by these two dimensions was 50.49%. The eigenvalues indicated that 35.234% of variance was accounted by the first factor, the second factor accounted 9.884%, the third dimension has 8.634% and the fourth dimension has 7.7024% of the total variance, respectively. The factor loadings were within the range of 0.493 to 0.921 accordingly. Likewise, the result in the scree plot indicated the scale has four-factor as seen in Figure 1. When the items in the scale are analyzed in the dimensions, respectively, the first dimension with five items was named “illegal execution”, “indictment” for the second dimension with five items as well, 3<sup>rd</sup> and the fourth dimensions were named as “unlawful arrest” with two items and “intimidation” with two items, respectively. Items description, factor loadings, and communalities of the 14 items are shown in Table 2. The factor loadings were within the range of 0.493 to 0.921 accordingly. And communalities varied from 0.426 to 0.790 as seen in Table 2.

**Table 2.** Factor loadings and communalities

Item No	Statements	Factor loadings	Communality
<b>Dimension 1</b>			
	Illegal execution		
1	Killing of a person by the Government authorities and individuals without the sanction of any judicial proceeding or legal process is common in the country today	<b>0.744</b>	<b>0.530</b>
2	Innocent people are killed in exchange for the actual perpetrators of the crime committed	<b>0.723</b>	<b>0.680</b>
3	Alleged criminals are always beaten by a crowd without giving a fair hearing in court	<b>0.696</b>	<b>0.503</b>
4	Many detained individuals suffer physical and psychological torture during interrogation and other abuses	<b>0.644</b>	<b>0.643</b>
5	Many people in prison today are thrown into the prison without legitimate or legal sentencing by the court	<b>0.529</b>	<b>0.503</b>
<b>Dimension 2</b>			
	Indictment		
6	The police usually plant evidence to support the narrative of the investigative report/process	<b>0.858</b>	<b>0.653</b>
7	Due to their incompetence and unprofessional behaviors at the scene of a crime, the investigating officers often contaminate evidence that will exonerate innocent victims	<b>0.620</b>	<b>0.569</b>
8	Uniformed security forces fabricate evidence just to victimize people and convict them of crimes they know nothing about	<b>0.617</b>	<b>0.426</b>
9	Peaceful protesters without ammunition are often killed by the defense forces without official authorization	<b>0.493</b>	<b>0.551</b>
10	Police instead of taking a suspect alive may most times kill them to cover their unprofessional wrong doings thereby protecting themselves from any consequences	<b>0.518</b>	<b>0.487</b>
<b>Dimension 3</b>			
11	Most people who are arbitrarily arrested are given no explanation as to why they are being arrested	<b>0.874</b>	<b>0.790</b>
12	Arrested individuals most times are not shown arrest warrants	<b>0.785</b>	<b>0.723</b>
<b>Dimension 4</b>			
13	Detectives often use crime perpetration as an opportunity to arrest, intimidate and extort money from suspects rather than charging them to court for fair hearing	<b>0.921</b>	<b>0.804</b>
14	Police officers force arrested suspects to write wrong statements to plead guilty just to convict them against an offense	<b>0.785</b>	<b>0.736</b>

**Figure 1.** The scree plot



The scree plot has indicated the scale has four-factor as seen in Figure 1.

**Confirmatory factor analysis** - The 4-factor model obtained from the EFA analysis was tested and confirmed using CFA with a confirmatory sample of n=300. To evaluate the model's fit, various fit indices ( the Chi-square ( $\chi^2$ ), Chi-square/degrees ( $\chi^2/df$ ), standard Root of the Mean Square Error of Approximation (RMSEA), the

Standardized of the Root Mean Square Residual (SRMR), Normed Fit of Index (NFI), Nonnormed Fit Index (NNFI) which is also the Tucker Lewis Index (TLI), the Comparative Fit of Index (CFI), were employed (Bollen, 1986; Bollen, 1989; Schermelleh-Engel et al., 2003).

**Table 3. CFA results.**

Measure	Value	Recommended threshold value	
		Satisfactory Fit	Acceptable Fit
$\chi^2$	143.451	$0 \leq \chi^2 \leq 2df$	$2df < \chi^2 \leq 3df$ (df=14)
$\chi^2/df$	2.020	$0 \leq \chi^2/df \leq 2$	$2 < \chi^2/df \leq 3$
RMSEA	0.058	$0 \leq RMSEA \leq 0.05$	$0.05 < RMSEA \leq 0.08$
SRMR	0.031	$0 \leq SRMR \leq 0.05$	$0.05 < RMSEA \leq 0.10$
NNFI	0.951	$0.97 \leq TLI \leq 1.00$	$0.95 \leq TLI < 0.97$
CFI	0.961	$0.97 \leq CFI \leq 1.00$	$0.95 \leq CFI < 0.97$
NFI	0.927	$0.95 \leq NFI \leq 1.00$	$0.90 \leq NFI < 0.95$

As seen in Table 3, the results showed the values of  $\chi^2$  and  $\chi^2/df$  has been calculated as 143.451 and 2.020, respectively. Then, it indicates that the model fit is good. The value of SRMR is 0.031 and for the RMSEA, it is = 0.058, this shows that the model is accepted. NFI is 0.927 and the NNFI is 0.951.

The CFI has the value of 0.961. In conclusion, all fit is good and application and verify the 4-factor model.

**Convergent and Discriminant Validity**

To guarantee convergent validity, every factor must demonstrate Composite Reliability (CR) and Cronbach's Alpha (CA) values greater than 0.70, and the Average Variance Extracted (AVE) for each factor must be less

than 0.50 (Hair et al., 1998; Fornell and Larcker, 1981; Rao, Solis and Raghunathan, 1999; Llusar and Zornoza, 2002).). Our analysis shows that every factor in the study has AVE values greater than 0.5, and for every factor, CR and CA values above 0.7, as shown in Table 4. The Fornell-Larcker criteria, which examine the correlation coefficients between factors and the square root of the AVE for each construct, were used to assess discriminant validity (Fornell and Larcker, 1981). Table 4 presents our results, which meet the Fornell-Larcker criterion. Discriminant validity is confirmed by the square root of AVE values for each factor, which consistently exceeds the correlation coefficients for the associated variables in the corresponding rows and columns.

**Table 4.** Convergent and Discriminant Validity Analysis Results

Factors	CA	CR	AVE	Fornell Larcker			
				Illegal execution	Indictment	Unlawful arrest	Intimidation
Illegal executions (IE)	0.782	0.837	0.513	0.716			
Indictment (Ind)	0.738	0.832	0.502	0.533	0.709		
Unlawful arrest (UA)	0.728	0.817	0.690	0.431	0.348	0.831	
Intimidations (Int)	0.714	0.732	0.845	0.428	0.446	0.263	0.919

**Criterion Validity by Police Perception Scale (PPS)**

There was a statistically positive correlation between the Extrajudicial Justice Scale and PPS, according to the results of the correlation analysis for criterion validity ( $r=0.701$ ,  $p<0.001$ ). We can conclude that the scale exhibits criterion validity as a result of the significant positive correlation result obtained.

**Reliability of the Extrajudicial Justice Scale**

With a Cronbach's alpha (CA) value of 0.859 for each of the 14 items, the suggested scale was determined to have good internal consistency. Strong internal consistency was shown when the four factors of the Extra-judicial Justice Scale (EJS) were examined individually in terms of CA (IE=0.782, Int=0.714, UA=0.728, Ind=0.738). Furthermore, the CA values were unaffected significantly by the removal of any one item from either factor. Furthermore, for all items on the EJS, the Spearman-Brown Split-Half Reliability Coefficient was strong ( $r = 0.747$ ). For the Spearman-Brown Split-Half Reliability Coefficient consistency, all dimensions of the EJS also showed acceptable values (IE=0.797, Int=0.720, UA=0.735, Ind=0.716). On the other hand, Pearson's r and ICC were used to assess the test-retest reliability of the EJS, which was based on the scores of 80 participants two

weeks following the initial questionnaire. The EJS scores showed a high degree of consistency across the two-week period, as seen by the results, which showed an ICC of 0.971 ( $p<0.001$ ) and a Pearson's r of 0.968 ( $p<0.001$ ).

**Item analysis** - The Item analysis results of the study are represented in Table 5. The total item seen to be correlated changed from can be seen that the item-total correlation changed from 0.359 to 0.590 for the sum of the items in the scale consecutively. The sum of the items is greater than 0.300. So, the total of the item correlation shown at each item was greater than 0.300 for each of the items in the sub-factors. The value of the CA was not seen to have a higher value than the CA value shown in all the items (0.859). Therefore, the alpha value did not increase significantly as an item was taken out for each of the sub-factors. The item analysis results depicted that it was correct for 14 items to be on EJS. In addition, during the application of the Student's t-test in comparing average scores and the common groups of the score of all the 14 items, observably there was seen to be a difference significantly between the two groups because the t-test values were varying between the number 8.449 ( $p < 0.001$ ) and the number 11.588 ( $p < 0.001$ ). The results are based on evaluations because the EJS items are valid and reliable.

**Table 5.** The Item analysis

Item	Mean	Standard Deviation	Correlation	Cronbach Alpha if item deleted	t
<b>Dimension 1:</b>					
<b>Illegal execution</b>					
1	3.62	1.329	0.421	0.858	7.371
2	4.01	1.115	0.499	0.853	8.379
3	4.13	1.101	0.576	0.849	8.852
4	3.75	1.173	0.476	0.854	9.693
5	3.63	1.054	0.465	0.854	7.711
<b>Dimension 2:</b>					
<b>Indictment</b>					
6	3.68	1.083	0.416	0.857	8.349
7	3.92	1.105	0.590	0.848	11.732
8	3.74	1.076	0.434	0.856	7.937
9	3.78	1.155	0.657	0.844	11.636
10	3.69	1.152	0.571	0.849	11.291
<b>Dimension 3:</b>					
<b>Unlawful arrest</b>					
11	3.57	1.182	0.509	0.852	10.308
12	4.00	1.120	0.435	0.856	8.449
<b>Dimension 4:</b>					
<b>Intimidation</b>					
13	3.65	1.197	0.547	0.850	11.588
14	3.69	1.051	0.359	0.859	8.124

## Discussion

The EJS bears a significant validity and reliability component from the analysis and therefore it is a good basis for reliability in determining the extent of extrajudicial justice. Initially, the developed scale consisted of 28 items, after which it was reduced to 15 items because of the complexity in the process of obtaining the expert report on the scale. The process of determining a quality analysis depends also on the responses of the expert opinion on a statistical basis with quantitative data on the general subjective (Bissiri, Holmes and Walker, 2016). The expert opinion is based on a subjective practical assessment, experience and knowledge; this methodology overlooks the contradiction whatsoever that may be placed on the potentially significant impact of the experts which were given on the data observation. (Morita, et al., 2008; Neuenschwander et al., 2020). Thereafter, the items in EJS were further reduced to 14 as a result of one factor loading which has a lower value than what was required.

The explanatory factor analysis shows that the factors in the scale are relatedly accurate ie the 14 selected items accordingly in their four categories. The item analysis of the extrajudicial justice results is seen in Table 4. The correlation of the extrajudicial justice scale items differed from 0.359 to 0.590 for the sum of each item included in the scale. Numbers were calculated, ie the total number and so every item was taken and determined as being greater than 0.300 and this is for all the items each in the sub-factors. In statistical analysis, the process of correlation helps to determine, predict, estimate and evaluate the probability of the outcomes of the linear relationship continuously between two variables which are relatedly consistent interpreting it's function easily (Mukaka, 2012).

The CA has the value which was not observed to bear the higher value than all the values of the other Cronbach alphas shown in the items (0.859). It can be seen as the value of the alpha did not reflect its high-value significance when any item was taken out of the sub-factor, because of this; the result of the analysis indicated that it was accurate, accepted and understood that it was expected to efficient for 14 items to be used in the test of extrajudicial justice scale. Cronbach Alpha even though it remains widely known, there are many misunderstandings on the application and its measure justifiably (Cutzen and Peters, 2017; Osburn 2000, Ursachi, Horodnic and Zaire, 2015).

In most of countries, extrajudicial justice remains a major concern and even more serious than all other forms of criminal activity, there is still no existing instrument to measure this in the literature; only perception of police scale has been shown to be used in the literature to review different methods for determining the police being biased, rude or discriminatory against individuals or group of individuals. The perception of police scale has 12 items, and it includes factors which are divided into two sub-scales, six items measure the perception of police towards efficacy while the other six items measure the perception of police image and all items are to get the responses which are relatedly about the police (Nadal et al., 2015).

In the writings of Kothari (2010), he explains that the critical problem lies within a greater part of the official body and these official bodies he describes to be the members responsible for the advocacy of extrajudicial

killings. He further describes this as an important aspect to the members of these organizations as an attempt or an act to protect the interest of their members, thereby possibly creating false claims and manipulations which are not necessarily true. The findings of Kothari merge with the study of Rodriguez (2012), with the title of his work "Reports on Victims of Violence": in this, he describes the coverage of the press as regards extrajudicial killings in Colombia which entails that the general report on the major crimes of extrajudicial killings informatively were these individuals who are known as official sources, and he describes them as unreliable sources. EJS measures 4 dimensions, illegal execution, indictment, unlawful arrest and intimidation. These perspectives will bring people closer to the truth about these officials who release this information on extrajudicial killings and expose people's true feelings about the perception of police on the extrajudicial justices.

Over the last 2 decades, the first type of police questionnaire existed and was used in 23 different countries, reflecting their unique continents, cultural background, legal status and economic development (Kutnjak, 2015). However, the first study to examine this questionnaire was published in the book "contours of police integrity" (Klockars and Kutnjak, 2004) and this contains a number of features in chapters clearly relevant from 14 different countries which include America, Australia, Britain, Canada, Croatia, Finland, Hungary, Japan, Netherlands, Pakistan, Poland, Slovenia, South Africa, Sweden and America. Finland, Hungary, Japan, Netherlands, Pakistan, Poland, Slovenia, South Africa and Sweden. Klockars and co debated that investigations into police misconduct were to be carried out extremely beyond the realms of corruption motivated by the common sense of personality and the ethics of ordinary extrajudicial conduct. In support of this investigation, the other part of the police integrity questionnaire which entails events that reflect forms of police accountability, misconduct, corruption and overly strict use of power, arrest with or without warrants, false office records and development of true and untrue allegations came to light in the year 1998 (Klockars, 1999). Hence, the EJS has 14 items with 4 dimensions measuring the; illegal execution with five items, indictment with five items as well, unlawful arrest and intimidation consecutively with two items each and these issues are related directly, independently and diversely to the many cases of crimes involving extrajudicial executions not just focusing on one aspect of extrajudicial affairs in measuring the perception of police.

## Conclusion

EJS as a means of measurement can help to effectively improve the way we measure extrajudicial behavior for the purposes of determining the perception people have about the police. Regardless of the importance of EJS, it includes limitations on the scale being reported by individuals, to an extent they may not have fully expressed their concerns or in some ways may have over-expressed their concerns.

## Recommendation

The study population was based in the Onitsha Region of the Anambra State, populated mainly by the eastern part of Nigeria, which has mostly Christians. Therefore, further study could also extend to the Western, Northern, and Southern regions of Nigeria to be able to compare, determine, and evaluate extra-judicial justice even more.



**Declarations****Ethics Approval and Consent to Participate**

Approval was received from the Social Science Ethics Committee, Near East University Ethics Review Board, for the implementation of the research (Decision No: NEU/SS/2023/1587, Date: 22.05.2023).

**Publication Permission**

Not applicable.

**Availability of Data and Materials**

Not applicable.

**Conflict Interest**

The author declares that no competing interests in this manuscript.

**Financing**

Not applicable.

**Authors' Contributions**

CEz carried out the proposal of the main idea of the research, CEz and CE contributed to the collection of data. NS analyzed and interpreted the data. EU contributed to the writing of the article and carried out revision of the article content. All authors have read and approved the final article

**References**

- Bagozzi, R. P., & Phillips, L. W. (1982). Representing & testing organizational theories: A holistic construal. *Administrative Science Quarterly*, 27(3), 459-489.
- Bayer, N., & Baykal, Ü. (2018). Improving quality perception scale of health workers. *Journal of Health and Nursing Management*, 5(2), 86-99.
- Bollen, K. A. (1986). Sample size and Bentler and Bonett's nonnormed fit index. *Psychometrika*, 51, 375-377.
- Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological methods & research*, 17(3), 303-316.
- Brown, B., & Reed Benedict, W. (2002). Perceptions of the police: Past findings, methodological issues, conceptual issues & policy implications. *Policing: an international journal of police strategies & management*, 25(3), 543-580.
- Benedict, W.R., Brown, B. & Bower, D.J. (2000). Perceptions of the police & fear of crime in a rural setting: utility of a geographically focused survey for police services, planning, & assessment. *Criminal Justice Policy Review*, 11(4), 275-98.
- Bissiri, P. G., Holmes, C. C., Walker, S. G. (2016). A general framework for updating belief distributions. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 78 (5), 1103-1130.
- Callanan V.J. & Rosenberger J.S. (2011). Media & public perceptions of the police: Examining the impact of race & personal experience. *Policing & Society*, 21(2), 167-189.
- Chermak, S., McGarrell, E. F. & Weiss, A. (2001). Citizens' perceptions of aggressive traffic enforcement strategies. *Justice Quarterly*, 18, 365-91.
- Crutzen, R., & Peters, G. J. Y. (2017). Scale quality: alpha is an inadequate estimate & factor-analytic evidence is needed first of all. *Health Psychology Review*, 11(3), 242-247
- Guder L.G (2021). The African allegations towards ignorance of international criminal court: does international criminal court unfairly focusing on Africa? *International Journal of Social Science & Economics*, 1 (1), 37-48.
- Hair, J.F., Tatham, R.L., Anderson, R.E., & Black, W.(1998). *Multivariate data analysis with readings*. Prentice Hall, USA.
- Igwe, I. (2020). To what extent is killing in defense of property equal to right to life in Nigeria? *Beijing Law Review*, 11, 1-10.
- Kaiser, H. F., & Rice, J. (1974). Little jiffy, Mark IV. *Educational & psychological measurement*, 34(1), 111-117.
- Klockars, Carl B. (1999). Measuring Police Integrity, Videotape presented at The Research in Progress Seminar, Final Report Submitted to the United States Department of Justice, Office of Justice Prog-rams, National Institute of Justice, U.S.A.
- Klockars, C. B., Ivkovic, S. K., & Haberfeld, M. R. (2003). *The contours of police integrity*. Sage publications.
- Kothari, A. (2010), The Framing of the Dafur conflict in the New York Times: 2003-2006. *Journalism Studies*, 11(2), 209-224.
- KutnjakIvkovic, Sanja. (2015). Studing Police Integrity, In Measuring Police Integrity Across The World: Studies From Established Democracies And Countries In Transition (Edited by S. KutnjakIvković& M. R. Haberfeld, pp. 1-36). Springer, New York.
- Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel psychology*, 28(4), 563-575.
- Llusar, J. C. B., & Zornoza, C. C. (2002). Development & validation of a perceived business quality measurement instrument. *The Quality Management Journal*, 9, 23-38.
- MacAlister, D. (2011). The law governing racial profiling: Implications of alternative definitions of the situation. *Canadian Journal of Criminology & Criminal Justice*, 53(3), 95-103.
- Morita, Satoshi, Thali, Peter. F, Muller, Peter (2008). Consultant's forum: Determining the effective sample size of a parametric prior. *Biometrics*, 64(2), 595-602.
- Mukaka, M. M. (2012). A guide to appropriate use of correlation coefficient in medical research. *Malawi Medical Journal*, 24(3), 69-71.
- Nadal KL, Kristin C, David O. (2015). Perceptions of Police Scale (POPS): Measuring Attitudes towards Law Enforcement & Beliefs about Police Bias. *Journal of Psychology and Behavioral Science*, 3(2), 1-9.

- Neuenschwander, Beat, Weber, Sebastian, Schmidli, Heinz, O'Hagan, Anthony (2020). Predictively consistent prior effective sample sizes. *Biometrics*, 76(2), 578-587.
- Odunaike D.A, Lalude O.M, &Odusanya T.O (2021). I will kill you and nothing will happen: Extra-Judicial Killings in Nigeria & Public Interest Litigation. *Bialystok Legal Studies Bialostockie Studia Prawnicze*, 26(6), 145-162.
- Osburn, H. G. (2000). Coefficient alpha & related internal consistency reliability coefficients. *Psychological Methods*, 5(3), 343-55.
- Polit, D. F., Beck, C. T., & Owen, S. V. (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in nursing & health*, 30(4), 459-467.
- Rao, S. S., Solis, L. E., & Raghunathan, T. S. (1999). A framework for international quality management research: Development & validation of a measurement instrument. *Total Quality Management*, 10, 1047-1075.
- Ridley, K.A. (2012). Citizens' perceptions of police service & response to community concerns. *Journal of Crime & Justice*, 35(1), 114-133.
- Rodríguez, S. M. (2012). Reporting on Victims of Violence: Press Coverage of the Extrajudicial Killings in Colombia. *Signo Y Pensamiento*, 31(60), 186-208.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of psychological research online*, 8(2), 23-74.
- Sedgwick, P. (2013). Convenience sampling. *Bmj*, 347.
- Stewart, D. W. (1981). The application & misapplication of factor analysis in marketing research. *Journal of Marketing Research*, 51-62.
- Tsai, A. C., &Venkataramani, A. S. (2015). Communal bereavement & resilience in the aftermath of a terrorist event: Evidence from a natural experiment. *Social science & medicine*, 146, 155-163.
- Tyler, T.R. (1988). What is procedural justice? Criteria used by citizens to assess the fairness of legal procedures. *Law and Society Review*, 22, 103-136.
- Ursachi, G., Horodnic, I. A., &Zait, A. (2015). How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Economics & Finance*, 20(15), 679-686.
- Wulandari, E. &Arivani, E. (2022). Extra Judicial Killing Dalam Perspektif Hukum Positif dan Hukum Pidana Islam. *Jurnal Al-Hakim: Jurnal Ilmiah Mahasiswa, Studi Syariah, Hukum Dan Filantropi*, 4(1), 15-28.
- Yaghmaie, F. J. A. M. (2003). Content validity and its estimation. *Journal of Medical Education*, 3(1).



RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# Investigation of the Relationship Between Attention Level and Reading Speed in Children

## Çocuklarda Dikkat Düzeyi ile Okuma Hızı Arasındaki İlişkinin İncelenmesi

Sema Kumrulu<sup>1</sup>, Fatih Bal<sup>2</sup>

### Abstract:

This study aimed to investigate the connection between attention and reading speed in children. The research design used descriptive analysis and a relational screening model. The sample consisted of 334 students aged 9-12 studying in 3rd and 4th grades in schools in Bakırköy, Istanbul. The research was conducted at 60th Year Primary School, Muhittin Üstündağ Primary School. Study group of the research criterion sampling method, one of the purposive sampling methods, was used. The study obtained data using the Personal Information Form, Reading Speed Measurement, and D2 Attention Test Scale. The data obtained from the study were previously recorded in the SPSS 25.00 program in a controlled manner. The types of analysis used were determined according to the research problems, and Pearson correlation analysis was used for the presence of relationships between variables. The level of the variables in the research was revealed with descriptive statistics, and comparison (t-test and ANOVA) tests were used to examine the differentiation status according to the independent variables. The analysis found a weak positive relationship between reading speed per minute and the total number scores of the d2 attention test among the participating children. Additionally, significant differences were observed between reading speed per minute scores and certain sociodemographic characteristics of the participants. In this sense, conducting similar research with different age groups can contribute to how students' reading speeds vary according to class and age.

**Keywords:** Reading, Reading speed, Attention, Attention test, d2 attention test

\*This study was produced from a master's thesis.

<sup>1</sup>Speed reading specialist, İstanbul Gelişim University, Gelişim Vocational School, İstanbul, Turkey, info@semakumrulu.com, Orcid Id: 0000-0002-5248-7645

<sup>2</sup>Assist. Prof. Dr., Sakarya University, Department of Psychology, Sakarya, Turkey, fatihbal@sakarya.edu.tr, Orcid Id: 0000-0002-9974-2033

**Address of Correspondence/Yazışma Adresi:** Fatih Bal, Sakarya Üniversitesi, İnsan ve Toplum Bilimleri Fakültesi, A Blok, Psikoloji Bölümü, Esentepe Kampüsü 54187 Serdivan, Sakarya, Turkey, Email: fatihbal@sakarya.edu.tr

**Date of Received/Geliş Tarihi:** 09.09.2023, **Date of Revision/Düzeltilme Tarihi:** 23.01.2024, **Date of Acceptance/Kabul Tarihi:** 08.05.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Kumrulu, S. & Bal, F. (2024). Investigation of the Relationship Between Attention Level and Reading Speed in Children. *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 126-136

© 2024 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktppdergisi.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes. <http://creativecommons.org/licenses/by/4.0/>

**Öz:**

Bu çalışmanın amacı, çocuklarda dikkat ve okuma hızı arasındaki bağlantıyı araştırmaktır. Araştırma deseninde betimsel analiz ve ilişkisel tarama modeli kullanılmıştır. Araştırmanın örneklemini İstanbul Bakırköy'deki okulların 3. ve 4. sınıflarında öğrenim gören 9-12 yaş aralığındaki 334 öğrenci oluşturmaktadır. Araştırmanın yapıldığı okullar 60. Yıl İlkokulu, Muhittin Üstündağ İlkokulu'dur. Araştırmanın çalışma grubunda amaçlı örnekleme yöntemlerinden ölçüt örnekleme yöntemi kullanılmıştır. Araştırmada veriler Kişisel Bilgi Formu, Okuma Hızı Ölçümü ve D2 Dikkat Testi Ölçeği kullanılarak elde edilmiştir. Çalışmadan elde edilen veriler önceden SPSS 25.00 programına kontrollü bir şekilde kaydedilmiştir. Kullanılan analiz türleri araştırma problemlerine göre belirlenmiş, değişkenler arasındaki ilişkilerin varlığı için Pearson korelasyon analizi kullanılmıştır. Araştırmada yer alan değişkenlerin düzeyi betimsel istatistiklerle ortaya konmuş, bağımsız değişkenlere göre farklılaşma durumunu incelemek için karşılaştırma (t-testi ve ANOVA) testleri kullanılmıştır. Analizler sonucunda katılımcı çocukların dakikada okuma hızı ile d2 dikkat testi toplam sayı puanı arasında pozitif yönde zayıf bir ilişki bulunmuştur. Ayrıca, dakika başına okuma hızı puanları ile katılımcıların bazı sosyodemografik özellikleri arasında anlamlı farklılıklar gözlenmiştir. Bu anlamda benzer araştırmaların farklı yaş gruplarıyla yapılması, öğrencilerin okuma hızlarının sınıf ve yaşa göre nasıl değiştiği konusunda katkı sağlayabilir.

**Anahtar Kelimeler:** Okuma, Okuma hızı, Dikkat, Dikkat testi, d2 dikkat testi.

**Introduction**

Reading is the exchange of ideas between the reader and the author, which takes place in a convenient environment where the reader tries to understand the text and to reveal new meanings by adding his understanding and prior knowledge (Pearson & Gallagher, 1983; Güneş, 2016). In the reading process, reading is seen as the learning area that makes the greatest contribution to the development of the mind, such as translating writings into mental concepts, making and structuring their understanding in the brain (Karasakaloğlu & Bulut, 2012). Reading allows the individual to expand and deepen their horizons by learning new words, gaining new understandings, having new dreams, and developing creativity. Learning, Sarı (2001) mostly takes place through reading. Students who are not accustomed to reading and cannot understand what they read cannot be expected to succeed in their courses, improve their vocabulary and gain new experiences (Arslan, 2013; Schallert, 2017; Kocisky, et.al., 2018).

Reading attitudes can be defined as the student's feelings toward reading, which positively or negatively affect their attitude toward reading tasks (Stokmans, 1999; Ogurlu, 2014). The reading attitude is just as important as the student's ability to read. This approach plays an important role in the development of a student's lifelong reading skills. It is known that there is a factor that affects reading attitude. If we list these factors, ability, success, self, home environment, interest, gender and intelligence can be counted (Kush, Watkins and Brookhart, 2005; Kırmızı, 2008). For good readers, there is a positive relationship between ability and reading attitudes. According to Wilson and Casey (2007), children who love to read will read more often. This attitude and willingness to read will also contribute significantly to reading development.

McDonalds and Trautman (2006) emphasizes that in order for children to succeed in the modern world, they must learn to read well but also have critical reading skills for long-term success (Honig, 1996; Wehby et al., 2003). Critical reading involves asking the reader questions about the texts they read, developing hypotheses and judgments, and solving problems by taking into account the data in the text (Çifci, 2006). To criticize what the reader reads, one must pay attention to truthfulness, truthfulness, rationality,

credibility, and contradictions in everything that is said (Allor et al., 2010). Özdemir (2002) considers critical reading skills as the highest dimension of literacy. Similarly, Carr (1988) suggests that critical reading is the source of higher-level skills. Kettler (2014) emphasized that gifted children have a more developed critical thinking ability compared to their peers. This process, which is not natural in the life of the individual, but can be acquired later, affects the whole life, provides competence in social, cultural and cognitive fields, is quite complex and dynamic, turns into a process of establishing a new meaning after the reader reinterprets the text read with the information that the reader has already acquired (Duman, 2012). This process of meaning-making is a mechanism that contributes more to one's life. It is seen that the healthy functioning of this mechanism positively affects the educational life and social-cultural life of the individual (Turan & Şişman, 2000). For this reason, reading needs to be questioned more in recent years. The common conclusion drawn from these inquiries is that reading is fluent (NICHD, 2000); in other words, it should be as if it were speaking (Keskin & Akyol, 2014). As a result of the studies on fluent reading, the importance of fluent reading is emphasized and shows that it is based on the cognitive processes of the reader. (Keskin & Akyol, 2014). The relationship of these processes with comprehension makes fluent reading important. There seem to be two approaches to the relationship between fluent reading and comprehension, "automaticity" and "prosodicity". Automaticity theory emphasizes the limitations of individuals' attention resources in the process of reading. Automaticity is important in the reading process because if readers devote most of their limited attention resources to word recognition, there will be fewer attention resources left to understand (Uzunkol, 2013). A problem or deficiency in fluency adversely affects comprehension. Students who do not have both basic reading and writing skills in the first and following years of primary education cannot be expected to have healthy teaching communication if solutions are not found to these problems. Teachers are asked to identify their problems and find appropriate solutions by paying special attention to these students (Aylanç, 2012). In the literature, it is

stated that different fluency reading strategies have been developed in order to eliminate learning difficulties in the field of reading and many studies have been carried out to evaluate the effectiveness of these strategies. Repetitive reading, echo reading, harmonious reading and paired reading are the most important among these strategies (Yüksel, 2010). However, there are studies on reading and mind management (Güneş, 2012), reading education (Aytas, 2005), fluent reading (Baştuğ & Akyol, 2012), the relationship between the readability levels of texts and the reading skills of students (Durukan, 2014). However, there was no national study on the relationship between attention level and reading speed. It is thought that children's attention levels and reading speeds may be important in their academic development. Therefore, in this study, it is important to examine the relationship between attention level and reading speed in children.

Word recognition should be automatic so that readers can devote more mental resources to comprehension in the reading process because comprehension is expressed as the justification for reading (Tanju, 2010). Therefore, readers should perform word recognition with minimal attention and mental capacity. (Baştuğ & Akyol, 2012). The importance of the study is that there is no national study examining the relationship between attention level and reading speed in the literature. It is thought that children's attention levels and reading speed may be important in their academic development. Therefore, examining the relationship between attention level and reading speed in children is important. The problem of this research is to analyze attention in children. This study aims to examine the relationship between attention and reading speed in children.

### Hypotheses of the Study

H0: There is no direct relationship between attention scale and reading speed scores in children.

H1: There is a direct relationship between the attention scale and reading speed scores of children.

H0 There is no difference between genders in children's attention scale scores.

H2 There is a difference between genders in children's attention scale scores.

H0: There is no difference between age variables in children's attention scale scores.

H3: There is a difference between age variables in children's attention scale scores.

H0: There is no difference in children's attention scale scores between class variables.

H4: There is a difference in children's attention scale scores between class variables.

## Methods

### Research design

The research model is the relational survey model. The aim of this model is to collect general information about a specific population (Lambert & Lambert, 2012). The correlational survey model is a research model that aims to explain whether two or more variables change together and the direction and magnitude of the degree of change. The study was conducted on the whole population (or a

selected sample) to understand the relationships between different variables and the degree and magnitude of change (Lans & Van der Voordt, 2002). Although the relationships found through this model do not establish true cause and effect relationships, they provide valuable clues (Dulock, 1993). By knowing the position of one variable relative to another, predictions can be made about the position of that variable (Karasar, 2010; Siedlecki, 2020).

### Participants

The population of the research consists of students attending 9 and 12 grades in a public school in Bakırköy district of Istanbul. The research population consists of 334 students aged 9-12 in the 3rd and 4th grades in the Bakırköy district of Istanbul in the 2020-2021 academic year. The schools where the research was conducted were 60th Year Primary School, Muhittin Üstündağ Primary School. This study was conducted using purposive sampling method. Purposive sampling is a non-probability sampling technique that involves the researcher selecting participants for the study using their own judgment. This method aims to create a smaller subset of the population and the researcher selects individuals by considering the population's history and current variations. Purposive sampling is particularly useful for researchers who want to target people with a particular profile or characteristics. This method is most effective with smaller sample sizes and more homogenous populations. Purposeful criterion sampling, one of the purposeful sampling methods, was used. It is the determination of the sample according to predetermined criteria. In this study, demographic information of 334 participants was analyzed. Most participants were male (53.6%) and the rest were female (46.4%). The majority of the participants were 9 years old (57.5%) and the rest were 10 years old (42%). When we look at the grades, 47.9% of the students are in the 4th grade and 52.1% are in the 3rd grade. Researchers can create an accurate and cost-effective sample by using a purposive sampling method.

The voluntary consent form was obtained from the parents of the students participating in the study. The approval of the research in the schools where the research was conducted was obtained with the permission of the Ministry of National Education with the number E-59090411-44-48213581. The ethical approval of the research was obtained with the decision of Istanbul Gelisim University dated 10.06.2021 and 2021-32. The text explains the data collection tools used in a research study conducted during the pandemic. Due to social distancing measures, face-to-face data collection was carried out while ensuring safety. Informed consent forms were obtained from the participants, who were then asked to fill out scales. Necessary permissions were obtained from relevant institutions before the research began. The data collection included the use of three tools: the Personal Information Form, the Reading Speed Measurement, and the D2 Attention Test Scale. The first measurements were made from the sample group formed after the determination of the subject of the research and the application of the research was carried out after the necessary permissions were obtained. Within the scope of the research, the Measurement of Reading Speed and D2 Attention Test Scale were used. In the first stage, data on reading speed were collected and analyzed. In the second stage, the attention test was applied and analyzed.

### Personal Information Form

The Personal Information Form gathered demographic information such as gender, education level, and age.

### Measurement of Read Speed

The Reading Speed Measurement involved calculating reading speed based on the formula of word count divided by reading time per minute. Expert opinion was sought to clarify the reading text. Overall, the study aimed to gather information from students in schools affiliated with the Ministry of National Education following the lifting of pandemic restrictions (Granello & Wheaton, 2004).

In the first stage, data on reading speed were collected and analyzed. For this, the number of words of the text read  $\times$  60 / reading time = 1 minute will be made with the formula of the number of words read (Walpole & McKenna, 2007). The reading text will be clarified by taking expert opinion during the process.

Reading speed is measured when (the student) is doing "silent reading". The following formula will be used (Öznur Karaoğlu, 2014).

Reading Speed =  $\frac{\text{Total number of words in text} \times 60}{\text{Read time read per minute (seconds)}}$

(Read time read per minute (seconds))

Word count)

Children with fluent reading skills were included in the study. The texts used in the research to measure the reading speed were prepared by Karaca (2022) according to the "Ateşman Readability Scale".

### d2 Attention test

One of these tools is the d2 Attention Test, which was developed in 1962 in Essen, Germany. This test attempts to look at characteristics such as attention, concentration and perceptual speed. It was Brickenkamp and Zimmer (1998) who standardized the test and made it suitable for today's use.

The d2 Attention Test is a test that measures selective attention in a time-dependent manner. The speed at which the task is performed, compliance with the rules and the quality of performance are the sub-characteristics measured (Brickenkamp & Zillmer, 1998). The visual scan applied in the d2 Attention Test is an important component of selective attention (Strauss, Sherman & Spreen, 2006).

The test can be administered individually or in groups to individuals between the ages of 9 and 60. The one-page test form contains a total of 658 figures, including 14 rows and 47 in each row. The letters 'd' and 'p' are used in the test. Some letters have a total of one, two, three, and four dots below or above them. In the test, letters can be found in a total of 16 different ways, depending on where they get their numbers and numbers.

The main task of the exam-taker is to find the letter 'D', which has a total of two points. These can be found in the test in three different ways. The test taker is given 20 seconds to perform the task specified in each row. The

duration of the test is approximately eight minutes. In a group practice, 7-8 minutes more minutes are required outside the task due to giving instructions during the preparation phase, checking whether the guidelines are understood and sample practice (Yaycı, 2013).

Two separate scoring keys are used to calculate test scores. Six points are obtained during the test. These; TN (total number of marked figures), E1 (number of figures skipped without marking), E2 (number of figures marked incorrectly), CP (number of total correctly marked figures), TN-E (test performance) and E% (proportion of errors) (Yaycı, 2013).

The adaptation of d2 Attention Test to Turkey and the norm study were conducted by Tokar (1993). Although the reliability of this test is found to be high for Istanbul children aged 11-14, it is recommended to conduct additional studies on its validity. Although there was no statistically significant difference, it was seen that the test performance of girls was better than boys. The reliability of the two halves was found to be .94. In the validity study, a .44 correlation was found between the WISC-R password subtest and the total score. Low correlations were obtained between teachers' active or passive children's psycho-motor speeds and will-resilience (not giving up easily) and error-making rates ( $r=.10$  and  $r=.16$ ) (Yaycı, 2013).

### Statistical analysis

The study was conducted with 155 female and 179 male participants. IBM SPSS 25 program was used for data analysis. Frequency and percentage values for categorical variables and continuous. Mean and standard deviation values are reported for the variables. No outlier was found and normality and linearity values were found satisfactory. The kurtosis and skewness values were taken as basis to examine the suitability of the scale scores for normal distribution. These values between +2 and -2 are considered to be sufficient for normal distribution (George & Mallery 2010).

Missing data was examined, and Pearson correlation analysis was used to analyze the relationships between variables (Benesty, ChenHuang & Cohen, 2009). Descriptive statistics and comparative tests (t-test and ANOVA) were used to examine the differentiation of variables based on the level of independent variables (Kim, 2015; McHugh, 2011).

The first measurements were made from the sample group formed after the determination of the subject of the research and the application of the research was carried out after the necessary permissions were obtained. Within the scope of the research, the Measurement of Reading Speed and D2 Attention Test Scale were used. In the first stage, data on reading speed were collected and analyzed. In the second stage, the attention test was applied and analyzed. In the interpretation of the significance of the findings, 95% confidence interval and 0.05 significance level were taken as criteria.

### Results

The findings from the personal information form given to the students, in line with the sub-problems of the study, were then presented.

**Table 1. D2 Attention Test t-Test Analysis Results According to Gender Variable of Participants**

Variables	Groups	n	Mean	SS	S.E	df	t	p
TN	Male	179	309,6760	77,27091	5,77550	229	332	,819
	Female	155	307,6710	82,65930	6,63935	,		
E1	Male	179	171,3631	168,29925	12,57928	229	332	,835
	Female	155	167,5161	167,31056	13,43871			
And	Male	179	8,7821	12,94641	,96766	229	325,739	,835
	Female	155	9,5226	18,40854	1,47861			
TNE	Male	179	9,0285	8,39051	,62714	229	271,133	,676
	Female	154	11,4067	9,56122	,77047			
FRI	Male	179	18,0279	70,94334	5,30255	229	-1,534	,126
	Female	155	19,4581	66,63720	5,35243			
TN%	Male	179	18,0279	8,28728	,61942	229	329,790	,132
	Female	155	19,4581	8,73360	,70150			
TNE%	Male	179	69,7358	29,86266	2,23204	229	5,206	<b>,000</b>
	Female	155	51,5465	34,09072	2,73823			
Read Speed per Minute	Male	179	144,3296	30,42737	2,27425	229	1,705	,089
	Female	155	134,3613	33,41000	2,68356			

t-Test was conducted to examine the performance of male and female students on the d2 attention test. The results showed no significant difference in performance between the two genders. Scores on various test dimensions, including total number, forgotten letters, errors, d2 attention test, and attention release, did not differ significantly based on gender. This suggests that gender does not significantly affect an individual's performance on the attention test. The p-values for all comparisons were greater than the significance level of 0.05, indicating that

the observed differences were likely due to chance rather than a true difference between males and females. Overall, the study found that boys and girls perform similarly in terms of attention and focus according to the d2 attention test ( $t(229) = 5,206, p > .05$ ). However, it is worth noting that the total scores of male participants were higher (mean  $69.7358 \pm 29.86266$ ) than those of female participants (mean  $51.5465 \pm 34.09072$ ). The t-test results also showed no significant difference in reading speed between boys and girls ( $p > .05$ ).

**Table 2. D2 Attention Test t-Test Analysis Results According to the Class Variable of the Participants**

Variables	Groups	n	Mean	SS	S.E	t	df	p
TN	4.class	160	333,1500	81,35559	6,43172	5,606	332	<b>,000</b>
	3.class	174	286,3046	71,32328	5,40700			
E1	4.class	160	333,1500	81,35559	6,43172	48,995	332	<b>,000</b>
	3.class	174	19,1667	22,04858	1,67150			
And	4.class	160	8,4188	11,11375	,87862	-,789	332	,431
	3.class	174	9,7759	18,97279	1,43832	-,805		
TNE	4.class	160	10,4067	8,97200	,70930	,541	331	,589
	3.class	173	9,8709	9,07445	,68992	,541		
FRI	4.class	160	295,6125	67,55440	5,34064	,338	332	,735
	3.class	174	257,5345	65,57744	4,97141			
TN%	4.class	160	18,8563	8,64961	,68381	,338	332	,735
	3.class	174	18,5402	8,41043	,63759	,338		
TNE%	4.class	160	72,1775	29,60160	2,34021	5,249	332	<b>,000</b>
	3.class	174	54,1397	32,91389	2,49520	5,273		
Read Speed per Minute	4.class	160	70,0831	30,50219	2,41141	4,810	332	<b>,000</b>
	3.class	174	53,2132	33,35971	2,52899	4,828		

According to the t-tests conducted, there was a statistically significant difference between the total number (TN) scores of 4th and 3rd grade participants in the d2 attention test, indicating that the 4th graders had higher scores ( $t(332) = 5,606, p < .05$ ). The mean total number score for 4th-grade participants was  $333.1500 (\pm 81.35559)$ , while for 3rd-grade participants it was  $286.3046 (\pm 71.32328)$ . However, when looking at the E scores, there was no statistically significant difference between the 4th and 3rd graders in the d2 attention test ( $t(332) = 48,995, p < .05$ ). This suggests that the participants' attention test scores did not differ significantly based on their grade level. In summary, the findings from Table 2 indicate that 4th-grade participants (mean  $333.1500 \pm 81.35559$ ) generally performed better than 3rd-grade participants (mean  $19.1667 \pm 22.04858$ ) in the total number scores of the d2 attention test, but there was no significant difference in the E scores between the two groups.

The t-Test analysis of Table 2 shows that there was no statistically significant difference in the release of attention scores between 4th and 3rd graders in the d2 attention test based on the grade variable ( $p > .05$ ). However, there was a statistically significant difference in the d2 attention test scores between the two groups ( $t(332) = 5.249; p > .05$ ). The mean reading speed per minute scores were higher in the 4th-grade participants (mean  $72.1775 \pm 29.60160$ ) compared to the 3rd-grade participants (mean  $54.1397 \pm 32.91389$ ). Additionally, there was a statistically significant difference in the reading speed per minute scores between the 4th (mean  $70.0831 \pm 30.50219$ ) and 3rd graders (mean  $53.2132 \pm 33.35971$ ). based on the gender variable, with the mean scores being higher in the 4th-grade participants. Overall, the t-test analysis revealed significant differences in the d2 attention test and reading speed per minute scores based on grade and gender variables ( $t(332) = 4,810; p > .05$ ).

**Table 3. D2 Attention Test t-Test Analysis Results According to Age Variable of Participants**

Variables	Groups	n	Mean	SS	S.E	t	df	p
TN	9	192	297,0260	76,99102	5,55635	-3,167	332	<b>,002</b>
	10	142	324,5915	80,82677	6,78283			
E1	9	192	88,5260	139,26087	10,05029	-12,418	332	<b>,000</b>
	10	142	279,1690	137,94227	11,57586			
And	9	192	9,5885	18,53827	1,33788	,626	332	,532
	10	142	8,5000	10,76160	,90309			
TNE	9	191	265,7917	9,46298	,68472	-3,110	331	<b>,002</b>
	10	142	289,2746	8,40975	,70573			
FRI	9	192	18,6927	67,64458	4,88183	,003	332	,998
	10	142	18,6901	69,00757	5,79099			
TN%	9	192	18,6927	8,82075	,63658	,003	332	,998
	10	142	18,6901	8,11284	,68081			
TNE%	9	192	58,4635	32,59999	2,35270	-2,844	332	<b>,005</b>
	10	142	68,6176	31,78567	2,66739	-2,855		
Read Speed per Minute	9	192	57,5891	32,81586	2,36828	-2,398	332	<b>,017</b>
	10	142	66,3049	32,86488	2,75796	-2,398		

In Table 3, there were significant differences in the scores of the d2 attention test between 9-year-old and 10-year-old participants ( $t(332) = -3,167, p < .05$ ). The total number scores were higher for the 10-year-olds (mean  $324.5915 \pm 80.82677$ ) compared to the 9-year-olds (mean  $297.0260 \pm 76.99102$ ). Additionally, there were significant differences in the scores for forgotten letters (d) in the test ( $t(332) = -12.418, p < .05$ ), with the 10-year-olds scores (mean  $279.1690 \pm 137.94227$ ) having higher scores than the 9-year-olds (mean  $88.5260 \pm 139.26087$ ). However, when it came to the number of errors in the test, there was no significant difference between the scores of 9-year-olds and 10-year-olds. Overall, this suggests that age has an impact on attention test scores, particularly in terms of the total number of correct answers and forgotten letters, but not in terms of the number of errors made ( $p > .05$ ).

and 10-year-old participants on the d2 attention test ( $t(332) = -3,110, p < .05$ ). Firstly, the scores on the TNE (total number) variable show a significant difference between 10-year-old participants (mean:  $265.7917 \pm 9.46298$ ) and the scores of 9-year-old participants (mean:  $289.2746 \pm 8.40975$ ). On the other hand, there is no significant difference in the scores for release of attention (FR) between the two age groups ( $p > .05$ ). Additionally, there is a significant difference in the scores on the TNE% (total number percentage) variable ( $t(332) = -2,844; p < .05$ ), with 10-year-olds (mean  $68.6176 \pm 31.78567$ ) scoring higher than 9-year-olds (mean  $58.4635 \pm 32.59999$ ). Finally, the reading speed per minute scores also show a significant difference between the two age groups ( $t(332) = -2.398; p < .05$ ). This finding was found to be higher than the total number scores of 10-year-old participants (mean  $66.3049 \pm 32.86488$ ) than the scores of reading speed per minute scores (mean  $57.5891 \pm$

The results of the t-test analysis in Table 3 show several significant differences between the scores of 9-year-old



32.86488) in the test of 9-year-old participants. Overall, these results suggest that age has an impact on the performance of participants on the d2 attention test,

particularly in the variables of total number scores and reading speed.

**Table 4. Pearson Correlation Analysis Result Table for the Relationship Between Participants' Read Rate Per Minute and D2 Attention Test Scores**

Variables		TN	E1	And	TNE	FRI	TN%	TNE%
Read Speed per Minute	r	,199**	,270**	-,050	,229**	-,074	,178**	,211**
	p	,000	,000	,363	,000	,177	,001	,000
	n	334	334	334	334	334	334	334

According to the Pearson Correlation analysis found that there is a weak positive correlation between reading speed per minute and the total number (TN) score on the d2 attention test ( $r=.199$ ;  $p<.05$ ). This means that higher reading speed is associated with higher scores on the attention test. There is also a weak positive correlation between the reading rate per minute and the forgotten d letters (E1) score on the d2 attention test, indicating that as reading rate per minute increases, the forgotten d letters score also increases ( $r=.270$ ;  $p<.05$ ). However, there is no significant correlation between reading rate per minute and the number of errors (E) score on the d2 attention test ( $p>.05$ ). On the other hand, there is a weak positive correlation between reading rate per minute and the total number of errors (TNE) score on the d2 attention test ( $r=.229$ ;  $p<.05$ ), suggesting that as reading rate per minute increases, the total number of errors score also increases. The study also found a weak positive correlation between reading rate per minute ( $r=.178$ ;  $p<.05$ ) and the total number score on the test and the individual's score on the d2 attention test ( $r=.211$ ;  $p<.05$ ), indicating that higher reading rate per minute is associated with higher scores on the test. Overall, the study reveals that reading speed is related to performance on the d2 attention test, but other factors also play a role.

## Discussion

In this study, the relationship between attention and reading speed in children was investigated, along with the influence of personal characteristics on these variables. The researchers collected data through scale sets and analyzed them to determine the findings of the study. The results were then discussed in relation to existing literature. Reading comprehension was identified as a complex task that involves various cognitive processes and skills. Studies on reading skills have a substantial history, with significant knowledge gained since 1975.

According to the first alternative hypothesis of the study, there is a direct relationship between the attention scale and reading speed scores in children, there was a weak positive relationship between the Reading Speed per Minute and the total number (TN) score of the d2 attention test, and as the Reading Speed per Minute scores increased, the total number (TN) scores of the d2 attention test increased. There was a weak positive correlation between Reading Speed Per Minute and the forgotten d letters (E1) score in the d2 attention test, and as the Reading Speed Per Minute scores increased, the forgotten d letters (E1) scores in the d2 attention test increased. There was a weak positive correlation between Reading Speed per Minute (RPM) and the individual's score on the d2 attention test (TNE) and as the RPM scores increased,

the individual's score on the d2 attention test (TNE) scores increased, there was a weak positive correlation between Reading Speed per Minute (RPM) and the total number score on the d2 attention test (TNPI) and as the RPM scores increased, the total number score on the d2 attention test (TNPI) scores increased. It was found that there was a weak positive correlation between Reading Speed per Minute and the score (TNEpercentage) of the individual in the d2 attention test and as the Reading Speed per Minute scores increased, the score (TNEpercentage) of the individual in the d2 attention test increased. Therefore, H0 is rejected and hypothesis H1 is accepted. Based on the results of a study conducted on children, a weak positive relationship was found between reading speed and attention scores. The study revealed that as reading speed increased, the total number scores and forgotten letter scores in the d2 attention test also increased. Additionally, there was a weak positive correlation between reading speed and the TNE score, indicating that as reading speed improved, TNE scores also increased. Similarly, there was a weak positive correlation between reading speed and the TNPercent score, suggesting that as reading speed rose, TNPercent scores in the d2 attention test also increased. Understanding the nature of reading comprehension and its effectiveness is crucial in further exploring reading skills. Unlike decoding, reading aloud, and preparation for reading, those who receive reading skills training are characteristic of working in other aspects of reading. "Each individual has a table that lists the different pages in the book. When a page in the list is finished reading, stop and make a prediction. Type the forecast in the column that says 'Forecast'. When you get to the next page in the list, check to see if your prediction is 'Happened', 'It won't happen' or 'It can still happen'. Then make another guess and write." (Duke & Pearson, 2009). This study focuses on the process of attention and its relationship to reading speed. Attention is the process of selecting specific sensory inputs from the many available options. It enables information to be transferred from sensory memory to short-term memory for further processing and recognition. In the context of learning letters, children rely on attention to distinguish between different features of letters, such as the presence of a line adjacent to a circle or its position relative to a vertical line. This highlights the importance of attention in the fundamental reading process (Yıldız & Çetinkaya, 2017).

The second alternative hypothesis of this study is that there is a difference between genders in children's attention scale scores representing that there was a statistically significant difference between the total scores of the participants in the d2 attention test between girls and boys according to the gender variable, and that the total scores of the male

participants were higher than the total number scores of the female participants. Therefore, H2 is rejected and hypothesis H1 is accepted. The neurocognitive functioning of individuals with attention problems was investigated in a study. The study compared four groups between the ages of 13 and 17: 30 male controls, 35 female controls, 24 males with ADHD and 25 females with ADHD. Participants completed tests of reading speed, processing speed, memory, inhibition, setting switching and interference. The results showed that men with ADHD and women with ADHD performed similarly, with only one notable difference: Men with ADHD showed some evidence of greater inhibition impairment than women with ADHD. In contrast, after controlling for reading ability, comorbidity and IQ, both men and women with ADHD showed some impairment in working memory, naming speeds, processing abilities and inhibition deficits compared to controls. This study supports the growing body of literature documenting impaired neurocognitive functioning in both men and women with ADHD (Rucklidge, 2006).

The alternative third hypothesis of the study is that there is a difference between the scores of children's attention scale and age representing that there was a statistically significant difference between the d2 attention test and reading comprehension scores of the participants aged 9 and 10 years according to the age variable of the participants, and the total number scores of the participants aged 10 years were higher than the total number scores of the participants aged 9 years. Therefore, H0 is rejected and hypothesis H3 is accepted. One study examined the effects of repeated practice on the divided attention performance of young and older adults. Six young and 6 older adults performed two perceptual-motor tasks under both single and dual-task conditions over six 1-hour sessions. Absolute performance levels reliably improved across sessions for both younger and older participants, but divided attention performance remained poorer in older than in younger adults. Relative divided attention costs were consistently higher for older adults across experimental sessions (Somberg & Salthouse, 1982). These results confirm previous suggestions that older people are particularly vulnerable to the effects of divided attention. The findings provide important conclusions regarding age differences in divided attention performance (McDowd, 1986).

The alternative fourth hypothesis of the research is that there is a difference in children's attention scale scores between class variables. represent that a statistically significant difference was found in the total number (TN) scores of the d2 attention test between the 4th grade and the 3rd grade according to the class variable of the participants. In this context, it was determined that the total number scores of the 4th-grade participants were higher than the total number scores of the 3rd-grade participants. Therefore, H0 is rejected and hypothesis H4 is accepted. The results of a study in which the relationship between reading fluency, reading comprehension and attention levels of fourth-grade students was examined and which was conducted using the relational survey model and included 132 fourth-grade students with adequate reading skills at grade level showed that good reader attention has significant effects on reading speed, prosody, word recognition and comprehension, respectively. A higher level of relationship was also found between

attention, reading speed and prosody (Yildiz & Çetinkaya, 2017, p.370).

### Conclusion

As a general result, according to the results obtained as a result of a direct examination between the attention scale and reading speed scores in the children participating in the study, there was a weak positive relationship between the Reading Speed per minute and the total number (TN) score of the d2 attention test, and as the Reading Speed per minute scores increased, the total number (TN) scores of the d2 attention test increased. There was a weak positive correlation between Reading Speed per Minute and the forgotten d letters (E1) score in the d2 attention test, and as the reading speed per minute scores increased, the forgotten d letters (E1) scores in the d2 attention test increased. It was determined that there was a weak positive correlation between Reading Speed per Minute and the score (TNE) score of the individual in the d2 attention test, and as the reading speed per minute scores increased, the score (TNE) scores of the individual in the d2 attention test increased, and there was a weak positive correlation between Reading Speed per Minute and the total number score (TNPercent) score of the individual in the d2 attention test, and as the reading speed per minute scores increased, the total number score (TNPercent) scores increased in the d2 attention test. According to the gender variable of the participants, it was determined that there was a statistically significant difference between the total scores of the participants in the d2 attention test between girls and boys, and the total scores of the male participants were higher than the total number scores of the female participants.

### Recommendations

Recommendations in line with the results obtained from this study; This research was conducted with 350 participants. It is recommended to be repeated with more participants and different age groups at different times and places. This research was conducted as a relational survey. It is recommended to be supported by observational and experimental studies with different study methodologies in future studies. The independent variable of our research was determined as speed reading and the dependent variable as attention. In addition to these variables, it is recommended to examine different variables that will affect or change the dependent variable. Apart from this, the results to be obtained in a study to be carried out by giving Structured Comprehension Reading Training prepared based on "attention" to an experimental group may give an idea to educators about the material to be presented to students in this subject in education. It is recommended that families or individuals attach importance to reading and reading comprehension, and in this context, it is recommended that they receive support from organizations that provide Fluent Reading, Strengthening Comprehension Skills and Structured Comprehension and Speed-Reading Training prepared based on "attention". In addition, it is recommended that they receive different attention-oriented programs and, if necessary, psychotherapies.

### Declarations

### Ethics Approval and Consent to Participate

The approval of the research in the schools where the research was conducted was obtained with the permission

of the Ministry of National Education with the number E-59090411-44-48213581. The ethical approval of the research was obtained with the decision of Istanbul Gelisim University dated 10.06.2021 and 2021-32. Informed consent forms were obtained from the participants, who were then asked to fill out scales.

#### Consent for Publication

Not applicable

#### Availability of Data and Materials

Not applicable.

#### Competing Interests

The authors declare that there are no competing interests in this manuscript.

#### Funding

Not applicable.

#### Authors' Contributions

SK: Study design, literature review, method, results, discussion, and approval of the final version. FB: Consultancy and approval of the final version

## References

- Allor, J. H., Mathes, P. G., Roberts, J. K., Jones, F. G., & Champlin, T. M. (2010). Teaching students with moderate intellectual disabilities to read: An experimental examination of a comprehensive reading intervention. *Education and Training in Autism and Developmental Disabilities*, 45(1), 3-22.
- Arslan, A. (2013). Okuma becerisi ile ilgili makalelerde cinsiyet değişkeni. *Uluslararası Türkçe Edebiyat Kültür Eğitim (TEKE) Dergisi*, 2(2), 251-265.
- Aylanç, M. (2012). Türkçe öğretmeni adaylarının özel öğretim yöntemleri dersi uygulamalarında karşılaştıkları sorunlar: Bilgilendirici ve öğretici metinler örneği. *Selçuk Üniversitesi Türkiyat Araştırmaları Dergisi*, 31, 333-350.
- Aytaş, G. (2005). Okuma eğitimi. *Türk Eğitim Bilimleri Dergisi*, 3(4), 461-470.
- Baltacı, A. (2018). Nitel araştırmalarda örnekleme yöntemleri ve örnek hacmi sorunsalı üzerine kavramsal bir inceleme. *Bitlis Eren Üniversitesi Sosyal Bilimler Dergisi*, 7(1), 231-274.
- Baştuğ, M., & Akyol, H. (2012). Akıcı Okuma becerilerinin okuduğunu anlamayı yordama düzeyi. *Kuramsal Eğitimbilim Dergisi*, 5(4), 394-411.
- Bell, T. (2001). Extensive reading: Speed and comprehension. *Reading matrix*, 1(1).
- Benesty, J., Chen, J., Huang, Y., & Cohen, I. (2009). Pearson correlation coefficient. In *Noise reduction in speech processing* (pp. 1-4). Berlin: Springer.
- Brickenkamp, R., & Zillmer, E. (1998). *The d2 test of attention*. Washington: Hogrefe & Huber Publishers.
- Brown, P. & Hirst, S.B. (1983). Writing reading courses: The interrelationship of theory and practice. In C. J. Brumfit (Eds.), *Language teaching projects for the third world*. London: British Council.
- Carr, K. S. (1988). How can we teach critical thinking? *Childhood Education*, 65(2), 69-73.
- Champeau de Lopez, C. L. (1993). Developing reading speed. *English Teaching Forum*, 31(1), 50-51.
- Coady, J. (1979). A psycholinguistic model of the ESL reader. In R. Mackay, B. Barkman, & R. R. Jordon (Eds.), *Reading in a second language* (pp 5-12). Rowley, MA: Newbury House.
- Cooper, J. R. (1984). *Reading Adrienne Rich: Reviews and re-visions, 1951-81*. Michigan: University of Michigan Press.
- Çifci, M. (2006). Eleştirel okuma. *Türk Dili Araştırmaları Yıllığı-Belleten*, 54(1), 55-80.
- Duke, N. K., & Pearson, P. D. (2009). Effective practices for developing reading comprehension. *Journal of Education*, 189(1-2), 107-122.
- Dulock, H. L. (1993). Research design: Descriptive research. *Journal of Pediatric Oncology Nursing*, 10(4), 154-157.
- Duman, M. Z. (2012). Aile kurumu üzerine tarihsel bir okuma girişimi ve muhafazakâr ideolojinin aileye bakışı. *İnsan ve Toplum Bilimleri Araştırmaları Dergisi*, 1(4), 19-51.
- Durukan, E. (2014). Metinlerin okunabilirlik düzeyleri ile öğrencilerin okuma becerileri arasındaki ilişki. *Ana Dili Eğitimi Dergisi*, 2(3), 68-76.
- George, D., Mallery, M. (2010), *SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 Update*, 10th Edition, Pearson, Boston
- Granello, D. H., & Wheaton, J. E. (2004). Online data collection: Strategies for research. *Journal of Counseling & Development*, 82(4), 387-393.
- Güneş, F. (2012). Okuma ve zihni yönetme. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 9(18), 1-15.
- Güneş, F. (2016). Kağıttan ekrana okuma alanındaki gelişmeler. *Bartın University Journal of Faculty of Education*, 5(1), 1-18.
- Hill, J. (1986). *Using literature in language teaching*. London: Macmillan.
- Hino, N. (1988). Yakudoku: Japan's Dominant Tradition in Foreign Language Learning. *JALT Journal*, 10 (1/2), 45-55.
- Honig, B. (1996). *Teaching our children to read: The role of skills in a comprehensive reading program*. Thousand Oaks, CA: Corwin Press.
- Hyland, K. (1990). Purpose and strategy: Teaching extensive reading skills. *English Teaching Forum*, 28(2), 14-18.
- Karaca, O. (2022). *Disleksi bilişsel müdahale uygulamaları*. İzmir: Yakın.
- Karaoğlu, Ö. (2014). *Çocuklar için anlayarak hızlı okuma*. İstanbul: Fom Kitap.

- Karasakaloğlu, N., & Bulut, B. (2012). Kurmaca metinlerin eleştirel okuma becerisini geliştirme aracı olarak kullanılması. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, 33, 95-106.
- Karasar, N. (2010). *Bilimsel araştırma yöntemi*. Ankara: Nobel Akademik Yayıncılık.
- Keskin, H., & Akyol, H. (2014). Yapılandırılmış okuma yönteminin okuma hızı, doğru okuma ve sesli okuma prozodisi üzerindeki etkisi. *Ana Dili Eğitimi Dergisi*, 2(4), 107-119.
- Kettler, T. (2014). Critical thinking skills among elementary school students: Comparing identified gifted and general education student performance. *Gifted Child Quarterly*, 58(127), 128-136.
- Kırmızı, F. S. (2008). Türkçe öğretiminde yaratıcı drama yönteminin tutum ve okuduğunu anlama stratejileri üzerindeki etkisi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 23(23), 95-109.
- Kim, T. K. (2015). T test as a parametric statistic. *Korean Journal of anesthesiology*, 68(6), 540-546.
- Kocisky, T., Schwarz, J., Blunsom, P., Dyer, C., Hermann, K. M., Melis, G., & Grefenstette, E. (2018). The narrative QA reading comprehension challenge. *Transactions of the Association for Computational Linguistics*, 6, 317-328.
- Kush, J. C., Watkins, M. W., & Brookhart, S. M. (2005). The temporal-interactive influence of reading achievement and reading attitude. *Educational Research and Evaluation*, 11(1), 29-44.
- Lambert, V. A., & Lambert, C. E. (2012). Qualitative descriptive research: An acceptable design. *Pacific Rim International Journal of Nursing Research*, 16(4), 255-256.
- Lans, W., & Van der Voordt, D. J. M. (2002). Descriptive research. In T. M. de Jong, & D. J. M. van der Voordt (Eds.), *Ways to study and research urban, architectural and technical design* (pp. 53-60). Delft: DUP Science.
- Light, T. (1970). The reading comprehension passage and a comprehensive reading program. In *English language teaching* (pp 120-124). Oxford: Oxford University Press.
- McDonalds, N. B. & Trautman, T.S. (2006). Enhancing critical reading skills with kindergartners: A study of a computer-based intervention. <http://www.amered.com/docs/ReviewofEnhancingReadingSkills.pdf>.
- McDowd, J. M. (1986). The effects of age and extended practice on divided attention performance. *Journal of Gerontology*, 41(6), 764-769.
- McHugh, M. L. (2011). Multiple comparison analysis testing in ANOVA. *Biochemia Medica*, 21(3), 203-209.
- National Institute of Child Health and Human Development (NICHD) (2000). Report of the national reading panel. *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- Nuttall, C. (1982). *Teaching reading skills in a foreign language*. London: Heinemann Educational.
- Ogurlu, Ü. (2014). Üstün zekâlı ve yetenekli öğrencilerin okuma ilgisi, tutumu ve eleştirel okuma becerileri. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, 15(02), 29-43.
- Özdemir, E. (2002). *Eleştirel okuma*. Ankara: Bilgi Yayınevi.
- Patton, M. Q. (2005). *Qualitative research*. In B. S. Everitt & D. C. Howell (Eds.), *Encyclopedia of statistics in behavioral science* (pp. 1-3). New York: John Wiley & Sons.
- Pearson, P. D., & Gallagher, M. C. (1983). The instruction of reading comprehension. *Contemporary educational psychology*, 8(3), 317-344.
- Rabiner, D. L., Coie, J. D., Miller-Johnson, S., Boykin, A. S. M., & Lochman, J. E. (2005). Predicting the persistence of aggressive offending of African American males from adolescence into young adulthood: The importance of peer relations, aggressive behavior, and ADHD symptoms. *Journal of Emotional and Behavioral Disorders*, 13(3), 131-140.
- Reynolds, M., & Besner, D. (2005). Basic processes in reading: A critical review of pseudo homophone effects in reading aloud and a new computational account. *Psychonomic Bulletin & Review*, 12(4), 622-646.
- Rucklidge, J. J. (2006). Gender differences in neuropsychological functioning of New Zealand adolescents with and without attention deficit hyperactivity disorder. *International Journal of Disability Development and Education*, 53(1), 47-66.
- Sarı, M. (2001). İki dilli çocukların çözümleme yöntemiyle okuma yazma öğrenirken karşılaştıkları güçlükler. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 9(9), 108-122.
- Schallert, D. L. (2017). The role of illustrations in reading comprehension. *Theoretical issues in reading comprehension*, 503-524.
- Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. *Clinical Nurse Specialist*, 34(1), 8-12.
- Somberg, B. L., & Salthouse, T. A. (1982). Divided attention abilities in young and old adults. *Journal of Experimental Psychology*, 8(5):651.
- Stokmans, M. J. (1999). Reading attitude and its effect on leisure time reading. *Poetics*, 26(4), 245-261.
- Strauss, E., Sherman, E. M., & Spreen, O. (2006). *A compendium of neuropsychological tests: Administration, norms, and commentary*. New York: American Chemical Society.
- Susser, B., & Robb, T.N. (1990). EFL extensive reading instruction: research and procedure. *JALT Journal*, 12(2), 161-185.
- Tanju, E. H. (2010). Çocuklarda kitap okuma alışkanlığına genel bir bakış. *Sosyal Politika Çalışmaları Dergisi*, 21(21), 30-39.
- Toker, M. Z. (1993). Visual Algı Testi D2'nin Geçerlik ve Güvenirlik Çalışması. (Yayınlanmamış Yüksek Lisans Tezi). Boğaziçi Üniversitesi, İstanbul.

Turan, S., & Şişman, M. (2000). Okul yöneticileri için standartlar: Eğitim yöneticilerinin bilgi temelleri üzerine düşünceler. *Bahkesir Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 3(4), 68-87.

Uzunkol, E. (2013). Akıcı okuma sürecinde karşılaşılan sorunların tespiti ve giderilmesine yönelik bir durum çalışması. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 9(1), 70-83.

Walpole, S., & McKenna, M. C. (2007). *Differentiated reading instruction: Strategies for the primary grades*. New York: Guilford Press.

Wehby, J. H., Falk, K. B., Barton-Arwood, S., Lane, K. L., & Cooley, C. (2003). The impact of comprehensive reading instruction on the academic and social behavior of students with emotional and behavioral disorders. *Journal of Emotional and Behavioral Disorders*, 11(4), 225-238.

Weiler, M., Bernstein, J., Bellinger, D., & Waber, D. (2002). Information processing deficits in children with attention-deficit/hyperactivity disorder, inattentive type, and children with reading disability. *Journal of Learning Disabilities*, 35, 448-461.

Williams, E. (1984). *Reading in the language classroom*. London: Macmillan.

Wilson, J. D., & Casey, L. H. (2007). Understanding the recreational reading patterns of secondary students. *Reading Improvement*, 44(1), 40-50.

Yaycı, L. (2013). D2 dikkat testinin geçerlik ve güvenilirlik çalışması. *Kalem Uluslararası Eğitim ve İnsan Bilimleri Dergisi*, 3, 43-80.

Yıldız, M., & Çetinkaya, E. Ö. (2017). The relationship between good reader's attention reading fluency and reading comprehension. *Universal Journal of Educational Research*, 5(3), 366-371.

Yüksel, A. (2010). Okuma güçlüğü çeken bir öğrencinin okuma becerisinin geliştirilmesine yönelik bir çalışma. *Kuramsal Eğitimbilim Dergisi*, 3(1), 124-134.



RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# Stress, Caregiving Burden and Family Functioning in Families Whose Children Have Been Diagnosed with Cancer

## Çocuklarına Kanser Teşisi Konmuş Ailelerde Stres, Bakım Verme Yükü ve Aile İşlevselliği

Çağla Özkan<sup>1</sup>, Gönül Taşcıoğlu<sup>2</sup>, Hande Çelikay Söyler<sup>3</sup>

### Abstract:

Getting a child diagnosed with cancer is an extremely challenging process for families. With the stress and change in care during this process, the family's recovery continues significantly. In this study, it was aimed to examine the relationship between stress levels, caregiving burden and family functioning of families with children diagnosed with cancer. The study was designed in a quantitative research model and was conducted using the relational survey method. The population of the study consisted of families of children diagnosed in hospitals with pediatric oncology and/or hematology clinics in Turkey and Cyprus. The research data were collected from parents with children diagnosed with cancer, and 140 participants (131 women, 9 men) between the ages of 24-52 were included in the study. Socio-Demographic Information Form, Caregiving Burden Scale, Perceived Stress Scale and Family Assessment Scale were applied to the participants to collect the research data. As a result of the study, statistically significant differences were found between the "Burden of Caregiving Scale" scores of the parents according to gender, education level, employment status and income level. Similarly, statistically significant differences were found between the overall scores of the "Perceived Stress Scale" and the scores of perception of inadequate self-efficacy and perception of stress/discomfort in the scale according to the negative impact on the relationship with the spouse. In this context, it may be recommended to provide support programs and counseling services to reduce the stress levels of families with children with cancer, to provide support and guidance to parents accompanying hospitalized children, and to re-evaluate state policies for caregivers of children with chronic diseases.

**Keywords:** Childhood cancers, Stress, Caregiving burden, Family functioning

<sup>1</sup>MSc, Near East University, Department of Psychology, Nicosia-TRN Cyprus, e-mail: caglaozkansp@gmail.com, Orcid Id: 0009-0003-1512-2107

<sup>2</sup>Asist. Prof. Dr., University of Kyrenia, Department of Psychology, Kyrenia-TRN Cyprus, e-mail: gonul.tascioglu@kyrenia.edu.tr, Orcid Id: 0000-0001-7334-9586

<sup>3</sup>Assoc. Prof. Dr., Near East University, Department of Psychology, Nicosia-TRN Cyprus, e-mail: hande.celikay@neu.edu.tr, Orcid Id: 0000-0001-6735-1321

**Address of Correspondence/Yazışma Adresi:** Çağla Özkan, Yakın Doğu Üniversitesi Psikoloji Bölümü Lefkoşa, Cyprus e-mail: caglaozkansp@gmail.com

**Date of Received/Geliş Tarihi:** 13.09.2024, **Date of Revision/Düzeltilme Tarihi:** 08.05.2024, **Date of Acceptance/Kabul Tarihi:** 11.06.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Özkan, Ç., Taşcıoğlu, G., & Söyler, H. Ç. (2024). Stress, Caregiving Burden and Family Functioning in Families Whose Children Have Been Diagnosed with Cancer *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 137-146

© 2024 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktppdergisi.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes. <http://creativecommons.org/licenses/by/4.0/>

## Öz:

Bir çocuğun kanser tanısı alması, aileleri için son derece zorlayıcı bir süreçtir. Bu süreçte, yaşanan stresin ve bakım yükünün artmasıyla birlikte aile işlevselliği de önemli ölçüde etkilenir. Bu çalışmada kanser tanısı almış çocuğu olan ailelerin stres düzeyleri, bakım verme yükü ve aile işlevselliği arasındaki ilişkinin incelenmesi amaçlanmıştır. Araştırma nicel araştırma modelinde tasarlanmış olup, ilişkisel tarama yöntemi kullanılarak gerçekleştirilmiştir. Araştırmanın evrenini Türkiye ve Kıbrıs'taki pediatrik onkoloji ve/veya hematoloji kliniği bulunan hastanelerde tanı almış çocukların aileleri oluşturmaktadır. Araştırma verileri, kanser tanısı almış çocuğu olan ebeveynler üzerinden toplanmış olup, çalışmaya 24-52 yaş aralığında 140 (131 kadın, 9 erkek) katılımcı dahil edilmiştir. Araştırma verilerini toplamak için katılımcılara Sosyo-Demografik Bilgi Formu, Bakım Verme Yükü Ölçeği, Algılanan Stres Ölçeği ve Aile Değerlendirme Ölçeği uygulanmıştır. Araştırma sonucunda, ebeveynlerin cinsiyet, öğrenim durumu, çalışma durumu ve gelir düzeyine göre "Bakım Verme Yükü Ölçeği" puanları arasında istatistiksel açıdan anlamlı farklar tespit edilmiştir. Ayrıca, eşle olan ilişkiyi olumsuz etkileme durumuna göre, "Algılanan Stres Ölçeği" genelinden ve ölçekteki yetersiz özyeterlik algısı ve stres/rahatsızlık algısı puanları arasında istatistiksel açıdan anlamlı farklar saptanmıştır. Bu bağlamda, kanserli çocuğu olan ailelerin stres düzeylerini azaltmaya yönelik destek programları ve danışmanlık hizmetleri sağlanması, hastanede yatan çocuklara refakat eden ebeveynlere destek ve rehberlik sunulması ve devlet politikalarının süregelen hastalığa sahip çocukların bakım verenleri için tekrardan değerlendirilmesi önerilebilir.

**Anahtar Kelimeler:** Çocukluk çağı kanserleri, Stres, Bakım verme yükü, Aile işlevselliği.

## Giriş

Stres bireyin varolan dengesini bozan, baş etme kabiliyetini zorlayan ya da aşan uyarıcı olaylara verdiği belli ve belirsiz tepki şeklindedir (Gerring ve Zimbardo 2014). Stres düzeyi, kanser tanısı almış bir çocuğun ailesi için önemlidir (Kim ve ark., 2020). Kanserle mücadele süreci, aile üyelerinin duygusal durumlarını ve davranışlarını etkileyebilir (López ve ark., 2021). Yüksek stres düzeyi, aile üyelerinin kanserle mücadele etme konusunda zorluklar yaşamasına neden olabilir. Kanser tanısı almış bir çocuğun ailesinin stres seviyesi, çocuğun tedavi sürecinde yaşanan belirsizlikler, duygusal zorluklar ve yaşam tarzında köklü değişiklikler gibi faktörlerden etkilenebilir. Bu durum, aile üyelerinin günlük yaşamlarını etkileyerek, aile içi ilişkilerde ve aile işlevselliğinde sorunlara yol açabilir (Klašnja ve ark., 2023). Pöder ve arkadaşları (2008), kanser tedavisi gören çocukların ebeveynleri arasında travma sonrası stres bozukluğunu (TSSB) araştırdıkları çalışmalarında annelerin babalara göre daha yüksek düzeyde potansiyel akut stres bozukluğu ve TSSB semptomları bildirdiklerini belirlemiştir. Ayrıca travma sonrası stres semptomlarının, çocuğun hastalığının teşhisinden sonra zamanla azalan bir eğilim gösterdiği bildirilmiştir. Yıldız ve arkadaşları (2016) tarafından yapılan bir diğer çalışmada, kanserli hastalara bakım veren aile üyelerinin yüksek düzeyde stres yaşadığı, bu durumun yaşamlarını olumsuz yönde etkilediği ve yaşam kalitelerinin düşük olduğu saptanmıştır.

Bakım verme yükü, çocuğun tedavi süreci boyunca ailenin karşı karşıya kaldığı çeşitli sorumlulukları içerir. Bu sorumluluklar arasında tedavi planının yönetimi, beslenmenin sağlanması, bakımın sağlanması, sterilizasyon süreçlerinin takibi ve psikolojik destek yer almaktadır. Aileler, çocuklarının sağlık durumunu yakından takip etmek, tedavi planlarını düzenlemek, doktor kontrollerine götürmek, ilaçlarını düzenli olarak vermek ve psikolojik destek sağlamak gibi bir dizi görevle

karşı karşıya kalmaktadır. Bu nedenle, ebeveynler zaman zaman diğer sorumluluklarını yerine getirmekte zorlanabilmekte ve çocuklarının ihtiyaçlarına cevap verebilmek için yaşamlarında önemli değişiklikler yapmak zorunda kalabilmektedir. Ayrıca bakım yükü ailenin duygusal ve psikolojik sağlığını da etkileyebilmektedir. Bakım verme yükündeki artışın bakım verenlerin kaygı ve depresyon düzeylerini artırdığı bildirilmiştir (Ünsar ve ark., 2021). Bakım verenlerin sağladıkları bakımın yoğunluğu, kanser tedavisinin maliyeti ve zorluğu nedeniyle diğer bakım verenlere göre daha fazla finansal yük getirdiği tespit edilmiştir (Bradley, 2019). Bakım verme süresinin bakım yükü üzerinde etkili olduğu, bakım yükü açısından daha kısa süreli bakım verenlerin daha az risk taşıdığı belirlenmiştir (Orak ve Sezgin, 2015). Alahan ve arkadaşları (2015) bir önceki çalışmayı destekler nitelikte daha uzun süre bakım vermenin bakım verenlerin üzerinde daha fazla yük oluşturduğunu bildirmiştir. Ayrıca düşük sosyo-ekonomik düzeye sahip olmanın, çocuğun hastalığının kronik olması ve çocuğun yatarak tedavi görmesi gibi durumların, bakım süreci ve ihtiyaçlar sebebiyle ailelerde daha yoğun bakım verme yükü yaşattığı saptanmıştır (Taşçıoğlu ve ark., 2017).

Aile işlevselliği, aile üyelerinin ihtiyaçlarını karşılama, iletişim kurma, problem çözme, duygusal destek sağlama, değerleri aktarma, değişime uyum sağlama, rollerin paylaşımı ve genel refahı gibi sağlıklı şekilde işleyen bir aile sistemini ifade eder (McCreary ve Dancy, 2004; Walsh, 2012). Hastalık aile bireyleri üzerinde duygusal bir yük oluşturur. Süregelen hastalığa sahip çocuğu olan annelerin duygularının incelendiği çalışmada hastalıkla ilgili duyguların ve gereksinimlerin eşler ve çocuklar arasında paylaşıldığı belirlenmiştir (Karakavak ve Çırak., 2006). Çocukluk çağı kanserinin ebeveyn ilişkileri üzerindeki etkisinin incelendiği çalışma sonucunda, ebeveynlerin ilişkilerinde, iletişimlerinde, stres düzeylerinde ve rollerinde hem olumlu hem de olumsuz

değişiklikler olduğu rapor edilmiştir (Da Silva, Jacob ve Nascimento, 2010).

Çalışmalar pediatrik kanser teşhisinin ve bakım verme yükünün aileler üzerinde yüksek stres oluşturduğunu, ebeveyn, çift ilişkisi ve aile işleyişini etkileyerek pratik ve duygusal zorluklar yaşamalarına yol açtığını göstermiştir. Lewandowska'nın (2021) çalışması kanser teşhisi konmuş çocukların ailelerine odaklanmış ve bu durumun aile dinamiklerini ve ailelerin ihtiyaçlarını nasıl etkilediğini incelemiştir. Araştırma, kanserin aile ilişkilerinde dengesizlikler yarattığını ve mali zorlukları beraberinde getirdiğini ortaya koymuştur. Bununla birlikte, literatürdeki çalışmalar, hasta bir çocuğa bakmanın, anne ve babanın profesyonel yaşamlarında değişikliklere yol açtığını ve bunun da ailenin yaşam standardını düşürerek diğer aile üyelerinin de bazı fedakârlıklar yapmasını gerektirdiğini göstermiştir (Van Schoors ve ark., 2017; Bakula ve ark., 2019). Öte yandan, süreç boyunca yaşanan aşırı stres ve algılanan yükün artışının, aile üyeleri için fiziksel ve psikolojik riskleri de beraberinde getirdiği bildirilmiştir (Woźniak ve Izycki, 2014). Ancak, kanserle mücadele eden ailelerin stres düzeyi, bakım verme yükü ve aile işlevselliği gibi faktörlerin etkisi hakkında yeterli araştırma bulunmamaktadır. Dolayısıyla bu çalışma, literatürdeki bu boşluğu doldurmayı hedefleyerek, kanser tanısı almış çocuğu olan ailelerin deneyimlediği stres düzeyini, bakım verme yükünü ve aile işlevselliğini daha iyi anlamayı hedeflemektedir. Ayrıca, farklı değişkenlerin

(cinsiyet, öğrenim durumu, çalışma durumu, hasta bireye refakat etme durumu vb.) bu süreçleri nasıl etkilediğini de inceleyerek, bu zorlu süreci daha etkili bir şekilde yönetme konusunda katkı sağlamayı amaçlamaktadır.

## Yöntem

### Araştırma Modeli

Kanser tanısı almış çocuğu olan ailelerin stres düzeyleri, bakım verme yükü ve aile işlevselliği arasındaki ilişkinin incelenmesi amacıyla ilişkisel tarama modelinde tasarlanmıştır.

### Evren ve Örneklem

Araştırmanın evrenini Türkiye ve Kıbrıs'taki pediatrik onkoloji ve/veya hematoloji kliniği bulunan hastanelerde tanı almış çocukların aileleri oluşturmaktadır. Araştırma örnekleme amaçsal örnekleme yöntemi kullanılarak oluşturulmuştur; bu yöntem olasılıklı olmayan örnekleme yöntemlerinden biridir. Gönüllü katılımcılar kanser tanısı almış çocuğu olan 25-52 yaş arası 140 ebeveynden oluşmaktadır. Katılımcıların %93,6 (131 kişi) Kadın, %6,4 (9 kişi) erkek ebeveynlerden oluşmuştur. Araştırma verileri yüz yüze ve çevrimiçi anket yöntemiyle toplanmıştır. Mart-Nisan 2023, 2 aylık zaman sürecinde veri toplama süreci tamamlanmış, anketlerin doldurulması yaklaşık 20-25 dakika sürmüştür. Yüz yüze anket çalışmasında 250 anket dağıtılmış geri dönüşü yapılan 80 anket, çevrimiçi dönüş yapılan anketlerden kontrol edildikten sonra 60 anket veri havuzuna dahil edilmiştir.

**Tablo 1.** Ebeveynlerin Sosyo-Demografik Özellikleri

	Sayı (n)	Yüzde (%)
<b>Yaş grubu</b>		
30 yaş ve altı	36	25,71
31-40 yaş	68	48,57
41 yaş ve üstü	36	25,71
<b>Doğum yeri</b>		
Türkiye	120	85,71
KKTC	20	14,29
<b>Cinsiyet</b>		
Kadın	131	93,57
Erkek	9	6,43
<b>Medeni hal</b>		
Evli	124	88,57
Boşanmış/Dul	16	11,43
<b>Öğrenim durumu</b>		
İlköğretim	20	14,29
Lise	74	52,86
Lisans/Lisansüstü	46	32,86
<b>Çalışma durumu</b>		
Çalışmayan	100	71,43
Çalışan	40	28,57
<b>Gelir düzeyi</b>		
Alt	21	15,00



Orta	108	77,14
Üst	11	7,86
<b>Sosyal güvence</b>		
Var	139	99,29
Yok	1	0,71
<b>Çocuk sayısı</b>		
Bir	63	45,00
İki	50	35,71
Üç ve üstü	27	19,29
<b>Herhangi bir kronik hastalık</b>		
Var	28	20,00
Yok	112	80,00
<b>Bakmakla yükümlü olduğu başka biri</b>		
Var	67	47,86
Yok	73	52,14

Tablo 1.'de ebeveynlerin sosyo-demografik özelliklerine göre dağılımı verilmiş olup, %25,71'inin 30 yaş ve altı, %48,57'sinin 31- 40 yaş ve %25,71'inin 41 yaş ve üstü yaş grubunda, %85,71'inin Türkiye ve %14,29'unun KKTC doğumlu, %93,57'sinin kadın, %88,57'sinin evli, %14,29'unun ilköğretim mezunu, %52,86'sının lise, %32,86'sinin lisans/lisansüstü mezunu, %71,43'ünün çalışan, %15,0'inin alt ve %77,14'ünün üst gelir grubunda, %99,29'unun sosyal güvencesinin olduğu belirlenmiştir. Ebeveynlerin %45,0'inin bir, %35,71'inin iki, %19,29'unun üç ve üstü sayıda çocuğunun olduğu, %80,0 herhangi bir kronik hastalığının olmadığı, %47,86'sinin bakmakla yükümlü olduğu başka birinin olduğu belirlenmiştir.

#### Veri Toplama Araçları

Çalışmada, Katılımcı Bilgi Formu, Aydınlatılmış Gönüllü Onam Formu, Sosyo-Demografik Bilgi Formu, Algılanan Stres Ölçeği (ASÖ), Bakım Verme Yükü Ölçeği (BVYÖ) ve Aile Değerlendirme Ölçeği (ADÖ) kullanılmıştır.

#### Katılımcı Bilgi Formu

Araştırmacı tarafından hazırlanan; araştırma çalışmalarında potansiyel katılımcılara çalışma hakkında ayrıntılı bilgi vermek ve bireyleri araştırmaya katılımı ilgili amaç, prosedürler, riskler, faydalar ve haklar hakkında detaylıca bilgilendirme amacıyla kullanılır.

#### Aydınlatılmış Gönüllü Onam Formu

Bu form, çalışmaya gönüllü olarak katılan bireylere, çalışmanın amacı, yöntemi, süreci, potansiyel riskleri, gizlilik önlemleri ve veri koruma yöntemleri hakkında ayrıntılı bilgi sunmaktadır. Aynı zamanda, katılımcıların sorularını veya olası şikâyetlerini iletebilecekleri kişi (araştırmacı) veya kuruluşun iletişim bilgilerini içermektedir. Katılımcılar, bu formu imzalayarak çalışmaya gönüllü olarak katıldıklarını beyan etmektedirler.

#### Sosyodemografik Bilgi Formu

Araştırmacı tarafından oluşturulan sosyodemografik özellikler bilgi formunun kullanım amacı çalışmaya katılan bireyler hakkında detaylı bilgiye erişilmiştir. Uygulanan anket ve ölçekleri daha iyi değerlendirebilmek

için araştırmacı tarafından hazırlanan; yaş, cinsiyet, medeni durum, gelir düzeyi, aile yapısı gibi soruları içeren bir formdur.

#### Algılanan Stres Ölçeği

Cohen ve ark. (1983) tarafından geliştirilen ve Eskin ve ark. (2013) tarafından Türkçeye uyarlanan ölçek on dört maddeden oluşmaktadır. On dört maddelik formun yanı sıra on ve dört maddelik kısa formları da bulunmaktadır. Ölçek, iki faktörden oluşmaktadır. İlk faktör, yetersiz özyeterlik algısıdır ve bireyin kendi yeteneklerine ve kaynaklarına olan güvensizliğini yansıtmaktadır. İkinci faktör ise stres/rahatsızlık algısıdır ve bireyin stres, endişe veya rahatsızlık hissiyatını yansıtmaktadır (Eskin ve ark., 2013). Ölçek, kişilerin hayatlarındaki bazı durumları stresli algılama seviyesini ölçmeyi amaçlamaktadır. Cevaplaması "Hiçbir zaman (0)" ile "Çok sık (4)" aralığında olan 5'li Likert tipi ölçekteki maddelerin 7 tanesi tersten puanlanmaktadır. Ölçeğin puan aralığı madde sayısına göre değişmektedir. On dört maddelik formda ölçeğin puan aralığı 0 ile 56 arasında iken on maddelik formda 0 ile 40 ve dört maddelik formda 0 ile 16 puan aralığı bulunmaktadır. Ölçekten alınan toplam puan kişinin stres seviyesini göstermektedir ve yüksek puan alınması kişinin stres algısının yüksek olduğunu belirlemektedir. Ölçeğin orijinali için yapılan çalışmalar geçerli ve güvenilir (0.84 – 0.86) bir ölçek olduğunu ortaya koymaktadır. Ölçeğin Türkçe uyarlanmasında ise iç tutarlık katsayısı 0.84 ve test-tekrar-test güvenilirliği 0.87 olduğu belirtilmektedir (Eskin ve ark., 2013).

#### Bakım Verme Yükü Ölçeği

Ölçek, Zarit ve ark. tarafından 1980 yılında bakım ihtiyacı olan bireylere bakmakla yükümlü olan kişilerin stres düzeylerini değerlendirmek için geliştirilmiştir. Ölçek araştırmacı tarafından sorularak uygulanabildiği gibi kişilerde soruları kendileri yanıtlayabilirler. Toplam 22 sorudan oluşan likert tipi bir ölçektir (Zarit ve Zarit 1990). İç tutarlılık katsayısı 0.87 ile 0.94 aralığında, test-tekrar test güvenilirliği ise 0.71 olarak saptanmıştır. Ölçekten minimum 0, maximum 88 puan alınabilmektedir (Zarit ve Zarit 1990). Ölçeğin Türkçe uyarlaması İnci ve Erdem tarafından yapılmıştır (İnci ve Erdem 2008). Türkçe

uyarlamasında ise iç tutarlılık katsayısı 0.95, test-tekrar test güvenilirliği ise 0.90 olarak saptanmıştır.

### Aile Değerlendirme Ölçeği

Aile Değerlendirme Ölçeği (ADO), Epstein ve ark. (1983) tarafından geliştirilen bir araç olup, ailelerin işlevselliğini değerlendirmek için kullanılan bir ölçektir. Bu öz-değerlendirme anketi, aile içinde iletişim, problem çözme, roller ve sorumluluklar, duygusal tepkiler ve genel olarak aile içindeki memnuniyet gibi çeşitli boyutları ölçer (Epstein ve ark., 1983). Aile Değerlendirme Ölçeği'nin alt boyutları problem çözme, iletişim, roller, duygusal tepki verebilme, gereken ilgiyi gösterme, davranış kontrolü ve genel işlevler olarak sıralanmaktadır. Asıl formun alfa katsayısı yedi boyutta da 0.72 ile 0.92 arasında değişmektedir. Alt boyutlardaki ögelerin %40'ından fazlası yanıtlanmadığında ortalama puan hesaplanamamakta ve yanıtlar geçersiz kabul edilmektedir. Ölçeğin Türkçe versiyonunda Cronbach alfa değeri .38 ile .86 arasında değişmektedir. Türkçeye uyarlaması Bulut (1990) tarafından yapılan ve 12 yaşın üzerindeki bütün aile fertlerine uygulanabilen ölçeğin puanlaması 1.00-4.00 arasında değişmektedir (1.00 sağlıklı 4.00 sağlıklı) (Bulut, 1990).

### Verilerin Toplanması

Veri toplama sürecine başlamadan önce Yakın Doğu Üniversitesi İnsani Araştırmalar Etik Kurulu'na başvurularak 02.03.2023 tarihinde Etik Kurul İzni alınmıştır (YDÜ/SB/2023/1470) ve sonrasında araştırmaya başlanmıştır.

Araştırma sürecinde Türkiye'de Adana İlinde Çukurova Üniversitesi Balcalı Hastanesi Pediatrik Onkoloji Servisi ve Kuzey Kıbrıs Türk Cumhuriyeti Dr. Burhan Nalbantoğlu Devlet Hastanesi Pediatrik Onkoloji Servisinden veri toplamak amacıyla ilgili kurumlardan araştırma izni alınmıştır. Ancak veri toplama süreci 6

Şubat Kahramanmaraş depreminden hemen sonraki süreci kapsadığından beklenen katılımcı sayısına ulaşılamamıştır.

Araştırmada yer alan katılımcılara araştırmanın amacı, gizliliği, araştırma verilerinin yalnızca bilimsel amaçlar için kullanılacağı, araştırmanın herhangi bir aşamasında rahatsızlık duyarlarsa çekilebilecekleri ve isterlerse anketlerinin çalışma dışı bırakılacağı hakkında bilgi verilerek, yazılı onamları alınmıştır. Çalışma verileri bir yandan yüz yüze anket uygulaması ile her iki kurumun pediatrik onkoloji servislerinden veriler toplanmaya çalışılırken, diğer taraftan çocukluk çağı kanseri hastası olan ailelerin kullandıkları platformlar üzerinden çevrimiçi toplanmaya başlanmıştır. Yüzyüze anket çalışmasında 250 anket dağıtılmış ancak geri dönüşü yapılan 80 anket değerlendirme kapsamına alınmıştır. Çevrimiçi dönüş yapılan anketler değerlendirildikten sonra da 60 anket veri havuzuna dahil edilmiştir.

### Verilerin İstatistiksel Analizi

Araştırmanın verilerin Sosyal Bilimler için İstatistik Paket Programı (SPSS) 27.0 ile analiz edilmiştir. Araştırmaya dahil olan ebeveynlerin Bakım Verme Yükü Ölçeği, Algılanan Stres Ölçeği ve Aile Değerlendirme Ölçeği yanıtlarının normalliği için Cronbach Alfa testi uygulanmış ve hesaplanan alfa katsayıları Bakım Verme Yükü Ölçeği için 0,611, Algılanan Stres Ölçeği için 0,795 ve Aile Değerlendirme Ölçeği için 0,804 bulunmuştur.

Ebeveynlerin ve hasta çocuklarının sosyo-demografik özelliklerine göre dağılımları frekans analizleriyle incelenmiştir. Ebeveynlerin Bakım Verme Yükü Ölçeği, Algılanan Stres Ölçeği ve Aile Değerlendirme Ölçeği puanları için tanımlayıcı istatistikler verilmiştir.

### Bulgular

**Tablo 2.** Ebeveynlerin Cinsiyetine göre Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği Puanları Karşılaştırmaları

	Cinsiyet	N	$\bar{x}$	s	M	S.O.	Z	p
<b>Bakım Verme Yükü Ölçeği</b>	Kadın	131	28,64	5,85	28	72,64	-2,387	0,017*
	Erkek	9	25,33	8,65	25	39,39		
Yetersiz Özyeterlik algısı	Kadın	131	14,82	3,08	15	71,37	-0,969	0,332
	Erkek	9	13,89	3,06	14	57,89		
Stres/rahatsızlık algısı	Kadın	131	17,02	2,59	18	70,84	-0,378	0,706
	Erkek	9	16,44	3,21	17	65,61		
<b>Algılanan Stres Ölçeği</b>	Kadın	131	31,84	5,24	33	71,15	-0,724	0,469
	Erkek	9	30,33	5,57	32	61,06		

\* $p < 0,05$

Araştırma kapsamındaki ebeveynlerin cinsiyetine göre Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği puanları karşılaştırmaları için Mann-Whitney U kullanılmış ve bulgular Tablo 2.'de gösterilmiştir

Tablo 2. incelendiğinde ebeveynlerin cinsiyetine göre Bakım Verme Yükü Ölçeği algısından aldıkları puanların arasında istatistiki açıdan manidar fark vardır

( $p > 0,05$ ). Kadınların Bakım Verme Yükü Ölçeği puanları erkeklerden daha yüksek bulunmuştur.

Ebeveynlerin cinsiyetine göre Algılanan Stres Ölçeği genelinden ve yetersiz özyeterlik algısı ve stres / rahatsızlık algısından aldıkları puanların arasında istatistiki açıdan anlamlı bir fark yoktur ( $p > 0,05$ ).

**Tablo 3.** Ebeveynlerin Öğrenim Durumuna göre Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği Puanları Karşılaştırmaları

	Öğrenim durumu	n	$\bar{x}$	s	M	S.O.	X <sup>2</sup>	p	Fark
<b>Bakım Verme Yükü Ölçeği</b>	İlköğretim <sup>1</sup>	20	25,35	6,32	24,5	49,60	6,674	0,036*	1<3
	Lise <sup>2</sup>	74	28,12	4,15	28	72,07			
	Lisans/Lisansüstü <sup>3</sup>	46	30,26	7,86	28	77,07			
Yetersiz Özyeterlik algısı	İlköğretim	20	14,50	2,56	14	65,15	0,853	0,653	
	Lise	74	14,99	2,87	15	73,32			
	Lisans/Lisansüstü	46	14,50	3,59	14,5	68,28			
Stres/rahatsızlık algısı	İlköğretim	20	16,75	2,40	16,5	66,33	0,257	0,879	
	Lise	74	17,07	2,31	18	71,39			
	Lisans/Lisansüstü	46	16,96	3,19	18	70,88			
<b>Algılanan Stres Ölçeği</b>	İlköğretim	20	31,25	4,30	31,5	63,75	0,758	0,685	
	Lise	74	32,05	4,74	33	72,58			
	Lisans/Lisansüstü	46	31,46	6,39	33	70,09			

\* $p < 0,05$ 

Tablo 3.'de ebeveynlerin öğrenim durumuna göre Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği puanları karşılaştırmaları için Kruskal-Wallis H sonuçları gösterilmiştir.

Araştırmadaki ebeveynlerin öğrenim durumuna göre Bakım Verme Yükü Ölçeği algısından aldıkları puanların arasında istatistikî açıdan manidar fark vardır( $p > 0,05$ ). İlköğretim mezunu olan ebeveynlerin Bakım Verme Yükü

Ölçeği puanları Lisans/Lisansüstü mezunlarından düşüktür.

Araştırmaya dahil edilen ebeveynlerin öğrenim durumuna göre Algılanan Stres Ölçeği genelinden ve yetersiz özyeterlik algısı ve stres/rahatsızlık algısından aldıkları puanların arasında istatistikî açıdan anlamlı bir fark olmadığı belirlenmiştir ( $p > 0,05$ ).

**Tablo 4.** Ebeveynlerin Çalışma Durumuna göre Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği Puanları Karşılaştırmaları

	Çalışma durumu	N	$\bar{x}$	s	M	S.O.	Z	p
<b>Bakım Verme Yükü Ölçeği</b>	Çalışmayan	100	27,46	4,47	27	66,17		
	Çalışan	40	30,85	8,54	29	81,34	-2,007	0,045*
Yetersiz Özyeterlik algısı	Çalışmayan	100	15,04	2,67	15	73,51		
	Çalışan	40	14,05	3,86	14	62,99	-1,393	0,164
Stres/rahatsızlık algısı	Çalışmayan	100	17,12	2,14	17	71,32		
	Çalışan	40	16,65	3,57	18	68,45	-0,382	0,702
<b>Algılanan Stres Ölçeği</b>	Çalışmayan	100	32,16	4,34	33	72,66		
	Çalışan	40	30,70	7,01	32,5	65,11	-0,997	0,319

\* $p < 0,05$

Tablo 4.'de araştırmanın örnekleme dahil edilen ebeveynlerin çalışma durumuna göre Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği puanları karşılaştırmaları için Mann-Whitney U testi bulgularına yer verilmiştir.

Ebeveynlerin çalışma durumuna göre Bakım Verme Yükü Ölçeği algısından aldıkları puanların arasında istatistiki açıdan manidar fark olduğu görülmüştür( $p>0,05$ ). Çalışan

ebeveynlerin Bakım Verme Yükü Ölçeği puanları çalışmayanlara göre daha yüksektir.

Ebeveynlerin öğrenim durumuna göre Algılanan Stres Ölçeği genelinden ve yetersiz özyeterlik algısı ve stres/rahatsızlık algısından aldıkları puanların arasında istatistiki açıdan manidar fark yoktur ( $p>0,05$ ).

**Tablo 5.** Ebeveynlerin Hasta Olan Çocuğa Refakat Etmenin Eşle Olan İlişkiyi Olumsuz Etkileme Durumuna göre Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği Puanları Karşılaştırmaları

	<b>Olumsuz etkileme</b>	<b>n</b>	<b><math>\bar{x}</math></b>	<b>s</b>	<b>M</b>	<b>S.O.</b>	<b>Z</b>	<b>p</b>
<b>Bakım Verme Yükü Ölçeği</b>	Evet	32	28,31	7,45	27	64,08	-1,023	0,306
	Hayır	108	28,46	5,66	28	72,40		
Yetersiz Özyeterlik algısı	Evet	32	13,59	2,59	14	53,83	-2,661	0,008*
	Hayır	108	15,10	3,14	15,5	75,44		
Stres/rahatsızlık algısı	Evet	32	15,72	2,39	16	50,38	-3,230	0,001*
	Hayır	108	17,36	2,58	18	76,46		
<b>Algılanan Stres Ölçeği</b>	Evet	32	29,31	4,46	29,5	49,94	-3,274	0,001*
	Hayır	108	32,46	5,28	33,5	76,59		

\* $p<0,05$

Ebeveynlerin hasta olan çocuğa refakat etmenin eşle olan ilişkiyi olumsuz etkileme durumuna göre Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği puanları karşılaştırmaları için Mann-Whitney U testi bulgularına Tablo 5.'de yer verilmiştir.

Ebeveynlerin hasta olan çocuğa refakat etmenin eşle olan ilişkiyi olumsuz etkileme durumuna göre Bakım Verme Yükü Ölçeği puanları arasında istatistiki olarak anlamlı fark yoktur ( $p>0,05$ ).

Ebeveynlerin hasta olan çocuğa refakat etmenin eşle olan ilişkiyi olumsuz etkileme durumuna göre Algılanan Stres Ölçeği genelinden ve ölçekteki yetersiz özyeterlik algısı ve stres/rahatsızlık algısı puanları arasında istatistiki açıdan önemli fark vardır ( $p<0,05$ ). Hasta olan çocuğa refakat etmenin eşle olan ilişkiyi olumsuz etkilediğini ifade eden ebeveynlerin Algılanan Stres Ölçeği genelinden ve ölçekteki yetersiz özyeterlik algısı ve stres/rahatsızlık algısı puanları daha düşüktür.

Tablo 6.'da araştırmaya dahil olan ebeveynlerin Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği Puanları ile Aile Değerlendirme Ölçeği puanları arasındaki korelasyonlar için Spearman testi uygulanmıştır.

Tablo 6. incelendiğinde, ebeveynlerin Bakım Verme Yükü Ölçeği puanları ile Algılanan Stres Ölçeği genelinden ve ölçekteki stres/rahatsızlık algısı puanları arasında istatistiki açıdan manidar ve pozitif yönde korelasyonların olduğu saptanmıştır ( $p<0,05$ ). Ebeveynlerin Bakım Verme Yükü Ölçeği puanları ile Algılanan Stres Ölçeğindeki yetersiz özyeterlik algısı puanlarının arasında istatistiki açıdan manidar korelasyon olmadığı görülmüştür.

Araştırmaya dahil edilen ebeveynlerin Bakım Verme Yükü Ölçeği puanları ile Aile Değerlendirme Ölçeği genelinden ve alt boyutlarından aldıkları puanların arasında istatistiki açıdan manidar korelasyon olmadığı saptanmıştır ( $p>0,05$ ).

Ebeveynlerin Algılanan Stres Ölçeği genelinden aldıkları puanlar ile Aile Değerlendirme Ölçeğindeki iletişimden aldıkları puanların arasında istatistiki açıdan manidar ve pozitif korelasyonların olduğu belirlenmiştir ( $p<0,05$ ). Ebeveynlerin Algılanan Stres Ölçeği genelinden aldıkları puanlar ile Aile Değerlendirme Ölçeği toplamından ve problem çözmeden, roller, duygusal tepki verebilmeden, davranış kontrolünden ve genel işlevlerden aldıkları puanların arasında istatistiki açıdan anlamlı korelasyon olmadığı belirlenmiştir.

**Tablo 6.** Ebeveynlerin Bakım Verme Yükü Ölçeği ve Algılanan Stres Ölçeği Puanları ile Aile Değerlendirme Ölçeği Puanları Arasındaki Korelasyon

		1	2	3	4	5	6	7	8	9	10	11	12
<b>1. Bakım Verme Yükü Ölçeği</b>	rho	1											
	p	.											
2. Yetersiz özyeterlik algısı	rho	0,155	1										
	p	0,067	.										
3. Stres/rahatsızlık Algısı	rho	0,226	0,638	1									
	p	0,007*	0,000*	.									
<b>4. Algılanan Stres Ölçeği</b>	rho	0,186	0,931	0,864	1								
	p	0,027*	0,000*	0,000*	.								
5. Problem Çözme	rho	-0,040	0,073	0,084	0,109	1							
	p	0,639	0,389	0,326	0,200	.							
6. İletişim	rho	0,034	0,132	-0,072	0,068	0,491	1						
	p	0,687	0,120	0,395	0,425	0,000*	.						
7. Roller	rho	-0,080	0,076	-0,099	0,000*	-0,036	0,366	1					
	p	0,349	0,374	0,243	0,996	0,673	0,000*	.					
8. Duygusal tepki Verebilme	rho	0,062	0,113	-0,039	0,067	0,090	0,204	0,053	1				
	p	0,463	0,183	0,643	0,435	0,288	0,015*	0,531	.				
9. Gereken ilgiyi Gösterme	rho	-0,099	0,163	-0,074	0,083	0,192	0,563	0,617	0,225	1			
	p	0,245	0,055	0,386	0,331	0,023	0,000*	0,000*	0,008*	.			
10. Davranış Kontrolü	rho	-0,096	0,057	-0,140	-0,015	0,216	0,537	0,549	0,132	0,642	1		
	p	0,259	0,501	0,100	0,863	0,010	0,000*	0,000*	0,121	0,000*	.		
11. Genel İşlevler	rho	-0,020	0,146	0,060	0,148	0,660	0,626	0,189	0,085	0,373	0,551	1	
	p	0,817	0,086	0,483	0,080	0,000*	0,000*	0,025*	0,318	0,000*	0,000*	.	
<b>12. Aile Değerlendirme Ölçeği</b>	rho	-0,066	0,132	-0,047	0,083	0,584	0,772	0,570	0,341	0,747	0,728	0,704	1
	p	0,437	0,120	0,585	0,330	0,000*	0,000*	0,000*	0,000*	0,000*	0,000*	0,000*	.

$p < 0,05$

## Tartışma

Bu araştırmada kadınların bakım verme yükü düzeylerinin erkelerden daha yüksek olduğu bulunmuştur. Araştırma sonucu literatürle uyumlu olarak hasta çocukların bakımının daha çok anne tarafından üstlendiğini bildiren çalışmalarla tutarlılık göstermiştir (Riana ve ark., 2005; Ağkaya, Alahan, Aylaz ve Yetiş, 2015). Ülkemizde kanser tanısı almış çocuğa bakım genellikle anneden beklenirken babaların yalnızca gerektiğinde bakım vermesi beklenmekte (Ay ve Akyar, 2020), bakım verme yükünü annelerin üstleniyor olması, bu zorlu süreçten annelerin daha fazla etkilendiğini göstermiştir (Ghufran ve ark., 2014).

Çalışmada İlköğretim mezunu olan ebeveynlerin bakım verme yükü puanlarının lise mezunlarından daha düşük olduğu tespit edilmiştir. Literatürde araştırma sonucunun tersi yönde ilköğretim mezunu olan ebeveynlerin bakım yükü puanlarının diğer ebeveynlere kıyasla daha yüksek olduğunu bildiren çalışmalar olduğu gözlenmiştir (Ağkaya Alahan, Aylaz ve Yetiş, 2015; Orak ve Sezgin 2015). Araştırma bulgularının diğer çalışmalardan farklı olması, katılımcıların çoğunun lise ve üstü eğitim düzeyine sahip olması, düşük eğitim düzeyinin çalışmada daha az temsil edilmiş olması ve eğitim düzeyi yüksek aile bireylerinin sağlık profesyonelleriyle tedavi sürecini yönetmekte daha fazla rol almalarından kaynaklanmış olabilir.

Araştırmamızda literatürle uyumlu olarak çalışan ebeveynlerin bakım verme yüklerinin çalışmayanlara göre daha yüksek olduğu tespit edilmiştir (Kobos ve Imelia,

2015; Özdemir, Akgün Şahin ve Küçük, 2009). Ayrıca Özdemir, Akgün Şahin ve Küçük (2009) hem çalışan ve hem de bakım veren yükünü alan annelerin, artan bakım yükü nedeniyle profesyonel hayattan çekildiklerini bu durumda daha fazla bakım yükü almalarına yol açtığını tespit etmiştir. Araştırma sonucumuz çalışan ebeveynlerin hem profesyonel iş yaşamının gerekliliklerini yerine getirmek hem de hasta çocuklarına bakım vermeyle ilgili artan sorumluluklar arasında denge kurmakta zorluk yaşadıklarını düşündürmüştür.

Çalışmada hasta olan çocuğa refakat etmenin eşle olan ilişkiyi olumsuz etkilediğini ifade eden ebeveynlerin, algılanan stres düzeyi, algılanan stres özyeterlik algısı ve algılanan stres rahatsızlık algısının daha düşük olduğu tespit edilmiştir. Literatür incelendiğinde Ekinci ve Uysal (2023)'ın eş desteği ile annelerin algıladıkları stres düzeyi arasındaki negatif yönlü anlamlı ilişkiyi tespit ettiği çalışma bulgularını desteklerken, diğer araştırmacılar ilişkilerde bakım verme yükü dolayısıyla ile içi dinamiklerin etkilendiğine, diğer çocuk ve evle ilgili sorumluluklara yeterince zaman ayıramamasının eşle olan ilişkilerde gerginliğe yol açtığını göstermiştir (Beşer ve Öz, 2003; Akyar, 2006; Karabağcı, 2009; Kalav, 2011). Çalışma bulgumuz annelerin hastanede refakatçi olarak kalmanın eşle olan ilişkiyi olumsuz etkilediğini belirtmelerine karşın, çocuklarının bakımının doğru yapıldığına dair sağlık profesyonellerinden destek ve onay alıyor olmalarının, özyeterlik algıları düşük olmasına karşın, algılanan stres algısı ve stres rahatsızlık algısının düşmesine yol açmış olabileceğini düşündürmüştür.

Araştırma sonucunda ebeveynlerin bakım verme yükü artıkça, algılanan stres düzeyi ve algılanan stres rahatsızlık algısının arttığı, ebeveynlerin bakım verme yükü azaldıkça, algılanan stres düzeyi ve algılanan stres rahatsızlık algısının azaldığı gözlemlenmiştir. Akgün Şahin, Polat ve Ergüney (2009)'in kanserli hastalara bakım veren bireylerde, bakım verme yükündeki azalmanın yaşamış oldukları stresin azalmasına ve yaşam kalitelerinde artışa yol açtığını tespit ettiği çalışma araştırma sonucumuzu desteklerken, bakım veren bireylerin bakım verme yükünün sıklığının artmasının hasta, bakım veren birincil kişi ve ailenin diğer bireyleri için önemli bir stresör olduğunu ortaya koymuştur (Sherwood ve ark., 2005; Hacıoğlu ve ark., 2010). Bulgu, ebeveynlerin bakım verme yükünün, algılanan stres düzeyi ve stres/rahatsızlık algısı üzerinde önemli bir etkiye sahip olduğunu göstermektedir.

Çalışmanın diğer önemli bir sonucu da ebeveynlerin algılanan stres düzeylerindeki artışın aile içi iletişimi artırdığını, ebeveynlerin algılanan stres düzeyinde azalmanın aile içi iletişimi azalttığını göstermiş olmasıdır. Wiener, Battles, Zadeh, Pelletier, Arruda-Colli ve Muriel'in (2016) yapmış oldukları araştırma ebeveynlerin ilişkilerinde hastalığın teşhisi ve nüksetmesinin en stresli zaman noktası olduğu, hastaneye yatışlar ve nüksetmenin ilişki üzerinde en stresli, tanı anının birbirlerine duygusal olarak en çok bağlı hissettikleri, tedavinin başında ve sonunda ise duygusal olarak en az bağlı hissettikleri zaman olarak bildirmiştir. Lavec ve May-Dan (2003) ise yapmış oldukları çalışmada hastalığın ebeveynlerin ilişkisinde olumlu değişiklikler yarattığı, çatışma çözme becerisi ve kişilerarası güveni arttırdığı, ilişkide daha fazla esneklik ve daha uyumlu desteğe yol açtığını göstermiştir. Bir çocuğun kanser teşhisi, çift, ebeveyn ve aile yaşamını derinden etkileyecek pratik ve duygusal zorluklar yaşatır. Hastalık tanısı almak aile yaşamında bir krize yol açarak olağan yaşam dengesini bozabilir. Hastalık ve tedavi sürecinin yarattığı stresin yönetilememesi aile işlevselliği, aile birliği, aile içi iletişim ve günlük yaşam rutininin sürdürülmesinde zorluklar yaratabilir. Araştırma sonucu literatürle uyumlu olmakla birlikte hasta çocuğu olan ebeveynlerin algıladıkları stresin artmasıyla, aile içi iletişimi artırarak baş etmeye çalıştıklarını düşündürmüştür.

Bu araştırma kesitsel ilişkisel tarama çalışması olup Kanser Tanısı Almış Çocuğu Olan Ailelerin Stres Düzeyleri, Bakım Verme Yükü ve Aile İşlevselliği Arasındaki İlişkinin Değerlendirilmesi amaçlamıştır. Bu araştırmanın bulguları, kadın olmak, düşük eğitim düzeyine sahip olmak ve çalışan ebeveyn olmanın daha yüksek bakım verme yüküyle ilişkili olduğunu göstermiştir. Araştırmanın örneklemini, çocukluk çağı kanseri hastası olan çocuklara genellikle annelerin bakım vermesi nedeniyle kadınlardan oluşmuştur. Bakım veren yükünün diğer paydaşı olan babalardan oluşan örnekleme yapılacak çalışmalar ilgili literatüre katkı sağlayabilir.

Klinik uygulamada hastalık sürecinin çocuk ve diğer aile bireyleri üzerinde yaratacağı krizin etkileri bir sistem dahilinde bütün aileyi etkilediği düşünüldüğünde aile işlevselliğini arttırmaya yönelik etkileşim, iş birliği ve rollerin paylaşımına yönelik yapılacak müdahaleler hastalık sürecine uyumun geliştirilmesinde ve bakım verme yükünün paylaşılmasında etkili olabilir. Ayrıca hasta çocuğa bakım vermenin eşle olan ilişkiyi olumsuz etkilediğini bildiren katılımcıların algılanan stres düzeyi ve özyeterlilik ve stres rahatsızlık algısının daha düşük olması araştırmacılar tarafından tükenmişlik belirtileri olarak yorumlanmıştır. Bir aile üyesindeki değişimin diğer aile üyelerini de etkilediği düşünüldüğünde aileyi güçlendirmek için çift alt sistemine yapılacak müdahaleler eşlerin birbirine karşı duygusal duyarlılık, ilgi gösterme, iletişim kurma ve problem çözme becerileri arttırmaya yönelik olabilir. Araştırmada elde edilen bir diğer önemli bulgu, aile işlevselliğinin göstergelerinden biri olan aile içi iletişimin, algılanan stres arttıkça arttığı, algılanan stres azaldıkça düştüğüdür. Pediatrik kanser tanısıyla birlikte hastalık ve tedavi uyum sürecinde aile içi iletişim artıyor olabilir. Aile içi iletişimin hastalık sürecinin hangi dönemlerde artma ya da azalma gösterdiğinin araştırılmasının yanında, ayrıca aile işlevselliğini etkileyecek diğer değişkenler olarak algılanan sosyal destek türleri, başa çıkma stratejileri, yaşam doyumu, evlilik doyumu, evlilik uyumu ve çatışma yönetim becerileri gibi farklı değişkenlerin rolü araştırılabilir.

## Beyannameler

### Etik Onay ve Katılma İzni

Yakın Doğu Üniversitesi İnsani Araştırmalar Etik Kurulu'na başvurularak 02.03.2023 tarihinde Etik Kurul İzni alınmıştır (YDÜ/SB/2023/1470).

### Yayın İzni

Uygulanamaz.

### Veri ve Materyallerin Mevcudiyeti

Uygulanamaz.

### Çıkar Çatışması

Yazarlar çıkar çatışması olmadığını beyan eder.

### Finansman

Uygulanamaz.

### Yazar Katkıları

Çağla Özkan, Gönül Taşcıoğlu ve Hande Çelikay Söyler, makalenin yöntem ve tartışma bölümünün, özet ve abstractın yazılmasında büyük katkı sağlamıştır. Aynı zamanda makalenin genel yazımına ve kontrolünde, araştırma verilerini analizi ve yorumlanmasında ortak katkı sağlamışlardır. Aynı şekilde makalenin giriş ve tartışma bölümünün yazılmasında ve veri toplanmasında yazarların ortak katkısı bulunmaktadır. Tüm yazarlar makalenin son halini okumuş ve onaylamıştır.

## Kaynaklar

Akyar İ. (2006). *Alzheimer Hastalarına Bakım Verenlerin Yaşadıkları Güçlükler*. Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü. Yüksek Lisans Tezi. Ankara.

Alahan, N. A., Aylaz, R. & Yetiş, G. (2015). Kronik Hastalığı Olan Çocuğa Sahip Ebeveynlerin Bakım Verme Yükü. *Annals of Health Sciences Research*, 4(2), 1-5.

- Ay, M. A., & Akyar, I. (2020). Psychosocial status of Turkish families of pediatric cancer patients. *Journal of Transcultural Nursing*, 31(3), 227-241.
- Bakula, D. M., Sharkey, C. M., Perez, M. N., Espeleta, H. C., Gamwell, K. L., Baudino, M., ... & Mullins, L. L. (2019). Featured article: The relationship between parent and child distress in pediatric cancer: A meta-analysis. *Journal of Pediatric Psychology*, 44(10), 1121-1136.
- Beşer, N., & Öz, F. (2003). Kemoterapi alan lenfomalı hastaların anksiyete-depresyon düzeyleri ve yaşam kalitesi. *Cumhuriyet Üniversitesi Hemşirelik Yüksek Okulu Dergisi*, 7, 47-58.
- Bradley, C. J. (2019). The economic burden associated with cancer caregiving. *Seminars in Oncology Nursing*, 35(4), 333-336.
- Bulut, I. (1990). Aile Değerlendirme Ölçeği El Kitabı. Ankara: Özgüzel Matbaası.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385-396.
- Da Silva, F. M., Jacob, E., & Nascimento, L. C. (2010). Impact of childhood cancer on parents' relationships: An integrative review. *Journal of Nursing Scholarship*, 42(3), 250-261.
- Ekinci, S., & Uysal, G. (2023) Kemik İliği Transplantasyonu Yapılan Çocukların Annelerinin Algıladıkları Eş Desteği ve Stres Düzeyleri Arasındaki İlişkinin Belirlenmesi. *Black Sea Journal of Health Science*, 115-126.
- Epstein, N. B., Baldwin, L. M. ve Bishop, B. S. (1983). The McMaster family assessment device. *Journal of Marital and Family Therapy*, 9 (2): 171-180.
- Eskin, M., Harlak, H., Demirkıran, F., Dereboy, Ç. (2013). Algılanan Stres Ölçeğinin Türkçeye Uyarlanması: Güvenilirlik ve Geçerlik Analizi. *Yeni Symposium Journal*, 51 (3), 132-140.
- Gerrig, R. J., & Zimbardo, P. G. (2012). *Psikolojiye giriş psikoloji ve yaşam*. (Çev. G. Sart), İstanbul: Nobel Akademik Yayıncılık.
- Ghufran, M., Andrades, M., & Nanji, K. (2014). Frequency and severity of depression among mothers of children with cancer: Results from a teaching hospital in Karachi, Pakistan. *British Journal of Medical Practitioners*, 7(1), 11-15.
- İnci, F.H., & Erdem, M. (2008). Bakım verme yükü ölçeğinin türkçeye uyarlanması geçerlilik ve güvenilirliği. *Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi*, 11(4): 85-95.
- Kalav S. (2011). *İnme tanısı almış hastalara bakım veren aile üyelerinin bakım verme yükü ile yaşam kaliteleri arasındaki ilişki*. Mersin Üniversitesi Sağlık Bilimleri Enstitüsü. Yüksek Lisans Tezi. Mersin.
- Karabuğa H. (2009). Kanserli Hastalara Bakım Verenlerde Yaşam Kalitesinin Değerlendirilmesi. Marmara Üniversitesi Sağlık Bilimleri Enstitüsü. Yüksek Lisans Tezi. İstanbul.
- Karakavak, G. ve Çırak, Y. (2006). Kronik hastalıklı çocuğu olan annelerin yaşadığı duygular. *Eğitim Fakültesi Dergisi*, 7(12), 95-112.
- Kim, M. A., Yi, J., Wilford, A., & Kim, S. H. (2020). Parenting changes of mothers of a child with cancer. *Journal of Family Issues*, 41(4), 460-482.
- Klaňnja, S., Hausmeister, I. K., Kavčič, M., Masten, R., & Kitanovski, L. (2023). Pediatric medical traumatic stress in children with cancer and their parents: Difference in stress levels due to illness and treatment factors. *Journal of Child & Adolescent Trauma*, 1-9.
- Kobos, E., & Imiela, J. (2015). Factors affecting the level of burden of caregivers of children with type 1 diabetes. *Applied Nursing Research*, 28(2), 142-149.
- Lavee, Y., & May-Dan, M. (2003). Patterns of change in marital relationships among parents of children with cancer. *Health & Social Work*, 28(4), 255-263.
- Lewandowska, A. (2021). Influence of a child's cancer on the functioning of their family. *Children*, 8(7), 592.
- López, J., Velasco, C., & Noriega, C. (2021). The role of acceptance in parents whose child suffers from cancer. *European Journal of Cancer Care*, 30(4), e13406.
- McCreary, L.L., Dancy, B.L. (2004). Dimensions of family functioning: perspectives of low-income African American single-parent families. *Journal of Marriage and Family*, 66, 690-701.
- Orak, O. S., & Sezgin, S. (2015). Kanser Hastasına Bakım Veren Aile Bireylerinin Bakım Verme Yüklerinin Belirlenmesi. *Journal of Psychiatric Nursing/Psikiyatri Hemşireleri Dergisi*, 6(1).
- Özdemir, F. K., Şahin, Z. A., & Küçük, D. (2009). Kanserli çocuğu olan annelerin bakım verme yüklerinin belirlenmesi. *Yeni Tıp Dergisi*, 26(1), 153-158.
- Pöder, U., Ljungman, G., & von Essen, L. (2008). Posttraumatic stress disorder among parents of children on cancer treatment: A longitudinal study. *Psycho-Oncology*, 17(5), 430-437.
- Riana, P., O'Donnell, M., Rosenbaum, P., Brehaut, J., Walter, S. D., Russell, D., Swinton, M., Zhu, B., & Wood, E. (2005). The health and well-being of caregivers of children with cerebral palsy. *Pediatrics*, 115(3), 626-636.
- Sherwood, P., Given, B. A., Given, C. W., Champion, V. L., Doorenbos, A. Z., Azzouz, F., et al. (2005). A cognitive behavioral intervention for symptom management in patients with advanced cancer. *Oncology Nursing Forum*, 32(6), 1190-1198.
- Şahin, Z. A., Polat, H., & Ergüney, S. (2009). Kemoterapi Alan Hastalara Bakım Verenlerin Bakım Verme Yüklerinin Belirlenmesi. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 12(2), 1-9.
- Taşçioğlu, G., Beyazıt, U., & Ayhan, A. B. (2017). Hastanede tedavi gören çocukların ebeveynlerinde bakım verme yükünün incelenmesi. Adnan Menderes Üniversitesi Sağlık Bilimleri Fakültesi Dergisi, 1(1), 10-19.
- Ünsar, S., Erol, O., & Özdemir, Ö. (2021). Caregiving burden, depression, and anxiety in family caregivers of patients with cancer. *European Journal of Oncology Nursing*, 50, 101882.
- Zarit, S. H., & Zarit, J. M. (1990). *The memory and behavior problems checklist and the Burden Interview*. University Park, PA: Pennsylvania State University Gerontology Center.
- Van Schoors, M., Caes, L., Knoble, NB, Goubert, L., Verhofstadt, LL, Alderfer, MA ve Konuk Editörler: Cynthia A. Gerhardt, Cynthia A. Berg, Deborah J. Wiebe ve Grayson N. Holmbeck. (2017). Sistematik inceleme: Pediatrik kanser tanısı sonrası aile işlevselliği ile çocuğun uyumu arasındaki ilişkiler: Bir meta-analiz. *Pediatric Psikoloji Dergisi*, 42 (1), 6-18.
- Walsh, F. (2012). *Normal family processes: Growing diversity and complexity*, The Guilford Press.
- Wiener, L., Battles, H., Zadeh, S., Pelletier, W., Arruda-Colli, M. N. F., & Muriel, A. C. (2017). The perceived influence of childhood cancer on the parents' relationship. *Psycho-oncology*, 26(12), 2109-2117.
- Woźniak, K., & Izycki, D. (2014). Cancer: a family at risk. *Menopause Review/Przegląd Menopauzalny*, 13(4), 253-261.
- Yıldız, E., Dedeli, Ö., & PAKYÜZ, S. Ç. (2016). Kanser hastalarına bakım veren aile üyelerinin bakım yükü ve yaşam kalitesinin incelenmesi. *Hemşirelikte Eğitim ve Araştırma Dergisi*, 13(3), 216-225.



RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# Trauma Exposure and Hopelessness as Predictors of Post-Traumatic Stress Disorder and Depression among War Veterans in South-East Nigeria

## Güneydoğu Nijerya'daki Savaş Gazileri Arasında Travma Sonrası Stres Bozukluğu ve Depresyonun Belirleyicileri Olarak Travmaya Maruz Kalma ve Umutsuzluk

Sunday Ejikeme Nwoye<sup>1</sup>, Gabriel E. Nweke<sup>2</sup>

### Abstract:

The study investigated trauma exposure and hopelessness as predictors of post-traumatic stress disorder (PTSD) and depression among war veterans in South-Eastern Nigeria. The research design used the ex post facto method purposively for a sample of 470 retired military veterans who were involved in a conflict at different times. The sample consisted of 240 men and 230 females who responded to four standardized instruments. The sample for the study was determined through Taro Yamen's statistical method for a multinomial or heterogeneous population. The results show that exposure to trauma significantly predicted PTSD among military veterans in Southeast Nigeria ( $F_{(1,468)} = 38.88$ ;  $P < 0.01$ ). However, trauma exposure did not significantly predict the development of depression disorder among veterans in Southeast Nigeria ( $F_{(1,468)} = 0.302$ ;  $P = 0.583$ ). Hopelessness was found to be a statistically significant predictor of PTSD ( $F_{(1,468)} = 10.87$ ;  $P < 0.01$ ). However, it did not significantly predict the development of depression disorder among veterans ( $F_{(1,468)} = 0.239$ ;  $P = 0.625$ ) with  $R = 0.023$  and  $R^2 = 0.001$ . The findings generally support most of the empirical evidence available in the literature. Based on the results of the study, the military organization and the Nigerian government must implement a strategic healthcare initiative to build military veteran rehabilitation health centers in each state. In these centers, both those serving in the military and retired veterans would be able to access routine psychological evaluation and treatment to ensure that they are in a good state of health and well-being during and after their engagement on the battlefield.

**Keywords:** Co-morbidity, Depression, Exposure to Trauma, Hopelessness, Nigeria, Post-traumatic stress disorder, Veterans

<sup>1</sup>PhD Student., Girne American University, Kyrenia, TRN Cyprus, sundayejikeme.nwoye@std.gau.edu.tr, Orcid id: 0000-0002-1150-2159

<sup>2</sup>Assist. Prof., Girne American University, Kyrenia, TRN Cayprus, nwekegabriel@gau.edu.tr, Orcid id: 0000-0003-2067-4494

**Address of Correspondence/Yazışma Adresi:** Sunday Ejikeme Nwoye, Girne American University, Academy of Applied Social Sciences, Kyrenia, Mersin 10, Turkey, e-mail: sundayejikeme.nwoye@std.gau.edu.tr

**Date of Received/Geliş Tarihi:** 24.10.2023, **Date of Revision/Düzelme Tarihi:** 17.01.2024, **Date of Acceptance/Kabul Tarihi:** 04.05.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Nwoye, S.E. & Nweke, G.E. (2024). Trauma Exposure and Hopelessness as Predictors of Post-Traumatic Stress Disorder and Depression among War Veterans in South-East Nigeria. *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 147-155

© 2023 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktpdergisi.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes. <http://creativecommons.org/licenses/by/4.0/>



**Öz:**

Bu çalışma, Güneydoğu Nijerya'daki savaş gazileri arasında Travma Sonrası Stres Bozukluğu (TSSB) ve depresyonun habercileri olarak travmaya maruz kalma ve umutsuzluğu araştırmaktadır. Araştırma tasarımı, farklı zamanlarda savaş alanında yer almış 470 emekli askeri gaziden oluşan bir örneklem üzerinde geriye dönük değerlendirme olarak gerçekleştirilmiştir. Örneklem, dört standart araca yanıt veren 240 erkek ve, 230 kadından oluşmuştur. Çalışmanın örnekleme, Taro Yamen'in çok terimli ya da heterojen popülasyona yönelik istatistiksel yöntemi kullanılarak belirlenmiştir. Sonuçlar, travmaya maruz kalmanın Güneydoğu Nijerya'daki askeri gaziler arasında TSSB'yi önemli ölçüde etkilediğini göstermektedir ( $F(1,468)=38.88; P<0.01$ ). Ancak, travma maruziyeti Güneydoğu Nijerya'daki gaziler arasında depresyon gelişimini önemli ölçüde etkilememiştir ( $F(1,468)=0.302; P=0.583$ ). Umutsuzluğun, TSSB'nin istatistiksel olarak önemli bir habercisi olduğu saptanmıştır ( $F(1,468)=10.87; P<0.01$ ). Ancak, gaziler arasında depresyon bozukluğu gelişimini  $R=0,023$  ve,  $R^2=0,001$  ile istatistiksel olarak öngörememiştir ( $F(1,468)=0,239; P=0,625$ ). Bulgular genel olarak literatürdeki mevcut deneysel kanıtların çoğunu desteklemektedir. Çalışmanın sonuçlarına göre, askeri teşkilat ve Nijerya hükümetinin her eyalette askeri gaziler için rehabilitasyon sağlık merkezleri kurmak üzere stratejik bir sağlık girişimi başlatmaları oldukça önemlidir. Bu merkezlerde hem halihazırda görev yapmakta olan askerler hem de emekli gaziler rutin psikolojik değerlendirme ve tedaviye erişebilecek, böylece savaş alanında ve sonrasında iyi bir fiziksel ve mental sağlık durumunda olmaları sağlanacaktır.

**Anahtar Kelimeler:** Ek Hastalık, Depresyon, Travmaya Maruz Kalma, Umutsuzluk, Nijerya, Travma Sonrası Stres Bozukluğu, Gaziler

**Introduction**

According to Médecins Sans Frontières (n.D.), also known as Doctors without Borders, war is a phenomenon of organized collective violence that affects either the relations between two or more societies or the power relations within a society. It consists of intense armed conflict between ethnic groups within a nation or between countries. War has erupted between or among people at different periods of human history and will continue to be fought around the world provided nations continue to maintain their own rules that determine and protect their interests. War has existed throughout the history of humanity and is generally characterized by extreme violence that leads to the destruction of human life and property. It is widely suggested in the literature that war has direct or indirect negative social, physical, and psychological impacts on humanity. Psychological harm can be experienced due to trauma induced by exposure to unexpected and uncontrollable perceptions of terrifying violence, which leaves participants with severe injuries and losses. It can potentially cause a large displacement of people and the development of mental illness due to traumatic experiences. Exposure to trauma is significantly linked with adverse mental distress, which is connected with increased vulnerability to PTSD, and depression (Asare-Doku, Donnir, Ae-Ngibise, Pephrah, Awuviry-Newton, and Acquah, 2014; Castro-Vale, Severo, Carvalho, and Mota-Cardoso and Galea, 2014), if not diagnosed and treated, could result in persistent health debilitation of the individual.

Unfortunately, the eruption of war is a common phenomenon globally, and the modern world has thus far experienced two physically and psychologically devastating major world wars that horrifically decimated large populations before coming to an end. However, all continents have had and are currently experiencing

ongoing wars between countries. In Africa, the Nigerian Civil War of the 20th century has inflicted losses on both military personnel and civilians.

The Nigerian Civil War exposed the military on both sides to tremendous and horrendous experiences that have the potential to leave terrifying memories and a life-long feeling of emotional desolation, hopelessness, and psychological distress, paralyzing their mental and physical health. During the war, while 100,000 military casualties were officially reported, the estimated number of people killed during the war ranged from 500,000 to 3,000,000, and 2,000,000 people were left homeless and displaced (Adamu, 2016; Chidubem, 2023). As the Nigerian Civil War had adverse social, economic, and psychological impacts on the people, it was expected that a similar armed conflict situation would never be experienced again, but this proved to be incorrect. A new wave of violent events led to the deployment of the military to peace-keeping missions in neighboring West African countries like Liberia, Sierra Leone, Somalia, among others.

While fewer studies have been conducted in Africa and Nigeria in particular, the consensus among researchers indicates that exposure of combatants to armed conflict can potentially lead to the increased incidence and prevalence of different forms of mental illnesses in veterans during and after war (Abel et al., 2018; Asare-Doku, 2014; Ifeagwazi, Abiama, and Chukwuorji, 2020; Kokun and Pischko, 2020; Young, Korinek, Zimmer, and Toan, 2021; Dagona, 2022, Smith, Robinson, and Segal, 2018). Much of the initial PTSD research focused on the war-related trauma of Vietnam veterans. According to data collected from a study of the National Rehabilitation of Vietnam Veterans (Kulka et al. 1990), which was cited in (Roy et al., 2022), the lifetime prevalence of PTSD among Vietnam veterans was estimated to be 30%, with 13%–17% actively suffering from PTSD at the time of the study.

Similarly, quantitative research also revealed an increased prevalence of posttraumatic stress disorder (PTSD) among survivors of the Biafra War (Shor, 2021).

According to Abel et al (2018), there was a noteworthy positive correlation between exposure to combat and PTSD among military personnel engaged in an insurgency in Nigeria.

In Nigeria, there was another military confrontation intended to deflate Boko Haram terrorist activities in North-East Nigeria, Indigenous Peoples of Biafra (IPOB) and Eastern Security Network (ESN) in the South-East, banditry in the North-West, and the Niger-Delta militants in the South-south region. To contain this menace on all fronts, Nigerian military personnel are serially exposed to an armed conflict that is characteristically traumatic. This combat exposure has led many military veterans to experience physical and psychological stress due to traumatic injuries from improvised explosive devices (IED) and horrible death occurrences from terrorist ambushes. For various reasons, including to cope with the stress experienced from these violent war situations, many military personnel, whether retired or still in service and either physically injured or not, have indulged in maladaptive behaviors including substance use and unnecessary aggressive responses in civil incidences. Unfortunately, these maladaptive responses, which are often associated with mental health challenges, are seen and interpreted by people as the normal professional military way of life. In addition, despite the involvement of military personnel in numerous armed conflict events, there have been few studies on exposure to trauma that could elucidate the impacts of war on the mental health of military personnel. Therefore, this study seeks to investigate exposure to military trauma and hopelessness as predictors of post-traumatic stress disorder (PTSD) and depression among war veterans in southern Nigeria. A study carried out recently demonstrated that military personnel from low-income nations who were exposed to terrorism and insurgency had a 12.2% prevalence rate of PTSD. It is well known that individuals who experienced traumatic events, such as being exposed to terrorist activity, military combatants in conflict zones, or other cruelties, are more likely to experience depression and symptoms of posttraumatic stress disorder, which include learned helplessness, intrusive thoughts, and trouble sleeping (Dagona, 2022; Dunkley, 2023; Ibrahim, Akindele, and Useh, 2023). Regarding the evidence of different forms and diffuse levels of psychopathology in war veterans, studies have reported that 50% of veterans develop mental illnesses such as posttraumatic stress disorder (PTSD), depression, and anxiety (Asare-Doku, 2014; McNally, 2012; Rawal, Karki Shrestha, and Manandhar Pathak, 2018).

Furthermore, the recognition that veterans who were exposed to combat trauma developed different levels of mental health problems suggests that PTSD is more commonly experienced by the veteran population than other psychological disorders (Asare-Doku, 2014; Farmer, Vaughan, Garnett, and Weinick, 2015; Murthy and Lakshminarayana, 2006; Stevelink et al., 2015; Hoge, Terhakopian, Castro, Messer, and Engel, 2007). Depression is described as an emotional condition that involves a feeling of helplessness and hopelessness, which can sometimes be overpowering and is often accompanied by a general lowering of psychophysical activity (Dagona,

2022; Rampund & Moore, 2000; Young, Korinek, Zimmer, and Toan, 2021).

The relationship between post-traumatic stress disorder (PTSD) and comorbid disorders such as depression has been documented at exceptionally high rates among American and Israeli veterans with PTSD, reaching 67%-82% (Dagona, 2022; Rampund & Moore, 2000; Young, Korinek, Zimmer and Toan, 2021; Hankin, Spiro, Miller and Kazis, 1999). Similarly, the prevalence of co-morbid PTSD among veterans suffering from depression was also found to be between 36%-73% (Campbell et al., 2007; Hankin, 1999; Raab, Mackintosh, Gros, and Morland, 2015; Roy et al., 2022, Ibrahim, Akindele, Useh, 2023).

### **Aim/Objectives of the Study**

The purpose of the study was to determine whether exposure to trauma and feelings of hopelessness are predictors of post-traumatic stress disorder and depression among war veterans in Southeast Nigeria. The research aims to achieve the following objectives:

1. To determine whether exposure to trauma is a risk factor for experiencing post-traumatic stress disorder among war veterans in Southeast Nigeria.
2. To determine whether exposure to trauma is a risk factor for experiencing depression disorder among war veterans in Southeast Nigeria.
3. To determine whether the feeling of hopelessness is a risk factor for posttraumatic stress disorder among war veterans in Southeast Nigeria
4. To ascertain whether hopelessness is a risk factor for the development of depression disorder among war veterans in Southeast Nigeria.

### **Research Hypotheses**

The following four hypotheses were formulated for testing.

1. Exposure to trauma is a significant predictor of post-traumatic stress disorder among war veterans in Southeast Nigeria.
2. Exposure to trauma is a significant predictor of depression disorder among veterans in Southeast Nigeria.
3. The feeling of hopelessness is a significant predictor of posttraumatic disorder among war veterans in southeast Nigeria.
4. The feeling of hopelessness is a significant predictor of depression disorder among war veterans in South-East Nigeria.

### **Methods**

#### **Research Design**

This study employed an ex post facto research design (Lord H, 1973). It is a design that is beneficial when the study focusses specifically on examining the after-effects of an event or situation on a people at a particular time. The research design helps to determine the cause-and-effect relationship through the selection and observation of existing variables without any manipulation of existing conditions. Consequently, the design was employed to examine the experience of exposure to trauma and hopelessness as predictors of post-traumatic stress disorder and depression among military veterans in South-eastern

Nigeria. The Southeast region, one of the six geopolitical zones in Nigeria, comprises Enugu, Abia, Imo, Anambra, and Ebony States.

### Participants / Sample technique

The study included military personnel from Southeast Nigeria who have not only served in the military but have also participated in various military combats within the country and outside of Nigeria and have retired voluntarily due to disability or age. In order to effectively adopt this survey, the researcher submitted the survey questionnaires to the military head command center, 82 Division Garrison located in Enugu State, the 34 Field Artillery Brigade, Obinze, Imo State, and 14 Brigade Ohafia, Abia State. The survey questionnaire was originally submitted to the 82 Division, which is the headquarters command in the southeast of Nigeria, for approval before it was sampled among veterans. The questionnaire was given to the veterans by the researcher during their monthly payroll check for their entitlements and pensions; since some veterans can no longer read properly, they were guided by the researcher to enable them to answer the questions at their discretion. The reason for following these procedures was to enable easy capture of veterans, as this was the only possible and viable approach to reach out to them.

A total of 470 participants, which accounted for 94%, responded to the 500 questionnaires distributed. Of these respondents, 240 were male and 230 were female. Participants consisted of all categories of veterans who met the sampling criteria that were not exclusive to gender but specific to the nature of services such as the Nigerian Army, Navy, and Air Force.

The sample for the study was determined using Taro Yamen's statistical method for a multinomial or heterogeneous population.

The following formula was used:

$$n = \frac{N}{1+N(e)^2}$$

Where:

n=sample size required

N=population size

e=level of significance

1 and 2 are constant

$$N = 1+2240 (0.5)^2$$

$$n = \frac{2240}{1+ 2240 (0.0025)}$$

$$n = \frac{2240}{1+3.765}$$

$$n = \frac{1958}{4.765}$$

$$n = 40$$

In terms of the demographic characteristics of the participants, 123 were single, 309 were married, and 38 were widows/widowers. With regard to rank, 169 of the respondents were senior officers, 207 were junior officers, and 94 were general flag officers.

### Sampling Technique

The purposive sampling technique was used to select the participants for the study. This non-probability sampling is a sampling technique that the researcher can use with a particular purpose in mind, such as when a particular type of respondent is sought rather than a representative sample (Howitt & Cramer, 2011).

### Instruments

Three standardized sets of self-report questionnaires were used for data collection in the study. These include 1) Brief Trauma Questionnaire (BTQ), which is a 10-item questionnaire developed by Schnurr, et al. (1995). The BTQ was originally designed to assess traumatic exposure to life-threatening conditions or serious injury. It has a Kappa coefficient for the presence of trauma in both A.1 and A.2 above .70 for all events except for other life-threatening events. For one case of current PTSD and four of the five cases of lifetime PTSD, the scores were .96 and .99, respectively. 2), The Beck Hopelessness Scale (BHS) was developed by Aaron Beck (1998) to measure three major aspects of hopelessness: feelings about the future, loss of motivation, and expectations. BHS has a higher reliability and validity including its internal reliability coefficients that range from .84 to 0.93. The Posttraumatic Stress Disorder Checklist (PCL-5) for DSM-5 is a 20-item self-report measure that assesses the presence and severity of PTSD symptoms. Items on the PCL-5 correspond to the DSM-5 criteria for PTSD. PCL-5 has strong internal consistency ( $\alpha = .94$ ), and test-retest reliability ( $r = .82$ ), with other confirmatory factor analysis scores. In general, PCL-5 is a psychometrically sound measure of PTSD symptoms, and the three tools employed in this research have acceptable psychometric values to measure symptoms of the disorders investigated.

### Ethical Considerations

Approvals to carry out the study were obtained from the Girme American University Research Ethics Committee for the Faculty of Humanities (Decision No: 6, Date: 3.11.2021). Additionally, written consent was obtained to allow veterans to participate in the study from the 82 Division General Officer Commanding (GOC), Enugu State (date: 14.4.2022). Subsequently, verbal consent was obtained from the veterans who participated. The participants who took part in the study were contacted during the monthly payroll checks in different military establishments in person, where their consent was obtained, and each signed the consent form attached to the questionnaire willingly. Respondents were briefed on the purpose of the study and informed that information confidentiality would be guaranteed.

### Data Analysis

Data collected during the study were analyzed using the Statistical Package for Social Sciences (SPSS), version 16.0. In the analysis to obtain statistical values to verify the stated hypotheses, linear regression analysis was used. All hypotheses formulated for the study were tested at a significance level of 0.01 and 0.5

### Results

The following section will present the results of the linear regression analysis derived from the SPSS:

**Table 1**  
**Demographic characteristics of the military participants in the study**

Items	Frequency	Percentage%
Male	240	51.1
Female	230	48.9
Single	309	65.7
Married	123	26.2
Widow/Widower	38	8.1
Junior Officer	169	36
Senior Officer	207	44
General Officer	94	20

**Table 2**  
**Linear regression showing trauma exposure as a predictor of PTSD among military veterans in South East Nigeria**

Variable	R	R <sup>2</sup>	F	p-value	B	T	p-value
Constant						31.18	<0.001*
Trauma	0.277	0.077	38.88	<0.001	-0.277	-6.23	<0.001*

\*Significant at p<0.001

The results in Table 2 show that exposure to trauma significantly predicts posttraumatic stress disorder. ( $F_{(1,468)} = 38.88; P < 0.001$ ) with  $R = 0.277$  and  $R^2 = 0.077$ . Thus, trauma ( $\beta = -0.277, t = -6.23, P < 0.001$ ) has a negative contribution, accounting for 27.7% of the variance in PTSD. (See Table 2).

As the p-value <0.001 from the study is less than 0.01, the researchers concluded that there is a significant difference between the variables, thus accepting the hypothesis that exposure to trauma predicts PTSD in veterans.

**Table 3**

**Linear regression analysis on trauma exposure as a predictor of depression among military veterans in South East Nigeria**

Variable	R	R <sup>2</sup>	F	p-value	$\beta$	T	p-value
Constant						40.54	<0.001*
Trauma	0.025	0.001	0.302	0.583	-0.025	-0.54	0.583

\*= Significant at P< 0.001

The results in Table 3 show that exposure to trauma does not significantly predict depression ( $F_{(1,468)} = 0.302; P = 0.583$ ) with  $R = 0.025$  and  $R^2 = 0.001$ . Thus, trauma ( $\beta = -0.023, t = -0.48, P = 0.625$ ) has a negative contribution by accounting for 2.5% of the variance in depression.

According to the result, the p-value is 0.583, which is higher than the significance value of 0.01. Therefore, the researcher revealed that there were no significant differences between the variables and the hypothesis that exposure to trauma predicts depression was rejected

**Table 4**

**Linear regression analysis on hopelessness and PTSD among military veterans in South East Nigeria**

Variable	R	R <sup>2</sup>	F	p-value	$\beta$	T	p-value
Constant						14.84	<0.001*
Trauma	0.151	0.023	10.87	<0.001	-0.151	3.29	<0.01*

\*= Significant at p< 0.001

The results in Table 4 show that hopelessness significantly predicts PTSD ( $F_{(1,468)} = 10.87; P < 0.01$ ) with  $R = 0.151$  and  $R^2 = 0.023$ . Thus, hopelessness ( $\beta = -0.151, t = 3.29, P < 0.001$ ) has a negative contribution by accounting for 15.1% of the variance in posttraumatic stress disorder.

The study showed that the p-value is <0.001 and lower than the significance value of 0.01, thus indicating that there is a statistically significant relationship between the variables; therefore, the hypothesis that hopelessness predicts PTSD is accepted.

Table 5

## Linear regression analysis on Hopelessness and Depression among military veterans in South East Nigeria

Variable	R	R <sup>2</sup>	F	p-value	β	T	p-value
Constant						40.54	<0.001*
Trauma	0.023	0.001	0.239	0.625	-0.023	-0.48	0.625

\*= Significant at  $p < 0.001$

The results in Table 5 show that experiencing hopelessness does not predict depression among military veterans  $F_{(1,468)} = 0.239$ ;  $P = 0.625$  with  $R = 0.023$  and  $R^2 = 0.001$ . Thus, hopelessness ( $\beta = -0.023$ ,  $t = -0.48$ ,  $P = 0.625$ ) has a negative contribution by accounting for 2.3% of the variance in depression. The P-value is 0.625 (see Table 5), which is higher than the significance value, which means that there is no significant difference in the analysis of the results; therefore, the hypothesis that hopelessness predicts PTSD among veterans in the Southeast region of Nigeria was rejected.

### Discussion

The purpose of the study was to investigate and determine whether exposure to trauma, which is often the life experience of military men and women in armed conflict, and experience of hopelessness are common predictors of mental health disorders such as post-traumatic stress disorder and depression among veterans in South-East Nigeria. In line with this purpose, data were collected and analyzed revealing the findings, which are discussed in this section. The results for the first hypothesis were determined from the linear regression analysis, showing that exposure to trauma significantly predicted post-traumatic stress disorder at  $p < 0.001$ . This finding largely supports multiple studies in the literature that have established that exposure to trauma in any life-threatening / injury event, including the participation of military personnel in armed conflict situations, is a risk factor for post-traumatic stress disorder (Dami, James, Zubairu, Karick and Dakwak, 2018; Dunkley, 2023; Morina, Schnyder, Klaghofer, Muller and Soelch, 2018, Roy et al., 2022; Young, Korinek, Zimmer and Toan (2021). Studies have reported that 50% incidence and prevalence of PTSD were found in veterans during and after the war (Asare-Doku, 2014; Dagona, 2022; Ibrahim, Akindele, and Useh, 2023; Ifeagwazi, Abiama and Chukwuorji, 2020).

Dagona (2022) in his study found that 56 (35%) of the participants reported experiencing symptoms of psychological distress by reliving war-related traumatic episodes, while 67 (48%) showed moderate to severe feelings of recurrent and distressing battlefield memories. Ibrahim, Akindele, and Useh's (2023) study also showed evidence of a 12.2% presence of PTSD among military personnel from a low-income country, such as those who were exposed to insurgency and terrorism. Experiencing an extremely adverse event (sometimes referred to as a potentially traumatic event or a traumatic event) is a necessary criterion for a diagnosis of PTSD (Abel et al., 2018; Ameh and Kazeem, 2014; American Psychiatric Association, 2013; McNally, 2012; Rawal, Karki Shrestha and Pathak, 2018; Smith, Robinson, and Segal, 2018; Stevelink et al., 2015; Hoge, Terhakopian, Castro, Messer,

and Engel, 2007; Kokun and Pischko, 2022; Undinyiaundeye and Agbama, 2022). For military veterans, the trauma may relate directly to combat duties, being in a dangerous war zone, or taking part in peacekeeping missions under difficult and stressful conditions.

For the second hypothesis, the statistical regression analysis obtained at ( $p < 0.001$ ) indicates that exposure to trauma does not significantly predict depression. However, the outcome of this hypothesis did not fully suggest that there is no relationship between exposure to trauma and the experience of depressive disorder. However, traumatic exposure is potentially not a direct predictor of depression in people exposed to violence and other terrifying events. The findings reflect the results of previous studies showing that depression is experienced as a comorbid disorder of PTSD in military veterans (Hankin, Spiro, Miller, and Kazis, 1999). Among PTSD symptoms, depressive symptoms have been found among veterans who are measured on the Mississippi Scale of Combat PTSD (Keane, Caddell, and Taylor, 1988).

This is confirmed by studies in which the prevalence of comorbid PTSD among veterans suffering from depression was also found to be between 36%-73% (Campbell et al., 2007; Raab, Mackintosh, Gros, and Morland, 2015; Scher and Resick, 2005). Keane, Caddell, and Taylor (1988) reported that among PTSD symptoms, there are also symptoms of depression found among veterans who measured on the Mississippi Scale of Combat PTSD,

The third hypothesis shows that feelings of hopelessness significantly predict PTSD ( $P < 0.001$ ) among military veterans. This finding concurs with existing empirically established evidence from studies that examined the relationship between hopelessness and post-traumatic stress disorder (Scher and Resick, 2005). However, the relationship between hopelessness and PTSD was found to be due to shared variance with depression. The identification of this relationship is presumed to have evolved from the theory of cognitive factors, in which hopelessness may have played a role in influencing PTSD (Scher and Resick, 2005). Many other studies have found that the attribution style for negative events specified in the hopelessness hypothesis is related to PTSD (Ginzburg, Solomon, Dekel, and Neria 2003; Grey, Pumphery, and Lombardo, 2003 as cited in Scher and Resick, 2005).

Lastly, the result of the fourth hypothesis shows that the feeling of hopelessness does not predict depression among military veterans. The outcome of this hypothesis cannot be completely rejected because it is clinically apparent that the feeling of hopelessness is a major symptom and criteria for the diagnosis of depression disorder. Furthermore, some studies have shown that rather than being the cause

of depression, it positively influences suicide ideation (Wolfe et al., 2019). Even though the hopelessness theory of depression (Abramson, Metalsky, and Alloy, 1989) explains the possible relationship, it is recognized that hopelessness is not a direct cause of depression. Instead, hopelessness theory analysts contend that recurrent exposure to unpredictable and unpleasant environmental circumstances gradually fosters feelings of helplessness and inescapability, which in turn breeds depression (Liu, Kleinman, Nestor, and Cheek, 2015). Dagona (2022) also reported that 56 (35%) of those who participated in combat experienced symptoms of psychological distress by reliving traumatic episodes related to war, while 67 (48%) showed moderate to severe feelings of continuous, distressing battlefield memories, and persistent dreams with themes (PTSD symptoms) related to combat experiences. Clausen, Clarke Philips, Haswell, and Rajendra (2019) also explained that combat-exposed war veterans are at risk of developing depression and other stress-related mental problems. Maclean, Levy, Miller, and Tollin's (2020) study on the effect of trauma on military members and their families revealed that military personnel can develop PTSD or other trauma-related disorders such as depression and anxiety, panic, and grief.

### Conclusion

A compendium of empirical evidence from research carried out at different times on various events of war experienced by military personnel has revealed that consistent military exposure is a strong predictor of mental illnesses such as PTSD and depression due to the risk of physical injury and psychological trauma from battlefield engagement. Therefore, similar to the evidence from extant literature, this current study that focused on investigating trauma exposure and hopelessness as predictors of PTSD and depression among war veterans in Southeastern Nigeria has equally established that it is one of the primary predictive factors for the onset of PTSD and depression disorder, including hopelessness and depression when exposed to the trauma of armed conflict. From these findings, it can be inferred that the abuse of alcohol and other substances and aggressive response behaviors among retired military personnel or those who are still serving are influenced by these psychological challenges. These behaviors are particularly due to the veteran's unmet mental health needs during and after discharge from service.

### Recommendations

Given that some veterans may experience mental disorders, it is important and necessary for the military in collaboration with the government to establish veterans' rehabilitation centers where serving and retired military personnel can be provided with quality care that will address their mental health problems. The military organization should employ trained mental health professionals including psychologists who provide psychological services through the assessment, diagnosis, and treatment of military veterans who experience mental distress during and after retirement. The military establishment should also collaborate with the Nigerian mental health professional bodies to develop and put in place mechanisms for identifying the most appropriate health intervention and levels of service provision required for the nation's veterans. Lastly, considering the enormous negative impact of combat-related stress on the military, pre-deployment and post-deployment social support provided to the veterans through peer support initiatives, community integration efforts, psychosocial treatment, and group therapy will be beneficial for this population.

### Declarations

#### Ethics Approval and Consent to Participate

Ethical approval for the study was obtained from the Gime American University, Research Ethics Committee for the Faculty of Humanities (Decision No: 6, Date: 3.11.2021). Additionally, written informed consent was obtained from the General Commanding Officer, 82 Division, Enugu State (14.4.2022). Subsequently, verbal consent was obtained from veterans who participated in the study.

#### Consent for Publication

Not applicable

#### Availability of Data and Materials

Data are readily available and will be provided on request.

#### Competing Interests

The author declares that no competing interests in this manuscript.

#### Funding

Not applicable.

#### Authors' Contributions

Sunday. E. Nwoye creatively designed the research study, conducted the data collection and data analysis, prepared the article, and also carried out a thorough evaluation of the article. Gabriel. E. Nweke undertook a comprehensive review and proofreading of the article and statistics. The authors read and approved the final version of the article accordingly.

### References

- Abel, J., Anongo, F.S., Dami, B.E., Ogbole, A. J., Abel, A., and Abel, J., Anongo, F.S., Dami, B.E., Ogbole, A. J., Abel, A., and Dagona, Z.K. (2018). Combat exposure and peritraumatic factors predicting PTSD among military personnel fighting insurgency in Nigeria. *Journal of Anxiety & Depression*, 1(2), 108
- Abramson, LY, Metalsky, GI and Alloy, LB. (1989). Hopelessness depression: a theory-based subtype of depression. *Psychological Review, APA PsycNet*. 96, 358-372., Doi:10.1037/0033-295X96.2.358.
- Ameh, A., Kazeem, O. (2014). Posttraumatic stress disorder among Nigerian military personnel-findings from a post-deployment survey. *Psychology, Medicine*. Retrieved from www.semanticscholar.org, 6/7/2023
- American Psychiatric Association, DSM-5 Task Force. (2013). *Diagnostic and Statistical Manual of Mental Disorder DSM-5™* (5th ed.). United State, American Psychiatric Publishing Inc. <https://doi.org/10.1176/appi.books.9780890425596>
- Asare-Doku, W., Donnir, GM., Ae-Ngibise., Peparah, J., Awuviry-Newton and Acquah. (2021). Psychiatric disorders among the military in West Africa: A systematic Narrative review. *Behavioral Science, Basel*; 11(10), 138. Doi: 3390/bs11100138.
- Chidubem, O. (2020). 8 Civil wars in Africa that changed the face of the continent. Retrieved online from <https://vocalafrica.com/civil-wars-in-africa/>, 24/10/2023
- Clausen AN, Clarke E, Phillips RD, Haswell C (2020). VA Mid-Atlantic MIRECC Workgroup, Morey RA. Combat exposure,

- posttraumatic stress disorder, and head injuries differentially relate to alterations in cortical thickness in veterans. *Neuropsychopharmacology: Official publication of American College of Neuropsychopharmacology*, 45(3), 491-498.
- Dagona, S.S. (2022). Assessment of combat-induced posttraumatic stress disorder (PTSD) among officers of the Nigerian army involved in the fight against Boko-Haram insurgency in North-Eastern Nigeria. *International Journal of Multidisciplinary and Current Educational Research (IJM CER)*, Volume 4, Issue 2. Pp.20-28.
- Dami, B.E., Abel, J., Zubairu, D. Karick, Dakwak, H. (2018). Combat exposure and PTSD among military combatants in North East Nigeria. *Journal of Psychology and Clinical Psychiatry*. 9(4), 400-404. DOI: 10.15406/jpcpy.2018.09.00558.
- Dunkley, F. (2023). Exposure to traumatic materials 3 stages support. FD Consultants, London Retrieved online from <https://www.fdconsultants.net>, 26/5/2023
- Farmer, C.M., Vaughan, C.A., Garnett, J. and Weinick, R.M. (2015). Pre-deployment stress, mental health and help-seeking Behaviors among marines. *Rand Health Quarterly*, 5(1), 23.
- Francoise B.S (2013). *Medecins Sans Frontiers. The practical guide to humanitarian law*. Rowman and Littlefield Publications, U.S.A.
- Ginzburg, K. Solomon, Z, Dekel, R, and Neira, Y. (2003). Battlefield functioning and chronic PTSD: Association with perceived self-efficacy and causal attribution. *Personality and Individual Differences Psychology*, 34(3), 463-476.
- Goldmann E. and Galea, S. (2014). Mental health consequences of disasters. *Annual Review of Public Health*, 35, 169-83. Doi: 10.1146/annurev-publhealth-032013-182435.
- Gonzalez, OI, Novaco, RW, Reger MA. And Gahm, GA. (2016). Anger Intensification with Combat-Related PTSD and Depression Comorbidity. *Psychological Trauma: Theory, Research, Practice, and Policy. American Psychological Association*, 8(1), 9–16 1942-9681 <http://dx.doi.org/10.1037/tra0000042>
- Gray, MJ, Pumphrey, JE and Lombardo, TW. (2003). the relationship between dispositional pessimistic style versus trauma-specific attributions and PTSD symptoms. *Journal of Anxiety Disorders*, 17(3), 289-303.
- Hankin, CS, Spiro, A., Miller, DR., Kazis, L. (1999). Mental disorders and mental health treatment among US Department of Veterans Affairs outpatient: the veterans' Health Study. *The American Journal of Psychiatry*, 156(12), 1924-30. doi:10.1176/ajp.15612.1924.
- Hoge, CW, Terhakopian, A. Castro, C.A., Messer, S.C., and Engel, C.C. (2007). Association of posttraumatic stress disorder with somatic symptoms, health visits, and absenteeism among Iraq war veterans. *The American Journal of Psychiatry*, 164, 150-153. doi:10.1176/ajp.2007.164.1150.
- Howit, D. and Cramer, D. (2011). Introduction methods in psychology. Edinburgh, United Kingdom, Pearson Education Limited, Third edition.
- Ibrahim SU, Akindele MO, Useh U (2023). Prevalence and Correlates of Post-traumatic Stress Disorders (PTSD) Among the Military in A Low-income Country. *Journal of Health Research.*, 37(2), 62-68. DOI. <https://doi.org/10.56808/2586-940X.1015>
- Ifeagwazi C.M., Abiama E. Chukwuorji, J.C. (2012). Self-reported mental health status of a sample of Nigeria-Biafra war veterans. *International Journal of Research in Arts and Social Sciences*, 4, 176-189
- Keane, T. M., Caddell, J. M., & Taylor, K. L. (1988). Mississippi Scale for Combat-Related Posttraumatic Stress Disorder: Three studies in reliability and validity. *Journal of Consulting and Clinical Psychology*, 56(1), 85–90. doi.org/10.1037/0022-006X.56.1.85
- Kokun, O., Agayev N., Pischko, I. and Stasiuk, V. (2020). Characteristic impacts of combat stressors on posttraumatic stress disorder in Ukrainian military personnel who participated in the armed conflict in Eastern Ukraine. *International Journal of Psychology and Psychological Therapy*, 20, 3, 315-326.
- Leshem, S. Keha, E, and Kalanthrof (2023). Post-trauma stress in war veterans and secondly traumatic stress among parents of war veterans five years after the 2014 Israel-Gaza military conflict. *European Journal of Psychotraumatology* 14(2).2235983 Doi:10.1080/20008066.2023.2235983
- Liu, R. T., Kleiman, E. M., Nestor, B. A., & Cheek, S. M. (2015). The Hopelessness Theory of Depression: A Quarter Century in Review. *Clinical psychology: a publication of the Division of Clinical Psychology of the American Psychological Association*, 22(4), 345–365. <https://doi.org/10.1111/cpsp.12125>
- Lord H.G (1973). Ex Post Facto Studies as a Research Method. Special Report No. 7320, Syracuse City School District, N.Y.
- Mclean, C.P., Levy, H.C., Miller, M.L. Tolin, D.F. (2022). Exposure therapy for PTSD in military population: A systematic review and meta-analysis of randomized clinical trials. *Journal of Anxiety Disorders*, volume 90, <https://doi.org/10.1016/j.janxdis.2022.102607>
- McNally, R.J. (2012). Psychiatric disorder and suicide in the military, then and now. *Journal of Anxiety Disorder*, 26(7), 776-778. doi: 10.1016/j.janxdis.2012.06.008.
- Morey, R.A. (2020). Combat exposure, post-traumatic stress disorder, and head injuries differently relate to alterations in cortical thickness in military veterans. *Neuropsychopharmacology: Official publication of the American College of Neuropsychopharmacology*, 45(3), 491-498. doi.org/10.1038/s41386-019-0539-9
- Morina, N., Schnyder, U., Klaghofer, R. Muller, J. and Martin-Soelch, C. (2018). Trauma exposure and the mediating role of posttraumatic stress on somatic symptoms in civilian war victims. *BMC Psychiatry*, 18, 92. doi.org/10.1186/s12888-018-1680-4
- Muhie, S., Gautam, A., Yang, R., Misganaw, B., Daigle, B. J., Jr, Mellon, S. H., Flory, J. D., Abu-Amara, D., Lee, I., Wang, K., Rampersaud, R., PTSD Systems Biology Consortium, Hood, L., Yehuda, R., Marmar, C. R., Wolkowitz, O. M., Ressler, K. J., Doyle, F. J., 3rd, Hammamieh, R., & Jett, M. (2023). Molecular signatures of post-traumatic stress disorder in war-zone-exposed veteran and active-duty soldiers. *Cell Reports Medicine*, 4(5), 101045. <https://doi.org/10.1016/j.xcrm.2023.101045>
- Murthy, R., and Lhshminarayana, R. (2006). Mental health consequences of war: a brief review of research findings. *World Psychiatry, Official Journal of the World Psychiatric Association (WPA)*, 5(1) 25-30.
- Okenyi, S. (2015). Need for post-traumatic stress disorder (PTSD) counseling policy in Nigeria. *International Journal of Research in Education and Psychology (IJREP)*, 1, 13-22
- Pietrzak, R. H., Johnson, D. C., Goldstein, M. B., Malley, J. C., and Southwick, S. M. (2009). Perceived stigma and barriers to mental healthcare utilization among OEF/OIF veterans. *Psychiatric Services (Washington DC)*, 60(8), 1118-1122.
- Raab, P. A., Mackintosh, M. A., Gros, D. F., & Morland, L. A. (2013). Influence of depression on state and trait anger in veterans with posttraumatic stress disorder. *Cognitive Therapy and Research*, 37(4), 673– 679.
- Rapmund, V. and Moore, C. (2000). Women's stories of depression: a constructive approach. *South-African Journal of Psychology*, 30(2), 20-30.
- Rawal, N., Karki, R., Shrestha, D., and Pathak, N. (2018). Factors associated with posttraumatic stress disorder and depression among Nepalese combatants during armed insurgency. *Journal of Psychiatrists Association of Nepal*, 6(1), 24. Doi: 10.3126/jpan.v6i1.21768

- Roy, H., Rohaly, T., Jeter, A., Villarreal, J., Dalangin, B., Enders, L., and Boykin, G. (2022). Understanding Posttraumatic stress disorder in military populations for designing research protocols. Retrieved online from <https://apps.dtic.mil/sti/trecms/pdf/AD1164023.pdf> , 8/6/2023
- Scher, C.D., and Resick, P.A. (2005). Hopelessness as a risk factor for post-traumatic stress disorder symptoms among interpersonal violence survivors. *Cognitive behavioral theory*, 34(2), 99-107.
- Schnurr, P.P., Vielhauer, M. Weathers, F and Findler, M. (1995). The brief trauma questionnaire (BTQ) {Measurement Instrument}. Retrieved online from <https://www.ptsd.va.gov>, 8/9/2023
- Shor, J. (2021). Posttraumatic Stress Disorder in Biafra War Survivors. Faculty of the Chicago School of Professional Psychology ProQuest Dissertation and Theses. Retrieved online from <https://www.proquest.com/docview>, 6/7/2023
- Smith, M.A., Robinson, L., and Segal, J. (2023). PTSD in military veterans. HelpGuide.org Retrieved online from <https://www.helpguide.org/articles/ptsd-trauma/ptsd-in-military-veterans.html>, 11/9/2023
- Stevellink, S.A., Jenkins, S., Sundin, J., and Fear, N.T. (2015). The prevalence of mental health disorders in ex-military personnel with physical impairment. A systematic review. *Occupational and Environmental Medicine*, 72(4), 243-251. doi.org/10.1136/oemed-2014-102207
- Undiyaundeye, F., Agbam, I.A. Post-traumatic stress disorder among military personnel in Nigeria: A Social Approach. *Scholars Journal of Arts, Humanities and Social Sciences*, 10(9), 402-406
- Wolfe, K.L. Nakonezny, P.A., Owen, V.J. Rial, K.V. Moorehead, A.P, Kennard, B.D., and Emsile, G.J. (2019). Hopelessness as a predictor of suicide ideation in depression male and female adolescent youth. *Suicide & life-threatening Behavior*, 49(1), 258-263.
- Young, Y., Korinek, K., Zimmer, Z., and Toan T.K. (2021). Assessing exposure to war-related traumatic events in older Vietnamese war survivors. *Conflict and Health*, 15, 14 doi.org/10.1186/s13031-021-00343-y.





RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# Examining the Predictive Role of Depression on Smartphone Addiction

## Depresyonun Akıllı Telefon Bağımlılığı Üzerindeki Yordayıcı Rolünün İncelenmesi

Mehmet Enes Sağar<sup>1</sup>, Feridun Kaya<sup>2</sup>, Yüksel Eroğlu<sup>3</sup>, Durmuş Sinan<sup>4</sup>,

Yılmaz Çelik<sup>5</sup>, Cafer Tosun<sup>6</sup>

### Abstract:

The aim of this study was to examine the predictive role of depression on smartphone addiction. A total of 326 adults (219 women and 107 men) participated in the study. The ages of the participants ranged between 18 and 61 years old, and the average age was  $26.86 \pm 8.05$ . Within the scope of the research, a demographic information form, DASS-21 (Depression, Anxiety and Stress Scale) depression subscale and Smartphone Addiction Scale-Short Form were applied. Depression has been found to be positively associated with smartphone addiction. The results obtained from the structural equation model showed that depression positively predicted smartphone addiction. This research, which provides a better understanding of the impact of depression, a common psychiatric disorder, on the formation of smartphone addiction, may enable the design of effective interventions within the scope of preventive guidance and the development of methods to reduce excessive use.

**Keywords:** Depression, Smartphone addiction, Adult.

<sup>1</sup>Assoc. Prof. Dr., Afyon Kocatepe University, Faculty of Education, Department of Guidance and Psychological Counseling, Afyonkarahisar, Türkiye, e-mail: mehmetenes15@gmail.com, Orcid Id: 0000-0003-0941-5301

<sup>2</sup>Assoc. Prof. Dr., Ataturk University, Faculty of Letters, Department of Psychology, Erzurum, Türkiye, e-mail: feridunkaya25@gmail.com, Orcid Id: 0000-0001-9549-6691

<sup>3</sup>Prof. Dr., Afyon Kocatepe University, Faculty of Education, Department of Guidance and Psychological Counseling, Afyonkarahisar, Türkiye, e-mail: yeroglu45@gmail.com, Orcid Id: 0000-0002-0028-0327

<sup>4</sup>Assistant Director, Uşak Guidance and Research Center Directorate, Uşak, Türkiye, +905446265006, e-mail: sinandurmus09@gmail.com, Orcid Id: 0000-0002-5980-3145

<sup>5</sup>School Principal, Ahmet Yesevi Vocational and Technical Anatolian High School, Manisa, Türkiye, edta45@hotmail.com, Orcid Id: 0009-0005-8902-8716

<sup>6</sup>School Principal, Tire Kurtuluş Primary School, İzmir, Türkiye, e-mail: cafertosun32@gmail.com orcid Id: 0009-0009-1472-971X

**Address of Correspondence/Yazışma Adresi:** Mehmet Enes Sağlar, Afyon Kocatepe University, Faculty of Education, Department of Guidance and Psychological Counseling, Afyon, Türkiye, e-mail: mehmetenes15@gmail.com

**Date of Received/Geliş Tarihi:** 30.03.2024, **Date of Revision/Düzeltilme Tarihi:** 20.04.2023, **Date of Acceptance/Kabul Tarihi:** 19.05.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Sağar, M.E., Kaya, F., Eroğlu, Y., Sinan, D., Çelik, Y., Tosun, C. (2024). Examining the Predictive Role of Depression on Smartphone Addiction. *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 156-165

© 2024 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktpddergisi.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes.  
<http://creativecommons.org/licenses/by/4.0/>

**Öz:**

Bu araştırmanın amacı depresyonun akıllı telefon bağımlılığı üzerindeki yordayıcı rolünü incelemektir. Çalışmaya 219'u kadın, 107'si erkek olmak üzere toplam 326 yetişkin birey katılmıştır. Katılımcıların yaşları 18 ile 61 yaş arasında değişmekte olup, yaş ortalaması  $26.86 \pm 8.05$ 'tir. Araştırma kapsamında kişisel bilgi formu, DASS-21 (Depresyon, Anksiyete ve Stres Ölçeği) depresyon alt ölçeği ve Akıllı Telefon Bağımlılığı Ölçeği-Kısa Formu uygulanmıştır. Depresyonun akıllı telefon bağımlılığı ile pozitif ilişkili olduğu bulunmuştur. Yapısal eşitlik modelinden elde edilen sonuçlar depresyonun akıllı telefon bağımlılığını pozitif yönde yordadığını göstermiştir. Akıllı telefon bağımlılığının oluşumunda yaygın bir psikiyatrik bozukluk olan depresyonun etkisinin daha iyi anlaşılmasını sağlayan bu araştırma, önleyici rehberlik kapsamında etkili müdahalelerin tasarlanmasını ve aşırı kullanımı azaltacak yöntemlerin geliştirilmesini sağlayabilir.

**Anahtar Kelimeler:** Depresyon, Akıllı telefon bağımlılığı, Yetişkin.

**Introduction**

The introduction of the iPhone to global markets in 2007 led to a significant and radical change in the mobile industry and subsequent mobile phone products due to the numerous technological developments that came with it (Frommer, 2011). A smartphone is “an answer phone that performs many of the functions of a computer, typically having a touch-screen interface, internet access, and an operating system that can run downloaded applications.” (Rotondi, Stanca, & Tomasuolo, 2017, p. 18) Based on the typology of Internet uses and applications (Song, Singleton, Hill, & Koh, 2004, p.60), the functions of smartphone use can be classified as productivity increase, information seeking, social information and interaction, distraction, relaxation, and entertainment (van Deursen, Bolle, Hegner, & Kommers, 2015, p. 412).

The widespread use of smartphones has brought positive and negative effects for individuals of all generations. Over the last decade, smartphone usage has increased tremendously across all age groups, including young and old users (Busch & McCarthy, 2021, p.14). According to Statista (2023), the number of smartphone users in the world in 2023 is 6.92 billion, which means that 86.11% of the world's population owns a smartphone. On the one hand, using a smartphone is convenient and provides access to countless forms of entertainment, online shopping, virtual socializing, and more. Conversely, there is growing evidence of the various negative effects of excessive smartphone use on mental health and well-being, with all the possibilities the device has to offer (Billieux, Maurage, Lopez-Fernandez, Kuss, & Griffiths, 2015, p.158). As a result, excessive use of digital media, especially smartphone use, has been associated with various mental health problems, highlighting the need for further research and intervention in this area.

Studies have shown several connections between smartphone use and symptom-related negative outcomes in the user's daily life (Busch & McCarthy, 2021, p.1). These include social withdrawal, loss of productivity, poor academic performance, poor social relationships, physical health problems, and emotional distress (Wacks & Weinstein, 2021, pp. 2-3). Given the variety of negative outcomes associated with smartphone addiction and its increasing prevalence, understanding the underlying factors and their impact on individuals' daily functioning is crucial to addressing this emerging construct.

Smartphone addiction can be defined in various ways. In the first of these definitions, smartphone addiction

involves having a strong internal urge to use the smartphone and impaired self-control ability (Ding et al, 2022, p. 2). In the second definition, smartphone addiction includes prioritizing smartphone use over other activities (Panova & Carbonell, 2018, p.254). The third definition refers to the continuation of smartphone use despite its negative consequences (Saunders et al., 2017). In short, typical symptoms of smartphone addiction include both psychological (e.g. cravings, loss of salience and control) and physical (e.g. tolerance and withdrawal) dependence (Panova & Carbonell, 2018, p. 253). Besides “smartphone addiction,” other terms used to describe this construct of smartphone use include “problem smartphone use,” “overuse,” “compulsive use,” and “compensatory use.” (Kardefelt-Winther, 2014).

Many researchers have explained smartphone addiction in the context of addictive disorders and conceptualized it as a behavioral addiction (Busch & McCarthy, 2021, pp. 2-3). In recent years, it has been determined that smartphone addiction may be associated with excessive use of smartphones and addiction symptoms, causing smartphone addiction to resemble behavioral addictions such as gambling and game addiction (Derevensky, Hayman, & Gilbeau, 2019, p.1172). Moreover, Billieux et al. (2015) showed that smartphone addiction has the basic components of addictive behavior, such as cognitive salience, loss of control, mood change, tolerance development, withdrawal, conflict and relapse. Kwon et al. (2013) revealed that smartphone addiction consists of six symptoms: discomfort in daily life, positive expectation, deprivation, cyberspace-oriented relationship, excessive use and deprivation.

According to Pivetta, Harkin, Billieux, Kanjo, and Kuss (2019, p. 106), researchers agree that smartphone addiction is an addictive behavior and is characterized by impaired use control that interferes with daily activities and causes dysfunction. Disruption of usage control may not only mean using smartphones more than intended but may also include use driven by a compulsive and unconscious impulse (Lin, Lin, Yang, & Kuo, 2017, p. 341). Additionally, even though people try to avoid using smartphones, smartphone addicts often experience discomfort following cessation of use, leading them to relapse into smartphone use to eliminate negative emotions. Therefore, repeated failures to regulate smartphone use have also been conceptualized as a

defining feature of smartphone addiction (Cheng & Meng, 2021, p.1).

From a comprehensive perspective, findings from studies examining the relationship between smartphone addiction and depression can be grouped into three groups. First, some studies have suggested that smartphone addiction may predict depression and anxiety. Geng, Gu, Wang, and Zhang (2021, p.418) found that smartphone addiction predicts depression. In a study conducted by Gao, Li, Zhu, Liu, and Liu (2016, p.7), they determined that smartphone addiction may be a risk factor for depression and anxiety. Bian and Leung (2015, p.2) stated that high levels of smartphone addiction can predict depression. On the contrary, some researchers (Mi, Jung, Hyun, Min, Hye, June, 2014; Wang, Lei, Wang, Nie, Chu, & Jin, 2018) were of the opinion that depression could predict smartphone addiction. Wang, et al. (2018) examined the moderating role of depression in the relationship between sensation-seeking and smartphone addiction in adolescents and determined that depression predicted smartphone addiction. Mi et al. (2014) found that depression predicted smartphone addiction. Kim, Cho and Kim (2017, p.6) revealed that depression and loneliness play a serial mediating role in the relationship between anxious attachment and smartphone addiction. Finally, some researchers (Elhai, Levine, Dvorak, & Hall, 2017, p.77; Kim, Seo, & David, 2015, p.442; Stanković, Nešić, Čičević, & Shi, 2021, p.441) have suggested that depression is in a bidirectional relationship with smartphone addiction. For example, Stanković et al. (2021) found that depression was bidirectionally related to smartphone addiction.

In this study, the theory that depression predicts smartphone addiction was adopted. Considering the views that depression may play a crucial role in the etiology of smartphone addiction (Boumosleh & Jaalouk, 2017, p.3), it is of great importance to determine under what conditions intense depression can lead to smartphone addiction. Conducting research on the conditions under which depression leads to smartphone addiction necessitates research investigating the relationship between depression and smartphone addiction. As research is conducted showing the relationship between depression and smartphone addiction and more evidence is obtained regarding the existence of this relationship, the process will evolve into research on the conditions under which this relationship occurs.

Due to the prevalence of smartphone ownership among college students, this group emerges as a particularly vulnerable population to the negative effects of smartphone use. Although all age groups now use smartphones, the most important part of the users are university students and the majority of them use their smartphones for four to six hours a day (Ataş & Çelik, 2019, p.61; Parent, Bond, Wu, & Shapka, 2022, p.2). According to research literature, excessive use of digital media is associated with increased mental health problems, especially among college students (Lattie, Lipson, & Eisenberg, 2019, p.2). Moreover, a large-scale epidemiological study shows that diagnoses of psychopathology in college students increased from 22% to 36% between 2007 and 2017, when the first smartphone and social media gained popularity (Lipson, Lattie, & Eisenberg, 2019, p.2). These findings highlight the need for further investigation of the relationship between

smartphone use and mental health problems among college students and point the way to a comprehensive understanding of smartphone addiction.

Positive and negative reinforcement play an important role in understanding the development and maintenance of smartphone addiction. Positive reinforcement provides a desired stimulus, such as praise or reward, to reinforce a behavior that produces pleasure or satisfaction (Yin, Yahaya, Sangryeol, Maakip, & Maalip, 2019, p.4). Negative reinforcement reduces an aversive stimulus, such as eliminating an unpleasant task. Both positive and negative reinforcement crave positive emotion and attempt to reduce negative emotion and increase the likelihood of the behavior being repeated (Wanigaratne, 2006). Operant conditioning may explain the phenomenon of smartphone addiction and suggest how positive reinforcement can lead to and promote smartphone addiction. Positive reinforcement, such as instant gratification and rewards provided by online activities, can create a reinforcement cycle that strengthens smartphone addiction (Lee & Kim, 2022, p. 70). Addiction motivated by negative reinforcement is often referred to as avoidance conditioning, affect regulation, or even self-medication, as the user attempts to alleviate negative emotions (Parent et al., 2022, p.8). By examining the effect of positive reinforcement in creating a reinforcement cycle and the role of negative reinforcement in alleviating negative emotions, operant conditioning provides valuable insight into the mechanisms underlying smartphone addiction.

One of the approaches to explain the development and maintenance of smartphone addiction includes a theory proposed by Kardefelt-Winther (2014) that points to emotionally motivated smartphone use that may eventually lead to addiction, as hypothesized in the operant conditioning model of addiction. This theory, called Compensatory Internet Use Theory, suggests that negative life situations such as stress or depressive symptoms may lead individuals to spend time online in an attempt to alleviate negative emotions (Elhai, Levine, & Hall, 2019, p. 46; Kardefelt-Winther, 2014). According to the theory, the root of the problem is the reaction to negative life situations and unmet needs that are compensated for by excessive internet use, such as smartphone addiction (Elhai et al., 2019). Users are motivated to consume online media to relieve negative emotions (Kim et al., 2015, p. 441). This behavior may become a habit over time. Ultimately, it can lead to negative consequences and addiction, as a high level of compensation is needed to relieve negative emotions. For people with persistent problems, the need to compensate can be constant and lead to smartphone addiction (Kardefelt-Winther, 2014). Elhai et al. (2019) emphasized that compensatory internet use and operant conditioning models can be called self-treatment or affect regulation models, and smartphone addiction, which can be seen as a behavioral addiction, can be a tool to alleviate negative emotion.

Compensatory use, often referred to as “self-medication” or “emotion regulation,” suggests that addiction developed as a way to cope with negative emotions (Baker, Piper, McCarthy, Majeskie, & Fioere, 2004, p. 34). Compensatory use can cause subconscious associations that encourage automatic motivation to engage in behaviors (Baker et al., 2004). However, failure to engage in this automated behavior leads to increased negative mood. Therefore, it offers a possible mechanism for

maintaining compensatory use. "Compensatory use" may not be exactly the same as dependent use, but this type of use may provide opportunities to escape real-world problems and tasks and/or avoid negative feelings and emotions (Kardefelt-Winther, 2014).

Compensatory use plays an important role in understanding the development and persistence of smartphone addiction. Compensatory use attempts to reduce negative emotion and increase the likelihood of the behaviour being repeated (Wanigaratne, 2006). Positive reinforcement, such as instant gratification and rewards provided by online activities, can create a reinforcement loop that strengthens smartphone addiction (Lee & Kim, 2022, p.70). Addiction motivated by negative reinforcement is often referred to as avoidance conditioning, affect regulation, or even self-medication, as the user attempts to alleviate negative emotions (Parent et al., 2022, p.2). By examining the effect of positive reinforcement in creating a reinforcement cycle and the role of negative reinforcement in alleviating negative emotions, compensatory use provides valuable insight into the mechanisms underlying smartphone addiction.

Although the relationship between smartphone addiction and depression has been investigated in many studies, it is not clear whether smartphone addiction causes depression or depression causes smartphone addiction (Sarman & Çiftci, 2024, p.151). However, studies examining the link between smartphone addiction and depression are insufficient to reveal the excessive smartphone use behaviors of individuals at risk for depression. Many of the studies conducted in this context appear to use models that assume that more smartphone use is associated with increased levels of depression. For example, Park and Lee (2022, p.2) examined the relationship between smartphone addiction and depression among adolescents using the Internet Paradox Model. In the Internet Paradox Model, it is suggested that more smartphone use leads to more depression. In addition, there are other researchers (Bian & Leung, 2015, p.66; Sarman & Çiftci, 2024, p.154) who suggest that smartphone addiction leads to depression and loneliness. To summarize, studies examining the predictive effect of depression on smartphone addiction (Demirci, Akgönül, & Akpınar, 2015, p.88; Elhai et al., 2017; Kim et al., 2015) are quite limited.

Therefore, this study aimed to examine the predictive effect of depression on smartphone addiction by making use of the Compensatory Use Theory (Kardefelt-Winther, 2014). This research will contribute to both determining the direction of the relationship between depression and smartphone addiction and revealing to what extent individuals experiencing depression are at risk in terms of smartphone addiction. Determining that depressed individuals turn to their mobile phones to get rid of their negative emotions pushes them towards smartphone addiction (Mun & Lee, 2021, p. 400), making it important to reveal the predictive effect of depression on smartphone addiction. In this regard, this research, which aims to examine the predictive effect of depression on smartphone addiction, will contribute to the design of intervention programs aiming to reduce depression and smartphone addiction.

For all these reasons, this study aimed to test the role of depression in the formation of smartphone addiction in the

context of Compensatory Use Theory. For this purpose, the following hypothesis was tested in this research:

H1: Depression positively predicts smartphone addiction.

## Method

### Research Design

This study was designed in accordance with relational research, which is one of the quantitative research designs. Relational models are research models that aim to determine the existence of co-variation between two or more variables (Fraenkel, Wallen, & Hyun., 2015, p. 331). In line with the nature of correlational research, the purpose of this study is to examine the relationship between depression and smartphone addiction.

### Research Group

G\*Power 3.1 program was used to determine the sample size. The minimum number of samples for models with effect size ( $F^2$ ) =.0.18, alpha level 0.05 and power level 0.95 was 325. This number is considered sufficient for the sample size in the current study (Faul, Erdfelder, Lang, & Buchner, 2007, p.176). The study group of this research consisted of a total of 326 adult individuals, 219 of whom were women (67.2 %) and 107 of whom were men (32.8 %). The average age of the participants, whose ages ranged from 18 to 61, was (Mean=26.86, SD=8.05).

### Data Collection Tools

In this study, the Demographic Information Form, Depression Anxiety Stress Scale and Smartphone Addiction Scale- Short Version were used as data collection tools. Information about the tools is presented below.

**Demographic Information Form:** The Demographic Information Form developed by the researchers aimed to collect personal information about university students. Accordingly, the form included expressions containing information such as age and gender.

**Depression, Anxiety, and Stress Scale:** DASS-21 was developed by Lovibond and Lovibond (1995a, p.340) by selecting the items of DASS-42 in order to shorten the duration. DASS-21 contains 7 items for each scale and the results are multiplied by two in evaluation (Lovibond & Lovibond, 1995b, p.33). Turkish adaptation of the short form of the scale was conducted by Sarıçam (2018, p.19). The short form consists of 21 items, three subscales (depression, anxiety and stress) and a 4-point Likert-type scoring system (between 0: Never and 3: Always). The total score of each sub-dimension is calculated by adding the scores of the items obtained from the sub-dimension. High scores obtained from the sub-dimensions mean that the individual's feelings towards the relevant sub-dimension are intense. Cronbach's alpha internal consistency coefficients for depression, anxiety and stress subscales were found to be 0.87, 0.85 and 0.91, respectively. The depression subscale was used in this study and the Cronbach's alpha internal consistency coefficient was calculated as 0.91.

**Smartphone Addiction Scale-Short Version:** This scale was developed by Kwon, Kim, Cho and Yang (2013, p.5) to assess individuals' smartphone addiction risk. The scale consists of 10 items. The evaluation method of the scale is Likert type and the scale items are scored between '1', strongly disagree, and '6', strongly agree. Scale scores range from the lowest of 10 to the highest of 60. It is

evaluated that as the score obtained from the test increases, the risk for addiction increases. The scale has a single factor and has subscales. In the Korean sample, the cut-off score for men is 31 and for women is 33. The Cronbach's alpha coefficient of the internal consistency and concurrent validity of the original form is a 0.91. Validity and reliability studies of the scale on individuals from Turkish culture were conducted by Noyan, Darcin, Nurmedov and Yilmaz (2015, p. 78). As a result of the validity and reliability analysis conducted, the Cronbach alpha coefficient, which indicates the reliability of the scale on individuals in Turkish culture, was measured at  $\alpha=0.867$ . The test/retest reliability coefficient is  $\alpha = 0.926$ . The Cronbach alpha coefficient obtained within the scope of this study was calculated as 0.88.

### Data Collection

After the planning phase of the research was completed, the necessary ethical permissions were obtained. Ethical permission for the research was received from Afyon Kocatepe University Social and Human Sciences Scientific Research and Publication Ethics Board on 20.03.2024 with document number 259324. Then, the research data was prepared via Google Forms and the data was collected online. The researchers sent the data collection tools to university students via e-mail and invited them to participate in the research. In addition, the university students to whom the e-mails were sent were asked to include them in the research by sending these e-mails to their acquaintances. Thus, it was aimed to reach a larger of participants. During the collection of research data, participants were constantly contacted to clarify points they did not understand, and when necessary, meetings were held via Zoom with the camera turned off, and it was stated that they could ask any questions they wanted.

The inclusion criteria of the study are using a smartphone and being at risk for smartphone addiction. Participants with psychiatric disorders were excluded from the study. Participants were informed that participation in the study was voluntary. Participants who agreed to participate in the study were informed about the purpose of the research and informed consent was obtained from the participants. Confidentiality was taken into consideration during the data collection process, and it was determined that the participants could leave the research at any time without any explanation. Filling the measuring tools takes approximately 15 minutes. The online data collection process of the research was completed in approximately thirty days.

### Data Analysis

To test the hypothesis of this study, the two-stage process suggested by Anderson and Gerbing (1988, p.411) was applied. First, the measurement model was tested to examine whether the latent variables were adequately represented by their indicators. After it was confirmed that the measurement model provided sufficient evidence in terms of goodness-of-fit criteria, the testing of structural models based on latent variables began to examine the predictive relationship. Model determination in the analysis of structural models; model identification; interpretation of parameter estimates; Stages such as evaluating model fit and reporting the results were followed (Byrne, 2010; Hoyle, 2014; Kline, 2016; Schumacker & Lomax, 2010, p.10).

Before performing statistical operations on the data obtained, the data set was reviewed and some editing operations were made. In this regard, the dataset was examined in terms of extreme values and normal distribution (Field, 2013). Within the scope of the study, extreme values were investigated by converting the total scores for the variables into standardized z scores. It was observed that the Z statistics were between -3 and +3, so the data set was free of extreme values (Tabachnick & Fidell, 2014, p.79). Descriptive statistics for the variables were calculated and skewness and kurtosis values were found to be between -2 and +2. In this regard, it was determined that the data was normally distributed (George & Mallery, 2019, p.124). After the dataset was ready, the testing phase of the predictive model was started. For this purpose, the IBM AMOS Graphics program was used and structural equation modeling was carried out according to maximum likelihood estimation. As a result of structural equation modeling analysis, various fit indices were examined. For the  $\chi^2/df$  goodness of fit value among these fit indices,  $\chi^2/df$  ratio of three or lower in small samples and five or lower in large samples is expressed as a good level of fit (Tabachnick & Fidell, 2014, p. 720). For the NFI goodness of fit value, values between .90 and .95 were found to be acceptable, and values of .95 and above indicated perfect fit (Schermelel-Engel, Moosbrugger, & Müller, 2003, p. 40). For the CFI goodness of fit value, it was emphasized that values between .95 and .97 are acceptable, and values of .97 and above indicate fit (Hu & Bentler, 1999, p.1). Although there are different evaluations for SRMR and RMSEA goodness of fit values, it is reported that values between .08 and .05 are acceptable, and values lower than .05 indicate perfect fit (Schermelel-Engel et al., 2003, pp. 36-37; Tabachnick & Fidell, 2014, pp.721-725).

## Results

### Correlation Analysis Results

To examine the relationships between depression and smartphone addiction, first the correlation values were examined. Table 1 shows the relationship between variables, means, standard deviations, skewness and kurtosis values. As a result of the correlation analysis, a positive significant relationship was found between depression and smartphone addiction ( $r = 0.391$ ,  $p < .001$ ; % 95 CI [0.301, 0.480]). The descriptive values of the measurement tools and the relationships between the observed variables are presented in Table 1.

**Table1.** Descriptive values and relationships for measurement tools

Variables	1	2
Depression	1	
Smartphone addiction	0.391***	1
Mean	6.914	30.819
Standard deviation	5.288	10.629
Skewness	0.790	-0.009
Kurtosis	0.161	-0.566

\*\*\* $p < .001$

### Measurement Model Analysis Results

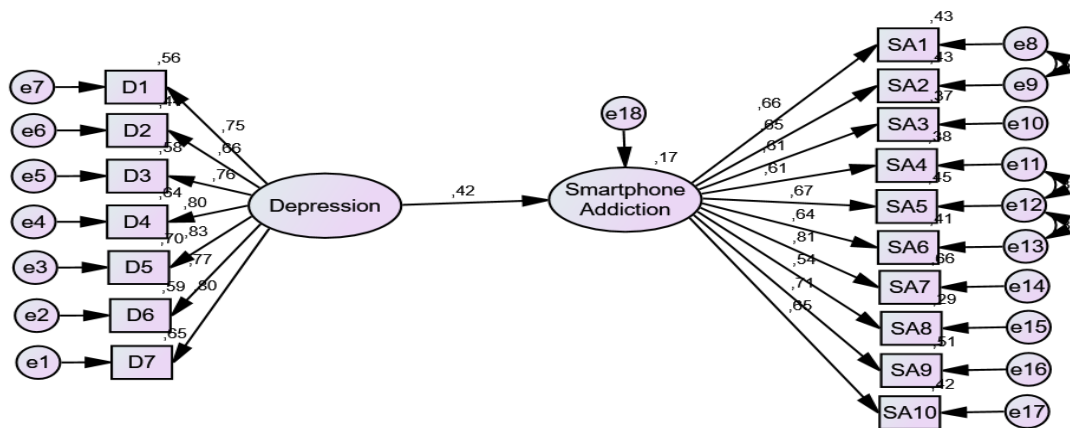
The measurement model consists of two latent (depression and smartphone addiction) and seventeen observed

variables. As a result of the analysis, the goodness of fit values of the measurement model were examined and it was determined that some of the goodness of fit values of the model were lower than acceptable ranges ( $X^2_{(df=18, N=326)} = 508.680, p < .001, X^2/df = 4.311, CFI = 0.867, NFI = 0.834, RMSEA = 0.101$  % 90 BCa (.092, .110), and  $SRMR = .073$ ). When the model modification suggestions were examined, it was seen that error correlations were high between smartphone addiction items 1 and 2, 4 and 5, and 5 and 6. Three modifications were made to the measurement model, respectively, and the goodness of fit values of the measurement model were found to be acceptable ( $X^2_{(df=115, N=326)} = 275.207, p < .001, X^2/df = 2.393, CFI = 0.945, NFI = 0.910, RMSEA = 0.065$  % 90 BCa (.056, .075), and  $SRMR = .063$ ).

### Structural Model Analysis Results

In this study, the structural model was tested to examine the predictive role of depression on smartphone addiction. Parameter estimates for the structural model were calculated and all paths in the model were found to be

statistically significant. As a result of the analysis, the goodness of fit values of the structural model were examined and it was determined that some of the goodness of fit values of the model were lower than acceptable ranges ( $X^2_{(df=18, N=326)} = 508.680, p < .001, X^2/df = 4.311, CFI = 0.867, NFI = 0.834, RMSEA = 0.101$  % 90 BCa (.092, .110), and  $SRMR = .073$ ). When the model modification suggestions were examined, it was seen that error correlations were high between smartphone addiction items 1 and 2, 4 and 5, and 5 and 6. Three modifications were made respectively and the goodness of fit values of the model were found to be acceptable ( $X^2_{(df=115, N=326)} = 275.207, p < .001, X^2/df = 2.393, CFI = 0.945, NFI = 0.910, RMSEA = 0.065$  % 90 BCa (.056, .075), and  $SRMR = .063$ ). As a result, it was determined that depression positively and significantly predicted smartphone addiction in the structural model ( $\beta = 0.416, p < .001$ ). Additionally, depression was found to explain 17% of the variation in smartphone addiction. The findings obtained are shown in Figure 1.



**Figure 1.** The predictive role of depression in smartphone addiction

### Discussion

The theory of compensatory internet use suggests that people facing negative life situations may be motivated to alleviate their negative emotions through excessive smartphone use. People living with depression may be more exposed to smartphone use than people with healthy psychological structures (Kardefelt-Winther, 2014). People with depression tend to withdraw from social interactions due to unrewarding experiences in social relationships (Allen et al., 2006). This tendency towards social withdrawal may extend to smartphone addiction, such that people with depression are more motivated to engage in social contact via smartphones. Moreover, people with depression often experience negative emotions such as sadness and hopelessness (Rottenberg, 2005). Therefore, they are motivated to consume entertainment media content to alleviate negative emotions (Kim et al., 2015). However, due to the lack of self-regulation ability in people with depression, they may be more vulnerable to uncontrolled use of smartphones when seeking hedonic experiences (Elhai et al., 2017).

Additionally, depressed individuals use mobile phones as a coping method to cope with their negative emotions (Kim et al., 2015). Therefore, smartphone use may function as an experiential avoidance strategy to deflect

distressing emotional content; however, experiential avoidance is ineffective in achieving this goal and leads to negative emotional consequences (Machell, Goodman, & Kashdan, 2015, p. 352). Thus, pathological use may begin as a positive reinforcement process, as in smartphone addiction. As the behavior becomes mandatory, the person begins to experience negative emotions when not performing the behavior. As a result, the only way to alleviate deprivation is to engage in behavior (Wise & Koob, 2014, p. 257). Alternatively, another way to view positive and negative reinforcement in smartphone addiction is that both types of reinforcement similarly involve the desire for positive emotion to alleviate negative emotion. However, it is also important not to over-pathologize smartphone use (Billieux et al., 2015).

The compensatory potential of smartphones may stem from technological affordances such as navigation and interaction (Sundar & Limperos, 2013, p.513). Smartphones allow users to seamlessly navigate between different interfaces or sites through a variety of hyperlinks, providing people with the opportunity to explore cyberspace for the diversion that requires little mental effort. Dedicated applications that allow users to progress through levels, such as smartphone games, can create a sense of play and encourage people to pursue the next difficulty level, distracting people from focusing on

negative emotions (Cheng & Meng, 2021, p. 3; Sundar & Limperos, 2013, p. 516). Additionally, the interactive feature of smartphones enables users to actively participate in narratives (e.g. video games and interactive movies) that create enjoyment and immersion (Green, Brock, & Kaufman, 2004, p. 322). These emotional and cognitive states associated with the use of smartphones can temporarily alleviate the negative moods of depressed people and rescue them from negative situations (Reinecke, Klatt, & Krämer 2011, p. 194).

Driven by the process, to satisfy the need to escape from constant negative emotions, people with depression may frequently engage in smartphone activities (Shen, Wang, Rost, Gaskin, & Wang, 2019, p.1942). In terms of social motivation, the need for a sense of belonging can create the odor of missing communication with others. To meet this need, people may become obsessed with smartphone control (Elhai, Yang, Fang, Bai, & Hall, 2020, p.5). Smartphones have a wide range of facilities and applications that allow people to meet their multiple needs and purposes in a single device. For example, social networking applications can meet people's needs not only for social interaction but also for entertainment (Sundar & Limperos, 2013, p. 521).

People with depression may initially use smartphones to meet their needs such as distraction and social stimulation, thus relieving their negative emotions. However, with frequent use of smartphones over time, people can develop addiction due to the desire for satisfaction and overuse of smartphones, which is characteristic of smartphone addiction (Billieux et al., 2015). People with depression who lack self-regulation may have difficulty monitoring their actual amount of smartphone use and assessing when their needs are being met (Deng et al., 2018). Therefore, people with depression are thought to be more prone to progressing to smartphone addiction.

Some studies indicate a two-way relationship; Smartphone addiction triggers psychopathology, and psychopathology triggers smartphone addiction (Yen et al., 2012). For example, a depressed individual may turn to excessive use of their smartphone to escape the negative emotion of depression. However, this excessive smartphone use ultimately keeps the person awake late at night, thus causing more depression, irritability and stress. Therefore, smartphone addiction may involve a vicious cycle of psychopathology (Kim et al., 2015).

As a result, it is important to investigate to what extent depression symptoms are associated with intense smartphone use in individuals. Accordingly, this study determined that smartphone addiction predicts depression. It was also found that 17% of the variance of smartphone addiction was explained by depression. In this context, it can be said that people experiencing depressive moods use smartphones more frequently to alleviate negative emotions, which potentially causes more social isolation and an increase in smartphone excessive use. In addition, it can be stated that preferring virtual communication to face-to-face communication exacerbates the effect of depression on smartphone addiction. Moreover, it can be stated that depressed individuals who turn to smartphones avoid their duties and responsibilities in their lives, and this situation further disrupts daily functionality. Depression is associated with unhappiness, lack of enjoyment in life, restlessness, hopelessness and loss of

interest. Although the activities offered by smartphones seem to make depressed individuals happy and eliminate these symptoms, it can be said that they will cause the symptoms of depression to become more severe. Furthermore, it can be stated that depressed individuals will constantly increase their smartphone use in order to reduce the effect of depression, and this will lead to a further increase in the harmful effects of smartphone addiction. Finally, although it is not the subject of this research, it can be expressed that increasing the severity of smartphone addiction will further the severity of depression and put the individual in a vicious circle.

This study examining the relationships between depression and smartphone addiction has several limitations. Various suggestions can be made in the context of these limitations. First, since this study is cross-sectional, causal inferences cannot be made. In this regard, it may be recommended to conduct longitudinal studies that allow examining the cause-effect relationship. Secondly, this research was conducted with a normal population. New studies to be conducted on people diagnosed with depression will contribute to a better understanding of the mechanism of the relationship between depression and smartphone addiction. Thirdly, this research was conducted with university students. Therefore, conducting new research on groups such as adolescents will increase the generalizability of the findings. Finally, this study tested the hypothesis that depression symptoms are a predictive indicator of smartphone addiction. In this regard, the hypothesis depression is a result of smartphone addiction or that both mutually affect each other can be tested. Such a study may contribute to better understanding of the mechanism of this relationship.

## Declarations

### Compliance with Ethical Standards

All procedures were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration of 1975. Informed consent was obtained from all participants in the study. In addition, ethical approval was obtained from Afyon Kocatepe University Ethics Committee with the approval number 2024/ -259324.

### Consent for Publication

Not applicable

### Availability of Data and Materials

Data sets analysed can be obtained from the relevant author upon appropriate request.

### Competing of Interest

The authors declare that there is no conflict of interest.

### Funding

Not applicable

### Authors' Contributions

MES, FK, and YE developed the study's conceptual framework and hypotheses, participated in its design and coordination, collected the data, performed the statistical analysis, and drafted the manuscript. MES, FK, YE, DS, YÇ, and CT helped conceptualize the study's aims and structure data collection, supervised the statistical analysis, participated in data interpretation, and helped write, review, and edit the article. All authors have read and approved the final version of the article.

### Acknowledgments

Not applicable

## References

- Allen, J. P., Insabella, G., Porter, M. R., Smith, F. D., Land, D., & Philips, N. (2006). A social-interactional model of the development of depressive symptoms in adolescence. *Journal of Consulting and Clinical Psychology, 74*(1), 55-65.  
https://doi.org/10.1037/0022-006X.74.1.55
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411-423.  
http://dx.doi.org/10.1037/0033-2909.103.3.411
- Ataş, H., & Çelik, B. (2019). Smartphone use of university students: Patterns, purposes, and situations. *Malaysian Online Journal of Educational Technology, 7*(2), 54-70.  
https://doi.org/10.17220/mojet.2019.02.004
- Baker, T.B., Piper, M. E., McCarthy, D.E., Majeskie, M. R., & Fiore, M. C. (2004). Addiction motivation reformulated: An affective processing model of negative reinforcement. *Psychological Review, 111*(1), 33-51.  
https://doi.org/10.1037/0033-295X.111.1.33
- Bian, M., & Leung, L. (2015). Linking loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital. *Social Science Computer Review, 33*(1), 61-79.  
https://doi.org/10.1177/0894439314528779
- Billieux, J., Maurage, P., Lopez-Fernandez, P., Kuss, D. J., & Griffiths, M. D. (2015). Can disordered mobile phone use be considered a behavioral addiction? An update on current evidence and a comprehensive model for future research. *Current Addiction Reports, 2*(2), 156-162.  
https://doi.org/10.1007/s40429-015-0054-y
- Boumosleh, J. M., & Jaalouk, D. (2017). Depression, anxiety, and smartphone addiction in university students- A cross-sectional study. *PLoS One, 12*(8), e0182239.  
https://doi.org/10.1371/journal.pone.0182239
- Busch, P. A., & McCarthy, S. (2021). Antecedents and consequences of problematic smartphone use: A systematic literature review of an emerging research area. *Computers in Human Behavior, 114*, Article 106414.  
https://doi.org/10.1016/j.chb.2020.106414
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications programming* (2nd ed.). Routledge.
- Cheng, Y., & Meng, J. (2021). The association between depression and problematic smartphone behaviors through smartphone use in a clinical sample. *Human Behavior and Emerging Technologies, 3*(3), 441-453. https://doi.org/10.1002/hbe2.258
- Demirci, K., Akgönül, M., & Akpınar, A. (2015). Relationship of smartphone use severity with sleep quality, depression, and anxiety in university students. *Journal of Behavioral Addictions, 4*(2), 85-92.  
https://doi.org/10.1556/2006.4.2015.010
- Deng, T., Kanthawala, S., Meng, J., Peng, W., Kononova, A., Hao, Q., Zhang, Q., & David, P. (2018). Measuring smartphone usage and task switching with log tracking and self-reports. *Mobile Media & Communication, 7*(1), 3-23.  
https://doi.org/10.1177/2050157918761491
- Derevensky, J., Hayman, V., & Gilbeau, L. (2019). Behavioral addictions: Excessive gambling, gaming, internet, and smartphone use among children and adolescents. *Pediatric Clinics of North America, 66*(6), 1163-1182.  
https://doi.org/10.1016/j.pcl.2019.08.008
- Ding, Y., Wan, X., Lu, G., Huang, H., Liang, Y., Yu, J., & Chen, C. (2022). The associations between smartphone addiction and self-esteem, self-control, and social support among Chinese adolescents: A meta-analysis. *Frontiers in Psychology, 13* (1029323).  
https://doi.org/10.3389/fpsyg.2022.1029323
- Elhai, J. D., Levine, J. C., Dvorak, R. D., & Hall, B. J. (2017). Non-suicidal features of smartphone use are most related to depression, anxiety and problematic smartphone use. *Computers in Human Behavior, 69*, 75-82.  
https://doi.org/10.1016/j.chb.2016.12.023
- Elhai, J. D., Levine, J. C., & Hall, B. J. (2019). The relationship between anxiety symptom severity and problematic smartphone use: A review of the literature and conceptual frameworks. *Journal of Anxiety Disorders, 62*, 45-52.  
https://doi.org/10.1016/j.janxdis.2018.11.005
- Elhai, J. D., Yang, H., Fang, J., Bai, X., & Hall, B. J. (2020). Depression and anxiety symptoms are related to problematic smartphone use severity in Chinese young adults: Fear of missing out as a mediator. *Addictive Behaviors, 101*, 105962.  
https://doi.org/10.1016/j.addbeh.2019.04.020
- Faul, F., Erdfelder, E., Lang, A., G., & Bucher, A. (2007). G\*Power 3: a flexible statistical power analysis program for the social behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175-191.  
https://doi.org/10.3758/bf03193146
- Field, A. (2013). *Discovering Statistics Using IBM SPSS* (4th ed.). Sage Publications.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2015). *How to design and evaluate research in education* (9th ed.). McGraw Hill Education.
- Frommer, D. (2011, June 6). History less: How the iPhone changed smartphones forever. *Business Insider*.
- Gao, Y., Li, A., Zhu, T., Liu, X., & Liu, X. (2016). How smartphone usage correlates with social anxiety and loneliness. *Peer J, 4*: e2197.  
https://doi.org/10.7717/peerj.2197
- Geng, Y., Gu, J., Wang, J., & Zhang, R. (2021). Smartphone addiction and depression, anxiety: The role of bedtime procrastination and self-control. *Journal of Affective Disorders, 293*, 415-421.  
https://doi.org/10.1016/j.jad.2021.06.062
- George, D., & Mallery, P. (2019). *IBM SPSS statistics 25 step by step: A Simple Guide and Reference* (15th ed.). Routledge.
- Green, M. C., Brock, T. C., & Kaufman, G. F. (2004). Understanding media enjoyment: The role of transportation into narrative worlds. *Communication Theory, 14*(4), 311-327.  
https://doi.org/10.1111/j.1468-2885.2004.tb00317.x



- Hoyle, R. H. (2014). *Handbook of structural equation modeling*. Guilford Press.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling: A Multidisciplinary Journal*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Kardefelt-Winther, D. (2014). A conceptual and methodological critique of internet addiction research: Towards a model of compensatory internet use. *Computers in Human Behavior*, 31, 351–354. <https://doi.org/10.1016/j.chb.2013.10.059>
- Kim, E. Y., Cho, I., & Kim, E. J. (2017). Structural equation model of smartphone addiction based on adult attachment theory: Mediating effects of loneliness and depression. *Asian Nursing Research*, 11(2), 92-97. <https://doi.org/10.1016/j.anr.2017.05.002>
- Kim, M., Kim, H., Kim, K., Ju, S., Choi, J., & Yu, M. (2015). Smartphone addiction: (focused depression, aggression and impulsions) among college students. *Indian Journal of Science and Technology*, 8 (25), 1-8. <https://doi.org/10.17485/ijst/2015/v8i25/80215>
- Kim, J. H., Seo, M., & David, P. (2015). Alleviating depression only to become problematic mobile phone users: Can face-to-face communication be the antidote? *Computers in Human Behavior*, 51, 440–447. <https://doi.org/10.1016/j.chb.2015.05.030>
- Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.) Guilford Press.
- Kwon, M., Kim, D., Cho, H., & Yang, S. (2013). The smartphone addiction scale: development and validation of a short version for adolescent. *PLoS One*, 8(12), e83558. <https://doi.org/10.1371/journal.pone.0083558>
- Kwon, M., Lee, J. Y., Won, W. Y., Park, J. W., Min, J. A., & Hahn, C., Gu, X., Choi, J. H., & Kim, D. J. (2013). Development and validation of a smartphone addiction scale (SCAS). *PLoS One*, 8(2), e56936. <https://doi.org/10.1371/journal.pone.0056936>
- Lattie, E. G., Lipson, S. K., & Eisenberg, D. (2019). Technology and college student mental health: Challenges and opportunities. *Frontiers in Psychiatry*, 10, Article 246. <https://doi.org/10.3389/fpsy.2019.00246>
- Lee, E., & Kim, H. C. (2022). Effects of depression and social interaction on smartphone addiction among female adolescents. *Journal of Child and Adolescent Psychiatric Nursing*, 35(1), 68-75. <https://doi.org/10.1111/jcap.12349>
- Lin, Y. H., Lin, S. H., Yang, C. C. H., & Kuo, T. B. J. (2017). Psychopathology of everyday life in the 21<sup>st</sup> century: Smartphone addiction. In C. Montag & M Reuter (Eds.), *Internet addiction* (pp339-358). Springer.
- Lipson, S. K., Lattie, E. G., & Eisenberg, D. (2019). Increased rates of mental health service utilization by U. S. College Students: 10-year population-level trends (2007-2017). *Psychiatric Services*, 70(1), 60-63. <https://doi.org/10.1176/appi.ps.201800332>
- Lovibond, P. F., & Lovibond, S. H. (1995a). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335-343. [https://doi.org/10.1016/0005-7967\(94\)00075-U](https://doi.org/10.1016/0005-7967(94)00075-U)
- Lovibond, S. H., & Lovibond, P. F. (1995b). *Manual for the Depression Anxiety Stress Scales*, (2nd ed.). Psychology Foundation of Australia.
- Machell, K. A., & Goodman, F. R., & Kashdan, T. B. (2015). Experiential avoidance and well-being: a daily diary analysis. *Cognition and Emotion*, 29(2), 1-9. <https://doi.org/10.1080/02699931.2014.911143>
- Mi, K.S., Jung, H. H., Hyun, C., Min, K., Hye, C. J., June, A. H., Woo, S. L., Ji, Y. K., & Jin, D. K. (2014). The effect of depression, impulsivity, and resilience on smartphone addiction in university students. *Journal of Korean Neuropsychiatric Association*, 53(4), 214-221. <https://doi.org/10.4306/jknpa.2014.53.4.214>
- Mun, I.B., & Lee, S. (2021). How does parental smartphone addiction affect adolescent smartphone addiction? Testing the mediating roles of parental rejection and adolescent depression. *Cyberpsychology, Behavior and Social Networking*, 24(6), 399-406. <https://doi.org/10.1089/cyber.2020.0096>
- Noyan, C. O., Darçin, A. E., Nurmedov, S., Yılmaz, O., & Dilbaz, N. (2015). Validity and reliability of the Turkish version of the Smartphone Addiction Scale-Short Version among university students. *Anatolian Journal of Psychiatry*, 16, 73-81. <https://doi.org/10.5455/apd.176101>
- Panova, T., & Carbonell, X. (2018). Is smartphone addiction really an addiction? *Journal of Behavioral Addictions*, 7(2), 252-259. <https://doi.org/10.1556/2006.7.2018.49>
- Parent, N., Bond, T., Wu, A., & Shapka, J. D. (2022). Predicting patterns of problematic smartphone use among university students: A latent class analysis. *Human Behavior and Emerging Technologies*, 2022, 1-12. <https://doi.org/10.1155/2022/4287600>
- Park, Y., & Lee, S. (2022). Gender differences in smartphone addiction and depression among Korean adolescents: Focusing on the internal mechanisms of attention deficit and self-control. *Computers in Human Behavior*, 136, 1-8. <https://doi.org/10.1016/j.chb.2022.107400>
- Pivetta, E., Harkin, L., Billieux, J., Kanjo, E., & Kuss, D. J. (2019). Problematic smartphone use: An empirically validated model. *Computers in Human Behavior*, 100, 105–117. <https://doi.org/10.1016/j.chb.2019.06.013>
- Reinecke, L., Klatt, J., & Krämer, N. C. (2011). Entertaining media use and the satisfaction of recovery needs: Recovery outcomes associated with the use of interactive and noninteractive entertaining media. *Media Psychology*, 14(2), 192–215. <https://doi.org/10.1080/15213269.2011.573466>
- Rotondi, V., Stanca, L., & Tomasuolo, M. (2017). Connecting alone: Smartphone use, quality of social interactions and well-being. *Journal of Economic Psychology*, 63, 17–26. <https://doi.org/10.1016/j.joep.2017.09.001>

- Rottenberg, J. (2005). Mood and emotion in major depression. *Current Directions in Psychological Science*, 14(3), 167-170.  
<https://doi.org/10.1111/j.0963-7214.2005.00354.x>
- Sarıçam, H. (2018). The psychometric properties of Turkish version of Depression Anxiety Stress Scale-21 (DASS-21) in health control and clinical samples. *Journal of Cognitive Behavioral Psychotherapy and Research*, 7(1), 19-30.  
<https://doi.org/10.5455/JCBPR.274847>
- Sarman, A., & Çiftci, N. (2024). Relationship between smartphone addiction, loneliness, and depression in adolescents: A correlational structural equation modeling study. *Journal of Pediatric Nursing*, 76, 150-159.  
<https://doi.org/10.1016/j.pedn.2024.02.019>
- Saunders, J.B., Hao, W., Long, J., King, D. L., Mann, K., Fauth-Buhler, M., Rumph, H. J., Bowden-Jones, H., Rahimi-Movaghar, A., Chung, T., Chan, E., Bahar, N., Achab, S., Lee, H. K., Potenza, M., Petry, N., Spritzer, D., Ambekar, A., Derevensky, ...Pozynak, V. (2017). Gaming disorder: Its delineation as an important condition for diagnosis, management, and prevention. *Journal of Behavioral Addictions*, 6(3), 271-279.  
<https://doi.org/10.1556/2006.6.2017.039>
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research*, 8(2), 23-74.
- Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling* (3rd ed.). Routledge.
- Shen, X., & Wang, H. Z., Rost, D. H., Gaskin, J., & Wang, J. L. (2019). State anxiety moderates the association between motivations and excessive smartphone use. *Current Psychology*, 40, 1937-1945.  
<https://doi.org/10.1007/s12144-019-0127-5>
- Song, L., Singleton, E.S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *Internet and Higher Education*, 7(1), 59-70.  
<https://doi.org/10.1001/j.iheduc.2003.11.003>
- Stanković, M., Nešić, M., Čičević, S., & Shi Z (2021). Association of smartphone use with depression, anxiety, stress, sleep quality, and internet addiction. Empirical evidence from a smartphone addiction. *Personality and Individual Differences*, 168(5):110342.  
<https://doi.org/10.1016/j.paid.2020.110342>
- Statista (2023). *Number of smartphone mobile network subscriptions worldwide from 2016 to 2022, with forecasts from 2023 to 2028 (in millions)*. Retrieved March 30, 2023. from:  
<https://www.statista.comezproxy2.untwente.nl/statistics/330695/number-of-smartphone-users-worldwide/>
- Sundar, S. S., & Limperos, A. M. (2013). Uses and grats 2.0: New gratification for new media. *Journal of Broadcasting & Electronic Media*, 57(4), 504-525.  
<https://doi.org/10.1080/08838151.2013.845827>
- Tabachnick, B.G., & Fidell, L. S. (2014). *Using multivariate statistics* (6<sup>th</sup> ed.). Pearson Education Limited.
- Van Deursen, A. J. A. M., Bolle, C. L., Hegner, S. M., & Kommers, P. A. M. (2015). Modeling habitual and addictive smartphone behavior: The role of smartphone usage types, emotional intelligence, social stress, self-regulation, age and gender. *Computers in Human Behavior*, 45, 411-420.  
<https://doi.org/10.1016/j.chb.2014.12.039>
- Wacks, Y., & Weinstein, A. (2021). Excessive smartphone use is associated with health problems in adolescent and young adults. *Frontiers in Psychiatry*, 12, Article 669042.  
<https://doi.org/10.3389/fpsy.2021.669042>
- Wang, P., Lei, L., Wang, X., Nie, J., Chu, X., & Jin, S. (2018). The exacerbating role of perceived social support and the "buffering" role of depression in the relation between sensation seeking and adolescent smartphone addiction. *Personality and Individual Differences*, <https://doi.org/10.1016/j.paid.2018.04.009>
- Wanigaratne, S. (2006). Psychology of addiction. *Psychiatry*, 5(12), 455-460.  
<https://doi.org/10.1053/j.mppsy.2006.09.007>
- Wise, R. A., & Koob, G. F. (2014). The development and maintenance of drug addiction. *Neuropsychopharmacology*, 39(2), 254-262.  
<https://doi.org/10.1038/npp.2013.261>
- Yen, J. Y., Yen, C. F., Chen, C. S., Wang, P. W., Chang, Y. H., & Ko, C. H. (2012). Social anxiety in online and real-life interaction and their associated factors. *Cyberpsychology, Behavior, and Social Networking*, 15(1), 7-12.  
<https://doi.org/10.1089/cyber.2011.0015>
- Yin, K. T., Yahaya, A. H., Sangryeol, C., Maakip, I., Voo, P., & Maalip, H. (2019). Smartphone usage, smartphone addiction, internet addiction and nomophobia in University Malaysia Sabah (UMS). *Southeast Asia Psychology Journal*, 7, 1-12.



RESEARCH ARTICLE / ARAŞTIRMA YAZISI

# Comparison of State Anxiety Levels of Strong and Weak Competitors in the Iraqi First League Basketball

## Irak Birinci Ligi'nde Basketbol Oynayan Güçlü ve Zayıf Rakiplerin Durumluk Kaygı Düzeylerinin Karşılaştırılması

Deniz Erdağ<sup>1</sup>, Sizar Salim Sadiq<sup>2</sup>, Mustafa Behlül<sup>3</sup>, Bingül Harmancı<sup>4</sup>

### Abstract:

The aim of this study was to compare the state anxiety levels of strong and weak competitors playing basketball in the Iraqi First League. The research focused on identifying the cognitive and somatic anxiety levels when strong teams play against weak teams, and vice versa. It also aimed to measure the cognitive and somatic anxiety levels across three games: strong teams versus weak teams and strong teams versus other strong teams. The study sample comprised 32 male athletes from four teams, all participants in Iraq's First Division Basketball League. A descriptive research method was employed, and data were collected using a questionnaire-based approach. Specifically, the Competitive State Anxiety Inventory questionnaire was utilized, which was translated into Arabic by two English language experts to ensure reliability and validity. The results indicated a significant difference in both somatic and cognitive anxiety levels between weak and strong teams, confirming the initial hypothesis. Additionally, the findings showed significant differences in anxiety levels when strong teams played against weak teams compared to when strong teams played against other strong teams. In conclusion, the study demonstrated a clear difference in state anxiety levels between strong and weak basketball competitors in the Iraqi First Division Basketball League.

**Keywords:** Basketball, Anxiety, Cognitive, Somatic, Self-confidence

<sup>1</sup>Assoc. Prof. Dr., Near East University, Department of Coaching Education, Faculty of Sports Sciences, Nicosia, Cyprus, ORCID ID: 0000-0002-1740-7726, e-mail: deniz.erdag@neu.edu.tr

<sup>2</sup>Msc., Near East University, Faculty of Sports Sciences, Nicosia, Cyprus

<sup>3</sup>Assit. Prof. Dr., Near East University, Faculty of Sports Sciences, Department of Coaching Education, Nicosia, Cyprus, ORCID ID: 0000-0001-5443-1322

<sup>4</sup>Dr., Near East University, Faculty of Arts and Science, Department of Psychology, Nicosia, Cyprus, Orcid ID: 0000-0003-3633-622X

**Address of Correspondence/Yazışma Adresi:** Deniz Erdağ, Near East University, Lefkoşa-Kıbrıs, Mersin 10 Turkey, e-mail: deniz.erdag@neu.edu.tr

**Date of Received/Geliş Tarihi:** 05.04.2023, **Date of Revision/Düzeltilme Tarihi:** 23.04.2024, **Date of Acceptance/Kabul Tarihi:** 28.05.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Erdağ, D., Sadiq S.S., Behlül, M. & Harmancı, B. (2024). Comparison of State Anxiety Levels of Strong and Weak Competitors in the Iraqi First League Basketball, *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 166-176

© 2024 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktpdgerisi.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes. <http://creativecommons.org/licenses/by/4.0/>

**Öz:**

Bu çalışmanın amacı Irak birinci liginde basketbol oynayan güçlü ve zayıf takım oyuncularının durumluk kaygı düzeylerinin karşılaştırılmasıdır. Araştırmada, güçlü takımların zayıf takımlarla oynaması durumundaki bilişsel ve bedensel kaygı düzeylerinin belirlenmesi, güçlü takımların güçlü takımlarla oynaması durumundaki bilişsel ve bedensel kaygı düzeylerinin bulunması ve iki maç arasında oynanan üç maçın toplamında bilişsel ve bedensel kaygı düzeylerinin bulunması amaçlanmaktadır. Araştırmanın örneklemini 4 takımdaki 32 sporcu oluşturmaktadır. Katılımcıların tamamı Irak Basketbol kulüplerinde basketbol oynayan erkeklerden seçilmiştir. Çalışma betimsel araştırma yöntemi kullanılarak gerçekleştirilmiştir. Araştırma ankete dayalı araştırma olarak yapılmıştır. Rekabetçi durumluk kaygı envanteri anketinde araştırmacı, anketin güvenilirliğini ve ölçeğin geçerliliğini sağlamak için iki İngilizce uzmanından anketi Arapça diline çevirmesini ister. Çalışma sonuçlarına göre hipotezi kabul ettikleri güçlü takımlarla zayıf takımların bedensel ve bilişsel kaygı düzeyleri arasında anlamlı bir fark vardır. Sonuçlar aynı zamanda güçlü takımın zayıf takıma karşı oynaması durumunda ve güçlü takımın güçlü takıma karşı oynaması durumunda bedensel ve bilişsel kaygı arasında anlamlı bir fark olduğunu göstermektedir. Sonuç olarak çalışma, Irak birinci lig basketbol liginde oynayan güçlü ve zayıf basketbolcular arasında durumluk kaygı düzeyleri arasında bir fark olduğunu gösterdi.

**Anahtar Kelimeler:** Basketbol, Kaygı, Bilişsel, Somatik, Öz-güven

**Introduction**

Basketball is a high-scoring, fast-paced sport that involves quick decision-making. These features make basketball a psychologically complex, physical, and dynamic sport. Each team tries to destabilize their competitors and generate disorder while maintaining their self-organization and stability, despite being affected by disruptions or crucial events that can modify or disrupt team cohesion (Ferreira et al., 2014). Cognitive activities in sports, such as decision-making, feelings, and perception of competition, are crucial for players (Ruiz et al., 2006). Sports anxiety is a significant topic in scientific studies as it causes changes in athletes' somatic and cognitive states (Rhea et al., 2003). Participation in competitive sports like basketball can influence psychological measures, including self-confidence, cognitive and somatic anxiety, self-efficacy, enjoyment, and continued participation. These aspects are frequently measured in sports psychology, where anxiety is typically conceptualized with physiological arousal (Weinberg & Gould, 2014).

Anxiety is considered a multidimensional construct that involves both somatic and cognitive components. It can also be seen as a relatively stable personality characteristic. According to previous research, responses to competitive situations—whether as state anxiety (response to a specific situation) or trait anxiety (general tendency to experience anxiety)—can be significant in team sports like basketball (Zamani & Moradi, 2011). While various measures exist to assess anxiety and trait anxiety in sports, validated tools specifically for cognitive and somatic anxiety are limited, especially in adult populations (Smith et al., 2006).

Competition between schools can influence the sports participation experience in nuanced ways, affecting overall satisfaction. Varying competitive challenges impact somatic anxiety, self-confidence, cognitive and mood measures. Specifically, assessing these measures in university basketball players during key points in the rivalry season can provide valuable insights for coaches (Eldridge et al., 2016). It was hypothesized that these measures could be effectively collected using validated psychometric tools. In basketball, somatic and cognitive

anxiety, as well as self-confidence, are influenced by a complex interplay of various factors. Therefore, they should be investigated with a multidimensional perspective integrating cognitive, contextual, and psychological elements. For instance, unsportsmanlike fouls should be studied within their natural environment, considering high-level interactions, contextual factors, and the preceding and subsequent possessions, as these may have a time-dependent impact on successful or unsuccessful behaviors (Kirker, Tenenbaum, & Mattson, 2000). High levels of anxiety carry significant responsibilities both at the beginning and end of the game, necessitating a wide range of skills to manage the game's demands (Osama, 1995). These abilities require adaptability, incorporating changes in strategies and procedures to address high degrees of neuromuscular coordination. This is accompanied by high capacities for concentration and attention, as well as cognitive and physical confidence in the skills required (Mohammed, 2000).

Precompetitive anxiety tends to have a greater impact on athletes the more they interact with their opponents. This anxiety influences the relationship between cognitive and somatic anxiety in basketball, often having a more detrimental effect on high-level sports compared to lower-level sports due to the presence of opponents and less control over the game (Terry, 1995). The cognitive and physical anxiety experienced by athletes can negatively affect their skill levels, and while the relationship between these types of anxiety is not fully understood, their impact is considered moderate. This uncertainty contributes to the limited emphasis on the relationship between cognitive and somatic anxiety in competitive sports (Kleine, 1990).

Anxiety in a sports context, particularly in competitions, can be a challenge that manifests as negative thoughts and concerns. This anxiety reflects an athlete's recognition of the competitive situation rather than a direct response to anxiety itself (Cox, Martens, & Russell, 2003). Through the researcher's experience and observations of sports teams, it has been found that understanding the concept of anxiety in sports competitions requires distinguishing

between two main types of anxiety: competition-related anxiety and state anxiety. Competition-related anxiety refers to the stress caused by competitive sports situations. State anxiety, on the other hand, refers to the temporary emotional state experienced during competition. Competition-related anxiety can play a significant role in athletes' performance. It can serve as a positive driving force, motivating athletes to exert more effort. Conversely, it can also hinder their physical activity and skill execution, depending on how the anxiety is managed. Understanding these types of anxiety is crucial for optimizing athletes' performance in competitive settings.

The researcher has observed during local matches that some players, despite their high skill levels, sometimes fail to perform effectively. This failure is often attributed to psychological factors, including anxiety, which impacts their performance. The concern here extends beyond just the players' skills; it also involves the lack of awareness among coaches regarding the impact of sports anxiety on players before and during the game. Additionally, there is a gap in scientific knowledge on how to manage or mitigate anxiety, which influences players' cognitive and somatic states as well as their self-confidence. This ultimately affects their individual results and the team's overall performance. Given these observations, the researcher decided to study the degree of sports anxiety (both facilitating and debilitating) and its relationship with self-confidence, cognitive, and somatic anxiety among advanced teams participating in the elite basketball championship.

Main aim of the this study was to investigate cognitive and somatic anxiety levels while strong teams play with weak teams, also to find cognitive and somatic anxiety levels while strong teams play with strong teams, and to find cognitive and somatic anxiety for the sum of three games between strong team plays against weak team and strong team plays against strong team.

The primary objective of this study was to investigate cognitive and somatic anxiety levels among basketball teams in various competitive scenarios. Specifically, the study aimed to assess cognitive and somatic anxiety levels when strong teams play against weak teams, evaluate cognitive and somatic anxiety levels when strong teams play against other strong teams, analyze the cumulative cognitive and somatic anxiety levels across three games, and compare scenarios where strong teams play against weak teams and strong teams play against strong teams.

The secondary objective was to examine differences in self-confidence anxiety across similar competitive scenarios. This included comparing self-confidence anxiety when strong teams play against weak teams, comparing self-confidence anxiety when strong teams

play against other strong teams, analyzing the cumulative self-confidence anxiety across three games, and comparing scenarios where strong teams play against weak teams and strong teams play against strong teams.

These objectives were pursued within a sample of basketball teams to provide insights into how different competitive contexts affect anxiety and self-confidence levels among athletes.

## Method

This descriptive study aimed to investigate the prevalence of cognitive and somatic anxiety among selected basketball teams and to explore their relationships within the context of the Iraq First Division Basketball League. Ethical permission for this study was obtained with the approval number NEU/SS/2023/1572 before data collection commenced.

### The study was guided by the following hypotheses

H1: There is a significant difference between cognitive and somatic anxiety levels when strong teams play against weak teams.

H2: There is a significant difference between cognitive and somatic anxiety levels when strong teams play against other strong teams.

H3: There is a significant difference in cognitive and somatic anxiety across the sum of three games where strong teams play against weak teams compared to when strong teams play against strong teams.

H4: There is a significant difference in self-confidence anxiety when strong teams play against weak teams.

H5: There is a significant difference in self-confidence anxiety when strong teams play against other strong teams.

H6: There is a significant difference in self-confidence anxiety across the sum of three games where strong teams play against weak teams compared to when strong teams play against strong teams.

### Study Group

The study focused on male basketball players affiliated with clubs participating in Iraq's first-division basketball league, specifically those in the advanced category. The study included 48 players from 11 clubs. Only players from the strongest and weakest teams within the league were selected for the study, resulting in a total of 32 male participants. These players were evenly distributed across four teams: Naft, Sharratah, Naft Aljanub, and Nasiriyah, with 8 players chosen from each team, as detailed in Table 1.

**Table 1.** Distribution of Basketball Athletes in Iraq's Basketball Clubs by Province.

No	Clubs	Number Of Players	Province
1	Naft	8	Baghdad
2	Sharratah	8	Baghdad
3	Naft Aljanub	8	Al Basrah
4	Nasiriyah	8	Nasiriyah
<b>Total</b>	<b>4</b>	<b>32</b>	<b>3</b>

**Table 2.** Descriptive summary of player sample in Iraq's basketball clubs by province

League Standings	Clubs	P	%
1	Naft	8	25
2	Sharratah	8	25
3	Naft Aljanub	8	25
4	Nasiriyah	8	25
<b>Total</b>	<b>4 Clubs</b>	<b>32</b>	<b>100</b>

Table 2 presents the distribution of participants in the current study, analyzed using frequency statistics across the clubs in sequence. The Naft club accounts for 25% of the sample (n=8), as does the Sharratah club with 25% (n=8), followed by the Naft Aljanub club also with 25% (n=8), and finally, the Nasiriyah club with 25% (n=8).

#### Data Collection Tools

The Competitive State Anxiety Inventory-2 (CSAI-2), developed by Martens et al. (1990), consists of 27 items designed to assess anxiety levels in athletes. Each item offers four response options scored as follows: 1 (never), 2 (a little), 3 (moderately), and 4 (much). Therefore, the total score ranges from a minimum of 27 to a maximum of 108. The reliability of the CSAI-2 is measured using Cronbach's alpha coefficient, which in this case is reported as 0.70. This coefficient indicates the internal consistency or reliability of the scale, with a value of 0.70 suggesting moderate reliability where items are reasonably consistent in measuring the same underlying construct of anxiety in competitive sports contexts.

#### Scale Validity and Reliability

To validate the Competitive State Anxiety Inventory-2 (CSAI-2), the researcher sought approval from experts and specialists in the field, achieving an 82% approval rate. According to Bloom et al. (1983), obtaining approval from 75% or more of expert opinions is considered adequate for scale validation. For reliability testing, the researcher administered the scale to basketball team players who were not part of the main research sample. This step was crucial to assess the scale's consistency and stability across different groups within the basketball community. Additionally, the CSAI-2 was translated into Arabic by three experts to ensure linguistic and cultural appropriateness for the study's context, enhancing its applicability and validity in Arabic-speaking populations.

The questionnaire used in this study was the Competitive State Anxiety Inventory-2 (CSAI-2), comprising 27 questions administered to male players from Iraq's basketball clubs participating in the advanced category of the first-division basketball league. The study included 32 athletes from four specific teams: Naft, Sharratah, Naft Aljanub, and Nasiriyah.

It is worth noting that the Nasiriyah team consisted of 10 players instead of 12, and not all players participated in all

games due to roster constraints. Therefore, each team was represented by 8 players selected for the study.

The procedure involved measuring pre-competition state anxiety across 6 games against various opponents. The matchups were structured as follows:

- \* 1st team versus 2nd team
- \* 1st team versus 3rd team
- \* 2nd team versus 3rd team
- \* The lowest-ranked team played against the 1st, 2nd, and 3rd teams.

Details of the matchups and further procedural information are provided in Table 2.

The questionnaire was administered immediately before the warm-up, approximately 30 minutes before the start of each game. Ultimately, data were collected from the sample, resulting in a total of 192 completed questionnaires.

**Table 3.** Selection of five matches against two different opponents by sequence

No	Two Competitors Teams	Stage
1	1. Naft × 2. Sharratah	Second
2	1. Naft × 3. Naft Aljanub	Second
3	2. Sharratah × 3. Naft Aljanub	Second
4	1. Naft × 5. Nasiriyah	Second
5	2. Sharratah × 5. Nasiriyah	Second
6	3. Naft Aljanub × 5. Nasiriyah	Second

**Data Analysis**

After collecting the data from the sample, frequency and descriptive statistics were performed using SPSS 21 to evaluate the differences in anxiety levels. A t-test

was conducted to calculate the mean anxiety scores between strong teams playing against weak teams and strong teams playing against other strong teams.

**Table 4.** Normality analysis of data collection tools

Shapiro-Wilk			
	Statistic	df	Sig.
Cognitive	0,939	32	0,071
Somatic	0,954	32	0,181
Self Confidence	0,962	32	0,304

Table 4 presents the Shapiro-Wilk test results assessing the normality of participants' scores in Cognitive, Somatic, and Self-Confidence. Based on these tests, it was concluded that the scores for Cognitive, Somatic, and Self-Confidence followed a normal distribution ( $p > 0.05$ ).

The Demographic Information Form developed by the researchers aimed to collect personal information about university students. Accordingly, the form included expressions containing information such as age and gender.

**Results**

**Table 5.** Descriptive analyses and t-test results comparing cognitive and somatic anxiety levels between weak and strong teams

Anxiety		N	Mean	St.Deviation	T	p-value
Cognitive	Nasiriyah	24	24.0	3.2	8.28	<b>0.000*</b>
	Naft, Sharratah, Naft Alj	24	16.2	3.1	8.28	<b>0.000*</b>
Somatic	Nasiriyah	24	23.7	2.6	7.96	<b>0.000*</b>
	Naft, Sharratah, Naft Alj	24	17.6	2.6	7.96	<b>0.000*</b>

\* $p < 0.05$

Table 5 displays the results of independent t-tests comparing cognitive and somatic anxiety levels between teams. The mean cognitive anxiety score for Nasiriyah ( $24.0 \pm 3.2$ ) was significantly higher than for the Naft, Sharratah, and Naft Alj teams ( $16.2 \pm 3.1$ ) ( $p < 0.05$ ,  $t = 8.28$ ), indicating a significant difference in cognitive anxiety levels between weak and strong teams. Similarly, the mean somatic anxiety score for

Nasiriyah ( $23.7 \pm 2.6$ ) was significantly higher compared to the Naft, Sharratah, and Naft Alj teams ( $17.6 \pm 2.6$ ) ( $p < 0.05$ ,  $t = 7.9$ ), suggesting a significant difference in somatic anxiety levels between these groups. These findings support Hypothesis 1, indicating a significant disparity in both cognitive and somatic anxiety levels between weak and strong teams.

**Table 6.** Descriptive analyses and t-test results of the cognitive and somatic anxiety levels for strong vs strong teams

Anxiety		n	Mean	St. Deviation	t	p
Cognitive	Naft	24	27.0	2.5	1.37	0.17
	Sharratah, Naft Alj	24	26.1	2.2	1.37	0.17
Somatic	Naft	24	26.1	1.6	0.49	0.62
	Sharratah, Naft Alj	24	25.8	2.3	0.49	0.62

$p > 0.05$

Table 6 presents the results of independent t-tests comparing cognitive and somatic anxiety levels between strong teams. The mean cognitive anxiety score for Naft ( $27.0 \pm 2.5$ ) was not significantly different from that of Sharratah and Naft Alj teams combined ( $26.1 \pm 2.2$ ) ( $p > 0.05$ ,  $t = 1.37$ ), indicating no significant difference in cognitive anxiety levels between these strong teams. Similarly, the mean

somatic anxiety score for Naft ( $26.1 \pm 1.6$ ) did not significantly differ from Sharratah and Naft Alj teams combined ( $25.8 \pm 2.3$ ) ( $p > 0.05$ ,  $t = 0.4$ ), suggesting no significant difference in somatic anxiety levels. These findings contradict Hypothesis 2, indicating that there is no significant disparity in cognitive and somatic anxiety levels between strong teams.

**Table 7.** Descriptive analyses and t-test results of the cognitive and somatic anxiety for strong team vs weak team and strong team vs strong team.

Anxiety		n	Mean	St. Deviation	t	p-value
Cognitive	Naft vs Nasiriyah	24	16.2	3.1	-15.31	<b>0.000*</b>
	Naft vs Sharratah	24	26.6	2.4	-13.98	<b>0.000*</b>
Somatic	Naft vs Nasiriyah	24	17.6	2.6	-14.93	<b>0.000*</b>
	Naft vs Sharratah	24	26	2.2	-13.72	<b>0.000*</b>

**\*p<0.05**

Table 7 displays the results of independent t-tests comparing cognitive and somatic anxiety levels between scenarios where a strong team competes against weak teams versus strong teams. The mean cognitive anxiety score for Naft versus Nasiriyah was  $16.2 \pm 3.1$  and versus Sharratah team was  $26.6 \pm 2.4$  ( $p < 0.05$ ,  $t = -15.31$  and  $-13.98$ , respectively), indicating a significant difference in cognitive anxiety levels between these matchups. Similarly, the mean somatic

anxiety score for Naft versus Nasiriyah was  $17.6 \pm 2.6$  and versus Sharratah team was  $26 \pm 2.2$  ( $p < 0.05$ ,  $t = -14.93$  and  $-13.72$ , respectively), demonstrating a significant difference in somatic anxiety levels. These findings align with Hypothesis 3, indicating a significant disparity in both cognitive and somatic anxiety levels depending on whether a strong team competes against a weak team or another strong team.

**Table 8.** Descriptive analyses and t-test results of the self confidence levels for weak vs strong teams

Self Confidence	N	Mean	St. Deviation	t	p-value
Naft, Sharratah, Naft Alj	24	24.2	2.3	9.6	<b>0.000*</b>
Nasiriyah	24	16.6	3.3	9.6	<b>0.000*</b>

**\*p<0.05**

Table 8 presents the results of an independent t-test comparing self-confidence anxiety levels between teams. The mean self-confidence anxiety score for Naft, Sharratah, and Naft Alj teams was  $24.2 \pm 2.3$ , whereas for the Nasiriyah team, it was  $16.6 \pm 3.3$  ( $p < 0.05$ ,  $t = 9.6$ ), indicating a significant difference in self-

confidence anxiety levels between strong teams playing against weak teams. These findings support Hypothesis 4, suggesting that there is a significant disparity in self-confidence anxiety depending on whether strong teams compete against weak teams.

**Table 9.** Descriptive analyses and t-test results of the self confidence levels for strong vs strong teams

Self Confidence	N	Mean	St. Deviation	T	p- value
Naft	24	26,5	1,6	0,76	0,44
Sharratah, Naft Alj	24	26,0	3,0	0,76	0,44

**p>0.05**

Table 9 illustrates the results of an independent t-test comparing self-confidence anxiety levels between strong teams. The mean self-confidence anxiety score for Naft was  $26.5 \pm 1.6$ , and for Sharratah and Naft Alj teams combined, it was  $26.0 \pm 3.0$  ( $p > 0.05$ ,  $t = 0.76$ ),

indicating no significant difference in self-confidence anxiety levels between these strong teams. This finding contradicts Hypothesis 5, suggesting that there is no significant disparity in self- confidence anxiety when strong teams compete against other strong teams.



**Table 10.** Descriptive analyses and t-test results of the self confidence levels for strong team vs weak team and strong team vs strong team

Self Confidence	N	Mean	St.Deviation	t	p-value
Naft vs Nasiriyah	24	24.2	2.3	-3.33	<b>0.001*</b>
Naft vs Sharratah	24	26.3	2.4	-3.36	<b>0.002*</b>

\*p&lt;0.05

Table 10 presents the results of independent t-tests comparing self-confidence anxiety levels across three scenarios: Naft versus Nasiriyah, Naft versus Sharratah team, and the sum of these comparisons. The mean self-confidence anxiety score for Naft versus Nasiriyah was  $24.2 \pm 2.3$ , and versus Sharratah team was  $26.3 \pm 2.4$  ( $p < 0.05$ ,  $t = -3.33$  and  $-3.36$ , respectively), indicating a significant difference in self-confidence anxiety levels between strong teams playing against weak teams versus strong teams playing against other strong teams. This finding supports Hypothesis 6, suggesting a significant disparity in self-confidence anxiety across these scenarios.

### Discussion

This study aimed to investigate cognitive and somatic anxiety levels when strong teams compete against weak teams and when they compete against other strong teams. Additionally, the study aimed to examine cognitive and somatic anxiety levels across all three games combined, comparing strong teams playing against weak teams versus strong teams. Furthermore, the study aimed to identify differences in self-confidence anxiety between strong teams playing against weak teams and strong teams playing against other strong teams among a sample of basketball teams. The researcher translated the questionnaire into Arabic to ensure accuracy, and then back-translated it into English to validate the questionnaire's reliability.

One of the hypotheses of this study aimed to explore the differences in cognitive and somatic anxiety levels between weak and strong basketball teams. The study's findings revealed a significant difference in these anxiety levels between weak and strong teams.

The results of this study are consistent with those of Thuot et al. (1998), which highlighted differences in physical and competitive anxiety among basketball players during games. They noted that anxiety levels were notably heightened during competition, affecting players' cognitive abilities and performance in response to challenging circumstances and strong opponents (Thuot, Kavouras & Kenefick, 1998).

Another hypothesis of the study aimed to investigate the distinction in cognitive and somatic anxiety levels between strong basketball teams. However, the results indicated no significant difference in these anxiety levels among strong teams. In another study by Balyan et al. (2016), it was found that a relationship exists between physical anxiety and cognitive anxiety among players experiencing heightened physiological arousal during competition. Interestingly, this study also revealed no significant difference in physical and cognitive anxiety levels among players during competition (Balyan et al., 2016).

Another hypothesis in this study was to examine the variance in cognitive and somatic anxiety levels when strong basketball teams compete against weak teams versus other strong

teams. The results demonstrated a significant disparity in both cognitive and somatic anxiety levels between these scenarios. In a related investigation by Cano et al. (2010), cognitive and physical anxiety levels were evaluated during basketball competitions among 10 players from Spanish teams. The study revealed varying levels of cognitive and physical anxiety among players, alongside a positive correlation during competitive events (Cano et al., 2010).

In this study, another hypothesis explores the differences in self-confidence and anxiety levels between basketball teams playing against strong versus weak opponents. The findings indicate a significant disparity in self-confidence and anxiety levels between these team conditions. Smith's study also revealed gender differences in self-confidence levels among players, correlating with varying skill levels. Female players showed higher levels of anxiety but also increased self-confidence compared to their male counterparts, whose self-confidence levels decreased relative to perceived abilities and anxiety levels. These findings underscore the strong impact of situational factors on competitive dynamics (Smith et al., 2006).

Another hypothesis of the study investigates the levels of self-confidence and anxiety between basketball teams playing against strong opponents versus teams of similar strength. The results indicate that there is no significant difference in self-confidence and anxiety levels between teams playing against equally strong opponents. This aligns with Parfitt's findings using the CSAI-2 scale, which showed no difference in self-confidence among players. Winners displayed higher anxiety levels related to self-confidence, while losers experienced lower physiological effects and nervousness. These findings highlight the psychological impact of competitive sports on anxiety levels during competition (Parfitt & Pates, 1999).

The final hypothesis of the study examines the levels of self-confidence and anxiety across a series of three games where strong teams play against weak teams and against other strong teams in basketball. The results indicate a significant difference in self-confidence and anxiety levels across these game scenarios. Bernardo's study also revealed a negative relationship between anxiety and competition, highlighting higher anxiety levels during competitive matches. This study underscores differences in self-confidence and anxiety among players during games (Sonstroem & Bernardo, 1982).

### Conclusion

This study revealed significant differences in cognitive anxiety levels between weak and strong teams. It also found significant differences in somatic anxiety levels between these team strengths. However, there were no significant differences in cognitive or somatic anxiety levels when strong teams competed against each other.

The study further demonstrated significant differences in both cognitive and somatic anxiety levels between strong teams playing against weak teams compared to strong teams playing against other strong teams. Overall, the research highlighted significant differences in cognitive and somatic anxiety across these different game scenarios.

Additionally, the study observed a significant difference in self-confidence and anxiety levels when strong teams played against weak teams. Conversely, no significant difference was found in self-confidence and anxiety levels when strong teams competed against other strong teams.

Finally, the study identified significant differences in self-confidence and anxiety levels across a series of three games where strong teams played against weak teams versus strong teams playing against other strong teams.

### Suggestions

Further studies on the vision for life are necessary due to the theoretical and empirical limitations mentioned above. To address these limitations, we recommend additional research to overcome them. Here are our recommendations:

This study focused on the relationship between cognitive and somatic anxiety among selected basketball teams in the Iraq First Division Basketball League. We suggest further research to explore this relationship among teams in other sports such as volleyball.

The study exclusively involved male participants; we propose conducting a similar study with female athletes.

Additionally, there is a need for further research to compare self-confidence and anxiety levels among teams from different sports.

### Statements And Declarations

#### Funding

The authors declare that no funds, grants, or other support were received for the preparation of this manuscript.

#### Competing Interests

The authors declare no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

#### Author Contributions

The first and second authors contributed to the conceptualization, methodology, and study design. The third and fourth authors conducted the data collection and analysis, as well as drafted the original manuscript.

#### Ethics Approval

This study was conducted following the principles outlined in the Declaration of Helsinki. Ethics approval was obtained from the Ethics Committee of Near East University (NEU/SS/2023/1572).

#### Consent to Participate

Informed consent was obtained from all individual participants included in the study.

#### Acknowledgments

No acknowledgments to disclose.

#### Data Availability

The data supporting the findings of this study are available from the corresponding author, D.E., upon reasonable request.

## References

- Al-Gendy, T. M. (2012). Designing new groups of tests for measuring the technical performance of the basketball players. *Trends in Applied Sciences Research*, 7(8), 673.
- Arazi, H., & Asadi, A. (2011). The effect of aquatic and land plyometric training on strength, sprint, and balance in young basketball players. *Journal of Human Sport & Exercise*, 6 (1), 101-111.
- Aşçı, F. H. (2003). The effects of physical fitness training on trait anxiety and physical self-concept of female university students. *Psychology of Sport and Exercise*, 4 (3), 255-264.
- Ángel Gómez, M., Lorenzo, A., Sampaio, J., José Ibáñez, S., & Ortega, E. (2008). Game-related statistics that discriminated winning and losing teams from the Spanish men's professional basketball teams. *Collegium Anthropological*, 32 (2), 451-456
- Asadi, A. (2013). Effects of in-season short-term polymeric training on jumping and agility performance of basketball players. *Sport Sciences for Health*, 9(3), 133-137.
- Aladag, M., Yaka, B., & Koc, I. (2014). Opinions of Counselor Candidates Regarding Counseling Skills Training. *Educational Sciences: Theory and Practice*, 14(3), 879-886.
- Bandura, A., & Adams, N. E. (1977). Analysis of self-efficacy theory of behavioral change. *Cognitive therapy and Research*, 1(4), 287-310.
- Balyan, K. Y., Tok, S., Tatar, A., Binboga, E., & Balyan, M. (2016). The relationship among personality, cognitive anxiety, somatic anxiety, physiological arousal, and performance in male athletes. *Journal of Clinical Sport Psychology*, 10(1), 48-58.
- Branscombe, N. R., & Wann, D. L. (1991). The positive social and self-concept consequences of sports team identification. *Journal of Sport & Social Issues*, 15(2), 115- 127.
- Beedie, C. J., Terry, P. C., & Lane, A. M. (2000). The Profile of Mood States and athletic performance: Two meta-analyses. *Journal of Applied Sport Psychology*, 12(1), 49-68.
- Bhat, S. A., & Shaw, D. (2016). Selected Anxiety Variables of Successful and Unsuccessful Male and Female Judo Players of All India Inter-University Level. *The International Journal of Indian Psychology*, 3(4), 65-151.

- Burton, D. (1988). Do anxious swimmers swim slower? Re-examining the elusive anxiety performance relationship. *Journal of Sport and Exercise Psychology*, 10(1), 45-61.
- Brooks, A. W. (2014). Get excited: reappraising pre-performance anxiety as excitement. *Journal of Experimental Psychology: General*, 143(3), 1144.
- Bloom, H. (1997). *The anxiety of influence: A theory of poetry*. Oxford University Press, USA.
- Craft, L. L., Magyar, T. M., Becker, B. J., & Feltz, D. L. (2003). The relationship between the Competitive State Anxiety Inventory-2 and sports performance: A meta-analysis. *Journal of Sport and Exercise Psychology*, 25(1), 44-65.
- Caffey, M. R., Crane, J. W., & Ireland, M. F. (2016). Paramedic student anxiety levels towards topics in applied pharmacology at a regional university in Australia. *Australasian Journal of Paramedicine*, 13, 1-9.
- Cox, R. H., Martens, M. P., & Russell, W. D. (2003). Measuring anxiety in athletics: the revised competitive state anxiety inventory-2. *Journal of Sport and Exercise Psychology*, 25(4), 519-533.
- Castro, J. (2017). *Sports Related Anxiety in College Athletes*. Presentation at Scholarly and Creative Works Conference. Dominican University of California. California, USA.
- Drust, B. (2010). Performance analysis research: meeting the challenge. *Journal of Sports Sciences*, 28(9), 921-922.
- Delewi, R., Vlastra, W., Rohling, W. J., Wagenaar, T. C., Zwemstra, M., Meesterman, M. & Baan, J. (2017). Anxiety levels of patients undergoing coronary procedures in the catheterization laboratory. *International Journal of Cardiology*, 228, 926-930.
- Ellis, M. J., Cordingley, D., Vis, S., Reimer, K., Leiter, J., & Russell, K. (2015). Vestibuloocular dysfunction in pediatric sports-related concussion. *Journal of Neurosurgery: Paediatrics*, 16(3), 248-255.
- Englert, C., & Bertrams, A. (2012). Anxiety, ego deplete and sports performance. *Journal of Sport and Exercise Psychology*, 34(5), 580-599.
- Eron, J., Garner, W., Wei, L., Zhong, L., Miller, M., Szwarcberg, J., ... & White, K. (2016). *Retesting of Suspected Low-Level Human Immunodeficiency Virus (HIV)-1 Viral Load Blips: A New Paradigm to Prevent Extra Clinic Visits and Unnecessary Patient Anxiety*. In Open Forum Infectious Diseases (Vol. 3, No. suppl\_1, 948). Oxford University Press.
- Elliott, S. K., & Drummond, M. J. (2017). Parents in youth sport: what happens after the game? *Sport, Education and Society*, 22(3), 391-406.
- Eldridge, S. M., Lancaster, G. A., Campbell, M. J., Thabane, L., Hopewell, S., Coleman, C. L., & Bond, C. M. (2016). Defining feasibility and pilot studies in preparation for randomized controlled trials: development of a conceptual framework. *Plos One*, 11(3), 0150205.
- Epstein, S. (1973). The self-concept revisited: Or a theory of a theory. *American psychologist*, 28(5), 404.
- Ferreira, A. P., Volossovitch, A., & Sampaio, J. (2014). Towards the game critical moments in basketball: a grounded theory approach. *International Journal of Performance Analysis in Sport*, 14(2), 428-442.
- Fiske, S. T., Morling, B., & Stevens, L. E. (1996). Controlling self and others: A theory of anxiety, mental control, and social control. *Personality and Social Psychology Bulletin*, 22(2), 115-123.
- Francis, J., Molnar, G., Donovan, M., & Peters, D. M. (2015). Development of a Valid and Reliable Performance Analysis Template for Assessing Team Performance in Elite Men's Wheelchair Basketball. *Journal of Sports Sciences*, 47-47.
- Foster, T., Steen, L., O'Ryan, L., & Nelson, J. (2016). Examining How the Adlerian Life Tasks Predict Anxiety in First-Year Counselling Students. *The Journal of Individual Psychology*, 72(2), 104-120.
- Gómez, M. A., Lorenzo, A., Ibáñez, S. J., Ortega, E., Leite, N., & Sampaio, J. (2010). An analysis of defensive strategies used by home and away basketball teams. *Perceptual and Motor Skills*, 110(1), 159-166.
- Gudykunst, W. B. (1998). Applying anxiety\ uncertainty management (AUM) Theory to intercultural adjustment training. *International Journal of Intercultural Relations*, 22(2), 227-250.
- Hardy, L., & Parfitt, G. (1991). A catastrophe model of anxiety and performance. *British Journal of Psychology*, 82(2), 163-178.
- Hoover, S. J., Winter, R. K., McCutchan, H., Beaudoin, C. C., Judge, L. W., Jones, L. M., & Hoover, D. L. (2017). Mood and Performance Anxiety in High School Basketball Players: A Pilot Study. *International Journal of Exercise Science*, 10(4), 604-618.
- Judge, L. W., Urbina, L. J., Hoover, D. L., Craig, B. W., Judge, L. M., Leitzelar, B. M., & Bellar, D. M. (2016). The Impact of Competitive Trait Anxiety on Collegiate Power Lifting Performance. *The Journal of Strength & Conditioning Research*, 30(9), 2399-2405.
- Jovanovic, T., Nylocks, K. M., Gamwell, K. L., Smith, A., Davis, T. A., Norrholm, S. D., & Bradley, B. (2014). Development of fear acquisition and extinction in children: Effects of age and anxiety. *Neurobiology of Learning and Memory*, 113, 135-142.
- Keikha, B. M., Yusof, S. M., & Jourkesh, M. (2015). The relationship between pre-competition state anxiety components and mood state sub-scales scores and the result of among college athletes through temporal patterning. *International Journal of Sports Science*, 5(1), 8-15.
- Krzyzewski, M., & Phillips, D. T. (2010). *Leading with the heart: Coach K's successful strategies for basketball, business, and life*. Hachette UK.
- Krause, J.V., (1991). *Basketball Skills and Drills*. Leisure Press, London, UK. 123.
- Kamel, E. M. (1990). *A Factorial Study of the tests of physical and skill in basketball* (Doctoral dissertation, M. Sc. Thesis, Faculty of Physical Education, Menia University, Egypt).

- Klinzing, J. E. (1991). Training for improved jumping ability of basketball players. *Strength & Conditioning Journal*, 13(3), 27-33.
- Kaur, G. (2016). *Comparative study of government and public school students of Chandigarh as related to sports achievements academic anxiety and self-concept*. (Unpublished doctoral thesis). Faculty of Education, Panjab University, Chandigarh, India.
- Kirker, B., Tenenbaum, G., & Mattson, J. (2000). An investigation of the dynamics of aggression: Direct observations in ice hockey and basketball. *Research Quarterly for Exercise and Sport*, 71(4), 373-386.
- Kleine, D. (1990). Anxiety and sports performance: A meta-analysis. *Anxiety Research*, 2(2), 113-131.
- Lam, T. P., & Sun, K. S. (2014). Stigmatizing opinions of Chinese toward different types of mental illnesses: a qualitative study in Hong Kong. *The International Journal of Psychiatry in Medicine*, 48(3), 217-228.
- Leary, M. R., & Jongman-Sereno, K. P. (2010). Social anxiety as an early warning system: A refinement and extension of the self-presentation theory of social anxiety. *Social anxiety: Clinical, Developmental, and Social Perspectives*, 471-486.
- Leitenberg, H. (Ed.). (2013). *Handbook of social and evaluation anxiety*. Springer, Boston, MA.
- Lerner, B. S., Ostrow, A. C., Yura, M. T., & Etzel, E. F. (1996). The effects of goal-setting and imagery training programs on the free-throw performance of female collegiate basketball players. *The Sport Psychologist*, 10(4), 382-397.
- Lewin, D. S. (2015). Mindful Strategies To Deal With Stress, Anxiety And Conflict Associated With Chronic Illness. *Paediatric Pulmonologist*, 50, 130.
- Latinjak, A. T., Hatzigeorgiadis, A., & Zourbanos, N. (2017). Goal-Directed and Spontaneous Self-Talk in Anger-and Anxiety-Eliciting Sport-Situations. *Journal of Applied Sport Psychology*, 29(2), 150-166.
- Lamb, A. L., Hess, D. E., Edenborn, S., Ubinger, E., Carrillo, A. E., & Appasamy, P. M. (2017). Elevated salivary IgA, decreased anxiety, and altered oral microbiota are associated with active participation on an undergraduate athletic team. *Physiology & Behavior*, 169, 169-177.
- Mohammed, S.H. (2000). *Thinking strategies in sports competitions, the Egyptian Society for Mathematical decrease*. Arab Thought House. Cairo, Egypt.
- Martens, R., Burton, D., Vealey, R. S., Bump, L. A., & Smith, D. E. (1990). Development and validation of the competitive state anxiety inventory-2. *Competitive Anxiety in Sport*, 117-190.
- Martens, R., Burton, D., Rivkin, F., & Simon, J. (1980). Reliability and validity of the competitive state anxiety inventory (CSAI). *Psychology of Motor Behavior and Sport*, 91-99.
- Miller, M. G., Herniman, J. J., Ricard, M. D., Cheatham, C. C., & Michael, T. J. (2006). The effects of a 6-week polymeric training program on agility. *Journal of Sports Science and Medicine*, 5(3), 459-465.
- Montgomery, P. G., Pyne, D. B., Hopkins, W. G., Dorman, J. C., Cook, K., & Minahan, C. L. (2008). The effect of recovery strategies on physical performance and cumulative fatigue in competitive basketball. *Journal of Sports Sciences*, 26(11), 1135-1145.
- McReynolds, W. T. (2015). *Anxiety as fear: a behavioral approach to one emotion. Emotions and Anxiety (PLE: Emotion): New Concepts, Methods, and Applications*, 12, 281.
- Öhman, A., & Wiens, S. (2004, April). *The concept of an evolved fear module and cognitive theories of anxiety. In Feelings and emotions: The Amsterdam symposium (8-80)*. Cambridge, UK: Cambridge University Press.
- Ortín, N. U., & López, M. I. P. (2010). Relation between the anxiety and performance of a team of basketball during the competition. *Revista de Psicología del Deporte*, 18(3), 409-413.
- Osama, R. (1995). *The Psychology of Sports Concepts Applications*, (First Edition), The Arab Thought House, Cairo, Egypt.
- Pichurin, V. V. (2015). Psychological and psycho-physical training as a factor of personal anxiety at students. *Pedagogic, Psychology, Medical-biological Problems of Physical Training and Sports*, 19(3), 46-51.
- Parfitt, G., & Pates, J. (1999). The effects of cognitive and somatic anxiety and self-confidence on components of performance during competition. *Journal of Sports Sciences*, 17(5), 351-356.
- Paulus, J., Tong, J., Hornegger, J., Schmidt, M., Eskofier, B., & Michelson, G. (2014). Extended stereopsis evaluation of professional and amateur soccer players and subjects without soccer background. *Frontiers in Psychology*, 5, 1186.
- Quevedo-Junyent, L., Aznar-Casanova, J. A., Merindano-Encina, D., Cardona, G., & Solé- Fortó, J. (2011). Comparison of dynamic visual acuity between water polo players and sedentary students. *Research Quarterly for Exercise and sport*, 82(4), 644-651.
- Ruiz, L. M., Sánchez, M., Piqueras, J. D., & Jiménez, C. (2006). Los expertos en el deporte: Su estudio y análisis desde una perspectiva psicológica. *Anales de Psicología/Annals of Psychology*, 22(1), 132-142.
- Roy-Byrne, P. (2015). Treatment-refractory anxiety; definition, risk factors, and treatment challenges. *Dialogues in Clinical Neuroscience*, 17(2), 191.
- Rhea, M. R., Landers, D. M., Alvar, B. A., & Arent, S. M. (2003). The effects of competition and the presence of an audience on weightlifting performance. *The Journal of Strength & Conditioning Research*, 17(2), 303-306.
- Smith, R. E., Smoll, F. L., Cumming, S. P., & Grossbard, J. R. (2006). Measurement of multidimensional sport performance anxiety in children and adults: The Sport Anxiety Scale-2. *Journal of Sport and Exercise Psychology*, 28(4), 479-501.
- Sampaio, J., Drinkwater, E. J., & Leite, N. M. (2010). Effects of season period, team quality, and playing time on basketball players' game-related statistics. *European Journal of Sport Science*, 10(2), 141-149.

- Smith, R. E., Smoll, F. L., Cumming, S. P., & Grossbard, J. R. (2006). Measurement of multidimensional sport performance anxiety in children and adults: The Sport Anxiety Scale-2. *Journal of Sport and Exercise Psychology*, 28(4), 479-501.
- Sanaei, O., Zafarghandi, A. M., & Sabet, M. K. (2015). The effect of classroom anxiety on EFL learner's oral narratives fluency: the case of intermediate level students. *Theory and Practice in Language Studies*, 5(7), 1390.
- Schaller, M. A., Griesinger, G., & Banz-Jansen, C. (2016). Women show a higher level of anxiety during IVF treatment than men and hold different concerns: a cohort study. *Archives of Gynecology and Obstetrics*, 293(5), 1137-1145.
- Sullivan, H. S. (2014). *The interpersonal theory of psychiatry. In An introduction to theories of personality* (37-156). Psychology Press.
- Sonstroem, R. J., & Bernardo, P. (1982). Intraindividual pregame state anxiety and basketball performance: A re-examination of the inverted-U curve. *Journal of Sport Psychology*, 4(3), 235-245.
- Thuot, S., Kavouras, S., & Kenefick, R. (1998). Effect of perceived ability, game location, and state anxiety on basketball performance. *Journal of Sport Behaviour*, 21(3), 311.
- Terry, P. (1995). The efficacy of mood state profiling with elite performers: A review and synthesis. *The Sport Psychologist*, 9(3), 309-324.
- Verkuil, B., Brosschot, J. F., & Thayer, J. F. (2014). Cardiac reactivity to and recovery from acute stress: Temporal associations with implicit anxiety. *International Journal of Psychophysiology*, 92(2), 85-91.
- Wilson, M. R., Vine, S. J., & Wood, G. (2009). The influence of anxiety on visual attentional control in basketball free throw shooting. *Journal of Sport and Exercise Psychology*, 31(2), 152-168.
- Wrisberg, C. A., & Anshel, M. H. (1989). The effect of cognitive strategies on the free throw shooting performance of young athletes. *The Sport Psychologist*, 3(2), 95-104.
- Weinberg, R. S., & Gould, D. (2023). *Foundations of sport and exercise psychology*. Human kinetics.
- Woodman, T., Barlow, M., Bandura, C., Hill, M., Kupciw, D., & MacGregor, A. (2013). Not all risks are equal: The risk-taking inventory for high-risk sports. *Journal of Sport and Exercise Psychology*, 35(5), 479-492.
- Wilde-Larsson, B., Larsson, G., Kvist, L. J., & Sandin-Bojö, A. K. (2010). Women's' opinions on intrapartal care: development of a theory-based questionnaire. *Journal of Clinical Nursing*, 19(11-12), 1748-1760.
- Yang, K., & Forney, J. C. (2013). The moderating role of consumer technology anxiety in mobile shopping adoption: differential effects of facilitating conditions and social influences. *Journal of Electronic Commerce Research*, 14(4), 334.
- Zamani, A., & Moradi, A. (2011). The comparison of the trait anxiety, state anxiety, and confidence in three sports teams and three individual sports. *Knowledge & Research in Applied Psychology*, 11(40), 81-98.
- Zuckerman, M., & Spielberger, C. D. (Eds.). (2015). *Emotions and anxiety (PLE: emotion): New concepts, methods, and applications*. Psychology Press.



REVIEW ARTICLE / DERLEME YAZISI

# A Review of the Literature on the Influence of Peer Support Programs on Student Mental Health and Well-Being

Akran destek programlarının öğrenci ruh sağlığı ve refahı  
üzerindeki etkisine ilişkin literatürün gözden geçirilmesi

Omotoyosi Oduwaye<sup>1</sup>, Askin Kiraz<sup>2</sup>, Yasemin Sorakin<sup>3</sup>

## Abstract:

This literature review investigates the transformative role of peer support programs focusing on student mental health and well-being. These programs offer significant advantages to domestic and international students by fostering emotional support and a sense of community. Additionally, studies show that they improve self-confidence, lessen stress and anxiety, and foster a supportive environment. Existing literature emphasizes the importance of peer support programs through strengths in empirical evidence, diverse settings, and multifaceted approaches. However, gaps in inclusivity, underexplored mechanisms, and the need for longitudinal research persist. The practical implications center on the distribution of resources, consciousness, accessibility, and continuous adaptation. Educational institutions can help students learn better and achieve academic success and emotional growth by paying attention to these implications.

**Keywords:** Peer support programs, social support, university students, mental health, well-being

<sup>1</sup>PhD Student, Near East University, Institute of Education Sciences, Department of Psychological Counseling and Guidance, Lefkoşa TRN Cyprus, e-mail: omotoyosi.oduwaye@neu.edu.tr, Orcid Id: 0000-0002-6761-7369

<sup>2</sup>Prof., Near East University, Institute of Education Sciences, Department of Psychological Counseling and Guidance, Lefkoşa TRN Cyprus, e-mail: askin.kiraz@neu.edu.tr, Orcid ID: 0000-0002-2350-8291

<sup>3</sup>Assoc. Prof., Near East University, Institute of Education Sciences, Department of Psychological Counseling and Guidance, Lefkoşa TRN Cyprus, e-mail: yasemin.sorakin@neu.edu.tr, Orcid ID: 0000-0003-4041-7903

**Address of Correspondence/Yazışma Adresi:** Omotoyosi Oduwaye, Near East University, Institute of Education Sciences, Department of Psychological Counseling and Guidance, Lefkoşa TRNC, Mersin 10 Turkey, Email: omotoyosi.oduwaye@neu.edu.tr

**Date of Received/Geliş Tarihi:** 12.11.2023, **Date of Revision/Düzeltilme Tarihi:** 05.03.2024, **Date of Acceptance/Kabul Tarihi:** 18.05.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Okumuşoğlu, S. (2024). A Review of the Literature on the Influence of Peer Support Programs on Student Mental Health and Well-Being, *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 177-182

© 2023 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktpppergisi.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes. <http://creativecommons.org/licenses/by/4.0/>

## Öz:

Bu literatür taraması, öğrencinin ruh sağlığı ve refahına odaklanan akran destek programlarının dönüştürücü rolünü araştırıyor. Bu programlar, duygusal desteği ve topluluk duygusunu geliştirerek yerli ve yabancı öğrencilere önemli avantajlar sunmaktadır. Ek olarak araştırmalar, bunların özgüveni artırdığını, stresi ve kaygıyı azalttığını ve destekleyici bir ortam geliştirdiğini gösteriyor. Mevcut literatür ampirik kanıtların güçlü yönleri, farklı ortamlar ve çok yönlü yaklaşımlar yoluyla akran destek programlarının önemini vurgulamaktadır. Ancak kapsayıcılık konusundaki boşluklar, yeterince araştırılmamış mekanizmalar ve boylamsal araştırmalara duyulan ihtiyaç devam etmektedir. Pratik çıkarımlar kaynakların dağıtımını, bilinç, erişilebilirlik ve sürekli uyum üzerinde yoğunlaşmaktadır. Eğitim kurumları bu sonuçlara dikkat ederek öğrencilerin daha iyi öğrenmelerine, akademik başarıya ve duygusal gelişime ulaşmalarına yardımcı olabilir.

**Anahtar Kelimeler:** Akran destek programları, sosyal destek, üniversite öğrencileri, ruh sağlığı, iyi oluş

## Introduction

The well-being and mental health of university students must be taken into consideration for them to have a successful educational experience. However, many challenges such as academic demands, the transition to higher education, and the numerous stressors that students face can all have an impact on their mental health (Campbell et al., 2022; Matsuo et al., 2022). It becomes important for universities to provide support programs to help students at this stage, one of which is the peer support program. This literature investigates how peer support programs influence student mental health and well-being, focusing on their ability to reduce stress and anxiety while also enabling a supportive academic environment.

Peer support programs have recently gained recognition as an effective way to address the mental health challenges that students face in higher education (John et al., 2018; Richard et al., 2022; Simmons et al., 2023). These programs are intended to provide students with support, guidance, and mentorship. Peer support programs aim to create a sense of belonging and reduce the isolation that can often accompany higher education by building connections and promoting experience sharing (Suresh et al., 2021).

According to Winzer et al. (2018), improving students' mental health and well-being benefits educational institutions, society at large, and their own personal development. Therefore, it is imperative to explore and understand the potential of peer support programs as a valuable resource for students to navigate the difficulties of higher education while maintaining their mental health and well-being.

The purpose of this review is to provide a comprehensive overview of peer support programs and their influence on student mental well-being. We examine the existing literature to identify how peer support programs enhance student well-being. Therefore, this review seeks to answer the research question – what influence do peer support programs have on students' mental health? Furthermore, the strengths and limitations of the current research will be assessed, highlighting areas where further investigation is warranted.

The methodology employed for this review will be discussed in the subsequent sections, followed by an overview of peer support programs, and the challenges of students in the academic environment and the influence of peer support programs. Finally, we will discuss the implications for educational institutions, policymakers, and the future of student support programs.

## Method

### Search Strategy

A systematic search was conducted to perform a thorough review of the literature on the influence of peer support programs on the mental health and well-being of students. The following databases were used to find relevant articles: PubMed, Scopus, Google Scholar, EBSCO Host, Medline, and PsycINFO. The results of the search are shown in Figure 1.

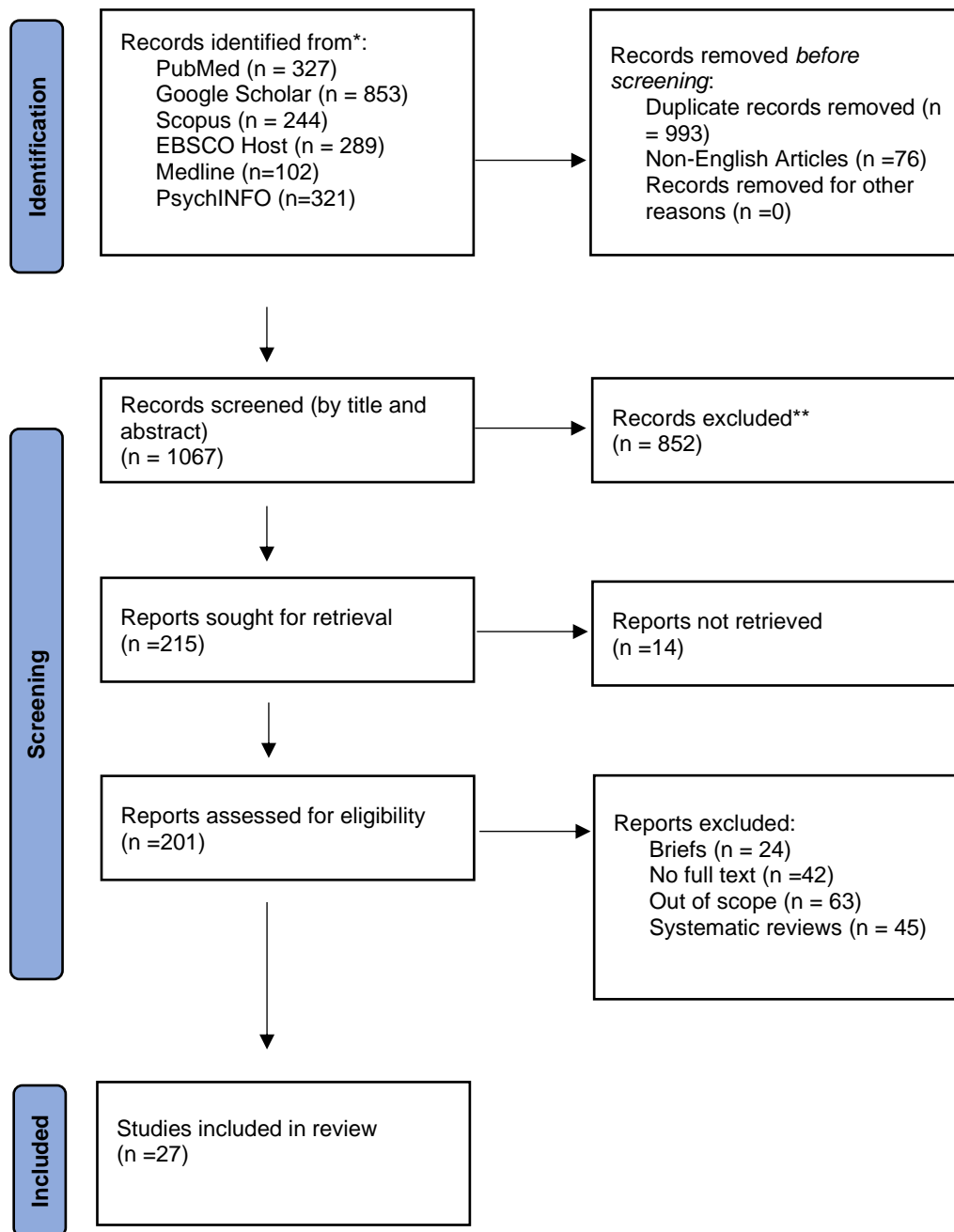
Relevant keywords and phrases were combined to create the search terms. Among these are “support for students' mental health,” “peer support for students,” and “support for students' psychological well-being.” The above search terms were applied methodically to all the databases that were chosen as part of an organized search procedure. For every term, separate searches were carried out and then combined to produce possible articles.

### Criteria for Inclusion and Exclusion

Inclusion and exclusion criteria were used to preserve the quality and relevance of the articles included in this review. The criteria for inclusion were that the article be full text, focused on peer support for students, address the mental, emotional, and psychological health and well-being of university students, be published in English, and be original and peer-reviewed. Non-original research articles, such as review papers and editorials, and articles published in languages other than English were excluded.

A rigorous screening process was used to select the articles. Initial screening was based on the titles and abstracts of the identified articles. The articles that fit the inclusion requirements were retrieved and reviewed thoroughly. All authors worked together to discuss and resolve any discrepancies or doubts about inclusion.

Figure 1: PRISMA Flowchart of the included studies. A total of 27 research articles were included in this review.



## Results

Twenty-seven studies on peer support programs and their impact on university students were included in this review. Three studies used mixed methods, 17 were quantitative and seven studies used qualitative methods. The findings reveal that several studies (Altermatt, 2016; Campbell et al., 2022; Hayman et al., 2022; Kaynak, Kaynak & Kocak., 2023; King & Fazel., 2021; Suresh et al., 2021; Worley et al., 2023) have investigated the impact of peer support on students' mental wellbeing with positive findings. This is not surprising since the mental health and well-being of students is a topic of critical concern in universities and higher educational institutions. Peer support programs are

intended to improve relationships and interactions among students and are frequently based on the ideas of social support and peer mentoring (Suresh, 2021). These initiatives give students supervised chances to socialize with classmates, usually emphasizing their academic and personal development. These programs are offered through student organizations, peer mentoring, tutoring, counseling, and other means (Osborn et al., 2022) and the main goals are to help students feel like they belong, offer support, and overcome obstacles they might encounter while pursuing their education.

Students pursuing a higher education are at a time of significant personal growth, academic development, and



exploration. Yet, they face increased stress and unique challenges (Divaris et al., 2008). Suresh et al., (2021) noted that balancing coursework, exams, social life, and self-discovery are some of the challenges that can affect students' mental health. In addition, understanding and addressing student well-being is essential not only for individuals but also for educational institutions seeking to provide a conducive and supportive learning environment.

The influence of peer support programs on students' psychological health and well-being is profound. Research has shown that students who actively engage in peer support programs experience lower stress, anxiety, and isolation (Crisp et al., 2020; Seery et al., 2021; Worley et al., 2023). Manyeruke and Ergun (2022) also stressed the significance of social support in improving the lives of international students. These programs act as a protective factor against mental health challenges, offering a space for students to share their experiences and receive support from peers who may have faced similar issues.

Peer support programs in universities usually involve upper-class students mentoring newcomers, particularly international students and providing academic and personal guidance (Venegas-Mugglu et al., 2021). This mentoring relationship assists students in navigating their academic journey while also providing insights into university life. The function of these mentors builds companionship and trust resulting in a supportive environment for their mentees (Seery et al., 2021).

Furthermore, many peer support programs provide tutoring or study groups, allowing students to improve their academic skills and succeed in their courses (Collier, 2022; Venegas-Muggli et al., 2021). Peers who excel in subjects or courses may volunteer to tutor struggling students. Additionally, study groups facilitate collaborative learning by providing a structured platform for students to collaborate, share knowledge, and tackle academic challenges together (Wilton et al., 2021).

Besides academic support, peer support programs provide a platform for emotional support (Suresh, 2021). Students can discuss their concerns, challenges, and fears openly, which reduces feelings of isolation, anxiety, and stress (Crisp, 2020). As a result, students can express their emotions and receive understanding and encouragement from their peers. Moreover, peer support programs contribute to developing a sense of community on campus. By facilitating interactions among students from diverse backgrounds and academic interests, these programs create a cohesive academic environment. Therefore, students who participate in peer support programs often report feeling more connected to their university, which can be instrumental in reducing isolation. (Osborn et al., 2022).

In addition, peer support benefits students beyond their academics. These programs can improve student's mood, teach life skills such as effective communication, and help them develop problem solving and stress coping skills. As they develop these skills, students become more resilient and better equipped to manage the challenges they encounter not only in their academic journey but also in their future endeavors. The peer mentorship and guidance of these programs also provide help in enhancing students' self-confidence. When students receive personalized advice and mentorship from their peers, they often experience increased self-esteem and self-efficacy

(Richard et al., 2022). This enhanced self-confidence positively influences their overall mental well-being, making them better prepared to face the complexities of academic life.

## Discussion

Peer support programs are invaluable resources within educational institutions that offer students support and understanding. Students face several challenges that affect their mental health and well-being. Academic demands, such as rigorous coursework and impending deadlines, can cause stress and anxiety (Alhamed, 2023). These challenges also extend to international students who may face more issues. For them, the transition to university life, frequently away from home, introduces a new set of stressors associated with independence and adjusting to a new environment (Oduwaye et al., 2023). Social pressures, financial constraints, and the uncertainty of prospects all add to the difficulties.

The possibility of isolation is one of the consistent challenges in university experience. Students may find themselves in environments with no familiar support networks, resulting in loneliness. Loneliness, when combined with academic pressure, can result in psychological distress (Diehl et al., 2018; Zahedi et al., 2022) and poor academic performance (Alinejad et al., 2022). Nevertheless, participation in peer support programs has been linked to improved academic performance (Altermatt, 2016; Huang, 2023). Students who participate in these programs and receive guidance and tutoring perform better in their classes. Peer support programs can improve student motivation and engagement in their academic pursuits by instilling a sense of belonging and community.

The prevalence of mental health issues among university students, such as anxiety, depression, and stress, emphasizes the importance of addressing their well-being. Many of the identified studies (Hayman et al., 2022; Manyeruke & Ergun, 2022; Osborn et al., 2022; Suresh et al., 2021; Worley et al., 2023; Wilcox et al., 2005) provide empirical evidence supporting the positive impact of peer support programs on student mental health. These studies used meticulous research methods and statistical analyses, making their findings credible. Although the findings of this review show that peer support programs have a positive influence on student mental health, some studies (Gregoire et al., 2022; John et al., 2018) conclude that there is no evidence to support these claims.

However, to emphasize its importance, peer support programs have been researched in various academic settings, including community colleges and large universities. Local and international students have been involved in these studies (Lee, 2017; Martirosyan et al., 2019; Huang, 2023; Pointon Haas et al., 2023; Suresh et al., 2021). These studies also demonstrate the effectiveness of peer support programs for students from all backgrounds. This diversity of settings offers a broad perspective on the effectiveness of these programs across different student populations.

## Implications for Practice

Examining peer support programs and their effects on students' mental health and well-being adds to the body of knowledge in academia. Additionally, this review's

findings indicate the areas where peer support can be improved upon in higher education.

Educational institutions and policymakers can improve peer support programs in several ways. First, they must ensure resource allocation to improve and expand support programs. Funding for mentorship training, additional support personnel, and program development can go a long way to enhance these programs (Osborn et al., 2022). Institutions should invest in comprehensive peer mentor and program coordinator training. This education should cover not only academics but also interpersonal and mental health support skills.

Additionally, different challenges arise when establishing an initiative such as peer support programs (Crisp, 2020). Therefore, monitoring and evaluation should be discussed when creating peer support programs. It is critical to assess these programs regularly and monitoring and evaluation helps to assess and ensure that the objectives of the programs are met (Nkonki-Mandleni, 2023). So, institutions should implement mechanisms to track the effectiveness of these programs for student well-being. These can be done through quantitative and qualitative research methods such as surveys and interviews.

Furthermore, existing mental health and counseling services should be integrated with peer support programs. Collaboration between peer mentors and professional counselors can provide a comprehensive approach to student well-being, with each component complementing the other (Collier, 2017; Colvin & Ashman, 2010). Additionally, institutions should establish efficient referral systems to connect students with more specialized mental health services as needed. They should also recognize that peer support programs must be adaptable and open to change, and student feedback should drive changes to ensure the program remains relevant and valuable.

Finally, recognizing that students' needs vary, institutions should consider tailoring peer support programs to a specific student population. Programs tailored to international students, students with disabilities, or those from underrepresented backgrounds can have a more significant impact (Claeys-Kulik et al., 2019).

## Conclusion

Peer support programs can improve all aspects of a student's life. Students can connect, learn, and support one another through these structured programs. According to research, peer support programs also appear to lower stress and anxiety, create a positive atmosphere, strengthen coping mechanisms, and boost self-esteem. Nonetheless, there are still gaps and restrictions in the research on peer support initiatives. This literature review demonstrates the need for additional research to meet the varied needs of students. While academic support and mentoring are well-researched components of peer support programs, more research is needed to understand emotional support and personal development fully. Additional considerations include contextual variables, long-term results, and balancing quantitative and qualitative research.

Peer support programs are a promising avenue for improving student mental health and well-being in the academic setting. This review has provided a thorough overview of their influence and practical implications. Leveraging the strengths of these programs while addressing their shortcomings can be critical in improving the development of university students.

## Declarations

### Ethical Approval and Consent to Participate

There were no human or animal participants in this study and therefore did not require ethical approval.

### Publication Permission

Not applicable.

### Availability of Data and Materials

Not applicable.

### Conflict of Interest

The authors declare that they have no conflict of interest.

### Financing

Not applicable.

### Author Contributions

OO and YS contributed to overall writing, analysis, literature search and interpretation. AK was involved in editing, proofreading and interpretation. All authors have read and approved the final version of the article.

## References

- Alhamed, A. A. (2023). The link among academic stress, sleep disturbances, depressive symptoms, academic performance, and the moderating role of resourcefulness in health professions students during COVID-19 pandemic. *Journal of Professional Nursing*, 46, 83-91. <https://doi.org/10.1016/j.profnurs.2023.02.010>
- Alinejad, V., Parizad, N., Yarmohammadi, M. & Radfar, M. (2022). Loneliness and academic performance mediate the relationship between fear of missing out and smartphone addiction among Iranian university students. *BMC Psychiatry* 22, 550. <https://doi.org/10.1186/s12888-022-04186-6>
- Altermatt, E. R. (2016). Academic Support from Peers as a Predictor of Academic Self-Efficacy Among College Students. *Journal of College Student Retention: Research, Theory & Practice*. <https://doi.org/10.1177/1521025116686588>
- Campbell, F., Blank, L., Cantrell, A., Baxter, S., Blackmore, C., Dixon, J., & Goyder, E. (2022). Factors that influence the mental health of university and college students in the UK: a systematic review. *BMC Public Health*, 22, 1778 <https://doi.org/10.1186/s12889-022-13943-x>
- Claeys-Kulik, A., Jorgensen, T.E., & Stober, H., (2019). Diversity, Equity and Inclusion in European Higher Education Institutions. *European University Association*. [https://eua.eu/downloads/publications/web\\_diversity%20equity%20and%20inclusion%20in%20european%20higher%20education%20institutions.pdf](https://eua.eu/downloads/publications/web_diversity%20equity%20and%20inclusion%20in%20european%20higher%20education%20institutions.pdf)
- Collier, P. (2022). How Peer Mentoring Can Help Universities Promote Student Success in a Post-COVID-19 Pandemic World. *Metropolitan Universities*, 33(1), 37-54. <https://doi.org/10.18060/25222>
- Collier, P.J. (2017). Why peer mentoring is an effective approach for promoting college student success. *Metropolitan universities*. Vol. 28 No. 3. <https://doi.org/10.18060/21539>
- Colvin, J.W., & Ashman, M. (2010). Roles, Risks, and Benefits of Peer Mentoring Relationships in Higher Education. *Mentoring & Tutoring: Partnership in Learning* Vol. 18, No. 2, May 2010, 121-134. <https://doi.org/10.1080/13611261003678879>
- Crisp, D. A., Rickwood, D., Martin, B., & Byrom, N. (2020). Implementing a peer support program for improving university

- student well-being: The experience of program facilitators. *Australian Journal of Education*.  
<https://doi.org/10.1177/0004944120910498>
- Diehl, K., Jansen, C., Ishchanova, K., & Hilger-Kolb, J. (2018). Loneliness at Universities: Determinants of Emotional and Social Loneliness among Students. *International Journal of Environmental Research and Public Health*, 15(9).  
<https://doi.org/10.3390/ijerph15091865>
- Divaris, K., Barlow, P. J., Chendea, S. A., Cheong, W. S., Dounis, A., Dragan, I. F., Hamlin, J., Hosseinzadeh, L., Kuin, D., Mitirattanakul, S., Mo'nes, M., Molnar, N., Perryer, G., Pickup, J., Raval, N., Shanahan, D., Songpaisan, Y., Taneva, E., Yaghoob-Zadeh, S., West, K., ... Vrazic, D. (2008). The academic environment: the student's perspective. *European journal of dental education: official journal of the Association for Dental Education in Europe*, 12 Suppl 1, 120–130.  
<https://doi.org/10.1111/j.1600-0579.2007.00494.x>
- Grégoire, S., Beaulieu, F., Lise Lachance, L., Bouffard, T., Vezeau, C., & Perreault, M. (2022). An online peer support program to improve mental health among university students: A randomized controlled trial. *Journal of American College Health*.  
<https://doi.org/10.1080/07448481.2022.2099224>
- Hayman, R., Wharton, K., Bruce-Martin, C., & Allin, L. (2022). Benefits and motives for peer mentoring in higher education: an exploration through the lens of cultural capital. *Mentoring & Tutoring: Partnership in Learning*, 30:2, 256–273.  
<https://doi.org/10.1080/13611267.2022.2057098>
- Huang, Y. (2023). Examining the relationship between peer support and foreign language emotions in online learning: The mediating effect of self-efficacy. *Frontiers in Psychology*, p. 14, 1148472. <https://doi.org/10.3389/fpsyg.2023.1148472>
- John N.M., Page O., Martin S.C., & Whittaker P. (2018). Impact of peer support on student mental well-being: a systematic review [version 1]. *Med Ed Publish* 7:170  
<https://doi.org/10.15694/mep.2018.0000170.1>
- John, N. M., Page, O., Martin, S. C., & Whittaker, P. (2018). Impact of peer support on student mental wellbeing: A systematic review. *Med Ed Publish*, 7.  
<https://doi.org/10.15694/mep.2018.0000170.1>
- Kaynak, U., Kaynak, S., & Koçak, S.S. (2023) The Pathway from Perceived Peer Support to Achievement via School Motivation in Girls and Boys: A Moderated-Mediation Analysis, *RMLE Online*, 46:3, 1-13.  
<https://doi.org/10.1080/19404476.2023.2171655>
- King, T., & Fazel, M. (2021). Examining the mental health outcomes of school-based peer-led interventions on young people: A scoping review of range and a systematic review of effectiveness. *PLoS ONE*, 16(4).  
<https://doi.org/10.1371/journal.pone.0249553>
- Lee, S., (2017). Peer Support for International Doctoral Students in Managing Supervision Relationships *Journal of International Students*. Vol 7. NO. 4. <https://doi.org/10.32674/jis.v7i4.194>
- Manyeruke, G. & Ergün, D. (2022). Mental Health, Loneliness and Social Support during COVID-19 Pandemic among International University Students in North Cyprus. *Cyprus Turkish Journal of Psychiatry and Psychology*, 4 (3), 211-221.  
<https://dergipark.org.tr/en/pub/ktppdergisi/issue/72722/1103229>
- Martirosyan, N.M., Bustamante, R.M., & Saxon, P. (2019). Academic and Social Support Services for International Students: Current Practices. *Journal of International Students*. Volume 9, Issue 1. <https://doi.org/10.32674/jis.v9i1.275>
- Matsuo, M., Sesoko, S., Kosa, A., Noda, S., Koura, S., Miyabara, H., & Higuchi, T. (2022). Factors affecting the mental health of medical students during the COVID-19 pandemic: A cross-sectional study. *Medicine*, 101(47).  
<https://doi.org/10.1097/MD.00000000000031897>
- Nkonki-Mandleni, B. (2023). Monitoring and Evaluation for University-Community Impact in Driving Transformation Agenda. *South African Journal of Higher Education*. Vol 37, No. 1. [https://hdl.handle.net/10520/ejc-high\\_v37\\_n1\\_a9](https://hdl.handle.net/10520/ejc-high_v37_n1_a9)
- Oduwaye, O., Kiraz, A., & Sorakin, Y. (2023). A Trend Analysis of the Challenges of International Students in Over 21 Years. *Sage Open*. *Sage Open*, 13(4).  
<https://doi.org/10.1177/21582440231210387>
- Osborn, T., Town, R., Ellis, R., Buckman, J., Saunders, R., & Fonagy, P. (2022). Implementing peer support in higher education: A feasibility study. *SSM - Mental Health*, p. 2, 100175. <https://doi.org/10.1016/j.ssmmh.2022.100175>
- Venegas-Muggli, J. I., Barrientos, C., & Álvarez, F. (2021). The Impact of Peer-Mentoring on the Academic Success of Underrepresented College Students. *Journal of College Student Retention: Research, Theory & Practice*. <https://doi.org/10.1177/1521025121995988>
- Pointon-Haas, J., Byrom, N., Foster, J., Hayes, C., & Oates, J. (2023). Staff Perspectives: Defining the Types, Challenges, and Lessons Learnt of University Peer Support for Student Mental Health and Well-being. *Education Sciences*, 13(9), 962.  
<https://doi.org/10.3390/educsci13090962>
- Richard, J., Rebinsky, R., Suresh, R., Kubic, S., Carter, A., Cunningham, J. E., Ker, A., Williams, K., & Sorin, M. (2022). Original research: Scoping review to evaluate the effects of peer support on the mental health of young adults. *BMJ Open*, 12(8).  
<https://doi.org/10.1136/bmjopen-2022-061336>
- Seery, C., Andres, A., Moore-Cherry, N., & O'Sullivan, S. (2021). Students as Partners in Peer Mentoring: Expectations, Experiences and Emotions. *Innov High Educ*, 46, 663–681.  
<https://doi.org/10.1007/s10755-021-09556-8>
- Simmons, M. B., Cartner, S., MacDonald, R., Whitson, S., Bailey, A., & Brown, E. (2023). The effectiveness of peer support from a person with lived experience of mental health challenges for young people with anxiety and depression: A systematic review. *BMC Psychiatry*, p. 23. <https://doi.org/10.1186/s12888-023-04578-2>
- Suresh, R., Karkossa, Z., Richard, J., & Karia, M. (2021). Program evaluation of a student-led peer support service at a Canadian university. *Int J Ment Health Syst*, 15, 54.  
<https://doi.org/10.1186/s13033-021-00479-7>
- Wilcox, P., Winn, S., & Fyvie-Gauld, M. (2005). 'It was nothing to do with the university, it was just the people': the role of social support in the first-year experience of higher education, *Studies in Higher Education*, 30:6, 707–722.  
<https://doi.org/10.1080/03075070500340036>
- Wilton, M., Katz, D., Clairmont A, Gonzalez-Nino, E., Foltz, K & Christoffersen, R. (2021). Improving academic performance and retention of first-year biology students through a scalable peer mentorship program. *CBE-Life Sciences Education*, Vol 20, NO.4. <https://doi.org/10.1187/cbe.21-02-0039>
- Winzer, R., Lindberg, L., Guldbrandsson, K., & Sidorchuk, A. (2018). Effects of mental health interventions for students in higher education are sustainable over time: A systematic review and meta-analysis of randomized controlled trials. *Peer J*, 6.  
<https://doi.org/10.7717/peerj.4598>
- Worley, J. T., Meter, D. J., Hall, A. R., Nishina, A., & Medina, M. A. (2023). Prospective associations between peer support, academic competence, and anxiety in college students. *Social Psychology of Education*, pp. 1–19.  
<https://doi.org/10.1007/s11218-023-09781-3>
- Zahedi, H., Sahebihagh, M. H., & Sarbakhsh, P. (2022). The Magnitude of Loneliness and Associated Risk Factors among University Students: A Cross-Sectional Study. *Iranian Journal of Psychiatry*, 17(4), 411–417.  
<https://doi.org/10.18502/ijps.v17i4.10690>



REVIEW ARTICLE / DERLEME YAZISI

# What should be the Focus of the Trauma Related Interventions? Solutions-Exceptions or Details of Trauma: A Literature Study

## Travma Bağlantılı Müdahalelerin Odağı Ne Olmalı? Çözümler-İstisnalar ya da Travmanın Detayları: Bir Literatür Çalışması

Sultan Okumuşoğlu<sup>1</sup>

### Abstract:

Because of the extensiveness besides associated negative outcomes, traumatic experiences are taking part among the serious public health issues. In this study, the comparison of certain differences of the solution-focused approach in trauma intervention with other approaches that emphasize the importance of focusing on trauma experience directly has been targeted. Besides, an examination of the certain differences of the mentioned two different approaches via related literature has been aimed. It is thought that the topic is worth examining regarding clinical practice and the potential to lead future research. In this study, the traditional review method that covers the examination of existing knowledge and findings regarding determined topics has been used. Hence, the process that followed is the examination of the related literature, making comparisons and drawing conclusions via handled knowledge. According to the examined information, even though the traditional approaches argue the importance of talking about the details of the trauma, the literature that points out the effectiveness of solution-focused approaches that focus on exceptional times and accomplishments of the client after the trauma experience emphasizes the importance of solution-focused approach for trauma cases. Besides, in the literature, the possible adverse negative outcomes of traditional trauma-focused interventions have been highlighted. When the potential of trauma exposure to create adverse mood conditions with overwhelming feelings of helplessness and/or hopelessness is considered, it became obvious that the solution-focused approach, -which focuses on the construction of hope and empowering the client- would be more beneficial for the most of the cases. Besides, the effectiveness studies in the related literature regarding trauma interventions via solution-focused approach are parallel with this conclusion.

**Keywords:** Trauma, Post Traumatic Stress Disorder, Psychotherapy, Solution Focused Interventions, Psychological Interventions.

<sup>1</sup>Assoc. Prof., European University of Lefke, Faculty of Arts and Science, Department of Psychology, Lefke-TRN Cyprus, ssehitoglu@eul.edu.tr, Orcid ID: 0000-0001-6155-2325

**Address of Correspondence/Yazışma Adresi:** Sultan Şehitoğlu, Lefke European University, Faculty of Arts and Science, Department of Psychology, Lefke-TR North Cyprus, Email: ssehitoglu@eul.edu.tr

**Date of Received/Geliş Tarihi:** 30.03.2023, **Date of Revision/Düzeltilme Tarihi:** 27.09.2023, **Date of Acceptance/Kabul Tarihi:** 02.04.2024, **Date of Online Publication/Çevrimiçi Yayın Tarihi:** 26.06.2024

**Citing/Referans Gösterimi:** Okumuşoğlu, S. (2024). What should be the Focus of the Trauma Related Interventions? Solutions-Exceptions or Details of Trauma: A Literature Study, *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(2): 183-190

© 2023 The Author(s). Published by Cyprus Mental Health Institute / Cyprus Turkish Journal of Psychiatry and Psychology (www.ktpjppdergisi.com). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution 4.0 license which permits use, sharing, adaptation, distribution and reproduction in any medium or format, provided the original work is properly cited and is not used for commercial purposes.  
<http://creativecommons.org/licenses/by/4.0/>

**Öz:**

Yaygınlığının yanısıra ilişkili olumsuz çıktıları dolayısıyla travmatik deneyimler önemli halk sağlığı sorunları arasında yer almaktadır. Bu çalışmada, travma müdahalesinde çözüm odaklı yaklaşımın daha çok danışanın travma deneyimine odaklanmayı vurgulayan uygulamalarla karşılaştırılması hedeflenmiştir. Ayrıca sözü edilen bu iki ayrı ele alma yolunun kimi farklılıklarının bağlantılı literatür aracılığıyla incelenmesi amaçlanmıştır. Gerek klinik pratikler bakımından gerekse gelecek araştırmalara yol açabilme potansiyeli açısından konunun incelenmeye değer olduğu düşünülmüştür. Bu çalışmada, belirlenen konulara dair var olan bilgi ve bulguların incelenmesini kapsayan geleneksel derleme yöntemi kullanılmıştır. Dolayısıyla, izlenen süreç ilişkili bilgilerin incelenmesi ve elde edilen bilgiler yoluyla karşılaştırma yapılması ve sonuç çıkarılması şeklindedir. Elde edilen bilgilere göre, geleneksel yaklaşımlarda travmanın ayrıntılarının konuşulmasının önemi savunulsa da, travma deneyimi sonrasında başa çıkmakla ilgili istisna zamanlara ve danışanın travma sonrası başarılarına odaklanan çözüm odaklı yaklaşımın etkililiğine işaret eden literatür travma vakalarında çözüm odaklı yaklaşımın önemini vurgulamaktadır. Yanısıra literatürde geleneksel travma odaklı müdahalelerin olası olumsuz çıktılarının altı çizilmektedir. Travmaya maruz kalmanın ezici çaresizlik ve/veya umutsuzluk gibi duygular içeren olumsuz bir ruh hali yaratma potansiyeli göz önüne alındığında, travmanın detaylarına odaklanmayan, danışanı güçlendirmeye ve umudun inşasına odaklanan çözüm odaklı yaklaşımın çoğu vakada daha faydalı olacağı açıkça anlaşılmaktadır. Aynı zamanda bağlantılı literatürdeki çözüm odaklı yaklaşımla travma müdahalelerine dair etkililik çalışmaları da bu sonuç ile paralel olduğu bulunmuştur.

**Anahtar Kelimeler:** Travma, Travma Sonrası Stres Bozukluğu, Psikoterapi, Çözüm Odaklı Müdahaleler, Psikolojik Müdahaleler.

**Giriş**

Dünya Sağlık Örgütü (World Health Organization [WHO], 2018) travmatik deneyimi duygusal olarak zorlayıcı veya yaşamı tehdit edici olan, bireyin sosyal, fiziksel, ruhsal ve/veya ruhani iyi olma hali ve işlevselliği ile ilgili uzun vadeli çeşitli olumsuz etkileri olabilen olay ya da olaylar dizisi diye açıklamaktadır. DSM-5 (American Psychiatric Association [APA], 2013) ile güncellenmiş DSM-5-TR (APA, 2022) tanı kitabında, travma sonrası stres bozukluğu (TSSB) belirtilerinin travmatik olayın yeniden deneyimlenmesi, bilişte değişiklikler, kaçınma ve aşırı uyarılma şeklinde dört semptom kümesiyle ifade edildiği görülmektedir. Güncellenmiş formda travma konusunda altı yaşa kadar çocuklar için görsel medyada travmatik olayın izlenmesinin dahi travmaya maruz kalmak olarak kabul edileceği ayrıntısına yer verilmesi dışında, iki form arasında kriterler kapsamında önemli bir farklılığın olmayışı dikkat çekmektedir. Dünya Sağlık Örgütü (WHO, 2018) yayını olan, ‘hastalıkların ve ilişkili problemlerin’ sınıflandırıldığı el kitabçığında (Manual of the International Statistical Classification of Diseases and Related Health Problems [ICD]) travma sonrası stres bozukluğu tanı kriterlerinin “travmatik olayın burada ve şimdi yeniden yaşanması”, “travmatik hatırlatıcılardan kaçınılması” ve “artmış bir tehdit varlığı algısı” şeklinde olduğu gözlenmektedir.

Dışarıdan nasıl görünürse görünsün, hiçkimsenin yaşamının daima tamamen travmasız adeta “dikensiz bir gül bahçesi” gibi olması doğal olarak mümkün değildir; dolayısıyla hemen herkesin bir zamanda, bir biçimde bir çeşit travmatik yaşantısının olma olasılığının yüksek olduğu açıktır.

Bu konuya ilişkin olarak literatürde Dünya üzerinde yaşayan insanların %70’e varan oranlarla ya da yaklaşık olarak üçte iki oranıyla- yaşamlarının bir bölümünde bir

çeşit travma deneyimleyeceklerine işaret edilmektedir (Froerer, Von Cziffra-Bergs, Kim, ve Connie 2018; Kessler ve ark., 2017). Travmaya maruz kalmanın geniş bir yelpazedeki olumsuz getirileri hesaba katıldığında, travmatik yaşantı deneyiminin önemli bir halk sağlığı sorunu olduğu anlaşılmaktadır (Al Jowf ve ark., 2022; Frewen, Schmahl, ve Olf, 2017; Magruder, McLaughlin, ve Elmore Borbon, 2017). Travmatik deneyimler sayısız eş zamanlı psikolojik bozukluklarla ilişkilendirilmekte ve yatkınlığı olanları özellikle çok daha fazla etkilediği, sarstığı bildirilmektedir (Mørkved ve ark., 2018). “Örselenme Sonrası Gerginlik Bozukluğu” ya da daha yaygın kullanımıyla “Travma Sonrası Stres Bozukluğu (TSSB)” travma ile ilişkilendirilen ciddi psikopatolojiler arasındadır (APA, 2013). Dolayısıyla travmanın yaygınlığı ve etkileri düşünüldüğünde belirtilere yönelik ve iyileşmeyi destekleyici müdahalelerin önemi öne çıkmaktadır (Eads ve Lee, 2019). Travmaya yönelik temel müdahale şeklinin psikoterapi olduğu ve kimi vakalarda buna farmakoterapi eklenmesinin gerekebileceği ileri sürülmektedir (Al Jowf ve ark., 2023).

Literatürde travma sonrası stres bozukluğuna yönelik en fazla araştırılmış uygulamaların travma odaklı bilişsel davranışçı yaklaşım, maruz bırakma terapisi, göz hareketleriyle yeniden işleme ve duyarsızlaştırma, ve travma odaklı olmayan bilişsel davranışçı yaklaşım şeklinde olduğu bildirilmektedir (Bisson, Roberts, Andrew, Cooper ve Lewis, 2013). Şimdiye odaklı (present-centered therapy/PCT) terapi yaklaşımının travmaya odaklanan tedavilere etkili bir alternatif oluşuna dair kanıtların ve ilginin arttığı da literatürde ifade edilmektedir (Belsher ve ark., 2017). TSSB tanı kriterleri düşünüldüğünde bu patolojiye sahip bireylerin zaten geri dönüşler (flashbacks) yaşadıkları, aşırı tetikte olma gibi semptomlar sergiledikleri ve psikolojik açıdan sıkıntı içinde oldukları açıktır. Dolayısıyla travma deneyimi,

danışanlar için hakkında konuşulması o kadar da kolay olmayan bir konu olabilmektedir.

Diğer yandan, travma sonrası stres bozukluğu hastalarının yüzde elliye varan tedavi bırakma oranları travmaya odaklanan müdahale yaklaşımlarının dezavantajlarıyla ilişkilendirilmektedir (Schottenbauer, Glass, Arnkoff, Tendick ve Hafter Gray, 2008). Kimi durumlarda, özellikle problem odaklı yaklaşımları benimseyen klinisyenin uygulamalarında karşısındaki bireyin travma deneyimine ilişkin gerekli hassasiyeti gösterememesi ve danışanı hazır olmadığı hatta istemediği halde travma anı hakkında konuşmaya zorlaması hastanın yeniden travmatize olmasıyla sonuçlanabilmektedir.

### Amaç

Bu makalede temel amaç, travmatik deneyim sonrası psikolojik müdahalelerde çözüm odaklı yaklaşımın, doğrudan travma deneyimine odaklanan geleneksel yaklaşımlarla kimi farklılıklarının ilgili literatür aracılığıyla incelenmesidir. Gözden geçirilmesi planlanan konunun hem klinik pratikler açısından, hem de gelecek araştırmalara yol açma potansiyeli ile incelenmeye değer olduğu düşünülmüştür.

### Yöntem

Bu çalışmada yöntem olarak geleneksel derleme yöntemi kullanılması planlanmıştır. Geleneksel derleme yöntemi belirlenmiş konuya dair literatür bilgilerini inceleyen ve değerlendiren, öyküsel, bütünlendirici ve eleştirel gibi çeşitli türlerde -ya da bunların bir kombinasyonu gibi-olabilen çalışmalar olarak tanımlanmaktadır (Sutton, Clowes, Preston, ve Booth, 2019). Dolayısıyla, bu çalışmada izlenecek yolun, ilgili literatürde var olan ilişkili bilgilerin gözden geçirilmesi, incelenmesi, değerlendirilmesi şeklinde olması kararlaştırılmıştır. Buna göre, travma odaklı olan kimi yaklaşımlar ile çözüm odaklı yaklaşıma dair bilgilerin incelenmesi, karşılaştırılması hedeflenmiştir. Literatür bilgilerinden yola çıkarak, geleneksel müdahalelerden farklılıklarıyla travma müdahalelerinde travmaya odaklanmayı temele koymayan bir yaklaşım olarak çözüm odaklı müdahale yaklaşımının klinik uygulamaya uygunluğuna dair bir sonuç çıkarılması şeklinde bir süreç planlanmıştır.

Ayrıca, izlenecek yol literatürdeki bilgilerin gözden geçirilmesi şeklinde olacağı için etik kurul onayı gerektirmeyen bir çalışma olduğu değerlendirilmiştir.

### Travma Odaklı Kimi Müdahaleler

Bu bölümde çözüm odaklı olmayıp travma deneyimine odaklanan kimi müdahale yöntemlerine kısaca göz atılacaktır.

### Bilişsel Davranışçı Müdahaleler

Bilişsel davranışçı müdahalelerin bilişsel yaklaşım ile davranışçı yaklaşımın bir arada uygulandığı terapilerdir. Dolayısıyla bilişsel ve davranışçı olmak üzere iki bileşkesi vardır. Bilişsel bileşke temel olarak travmatik deneyimin kişinin hayatındaki etkilerinin bilişsel yeniden yapılandırılmasına odaklanmaktadır. Terapist bunu, danışanın emniyette olma, güven duyma, kontrol gibi çeşitli alanlardaki uyum bozucu, fonksiyonel olmayan düşüncelerini ve inançlarını sorgulamasında yol göstererek gerçekleştirmektedir. Diğer yandan bilişsel davranışçı terapilerdeki davranışçı bileşke ise, danışanın

günlük yaşamındaki işlevselliğini bozan belirtilerin azalmasını sağlayabilmek adına, bu düşünce biçimleriyle başa çıkarken gerçekleştireceği çeşitli davranışsal uygulamaları öğrenmesiyle ilgilidir (Beck, 2020). Buna göre bu psikoterapi yaklaşımında aslında hedefin semptomun ortadan kaldırılmasından daha çok işlevselliğin artırılması olduğunu söylemek çok daha doğru bir ifade olmaktadır.

Travma müdahalesinde yüzleştirme danışanı travmatik olay ya da anı ile yüzleştirerek bunun giderek daha az stres yaratır hale getirilmesi temelinde ilerlemektedir. Davranışçı teknikler olan maruz bırakma uygulamaları hayali (imaginal exposure), gerçek yaşam koşullarında (in vivo exposure) ya da sanal gerçeklik (virtual reality exposure) kullanılarak yüzleştirme şeklinde olabilmektedir. Yazılı maruz bırakma (written exposure) uygulamaları da yüzleştirmenin yazarak gerçekleştirilmesi şeklindedir (Sloan ve Marx, 2019). Tüm maruz bırakma uygulamalarında öncelikle danışana travma tepkilerine, travmatik deneyimin işlenmesine ve nefes egzersizleri gibi gevşeme tekniklerine dair psikoeğitimler verilmektedir. Ancak bu eğitim seansları aracılığıyla gerekli ön hazırlık yapıldıktan ve hastanın gerekli donanımı kazandıktan emin olunduktan sonra yüzleştirme uygulaması yapılmaktadır (Forman-Hoffman ve ark., 2018; van Minnen, Harned, Zoellner ve Mills, 2012). Özellikle uzatılmış maruz bırakma uygulamalarının (Prolonged Exposure Therapy/PET) psikoz ya da kişilik bozukluğu gibi komorbid bozuklukların eşlik ettiği durumlardaki travma müdahalelerinde etkili olduğunu bildiren çalışmalar vardır (örn. Forman-Hoffman ve ark., 2018). Buna karşın travma odaklı maruz bırakma müdahalelerinin potansiyel ters etkilerine ve olumsuz getirilerine işaret eden çalışmalar da dikkat çekmektedir (örn. van Minnen ve ark., 2012).

### Göz Hareketleriyle Duyarsızlaştırma ve Yeniden İşleme

Göz hareketleriyle duyarsızlaştırma ve yeniden işleme (Eye movement desensitization and reprocessing [EMDR]) tekniği, bilişsel davranışçı yaklaşım ile maruz bırakmanın kombinasyonunun terapi esnasında kesikli göz hareketleriyle birleştirilmesi şeklinde tarif edilmektedir (Shapiro, ve Liliotis, 2015; Shapiro, 1996). Buna göre hasta bir yandan travmatik olayı hatırlamaktayken aynı zamanda hatırladığı olayın bilişsel yönlerine odaklanmakta ve terapist hastayı bu süreç devam ederken, anksiyete ortadan kalkıncaya kadar hareket ettirdiği parmaklarını göz hareketleriyle takip etmeye devam etmesi için yönlendirmektedir.

### Travma Odaklı Olmayan Müdahalelerden Çözüm Odaklı Yaklaşım: Travma Deneyimine Odaklanmamak ve Travmaya Çözüm Odaklı Yaklaşım

Temelleri Milwaukee, Wisconsin'de kısa aile terapisi hizmeti sunan bir merkezdeki çalışmalara dayanan çözüm odaklı yaklaşım (De Shazer ve ark., 1986), danışanın geçmiş başarılarını ve istisna durumları (problem olabileceken olmadığı ya da daha az rahatsız ettiği durumları) araştırmak dışında geçmişe ya da probleme odaklanmaz (De Jong ve Berg, 2013). Kısa dönemli hedef yönelimli bir yaklaşım olarak tanımlanan (Okumuşoğlu, 2018; De Jong ve Berg, 2013) çözüm odaklı yaklaşımda, sürecin danışanı terapi odasına getiren mesele çözüldüğünde ya da ortadan kalktığında hayatının nasıl

olacağına odaklanma ve sonra da danışanın bunu gerçekleştirecek kaynaklarının araştırılması yoluyla ilerlediği gözlenmektedir.

Çözüm odaklı yaklaşımın, problemin ne olduğunun saptanması ve problemin derinlemesine çalışılmasından daha çok “çözümlerin inşasına”, “bireyin başa çıkma gücüne”, “istisna durumlara” vurgu yapan, gelecek yönelimli, kısa sürede fayda sağlama hedefli bir müdahale yaklaşımı (Okumuşoğlu, 2018; De Jong ve Berg, 2013; de Shazer ve ark., 1986) olduğu düşünüldüğünde, böylesi bir yaklaşımda temel olarak travmaya odaklanılamayacağı açıktır. Dolayısıyla, bu yaklaşımda, temel felsefesi gereği probleme değil danışanın (halihazırda var olan ancak farkında olmadığı) çözümlerine odaklanılarak terapötik fayda sağlanmasının hedeflendiği anlaşılmaktadır.

Özellikle geniş kapsamlı ciddi kriz durumları sonrasında, travmatize olmuş bireylere en kısa sürede destek sağlayabilecek, en hızlı biçimde sonuca oluşturan psikolojik yaklaşımlara ihtiyaç duyulduğu açıktır. “Kısa Çözüm Odaklı Yaklaşım’ın” travma sonrası psikolojik desteğin gereklerine uygunluğu bu yaklaşımın odağının çözüme, şimdiki ve geleceğe yönelmesiyle ilişkilidir. Özellikle travmaya odaklanan müdahalelerin dezavantajlarına işaret eden literatür (van Minnen ve ark., 2012; Schottenbauer ve ark., 2008) göz önüne alındığında travma vakalarında çözüme odaklanmanın önemini açığa çıktığı söylenebilir.

Travmatik deneyimler sayısız eş zamanlı psikolojik bozukluklarla ilişkilendirilmekte ve yatkınlığı olanları özellikle çok daha fazla etkilediği, sarstığı bildirilmektedir (Mørkved ve ark., 2018). Travma bireyin yoğun ve hatta ezici çaresizlik ve umutsuzluk duyguları yaşamasına yol açabilmektedir (Sklarew ve Blum, 2006). Ancak evvelce vurgulandığı gibi, çözüm odaklı yaklaşımda travmaya dair semptomlara ya da travmatik deneyimin kendisine değil de travma sonrası başarılanlara odaklanılmaktadır (Bannink, 2008). Dolayısıyla çözüm odaklı terapi, danışanı güçlendirme ve umut inşası bakımından yararlı olan stratejilerle öne çıkmaktadır (De Jong ve Berg, 2013). Çözüm odaklı yaklaşımda “istisnaların araştırılması”, “küçük değişikliklerin vurgulanması” gibi stratejilerin kullanılması; danışanın güçlü yanlarının altını çizmeyi amaçlayan, istenen yönde değişimi ve dolayısıyla çözümünü hedefleyen stratejilerin kullanılması (Okumuşoğlu, 2018; 2017; De Jong ve Berg, 2013) travma müdahalesinde özellikle önemlidir. Daha da önemlisi bu stratejiler altında terapistin yönlendirmesiyle danışanın kendi potansiyelinin fark ettirilmesi demektir. Örneğin, çözüm odaklı yaklaşımda “istisnaların araştırılması tekniği” danışanın hâlihazırda travmanın etkilerini ya da semptomlarını yönetebildiği kimi zamanların zaten var olduğunu fark etmesini sağlamasıyla oldukça faydalıdır. Böylece çözüm odaklı müdahale danışanda bu “istisna zamanların” ileride artabileceği umudunu açığa çıkarabilmektedir. Diğer yandan, “küçük değişikliklerin vurgulanması tekniğinde” ise terapistin olmakta olan küçük değişiklikleri fark ettirmesinin daha büyük değişikliklerin yolunu açacağı öngörülmektedir. Bu tekniklerin travma deneyimlemiş bireyin en kötü travmasıyla yüzleşme girişiminde bulunmasından/buna yönlendirilmesinden çok daha gerçekçi ve yönetilebilir olduklarını söylemek mümkündür.

Travmatik yaşantı sonrasında psikolojik destek almaya gelen danışanlar için terapistin özen, empati ve hassasiyetle yaklaşması özellikle önemlidir. Çözüm odaklı

yaklaşımın probleme değil çözümlere ve istisnalara odaklanması ile en kısa sürede en çok fayda sağlamayı hedeflemesinin öne çıkan önemli özellikleri olduğundan evvelce söz edilmişti. Bununla birlikte, çözüm odaklı yaklaşımda travmanın detaylarına ne kadar az ya da çok odaklanılacağı aslında kimi zaman kaçınılması mümkün olmayan zaman kısıtlamalarının yanı sıra, danışanın hedefleri ile ve danışanın travmanın ayrıntılarını konuşmayı belirtilerden kurtulmaya yardımcı olması anlamıyla yararlı bulup bulmadığı ile de yakından ilişkilidir. En önemlisi travmanın detaylarına odaklanma konusunda tamamen danışanın arzu ve gereksinimine göre birlikte karar verilmesidir.

### Çözüm Odaklı Travma Müdahalelerinin Etkililiği

Literatürde travmanın kendisine değil de çözüme odaklanan travma müdahalelerine dikkat çekilmekte (Froerer ve ark., 2018) ve çözüm odaklı terapilerin travmaya uygulanması konusunda güçlü kavramsal bir savın mevcut olduğuna işaret edilmektedir (Bannink, 2008; Coulter, 2014).

Çözüm odaklı travma tedavisinde kullanılmakta olan temel tekniklerin yardım almaya gelenin sahip olduğu kaynakları, halihazırda başa çıktığı istisna zamanları, kendi potansiyelini fark ettirmek ve gelecek yönelimli olmak çerçevesinde ilerlediği düşünüldüğünde, çözüm odaklı yaklaşımın travma tedavisinde yararlı olacağı açıkça anlaşılmaktadır. Ayrıca, çözüm odaklı terapilerin danışanın sahip olduğu kaynakları temelinde ilerlemesinin, hastaya bunları fark ettirmesinin ve gelecek yönelimli olmasının yararlılığının ayrıca ortaya konulduğu literatürde vurgulanmaktadır (Franklin, Zhang, Froerer, ve Johnson, 2017). Çözüm odaklı yaklaşımda “umudun inşasının” özellikle önemli olduğunun altı çizilmektedir (Okumuşoğlu, 2018). Travmatik deneyim sonrasında bireylerin en çok çaresizlik, umutsuzluk duyguları yaşadıkları göz önüne alındığında, “umudun inşasının” değişimi getirecek bir mekanizma olarak önemli ölçüde fayda sağladığı anlaşılmaktadır.

Literatürde çözüm odaklı yaklaşım içeren müdahalelerin yüksek travma öyküsü görülen topluluklarla çalışırken başarıyla kullanıldığından söz edilmektedir. Buna göre, sözü edilen gruplarda öz güvenin artırılmasından (Cepukiene, Pakrosnis, ve Ulinskaite, 2018), davranış problemlerinin düzeltilmesine (Cepukiene ve Pakrosnis, 2011) varan geniş bir yelpazede çözüm odaklı yaklaşım kullanılımasının olumlu terapötik sonuçlar getirdiği ifade edilmektedir.

Fredrickson’a (2000) göre, çözüm odaklı yaklaşım danışanların arzuladıkları sonuca giden farklı yolları keşfetmelerinin önünü açmakta ve olumlu duyguları artırmaktadır. Bunlar da umudu ve nihayetinde kişinin öznal iyi oluşunu artırmasıyla yararlı olmaktadır. Bu çıkarsamayla paralel olarak, çözüm odaklı travma bağlantılı müdahalelerin olumlu getirilerinin ilgili literatürde birçok çalışmada vurgulandığı (örn. Kaminer ve Eagle, 2017; Retnowati, Ramadiyanti, Suciati, Sokang, ve Viola, 2015; Gilman, Schumm ve Chard, 2012; Fredrickson, 2000) gözlenmektedir.

### Tartışma

Travmatik deneyimlerin dünya nüfusunun üçte ikisi oranındaki yaygınlığı (Kessler ve ark., 2017) ve bireyin

birçok alandaki işlevselliğini bozan yaygın olumsuz etkileri (Al Jowf ve ark., 2022) göz önüne alındığında, travma yaşayanlara yönelik etkili müdahalelerin önemi açığa çıkmaktadır (Eads ve Lee, 2019). Tarihsel olarak her ne kadar travmatik deneyimin detaylarının konuşulmasının travma sonrası stres bozukluğu semptomlarını ortadan kaldırmada yararlı olacağı ileri sürülmüş olsa da (Shapiro ve Laliotis, 2015; Bohus ve ark., 2013) geleneksel yöntemlere dair araştırmalar, travma hakkında konuşma yönteminin kimi zaman hedeflenenin tam tersi olumsuz etkilere yol açabileceğini ortaya koymuştur (Paintain ve Cassidy, 2018; Cloitre, 2015). Buna göre çeşitli çalışmalarda geleneksel uygulamaların etkililiklerinden söz edilse de ve bunlar travma çalışan klinisyenler tarafından yaygın kabul görüyor olsalar da (örn. Shapiro ve Laliotis, 2015), yaşanmış travmatik deneyime dair maruz bırakma yaklaşımlarının danışanda kaygı ve olumsuz stresi artırabileceği ve dolayısıyla yüksek tedavi bırakma oranlarıyla ilişkili olabilecekleri (Schottenbauer ve ark., 2008) vurguları dikkat çekmektedir. Travmanın kişinin oldukça yoğun ve hatta ezici çaresizlik ve umutsuzluk duyguları yaşamasına yol açabilme potansiyeli (Skarew ve Blum, 2006) hesaba katıldığında probleme/travmaya değil de çözümlere/istisnalara odaklanması ile çözüm odaklı terapinin danışanı güçlendirme ve umut inşası bakımından yararlı olan stratejilerinin (De Jong ve Berg, 2013; De Shazer ve ark., 1986) travma müdahalesindeki önemi anlaşılmaktadır.

Literatürdeki birçok çalışmada, travmaya çözüm odaklı yaklaşım ile bu yaklaşım kapsamındaki tekniklerin travma deneyimi yaşamış danışanlarla olumlu sonuçlar getirdiği ifade edilmektedir (örn. Kaminer ve Eagle, 2017; Retnowati ve ark., 2015). Çözüm odaklı yaklaşımda travmaya dair semptomlara ya da travmatik deneyimin kendisine değil de travma sonrası başarılanlara odaklanılmasının yararları (Bannink, 2008), etkililik çalışmalarının gösterdiği başarılı sonuçlarla (örn. Cepukiene ve ark., 2018; Franklin ve ark., 2017; Ehring ve ark., 2014; Frost, Laska ve Wampold, 2014) paraleldir.

Bununla birlikte herhangi bir yaklaşımdaki tüm tekniklerin tüm aşamalarda her danışana uygun olup olmayacağı ayrıca göz önüne alınması gereken diğer bir konudur. Kimi tekniklerin danışanın ihtiyaçlarına göre yeniden gözden geçirilmesinin de doğal olarak önemli olduğu anlaşılmaktadır. Örneğin, ağır travma yaşamış danışanlar için çözüm odaklı yaklaşımın “mucize soru” tekniğinin uygun olmayabileceği söylenebilir. Coulter’a (2014) göre, “mucize soru” tekniğinin ağır travma deneyimlemiş kimi bireylere uygun olmamasının sebebi bu bireylerin -henüz- travmanın tamamen ortadan kalktığı bir geleceği hayal edemiyor olmalarıyla ilişkilidir. Mucize soru tekniğinin işe yaramasının danışanın sorunun tamamen ortadan kalktığı bir zamanı hayallemesiyle ilgili olduğu düşünüldüğünde, ağır biçimde travmatize olmuş kişide sözü edilen tekniğin -en azından başlangıçtaki aşamalardan- neden işe yaramayabileceği konusu açıklığa kavuşmaktadır.

Travmatik deneyimin büyük ölçüde çaresizlik ve umutsuzluk yaratma potansiyeli (Skarew ve Blum, 2006) göz önüne alındığı zaman, travmanın detaylarına odaklanmayı öngören çeşitli maruz bırakma yaklaşımlarının da benzer bir umutsuzluk yaratma ya da var olan umutsuzluğu artırma potansiyeli barındırdığı anlaşılmaktadır. Diğer yandan, çözüm odaklı yaklaşımın

temel teknikleri arasında yer alan “istisnaların araştırılması”, “küçük değişikliklerin vurgulanması” gibi stratejiler aracılığıyla (Okumuşoğlu, 2018; 2017; De Jong ve Berg, 2013; De Shazer ve ark., 1986) danışanın başa çıkma becerilerinin ve kendi öz kaynaklarının halihazırda var olduğunu fark ettirmesiyle (olumsuz ruh halini beslemek ve çaresizliği artırmak yerine) tam tersi bir etkiyle umudu beslediği gözlenmektedir. Dolayısıyla travmatik deneyime odaklanma uygulaması içermeyen çözüm odaklı yaklaşımın umudu desteklemeye/çaresizliği azaltmaya dair çıktılarıyla travma sonrası müdahalelere özellikle uygun olduğu anlaşılmaktadır.

Teknikler bazında ele alındığında, çözüm odaklı yaklaşımın “istisnaların araştırılması” tekniğinin - danışanın travmanın etkilerini yönetebildiği istisna zamanların zaten var olduğunu ve keşfedilmeyi beklediğini fark etmesini sağlamasıyla- özellikle önemli olduğu gözlenmektedir. İstisnaların araştırılması, sorunun var olmadığı zamanlara işaret etmesiyle umudu desteklemektedir. Diğer yandan “küçük değişikliklerin vurgulanması” tekniği ise terapistin danışana hâlihazırda olmakta olan küçük değişiklikleri fark ettirmesiyle ve bunun daha büyük değişikliklere dolayısıyla olumlu terapötik çıktılara yol açmasıyla ilişkilendirilmektedir. Böylece, çözüm odaklı tekniklerin danışanın bu istisna zamanların ve küçük değişikliklerin istenen yönde gelişmelere yol açacağına dair umudunu beslemekte olduğu anlaşılmaktadır. En az bunun kadar önemli bir diğer ayrıntı, bu tekniklerin danışanın kendi öz kaynaklarına/başa çıkma becerilerine olan güvenini besleme potansiyelidir. Böylece çözüm odaklı yaklaşımın tekniklerinin arzulanan yönde gelişme ve iyileşmenin önünü açtığı görülmektedir. Paintain ve Cassidy (2018) tarafından altı çizilmiş olan travmaya odaklanmanın olası olumsuz getirileri göz önüne alındığında, yukarıda sözü edilen çözüm odaklı tekniklerin travma atlatmış danışan için en kötü travmasıyla yüzleşme girişiminde bulunmaktan çok daha gerçekçi ve yönetilebilir uygulamalar olduğu anlaşılmaktadır. Çözüm odaklı yaklaşımda izlenen yolun, en kısa sürede en fazla faydayı sağlama ve zarar vermeme etik ilkeleriyle de uyumlu olduğu açıktır.

Bununla birlikte Yalom’un (2009) “The Gift of Therapy” kitabında vurguladığı gibi, asıl önemli olan terapistin her danışanın ihtiyacına en uygun olan terapiyi keşfetmesi, adeta her danışan için yeni bir terapi yaratmanın öneminin akılda tutulmasıdır. Bu noktada danışanın ihtiyaçları çerçevesinde çeşitli eklektik yaklaşımların devreye girebilmesinin de söz konusu olabileceği akla gelmektedir. Okumuşoğlu’nun (2017) işaret ettiği gibi, çözüm odaklı terapilere problem odaklı (geleneksel) terapilerden tekniklerin entegrasyonunun pekâlâ da mümkün olduğu anlaşılmaktadır.

Literatürde, travma odaklı müdahalelerin potansiyel olumsuz getirilerine işaret eden çeşitli çalışmalar (örn. van Minnen, ve ark., 2012; Schottenbauer, ve ark., 2008) bulunmaktadır. Buna karşın, literatürde çözüm odaklı uygulamalara dair sistematik derleme tarzındaki kapsamlı bir makalede (Eads, ve Lee, 2019) incelenen etkililik çalışmalarının (örn. Kim, Brook, ve Akin, 2018; Zhang, Yan, Du, ve Liu, 2014) hiçbirinde çözüm odaklı yaklaşıma dair herhangi bir olumsuz sonuçtan söz edilmediğine dikkat çekilmektedir. Ayrıca Bisson ve arkadaşları (2013) literatürdeki etkililik çalışmalarına dair ortadan yükseğe değişimlenen etki ölçüsü (effect size = 0.40 ile 0.82)



bildirimlerinin, travmaya odaklanmayan müdahalelerin TSSB semptomlarında hatırı sayılır değişimler meydana getirdiğinin göstergesi olduğunu ifade etmektedirler. Literatürden yola çıkıldığında, Cloitre (2015) tarafından da vurgulandığı gibi, artık TSSB tedavisinde travma odaklı müdahalelerin “temel uygulama” ya da “altın standard” olarak nitelenmesinin mümkün görünmediği açıkça anlaşılmaktadır.

### Sonuç

Sonuç olarak, travma müdahalesinde çözüm odaklı yaklaşımın, doğrudan travma yaşantısına odaklanan yaklaşımlar ile karşılaştırılmalı olarak incelendiği bu çalışmada -ilgili literatürün ışığı altında- çözüm odaklı tekniklerin danışanın başa çıkma becerilerinin ve öz kaynaklarının zaten var olduğunu fark ettirmesiyle, umudu desteklemesiyle travma sonrası müdahalelere özellikle uygun olduğu, travma odaklı müdahalelerin temel uygulama olamayacağı anlaşılmaktadır. Ele alınmış olan konu gerek klinik uygulama ve gerekse gelecek araştırmalar açısından yeni çalışmalara yol açma potansiyeli barındırmaktadır. Varılan sonucun gelecek çalışmaların bulgularıyla desteklenmesi umulmaktadır; gelecekte planlanacak çözüm odaklı travma sonrası müdahale yaklaşımlarına dair etkililik çalışmalarının konuya dair bilgi birikimine katkı sağlayacağı düşünülmektedir.

### Beyanname

#### Etik Onay ve Katılma İzni

Uygulanamaz.

#### Yayın İzni

Uygulanamaz.

#### Veri ve Materyallerin Mevcudiyeti

Uygulanamaz.

#### Çıkar Çatışması

**Yazarlar çıkar çatışması olmadığını beyan eder.**

#### Finansman

Uygulanamaz.

#### Yazar Katkıları

SO, araştırmanın planlanması ile metodolojisini oluşturmuştur. Yazar, literatür taramasında, yorumlamasında, özet, giriş, tartışma ve sonuç bölümlerinde katkı sağlamış, tüm inceleme, değerlendirme, yazım ve revizyon sürecini yürütmüştür.

### Kaynaklar

Al Jowf, G. I., Ahmed, Z. T., Reijnders, R. A., de Nijs, L., & Eijssen, L. M. T. (2023). To predict, prevent, and manage Post-Traumatic Stress Disorder (PTSD): a review of pathophysiology, treatment, and biomarkers. *International Journal of Molecular Sciences*, 24(6), 5238. <https://dx.doi.org/10.3390/ijms24065238>

Al Jowf, G.I., Ahmed, Z.T., An, N., Reijnders, R.A., Ambrosino, E., Rutten, B.P.F., de Nijs, L., & Eijssen, L.M.T. (2022). A public health perspective of Post-Traumatic Stress Disorder. *Int. J. Environ. Res. Public Health*, 19, 6474.

American Psychiatric Association [APA]. (2013). *Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5)*. Washington, American Psychiatric Association.

American Psychiatric Association [APA]. (2022). *Diagnostic and Statistical Manual of Mental Disorders 5th edition Text Revision (DSM-5-TR)*. American Psychiatric Association.

Bannink, F. P. (2008). Posttraumatic success: Solution-Focused brief therapy. *Brief Treatment and Crisis Intervention*, 8(3), 215-225. <https://doi.org/10.1093/brieftreatment/mhn013>

Beck, J.S. (2020). *Cognitive Behavior Therapy: Basics and Beyond*. Guilford Publications.

Belsher, B., Beech, E., Evatt, D., Rosen, C. S., Liu, X., Otto, J., & Schnurr, P. P. (2017). Present Centered Therapy (PCT) for post-traumatic stress disorder (PTSD) in adults (protocol). *Cochrane Database of Systematic Reviews*, 2017(12), 1-13. <https://doi.org/doi.org/10.1002/14651858.CD012898>

Bisson, J. I., Roberts, N. P., Andrew, M., Cooper, R., & Lewis, C. (2013). Psychological therapies for chronic post-traumatic stress disorder (PTSD) in adults (review). *Cochrane Database of Systematic Reviews*, (12), 1-242. <https://doi.org/10.1002/14651858.CD003388>. pub4. www.cochranelibrary.com

Bohus, M., Dyer, A.S., Priebe, K., Krüger, A., Kleindienst, N., Schmahl, C., Niedfeld, I., & Steil, R. (2013). Dialectical behaviour therapy for post-traumatic stress disorder after childhood sexual abuse in patients with and without borderline personality disorder:

a randomized controlled trial. *Psychotherapy & Psychosomatics*, 82, 221-233. <https://doi.org/10.1159/000348451>.

Cepukiene, V., Pakrošnis, R., & Ulinskaitė, G. (2018). Outcome of the solution-focused self-efficacy enhancement group intervention for adolescents in foster care setting. *Children and Youth Services Review*, Elsevier, vol. 88(C), pages 81-87. <https://doi.org/10.1016/j.chilgyouth.2018.03.004>

Cepukiene, V., & Pakrošnis, R. (2011). The outcome of Solution-Focused Brief Therapy among foster care adolescents: The changes of behavior and perceived somatic and cognitive difficulties. *Children and Youth Services Review*, 33(6), 791-797. <https://doi.org/10.1016/j.chilgyouth.2010.11.027>

Cloitre, M. (2015). The “one size fits all” approach to trauma treatment: should we be satisfied? *European J. of Psychotraumatology*, 6, 1, <https://doi.org/10.3402/ejpt.v6.27344>

Coulter, S. (2014). The applicability of two strengths-based systemic psychotherapy models for young people following type I trauma. *Child Care in Practice*, 20(1), 48-63. <https://doi.org/10.1080/13575279.2013.847057>

De Jong, P., & Berg, I. K. (2013). *Interviewing for solutions* (4th ed.). Brooks/Cole.

De Shazer, S., Berg, I. K., Lipchik, E., Nunnally, E., Molnar, A., Gingerich, W., & Weiner-Davis, M. (1986). Brief therapy: focused solution development. *Family Process*, 25(2), 207-221. <https://doi.org/10.1111/j.1545-5300.1986.00207.x>

Eads, R. & Lee, M. Y. (2019). Solution Focused Therapy for trauma survivors: a review of the outcome literature. *Journal of Solution Focused Practices*, 3(1), Article 9. <https://digital.scholarship.unlv.edu/journalsfp/vol3/iss1/9>

Ehring T., Welboren R., Morina N, Wicherts J. M., Freitag J., & Emmelkamp P. M. G. (2014). Meta-analysis of psychological treatments for posttraumatic stress disorder in adult survivors of childhood abuse. *Clinical Psychology Review*, 34, 645-657.

- Forman-Hoffman, V., Middleton, J.C., Feltner, C., Gaynes, B.N., Weber, R.P., Bann, C., Viswanathan, M., Lohr, K.N., Baker, C., & Green, J. (2018). Psychological and pharmacological treatments for adults with posttraumatic stress disorder: a systematic review update. Agency for Healthcare Research and Quality (US): Rockville, MD, USA. <https://doi.org/10.23970/AHRQEPCCER207>
- Franklin, C., Zhang, A., Froerer, A., & Johnson, S. (2017). Solution Focused Brief Therapy: a systematic review and meta-summary of process research. *J Marital Fam Ther.*, 43(1), 16-30. <https://doi.org/10.1111/jmft.12193>. Epub 2016 Oct 19. PMID: 27757976.
- Fredrickson, B. L. (2000). Cultivating positive emotions to optimize health and well-being. *Prevention & Treatment*, 3(1). <https://doi.org/10.1037/1522-3736.3.1.31a>
- Frewen, P., Schmahl, C., & Olf, M. (2017). Interdisciplinary approaches to understand traumatic stress as a public health problem. *Eur. J. Psychotraumatol.*, 8, 1441582.
- Froerer, A. S., Von Cziffra-Bergs, J., Kim, J. K., & Connie, E. E. (2018). Solution-Focused Brief Therapy with clients managing trauma. Oxford University Press
- Frost N. D., Laska K. M., & Wampold B. E. (2014). The evidence for present-centered therapy as a treatment for posttraumatic stress disorder. *Journal of Trauma Stress*, 27, 1-8. <https://doi.org/10.1002/jts.2188>.
- Gilman, R., Schumm, J. A., & Chard, K. M. (2012). Hope as a change mechanism in the treatment of post-traumatic stress disorder. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4, 270-277. <https://doi.org/10.1037/a0024252>
- Kaminer, D., & Eagle, G. T. (2017). Interventions for posttraumatic stress disorder: a review of the evidence base. *South African Journal of Psychology*, 47(1), 7-22. <https://doi.org/10.1177/0081246316646950>
- Kessler, R. C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G., & Koenen, K. C. (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology*, 8(sup5), 1353383. <https://doi.org/10.1080/20008198.2017.1353383>
- Kim, J. S., Brook, J., & Akin, B. A. (2018). Solution-focused brief therapy with substance using individuals: a randomized controlled trial study. *Research on Social Work Practice*, 28, 452-462. <https://doi.org/10.1177/1049731516650517>
- Magruder, K. M., McLaughlin, K. A., & Elmore Borbon, D. L. (2017). Trauma is a public health issue. *European Journal of Psychotraumatology*, 8(1), 1375338. <https://doi.org/10.1080/20008198.2017.1375338>
- Mørkved, N., Winje, D., Dovran, A., Arefjord, K., Johnsen, E., Kroken, R. A., et al. (2018). Childhood trauma in schizophrenia spectrum disorders as compared to substance abuse disorders. *Psychiatry Research*, 261, 481-487. <https://doi.org/10.1016/j.psychres.2018.01.011>
- Okumuşoğlu, S. (2018). Çözüm odaklı olmak: 'Çözüm Odaklı Kısa Terapilere' Kısa Bir Bakış. Nobel Akademik Yayıncılık.
- Okumuşoğlu, S. (2017). Çözüm Odaklı Psikoterapilerde eklettik yaklaşım: Çözüm odaklı terapilere problem odaklı terapilerden tekniklerin entegrasyonu mümkün müdür? Researcher: *Social Science Studies Dergisi*, 5(9), 362-367.
- Paintain, E., & Cassidy, S. (2018). First-line therapy for post-traumatic stress disorder: a systematic review of cognitive behavioral therapy and psychodynamic approaches. *Counseling and Psychotherapy Research*, 18(3), 237-250. <https://doi.org/10.1002/capr.12174>
- Retnowati, S., Ramadiyanti, D. W., Suciati, A. A., Sokang, Y. A., & Viola, H. (2015). Hope intervention against depression in the survivors of cold lava flood from Merapi Mount. *Procedia: Social and Behavioural Sciences*, 165, 170-178. <https://doi.org/10.1016/j.sbspro.2014.12.619>
- Schottenbauer, M. A., Glass, C. R., Arnkoff, D. B., Tendick, V., & Hafter Gray, S. (2008). Nonresponse and dropout rates in outcome studies on PTSD: review and methodological considerations. *Psychiatry: Interpersonal and Biological Processes*, 71(2), 134-168. <https://doi.org/10.1521/psyc.2008.71.2.134>
- Shapiro, F. (1996). Eye Movement Desensitization and Reprocessing (EMDR): Evaluation of controlled PTSD research. *J. Behav. Ther. Exp. Psychiatry*, 27, 209-218.
- Shapiro, F., ve Laliotis, D. (2015). EMDR Therapy for Trauma-Related Disorders. In: Schnyder, U., Cloitre, M. (Eds) Evidence-based treatments for trauma-related psychological disorders. Springer, Cham. [https://doi.org/10.1007/978-3-319-07109-1\\_11](https://doi.org/10.1007/978-3-319-07109-1_11)
- Sklarew, B., & Blum, H. (2006). Trauma and depression. *The International Journal of Psychoanalysis*, 87(3), 859-861.
- Sloan, D.M., & Marx, B.P. (2019). Written Exposure Therapy for PTSD: a brief treatment approach for mental health professionals. American Psychological Association: Washington, DC, USA.
- Sutton, A., Clowes, M., Preston, L., & Booth A. (2019). Meeting the review family: exploring review types and associated information retrieval requirements. *Health Info Libr J.*, 36(3), 202-222.
- Van Minnen, A., Harned, M.S., Zoellner, L., & Mills, K. (2012). Examining potential contraindications for prolonged exposure therapy for PTSD. *Eur. J. Psychotraumatol.*, 3, 18805.
- Yalom, I. D. (2009). The gift of therapy: reflections on being a therapist. Harper, Perennial.
- WHO (2018). International Statistical Classification of Diseases and Related Health Problems (11th Revision). Geneva, World Health Organization.
- Zhang, W., Yan, T., Du, Y., & Liu, X. (2014). Brief Report: Effects of Solution-Focused Brief Therapy Group work on promoting Post-traumatic Growth of mothers who have a child with ASD. *Journal of Autism and Developmental Disorders*, 44(8), 2052-2056. <https://doi.org/10.1007/s10803-014-2051-8>
- Karaçam Z (2013) Sistematiik derleme metodolojisi: Sistematiik derleme hazırlamak için bir rehber. *Dokuz Eylül Üniversitesi Hemşirelik Fakültesi Elektronik Dergisi*, 6, 26-33. Retrieved from: <https://dergipark.org.tr/en/download/article-file/753523>
- Kim, C., Kwak, K., & Kim, Y. (2023). The relationship between stress and smartphone addiction among adolescents: the mediating effect of grit. *Current Psychology*, 42(10), 8451-8459. <https://doi.org/10.1007/s12144-022-03367-6>
- Kim, M. O., Kim, H., Kim, K., Ju, S., Choi, J., & Yu, M. I. (2015). Smartphone addiction:(focused depression, aggression and impulsion) among college students. *Indian Journal of Science and Technology*, 8(25), 1-6. <https://doi.org/10.17485/ijst/2015/v8i25/80215>
- Kumar, V. A., Chandrasekaran, V., & Brahadeeswari, H. (2019). Prevalence of smartphone addiction and its effects on sleep quality: A cross-sectional study among medical students. *Industrial Psychiatry Journal*, 28(1), 82-85. [https://doi.org/10.4103/ipj.ipj\\_56\\_19](https://doi.org/10.4103/ipj.ipj_56_19)
- Lei, L. Y. C., Ismail, M. A. A., Mohammad, J. A. M., & Yusoff, M. S. B. (2020). The relationship of smartphone addiction with psychological distress and neuroticism among university medical students. *BMC Psychology*, 8, 1-9. <https://doi.org/10.1186/s40359-020-00466-6>
- Li, Y., Li, G., Liu, L., & Wu, H. (2020). Correlations between mobile phone addiction and anxiety, depression, impulsivity, and poor sleep quality among college students: A systematic review and meta-analysis. *Journal of Behavioral Addictions*, 9(3), 551-571. <https://doi.org/10.1556/2006.2020.00057>

- Mahapatra, S. (2019). Smartphone addiction and associated consequences: Role of loneliness and self-regulation. *Behaviour & Information Technology*, 38(8), 833-844. <https://doi.org/10.1080/0144929X.2018.1560499>
- Rather, S. A., & Khazer, M. (2019). Impact of smartphones on young generation. *Library Philosophy and Practice (e-journal)*, 2384, 1-9. Retrieved from: <https://core.ac.uk/download/pdf/220153698.pdf>
- Scarsella, A. (2021, Eylül 25). Worldwide Smartphone 2021–2025 Forecast Update, IDC. Retrieved from: <https://www.idc.com/getdoc.jsp?containerId=US48222321>
- Shi, X., Wang, A., & Zhu, Y. (2023). Longitudinal associations among smartphone addiction, loneliness, and depressive symptoms in college students: Disentangling between–And within-person associations. *Addictive Behaviors*, 142, 107676. <https://doi.org/10.1016/j.addbeh.2023.107676>
- Tayhan Kartal, F., & Yabancı Ayhan, N. (2021). Relationship between eating disorders and internet and smartphone addiction in college students. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, 26, 1853-1862. <https://doi.org/10.1007/s40519-020-01027-x>
- Ting, C. H., & Chen, Y. Y. (2020). *Smartphone addiction: In adolescent addiction*. Academic Press.
- Touitou, Y., Touitou, D., & Reinberg, A. (2016). Disruption of adolescents' circadian clock: The vicious circle of media use, exposure to light at night, sleep loss and risk behaviors. *Journal of Physiology-Paris*, 110(4), 467-479. <https://doi.org/10.1016/j.jphysparis.2017.05.001>
- TÜİK (2021, May 6). İstatistiklerle Aile, 2020. Retrieved from: <https://data.tuik.gov.tr/Bulten/Index?p=İstatistiklerle-Aile-2020-37251>
- TÜİK (2023, August 14). Hanehalkı Bilişim Teknolojileri (BT) Kullanım Araştırması, 2022. Retrieved from: [https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-\(BT\)-Kullanım-Arastirmasi-2022-45587](https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-(BT)-Kullanım-Arastirmasi-2022-45587)
- Wang, J., Hao, Q. H., Peng, W., Tu, Y., Zhang, L., & Zhu, T. M. (2023). Relationship between smartphone addiction and eating disorders and lifestyle among Chinese college students. *Frontiers in Public Health*, 11, 1111477. <https://doi.org/10.3389/fpubh.2023.1111477>
- Wheelwright, T. (2021, Nisan 21). Cell phone behavior in 2021: How obsessed are we? Retrieved from: <https://www.reviews.org/mobile/cell-phone-addiction/>.
- Wikipedia (2023, August 14). Smartphone. Retrieved from: <https://en.wikipedia.org/wiki/Smartphone>
- Yang, X., Zhou, Z., Liu, Q., & Fan, C. (2019). Mobile phone addiction and adolescents' anxiety and depression: The moderating role of mindfulness. *Journal of Child and Family Studies*, 28, 822-830. <https://doi.org/10.1007/s10826-018-01323-2>
- Yıldırım, S., Ergüzel, T. T., & Sayar, G. H. (2019). Akıllı telefon bağımlılığı. *Current Addiction Research*, 3(1), 25-30. <https://doi.org/10.5455/car.105-1558585853>
- Yılmaz, R., Sulak, S., Griffiths, M. D., & Yılmaz, F. G. K. (2023). An exploratory examination of the relationship between internet gaming disorder, smartphone addiction, social appearance anxiety and aggression among undergraduate students. *Journal of Affective Disorders Reports*, 11, 100483. <https://doi.org/10.1016/j.jadr.2023.100483>
- Zhang, K. Z., Chen, C., Zhao, S. J., & Lee, M. K. (2014, June). Understanding the role of motives in smartphone addiction. In 18th Pacific Asia Conference on Information Systems, PACIS 2014. Pacific Asia Conference on Information Systems. Retrieved from: [https://web.archive.org/web/20200323042527id\\_/https://aisel.aisnet.org/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1259&context=pacis2014](https://web.archive.org/web/20200323042527id_/https://aisel.aisnet.org/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1259&context=pacis2014)
- Zhang, Y., Li, S., & Yu, G. (2020). The relationship between loneliness and mobile phone addiction: A meta-analysis. *Advances in Psychological Science*, 28(11), 1836-1852. <https://doi.org/10.3724/SP.J.1042.2020.01836h/>

## CORRECTIONS / DÜZELTMELER

Correction to Birkök, M. C. & Tatoğlu, S. (2024).

In the article “Investigating the Relationship Between Smartphone Use and Social Dominance Orientation in University Students. *Cyprus Turkish Journal of Psychiatry & Psychology*, 6(1), 62-68. Doi:10.35365/ctjpp.24.1.07”, there were errors in the 2024 March Issue (Volume 6, Issue 1). Corrections are required on two points. The corrections are required on page 62 in the authors' information section.

1-Second Author Semanur Tatoğlu's Institution City name:

The city name of the institution to which the second author is affiliated is spelled incorrectly. The city information should be stated as "Istanbul", not "Uşak".

Incorrect form:

<sup>2</sup>MA., Republic of Turkey Ministry of National Education, **Uşak**- Turkey, statoglu@gmail.com, Orcid id: 0000-0001-9682-6779

Correction:

<sup>2</sup>MA., Republic of Turkey Ministry of National Education, **İstanbul**- Turkey, statoglu@gmail.com, Orcid id: 0000-0001-9682-6779

2-Address of Correspondence Information:

Incorrect form:

Address of Correspondence/Yazışma Adresi: Dursun Yılmaz, Uşak University, Institute of Social Sciences, Department of Communication Sciences, Uşak- Türkiye, dursun\_ylmz@yahoo.com

Correction:

Address of Correspondence/Yazışma Adresi: Doç. Dr. Mehmet Cüneyt Birkök, Sakarya University, Faculty of Education, Department of Educational Science, Hendek-Sakarya, Turkey, e-mail: birkok@sakarya.edu.tr, Orcid: 0000-0001-7915-1116

## INSTRUCTION FOR AUTHORS

### GENERAL INFORMATION

#### **Aims and Scope:**

The aim of the Cyprus Turkish Journal of Psychiatry and Psychology, Cyprus, Turkey and in the world, mainly Psychiatry and Psychology, to provide the scientific level of theoretical knowledge and clinical experience to create and promote a forum. In the Cyprus Turkish Journal of Psychiatry and Psychology, original research articles, review articles, case reports, letters / debates, books and dissertations will be published. The Turkish Cypriot Journal of Psychiatry and Psychology, whose short name is Cyp Turk J of Psychiatry and Psychol, is published both in print (ISSN: 1302-7840) and online (E-ISSN: 2667-8225).

Cyprus Turkish Journal of Psychiatry and Psychology recommends that authors follow the Recommendations for the conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals formulated by the International Committee of Medical Journal Editors (ICMJE).

Link: <http://www.icmje.org/icmje-recommendations.pdf>

#### **Publication Frequency:**

The journal is published 4 issues per year, in March, June, September and December.

Manuscripts are published after review of the editorial board and at least two reviewers, and after making necessary corrections.

#### **Publication Language:**

The language of the Cyprus Turkish Journal of Psychiatry and Psychology is Turkish and English. Articles published in full text in Turkish also contain the English title, abstract and keywords. Again, Articles Published in English contain Turkish title, abstract and keywords.

It is a policy that the Editorial Board attaches importance to the writing and grammar rules of the articles. It is expected that the articles should be written in an understandable, clear, and plain language in accordance with grammar, spelling rules and field writing.

Articles accepted for publication by the Editorial Board are read by language (Turkish, English) editors. During the evaluation process of the articles, the editorial board, referees, or language editors may suggest corrections regarding the writing of the article. It is the authors' responsibility to make these corrections. Authors seeking assistance with English language editing, translation, or figure and manuscript formatting to fit the journal's specifications should consider using Cyprus Mental Health Institute Language Services. Visit Cyprus Mental Health Institute Language Services on [ruhsagligienstitusu.com](http://ruhsagligienstitusu.com).

#### **Open Access Policy:**

Cyprus Turkish Journal of Psychiatry and Psychology is an open access, double-blind peer-reviewed journal. Each article accepted by peer review is made freely available online immediately upon publication, is published under a Creative Commons license and will be hosted online in perpetuity. There is no charge for submitting a paper to the journal.

The Cyprus Turkish Journal of Psychiatry and Psychology is published with the policy of transparency, open access and sharing of information in publishing. The Journal supports the Budapest Open Access Initiative. For this purpose, the open access policies available at <http://www.budapestopenaccessinitiative.org/boai-10-translations/turkish-translation> are adopted by the Editorial Board of the Cyprus Turkish Journal of Psychiatry and Psychology. In addition, articles published in the Cyprus Turkish Journal of Psychiatry and Psychology within the scope of open access policies are licensed under "Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License" (<https://dergipark.org.tr/en/pub/ktppdergisi/archive>).

#### **Journal Content:**

At the stage of submission, the application letter, title, authors and institutions, contact address, Turkish abstract and the title and summary of the manuscript should be written at the relevant stages.

Turkish abstract should be added to the works written in English. In the main text of the manuscript it will be used as follows: Introduction, Materials and Methods, Results, Discussion, Acknowledgments, References, Tables and Figures.

Manuscripts must not have been previously published or sent to another journal for publication.

#### **Article Types:**

The Journal accepts the following paper types for publication:

- Original Articles: These should only include original findings from high-quality planned research studies such as experimental designs, outcome studies, case-control series, surveys with high response rates, randomized controlled trials, intervention studies, studies of screening and diagnostic tests, and cost-effectiveness analyses.
- Review articles: These are systematic and critical assessments of the literature.
- Viewpoints: These should be experience-based views and opinions on debatable or controversial issues that affect the profession. The author should have sufficient, credible experience on the subject.
- Practical Psychotherapy: Manuscripts describing the use of psychotherapy in a single case or a series of cases can be submitted to this section. We are mainly looking for articles that describe the practicalities in conducting psychotherapy, the hurdles faced, how they were overcome, etc.
- Case Series: More than one new, interesting, and rare cases belonging to a particular diagnosis/clinical feature/treatment can be reported in this section.
- Commentaries: These should address important topics and may be linked to multiple or a specific article recently published in Cyprus Turkish Journal of Psychiatry and Psychology.
- Letter to the Editor: In this section, the authors publish their short observations on the mental health field.

#### **Authorship:**

The Cyprus Turkish Journal of Psychiatry and Psychology follows the requirements for authorship recommended by the International Medical Journal Editors Committee. Articles should be submitted for evaluation only after approval by all contributing authors. During the article submission phase, the Author Form must be sent together. Submitters should carefully check that all contributors to the article are considered contributing authors.

The list of authors should include anyone who can legally claim authorship. Accordingly, each author must meet all the following criteria:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND

Drafting the work or revising it critically for important intellectual content; AND

Final approval of the version to be published; AND

Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and

Those who do not meet the above 4 criteria should be named in the Acknowledgements.

The terms set forth herein have been arranged in accordance with the guidelines of the Journal Editors (ICMJE). For further details please see:

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>

#### **Copyright Transfer Form:**

Authors have to transfer the copyrights of their articles to the Cyprus Turkish Journal of Psychiatry and Psychology at the time of article application. For this, the "Copyright Transfer Form" is filled and the publication rights of the articles are transferred to the journal. All authors sign the form, scan it in the browser and electronically upload it to the TÜBİTAK ULAKBİM DERGİPARK system (<https://dergipark.org.tr/en/pub/ktppdergisi>) with the article. The Editorial Board of the Cyprus Turkish Journal of Psychiatry and Psychology is authorized to publish the article.

In addition, the authors reserve the right to use the article free of charge in their lectures, presentations and book works other than copyright, the right to reproduce the article for their own purposes provided that they do not sell, and the right to distribute by mail

or electronically. In addition, the author can use any part of the article in another publication, if it is sent to the Journal (citation). The articles of the authors who do not upload the Copyright Transfer Form to the system with article application are not processed. Copyright transfer applies only to articles published in the Cyprus Turkish Journal of Psychiatry and Psychology. Please ensure that a 'Declaration of Conflicting Interests' statement is included at the end of your manuscript, after any acknowledgements and prior to the references. If no conflict exists, please state that 'The Author(s) declare(s) that there is no conflict of interest'.

For guidance on conflict of interest statements, please see the ICMJE recommendations.

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/author-responsibilities-conflicts-of-interest.html#two>

Please make sure that this statement is not included in the main manuscript but in the Title page.

For accepted manuscripts, the authors are deemed to have accepted the correctness by the editor-in-chief.

In case of studies presented previously in a congress / symposium, this should be stated as a footnote.

#### **Financing:**

The Cyprus Turkish Journal of Psychiatry and Psychology requires all authors to state their funds consistently under a separate heading. In the absence of funding, the acknowledgment should include the following statements after and before the resources section: "This research has not received a private grant from any funding institution in the public, commercial or non-profit sectors."

#### **Statement of Conflict of Interests:**

The policy of the Cyprus Turkish Journal of Psychiatry and Psychology is that all authors indicate conflict of interests in their articles. If there is no conflict, please use the phrase 'Author (s) declares no conflict of interest'. Please refer to the ICMJE recommendations for guidance on conflict of interest statements.

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/author-responsibilities-conflicts-of-interest.html#two>

All applications must be accompanied by the ICMJE Conflict of Interest Forms.

#### **Ethics Committee:**

Local ethics committee approval should be obtained for researches. In the manuscripts that report the results of the experimental studies, there should be a sentence indicating that the informed consent of the volunteer or the patients were taken after all the procedure(s) is fully described. In the case of such a study, the authors must accept internationally recognized guidelines and Turkish provisions of the regulations and also send the approval of the Ethics Committee from the institution. Studies on animals should be made clear of what has been done to prevent pain and discomfort.

Medical research involving human subjects must be conducted according to the World Medical Association Declaration of Helsinki.

<https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>

Submitted manuscripts should conform to the ICMJE Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals.

<http://www.icmje.org/icmje-recommendations.pdf>

All papers reporting animal and/or human studies must state in the methods section that the relevant Ethics Committee or Institutional Review Board provided (or waived) approval.

All submissions must be accompanied by a title page.

Write the manuscript title.

Provide the full name and institution of the review committee, in addition to the approval number.

Include a statement to the editor that the paper being submitted has not been published, simultaneously submitted, or already accepted for publication elsewhere.

Include a statement that the manuscript has been read and approved by all the authors, that the requirements for authorship as stated earlier in this document have been met, and that each author believes that the manuscript represents honest work.

The author must declare that the manuscript, to the best of the author's knowledge, does not infringe upon any copyright or property right of any third party.

Information on informed consent to report individual cases or case series should be included in the manuscript text. A statement is required regarding whether written informed consent for patient information and images to be published was provided by the patient(s) or a legally authorized representative. Please do not submit the patient's actual written informed consent with your article, as this in itself breaches the patient's confidentiality. The Journal requests that you confirm to us, in writing, that you have obtained written informed consent, but the written consent itself should be held by the authors/investigators themselves, for example, in a patient's hospital record. The confirmatory letter may be uploaded with your submission as a separate file.

Please also refer to the ICMJE Recommendations for the Protection of Research Participants.

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/protection-of-research-participants.html>

All research involving animals submitted for publication must be approved by an ethics committee with oversight of the facility in which the studies were conducted. The journal has adopted the Consensus Author Guidelines on Animal Ethics and Welfare for Veterinary Journals published by the International Association of Veterinary Editors.

<http://www.veteditors.org/consensus-author-guidelines-on-animal-ethics-and-welfare-for-editors/>

#### **Clinical Studies:**

The Cyprus Turkish Journal of Psychiatry and Psychology complies with the requirement of the ICMJE that clinical trials are recorded in a WHO approved public trials registry as an evaluation condition for publication at or before the initial patient registration. At the end of the abstract, the trial registration name and URL and registration number should be included.

#### **Reporting Guidelines:**

Relevant EQUATOR Network reporting guidelines should be followed depending on the type of study. For example, all randomized controlled trials submitted for publication must include a complete CONSORT flowchart as figure. Systematic reviews and meta-analyses should be arranged according to the completed PRISMA flowchart. The EQUATOR wizard can help you determine the appropriate grid.

Other resources can be found in NLM's Research Reporting Guidelines and Initiatives.

#### **Research Data:**

As the Cyprus Turkish Journal of Psychiatry and Psychology, we believe that the clarity, transparency and reproducibility of the research should be facilitated. Regarding the subject, we encourage authors to share their research data in an appropriate public repository subject to ethical considerations and to include a data accessibility statement in their article files.

### **ARTICLE WRITING RULES AND FEATURES**

#### **General Information:**

The language of the Cyprus Turkish Journal of Psychiatry and Psychology is Turkish and English. Manuscripts should be written in a clear, fluent, simple language and long narratives should be avoided. Turkish equivalents of foreign words and abbreviations must be fully written in parenthesis where they crossed. Generic names of drugs should be used. Footnotes should not be used.

The names of the authors should be placed at the bottom right of one line of the article title and the title, institution, address, telephone, e-mail address should be given with the asterisk (\*). Authors / text-specific terminology and / or abbreviations should be explained in footnotes. The author (s) must be the person (s) who makes the work and writes directly.

If the research has received financial support from an organization or has been presented in a congress, it should be placed on the last word of the title of the manuscript (\*) and should be indicated as a bottom note.

Articles are on one side of A4 paper size, 2.5 cm on all sides. It should be written with "Times New Roman" font with 12 pt and one and a half line spacing. The Turkish title should not exceed 19 words. Subheadings must be preceded by line spacing, no space between paragraphs and no paragraph indented.

Footnotes should be used to provide additional information, not for source representation, should be numbered on the page, written in 10 pt and 1 line spacing and justified. The page numbers must also be placed at the bottom with 11 pt.

Accepted articles are published in order.

#### **Preparation of articles:**

##### **Title page:**

The Turkish and English title of the article should not exceed 19 words. Abbreviations should not be used in the title. In the article, only the names and surnames of the authors who directly contributed to the study, their titles, and the institutions they work for should be written clearly. Funds and organizations supporting the study should be specified on the title page.

Contact information of the author to be contacted should be written at the bottom of the title page (Author's name, surname, full address, postal code, telephone number, fax number and e-mail address should be written).

##### **Abstracts:**

Abstracts should be written in Turkish and English and should contain a maximum of 250 words. The abstract should be organized according to purpose-method-results-discussion sections. Turkish and English key words (3-8) for the article should be given right after the abstracts. English keywords should be given in accordance with "Medical Subject Headings (MESH)" (<http://www.nlm.nih.gov/mesh/MBrowser.html>). Turkish keywords should be in accordance with Turkey Science Terms (TBT) (<http://www.bilimterimleri.com>). Using abbreviations in abstracts should be avoided as much as possible. When abbreviations must be used, they should be used after they are defined in parentheses at the first mention.

Research articles: After the abstract, the subtitles of introduction-method and materials-results-discussion-resources should be included, the latest information on the subject should be included, the method should be written clearly, the validity and reliability studies of the measurement tools used and the tests used for evaluation, standard deviation, test values must be specified. In the discussion, the clinical and theoretical benefits of the results, application areas, and innovations should be emphasized. Articles should not exceed 3500 words. The article should contain a maximum of 6 tables or figures. Care should be taken that the number of references does not exceed 50 resources.

Review articles: The purpose, the method used, the sources used, the results obtained should be stated. Articles should not exceed 3500 words. The article should contain a maximum of 6 tables or figures. Care should be taken that the number of references does not exceed 50 resources.

Case reports: Case reports should include introduction, description of the cases, discussion and references sections. The article should not exceed 3000 words. It should be noted that the number of references for typical or rare cases that are found useful in terms of clinical or theoretical education should not exceed 30 references. The number of tables or figures should not exceed 2.

Perspectives: In these articles, experience-based opinions on controversial or controversial issues affecting the profession should be discussed with the introduction of the literature. The article should not exceed 2500 words. Number of Resources should not exceed 20. The number of tables or figures should not be more than 2.

Practical Psychotherapy: In these articles, the introduction and information about psychotherapy application should be discussed in the light of the literature. The article should not exceed 2500 words. Number of Resources should not exceed 20. The number of tables or figures should not be more than 2.

Comments: The features of the article discussed with the introduction should be discussed in the light of the literature. The article should not exceed 2500 words. Number of Resources should not exceed 20. The number of tables or figures should not be more than 2.

Letter: Opinions in which a discussion forum can be formed on various issues in the journal are included in the letter section. The article should not exceed 500 words.

Translation, book and thesis presentation: Translation, book and thesis introductions should be short, an original copy of the translation texts and thesis should be sent. The article should not exceed 500 words.

Thank letter: The letter of acknowledgment can be added to the individuals who contributed or to the funds and organizations supporting the study, if any.

Resources: In-article citations and bibliography in the journal should be shown according to the international APA format. For detailed information, see the Resources section on the website.

##### **Reference in Text:**

References should be written in parentheses in the text by including the surnames and publication date of the manuscripts. If more than one source is to be shown, the (;) sign must be used between the references. References should be sorted alphabetically.

Single author References;

(Akyolcu, 2007)

References with two authors;

(Saymer and Demirci, 2007, p. 72)

References with three, four and five authors;

For the first use in the text: (Ailen, Ciambune and Welch 2000, pp. 12 .13) In repeated use within the text: (Ailen et al., 2000).

References with six and more authors;

(Çavdar et al., 2003)

References in References Section

All references should be given in a separate section at the end of the text in alphabetical order.

Examples of literature writing are given below.

Book

a) Book Example

Onur, B. (1997). *Developmental Psychology*, Ankara: İmge Kitapevi.

b) Translation of Books

Schuckit MA. (1993). *Alcohol and Substance Abuse*. K Kamberoglu (trans.), Izmir: Kanyilmaz Matbaasi.

c) Multi Writer Turkish Book

Tonta, Y., Bitirim, Y. and Sever, H. (2002). *Performance evaluation in Turkish search engines*. Ankara: Total Informatics.

d) English Book

Kamien R., & amp; Kamien, A. (2014). *Music: An appreciation*. New York, NY: McGraw-Hill Education.

e) Section in English Book

Bassett, C. (2006). *Cultural studies*. In G. Hall & C. Birchall (Eds.), *New cultural studies: Adventures in theory* (pp. 220 Bir237). Edinburgh, UK: Edinburgh University Press.

f) Section in Turkish Book

Erkmen, T. (2012). *Organizational culture: Functions, elements, the importance of business management and leadership*. M. Zencirkiran (Ed.), *In the book of Organizational Sociology* (pp. 233an263). Bursa: Dora Edition Publication.

Article

a) Article

Mutlu, B. and Savaşer, S. (2007). *Causes of stress in parents in the intensive care unit after surgery and attempts to reduce*. *Istanbul University Florence Nightingale Nursing Journal*, 15 (60), 179ing182.

b) More Than Seven Writers in Article

Lal, H., Cunningham, A. L., Godeaux, O., Chlibek, R., Diez-Domingo, J., Hwang, S.-J. ... Heineman, T. C. (2015). *Efficacy of an adjuvanted herpes zoster subunit vaccine in older adults*. *New England Journal of Medicine*, 372, 2087 Medicine2096. <http://dx.doi.org/10.1056/nejmoa1501184>

Thesis, Presentation, Paper

a) Thesis

Yellow, E. (2008). *Cultural identity and policy: Interculturalism in Mardin*. (Unpublished PhD Thesis). Ankara University Institute of Social Sciences, Ankara.

b) Congress Presentation

Çepni, S., Bacanak, A. and Özsevgeç, T. (2001, June). *The relation of science teacher candidates attitudes towards science branches and their success in science branches*. Paper presented at the X. National Educational Sciences Congress, Abant İzzet Baysal University, Bolu

##### **Tables and Figures:**

Tables should be written on a separate page with single spacing. Each table should have a number and descriptive information on top. If abbreviations are included in the table, the expansions of these abbreviations should be placed under the table in the form of subtitles and in alphabetical order.

When using previously printed or electronically published tables, written permission must be obtained from both the author and the publisher, and this must be sent to the editor of the journal by fax or mail.

Transverse and longitudinal lines should not be used in the table, only straight lines should be drawn at the top and bottom.

The visuals and note examples in the articles should be numbered as Figure / Table 1.... with their short explanations centered. All images should be sent separately in JPG format with a minimum resolution of 300 dpi in order to avoid resolution problems in printing. Placements in the text can be changed according to the page layout when necessary.

Tables, graphics, figures and photographs should not be more than six, they should be placed on a separate page and their place in the text should be specified. Periods should not be used in arabic numbers and decimals.

#### **Article Submission:**

Article submissions are through the magazine park system and are given below;

Link: <https://dergipark.org.tr/tr/>

#### **THE BLIND REVIEW AND EVALUATION PROCESS**

Blind refereeing is a method applied for publishing scientific publications with the highest quality. This method forms the basis of the objective evaluation process of scientific studies and is preferred by many scientific journals. All studies submitted to the Cyprus Turkish Journal of Psychiatry and Psychology are evaluated by blinding according to the following stages.

#### **Blind Arbitration Type:**

The Cyprus Turkish Journal of Psychiatry and Psychology uses the double blind method in the evaluation process of all studies. In the double blind method, the identities of the authors and referees of the studies are hidden.

#### **Initial Evaluation Process:**

Studies submitted to the Cyprus Turkish Journal of Psychiatry and Psychology are first evaluated by the editors. At this stage, studies that do not comply with the purpose and scope of the journal, are weak in terms of language and expression rules in Turkish and English, contain scientific critical errors, have no original value and do not meet the publication policies are rejected. Authors of rejected studies are informed within one month at the latest from the date of submission. Studies that are deemed appropriate are sent to a field editor for the field of interest for pre-evaluation.

#### **Pre-Evaluation Process:**

In the pre-evaluation process, field editors examine the introduction and literature, method, findings, conclusion, evaluation and discussion sections of the studies in detail in terms of journal publishing policies and scope and originality. Studies deemed unsuitable as a result of this review are returned within four weeks at the latest with the field editor's evaluation report. Studies found appropriate are taken into the refereeing process.

#### **Refereeing Process:**

Studies are refereed according to their content and expertise of the referees. The editor of the field who examines the study suggests at least two referees from the referee pool of the Cyprus Turkish Journal of Psychiatry and Psychology, or may suggest new referees suitable for the field of study. The referee suggestions from the field editor are evaluated by the editors and the studies are forwarded to the referees by the editors. Referees must guarantee that they will not share any process and document about the work they evaluate.

#### **Referee Reports:**

Referee evaluations are generally; It is based on originality, method used, compliance with ethical rules, consistent presentation of findings and results, and review of the literature. This review is based on the following factors: Introduction and literature: the evaluation report includes the presentation and aims of the problem in the study, the importance of the subject, the scope of the literature on the subject, its currency and the originality of the study.

Method: The evaluation report includes information on the suitability of the method used, the selection and characteristics of the research group, validity and reliability, as well as an opinion on the data collection and analysis process

Findings: The evaluation report includes opinions on the presentation of the findings obtained within the framework of the method, the accuracy of the analysis methods, the consistency of

the findings reached with the aims of the research, the presentation of the tables, figures and visuals needed, and the conceptual evaluation of the tests used.

Evaluation and discussion: the evaluation report includes discussion of the topic based on the findings, compliance with the research question (s) and hypothesis (s), generalizability and applicability.

Conclusion and suggestions: the evaluation report includes a contribution to the literature, an opinion on suggestions for future studies and applications in the field.

Style and expression: the evaluation report includes the opinion about the content of the study title, the use of Turkish in accordance with the rules, the submission and references to the language of the full text in accordance with the examples under the journal publication principles.

General evaluation: the evaluation report includes an opinion about the originality of the study as a whole, and its contribution to the literature and practices in the field.

During the evaluation process, the referees are not expected to make adjustments according to the typographical features of the study.

#### **Referee Evaluation Process:**

The time given to the referees for the referee evaluation process is 3 weeks. Correction suggestions from referees or expert editorial board members must be completed by the authors within 3 weeks. Referees can examine the revisions of a work and decide whether it is appropriate or, if necessary, request corrections more than once.

#### **Evaluation Result:**

Comments from referees are reviewed by the field editor within two (2) weeks at the latest. As a result of this review, the editor of the field transmits its final decision regarding the study to the editors.

#### **Editorial Board Decision:**

Editors prepare editorial board opinions on the study based on the opinions of the field editor and referees. The opinions prepared are forwarded to the author (s) by the editor together with the field editor and referee recommendations within 1 week at the latest. In this process, the works that are given negative opinions are returned without requesting a plagiarism check. The final decision is made according to the results of the plagiarism audit reports for the studies with positive opinions.

#### **Publication Evaluation Process:**

It is envisaged that the publication evaluation process of the studies submitted to the Cyprus Turkish Journal of Psychiatry and Psychology will be completed within approximately 3 months. However, the period between the date when the referees or editors request a correction from the author (s) and the date when the author (s) complete the corrections are not included in this 3-month period.

#### **Citation and Reference Control:**

According to the publication ethics of the Cyprus Turkish Journal of Psychiatry and Psychology, it is mandatory to cite the articles accurately and completely. Authors must ensure that they have written entirely original works and that if authors have used the works and / or words of others, it is properly quoted or quoted. This audit is done first by the referees during the evaluation and then by the editors according to the result of the similarity-plagiarism (iThenticate) program. All works plagiarism report is also checked over intihal.net.

#### **Early View and Publishing of the Article:**

The articles that are edited in the Cyprus Turkish Journal of Psychiatry and Psychology are published in electronic media under the title of "Early View" by giving a Digital Object Identifier (DOI). Minor adjustments can be made, if necessary, while early view articles are published in the journal. Articles in early view are published in volumes and numbers determined by the Editorial Board, by removing the "EARLY VIEW" watermark on it. After the electronic journal is published, the printed version of the Cyprus Turkish Journal of Psychiatry and Psychology, which includes the same articles, is also published in the same month.

#### **Archiving:**

The data and full texts of the articles published in the Cyprus Turkish Journal of Psychiatry and Psychology are published as .pdf on the server of TÜBİTAK ULAKBİM DERGİPARK.



OCLC WorldCat and EBSCOhost digital archiving (<https://dergipark.org.tr/en/pub/ktppdergisi/archive>), (<https://www.worldcat.org/>) stored and archived in a closed way. (LOCKSS; <https://dergipark.org.tr/en/pub/ktppdergisi/lockss-manifest>).

**EASE Statement on Quality Standards**

The European Association of Science Editors encourages all editors to ensure that reports of research on COVID-19 meet required standards and comply with agreed guidelines, and that any limitations are clearly stated. Members of EASE have noted poor standards of reporting in many studies related to the COVID-19 pandemic. Medical and public health measures to treat infected patients and to limit the spread of the coronavirus have to be based on high quality evidence if they are to succeed. EASE urges all involved in collecting and publishing data related to the pandemic to adhere to ethical guidelines, and to follow standard reporting guidelines (see [www.equator-network.org](http://www.equator-network.org)), for example CONSORT for clinical trials and STROBE for epidemiological studies. Demographic data should include age and sex of all individuals and follow the SAGER guidelines to ensure that data on sex and gender are fully and correctly reported. We encourage full and open sharing of data where possible.

We recognise that in times of crisis it may not always be possible to obtain all required data, and that reporting may – of necessity – be curtailed. To avoid misinterpretation, but also to facilitate the rapid sharing of information, we encourage editors to ensure that authors include a statement of limitations on their research. This will inform readers and strengthen the usefulness of any published research.

In addition, whilst always advocating high language standards, we acknowledge that to facilitate rapid dissemination of important research it may be necessary to limit editorial involvement to ensuring that the published research is understandable, and not to enforce stringent language requirements on authors.

The relevant statement can be found at the website <https://ease.org.uk/publications/ease-statements-resources/ease-statement-on-quality-standards/>.

## YAZARLARA BİLGİLER

### GENEL BİLGİLER

#### Amaçlar ve Kapsam:

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nin amacı, Kıbrıs Türkiye ve Dünya'da Psikiyatri ve Psikoloji başta olmak üzere kuramsal bilgileri ve klinik deneyimleri bilimsel düzeyde sunmak, yayımlaştırmak bir forum oluşturmaktır. Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nde Psikiyatri ve Psikoloji ile ilgili alanlardaki araştırma, gözden geçirme/ derleme, olgu sunumu, eğitimde/ uygulamada ve psikiyatride yeni ufuklar açacak özgün yazılar/görüşler, çeviri yazılar, mektup/tartışma, kitap ve tez tanıtımı yayımlanır. Kısa Adı KTPP Dergisi olan Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi hem basılı (ISSN: 1302-7840) hem de online (E-ISSN: 2667-8225) olarak yayımlanmaktadır. Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi, yazarların International Committee of Medical Journal Editors (ICMJE) tarafından formüle edilen Tıbbi Dergilerde Bilimsel Çalışmanın Yürütülmesi, Raporlanması, Düzenlenmesi ve Yayınlanması için Önerilere uymalarını önermektedir. Link: <http://www.icmje.org/icmje-recommendations.pdf>

#### Yayın Sıklığı:

Dergi Mart, Haziran, Eylül ve Aralık olmak üzere üç ayda bir, dört sayı olarak yayımlanır. Dergiye gönderilen yazılar yayın kurulu ve en az iki danışmanın incelemesinden ve gerekli düzeltmeler yapıldıktan sonra yayımlanır.

#### Yayın Dili:

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nin yayın dili Türkçe ve İngilizce'dir. Türkçe tam metin yayımlanan makalelerde İngilizce başlık, öz ve anahtar sözcükler de yer alır. Yine İngilizce Yayınlanan Makalelerde Türkçe başlık, öz ve anahtar sözcükler yer alır.. Makalelerin yazımı ve dil bilgisi kurallarına uygun olması, Editörleri Kurulunun önem verdiği bir politikadır. Makalelerin dil bilgisi, yazım kuralları ve alan yazına uygun, anlaşılır, açık ve yalın bir dil ile yazılması beklenir.

Editörler Kurulu'nca yayına kabul edilen makaleler, dil (Türkçe, İngilizce) editörlerince okunur. Yazarlara, makalelerin değerlendirme sürecinde editörler kurulu, hakemler ya da dil editörlerince makalenin yazımına ilişkin düzeltmeler önerilebilir. Bu düzeltmelerin yapılması, yazarların sorumluluğundadır.

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi herhangi bir çeviri hizmeti vermemektedir. Derginin beklentilerine uyması için İngilizce düzenleme, çeviri veya şekil ve makale biçimlendirme konusunda yardım arayan yazarlar, Kıbrıs Ruh Sağlığı Enstitüsü Dil Hizmetlerini kullanmayı düşünebilirler. Kıbrıs Ruh Sağlığı Enstitüsü'ndeki dil hizmetleri için enstitünün web sitesi <http://ruhsagligienstitusu.com>'u ziyaret edebilirler.

#### Açık Erişim Politikası:

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi, açık erişimli, çift kör hakemli bir dergidir. Hakem değerlendirmesi sonrasında kabul edilen her makale, yayımlandıktan hemen sonra çevrimiçi olarak ücretsiz olarak bir Creative Commons lisansı altında yayımlanır ve sürekli olarak çevrimiçi olarak barındırılır. Dergiye makale göndermenin herhangi bir bedeli yoktur.

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi, yayıncılıkta saydamlık, açık erişim sağlama ve bilginin paylaşılması politikasıyla yayımlanmaktadır. Dergimiz, Budapeşte Açık Erişim Girişimi'ni desteklemektedir. Bu amaçla <http://www.budapestopenaccessinitiative.org/boai-10-translations/turkish-translation> web adresinde bulunan açık erişim politikaları, Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi Editörler Kurulu'nca benimsenmektedir. Ayrıca, açık erişim sağlama politikaları kapsamında Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nde yayımlanan makaleler "Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License" ile lisanslanmıştır.

(<https://dergipark.org.tr/en/pub/ktppdergisi/archive>)

#### Dergi yazım içeriği:

Gönderim aşamasında, başvuru mektubu, başlık, yazarlar ve kurumları, iletişim adresi, Türkçe özet ve yazının İngilizce başlığı ve özeti ilgili aşamalarda yazılmalıdır. İngilizce yazılan çalışmalara da Türkçe özet eklenmesi gerekmektedir. Yazının ana metnindeyse şu sıra kullanılacaktır: Giriş, Gereç ve Yöntem, Bulgular, Tartışma, Teşekkür, Kaynaklar. Yazıların daha önce

yayımlanmamış ya da yayımlanmak üzere başka dergiye gönderilmemiş olması gerekir.

#### Yazı Cesitleri:

Dergi aşağıdaki yazı türlerini yayın için kabul eder:a)Özgün Makaleler: Bunlar sadece deneysel tasarımlar gibi yüksek kaliteli planlanmış araştırma çalışmalarından orijinal bulgular içeren sonuç çalışmaları, vaka-kontrol serileri, yüksek yanıt oranlarına sahip anketler, randomize kontrollü çalışmalar, müdahale çalışmaları, tarama ve teşhis testleri çalışmaları ile maliyet-etkinlik analizleri.

b)Derleme makaleleri: Bunlar, literatürün sistematik ve eleştirel değerlendirmeleridir.

c)Vaka Serileri: Bu bölümde belirli bir tanıya / klinik özelliğe / tedaviye ait birden fazla yeni, ilginç ve nadir vaka rapor edilebilir.

d)Bakış Açılırları: Bu yazılar, mesleği etkileyen tartışmalı veya tartışmalı konulara ilişkin deneyime dayalı görüş ve görüşler olmalıdır. Yazar konu hakkında yeterli ve güvenilir deneyime sahip olmalıdır.

e)Pratik Psikoterapi: Tek vakada veya bir dizi vakada psikoterapinin kullanımını anlatan yazılar bu bölüme gönderilebilir. Esas olarak psikoterapi uygulamasındaki pratiklikleri, karşılaşılan engelleri, nasıl aşıldıklarını vb. Açıklayan makaleler arıyoruz.

f)Yorumlar: Bunlar önemli konuları ele almalıdır ve Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nde yakın zamanda yayımlanan birden fazla veya belirli bir makaleye bağlanabilir.

g)Editöre Mektup: Bu bölümde yazarlar ruh sağlığı alanı ile ilgili kısa gözlemlerini bu bölümde yayımlarlar.

#### Yazarlık:

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi, Uluslararası Tıp Dergisi Editörleri Komitesi tarafından yazarlık için önerilen gereksinimlerini takip etmektedir. Makaleler, yalnızca katkıda bulunan tüm yazarlar tarafından onaylandıktan sonra değerlendirilmek üzere sunulmalıdır. Makale gönderim aşamasında Yazar Formu da birlikte gönderilmelidir. Makaleyi gönderenler, makaleye katkıda bulunan herkesin katkıda bulunan yazarlar olarak kabul edildiğini dikkatlice kontrol etmelidir.

Yazar listesi, yasal olarak yazarlık iddia edebilecek herkesi içermelidir. Buna göre, her yazar aşağıdaki kriterlerin tümünü karşılamalıdır:

Çalışmanın ana fikir veya tasarımına önemli katkılar veya çalışma için verilerin toplanması, analizi veya yorumlanması; VE Çalışmanın taslağını hazırlamak veya önemli entelektüel içerik için eleştirel olarak yeniden gözden geçirmek; VE Yayınlanacak versiyonun son onayı; VE

İşin herhangi bir kısmının doğruluğu veya bütünlüğü ile ilgili soruların uygun şekilde araştırılıp çözülmesini sağlamada çalışmanın tüm yönlerinden sorumlu olmayı kabul etmek

Yazarlık kriterlerini karşılamayan tüm katkıda bulunanların Teşekkür bölümünde belirtilmelidir. Yazarlık hakkında daha fazla bilgi için lütfen International Committee of Medical Journal Editors (ICMJE) yazarlık kılavuzuna bakın.

#### Telif Hakkı Devir Formu:

Yazarlar makalelerinin telif haklarını, makale başvurusu sırasında Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'ne devretmek zorundadır. Bunun için "Telif Hakları Devir Formu" doldurularak yazıların yayın hakları dergiye devredilir. Formu tüm yazarlar imzalar, tarayıcıda tarar ve elektronik olarak makaleyle birlikte TÜBİTAK ULAKBİM DERGİPARK sistemine (<https://dergipark.org.tr/en/pub/ktppdergisi>) yükler. Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi Editörler Kurulu, makalenin yayımlanmasında yetkilidir.

Ayrıca yazarların telif hakkı dışında kalan patent hakları, dersleri, sunumları ve kitap çalışmalarında makaleyi ücret ödemeksizin kullanabilme hakkı, satmamak koşuluyla kendi amaçları için makaleyi çoğaltma hakkı, postayla veya elektronik yolla dağıtma hakkı saklıdır. Ayrıca makalenin herhangi bir bölümünün başka bir yayında kullanılmasına Dergiye yollamada (atıfta) bulunulması koşuluyla yazarına izin verilir. Telif Hakları Devir Formu'nu makale başvurusu ile sisteme yüklemeyen yazarların makalelerine işlem yapılmaz. Telif hakkı devri yalnız Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nde yayımlanan makaleler için geçerlidir.

### **Finansman:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi, tüm yazarların fonlarını tutarlı bir şekilde ayrı bir başlık altında belirtmelerini talep etmektedir. Finansman bulunmaması durumunda teşekkür metninde sonra ve kaynaklar bölümünden önce şu ifadelerin bulunması gerekir: "Bu araştırma, kamu, ticari veya kar amacı gütmeyen sektörlerdeki herhangi bir finansman kuruluşundan özel bir hibe almadı."

### **Çatışan Çıkarların Beyanı:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nin politikası, tüm yazarlardan çatışan çıkar beyanını yazılarında belirtmeleridir. Çatışma yoksa lütfen 'Yazar (lar) çıkar çatışması olmadığını beyan eder' ifadesinin kullanılması gerekir. Çıkar çatışması bildirimleri hakkında rehberlik için lütfen ICMJE önerilerine bakın.

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/author-responsibilities--conflicts-of-interest.html#two>

Tüm başvurulara ICMJE Çıkar Çatışması Formları eşlik etmelidir.

### **Etik Kurul:**

Araştırmalar için yerel etik kurul onayı alınmalıdır. Deneysel çalışmaların sonuçlarını bildiren yazılarda, çalışmanın yapıldığı gönüllü ya da hastalara uygulanacak prosedür(lerin) özelliği tümüyle anlatıldıktan sonra, onaylarının alındığını gösterir bir cümle bulunmalıdır. Yazarlar, bu tür bir çalışma söz konusu olduğunda, uluslararası alanda kabul edilen kılavuzlara ve T.C ve/veya K.K.T.C. Sağlık Bakanlığı tarafından getirilen yönetmelik ve yazılarda belirtilen hükümlere uyulduğunu belirtmeli ve kurumdan aldıkları Etik Komitesi onayını göndermelidir.

İnsan denekleri içeren tıbbi araştırmalar Dünya Tıp Birliği Helsinki Deklarasyonu'na göre yapılmalıdır.

<https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/>

Gönderilen makaleler, Tıbbi Dergilerde Bilimsel Çalışmanın Yürütülmesi, Raporlanması, Düzenlenmesi ve Yayınlanması için ICMJE Tavsiyelerine uygun olmalıdır.

<http://www.icmje.org/icmje-recommendations.pdf>

Hayvan ve / veya insan çalışmalarını bildiren tüm makaleler ile ilgili Etik Kurul veya Kurumsal İnceleme Kurulunun verdiği onay yöntemler bölümünde belirtilmelidir.

Tüm başvurulara bir başlık sayfası eşlik etmelidir.

Makalenin başlığı olmalı.

Onay numarasına ek olarak inceleme komitesinin tam adı ve kurumu belirtilmeli.

Editöre, gönderilen makalenin basılmadığına, eşzamanlı olarak gönderilmediğine veya başka bir yerde yayınlanmak üzere kabul edilmediğine dair bir açıklama eklenmeli.

Yazının tüm yazarlar tarafından okunduğuna ve onaylandığına, bu belgede daha önce belirtildiği gibi yazarlık gereksinimlerinin karşılandığına ve her yazarın yazının dürüst çalışmayı temsil ettiğine inandığına dair bir açıklama eklenmeli.

Yazar, yazının bilgisi dahilinde, herhangi bir üçüncü şahsın telif hakkını veya mülkiyet hakkını ihlal etmediğini beyan etmeli

Bireysel vakaları veya vaka serilerini bildirmek için bilgilendirilmiş onam hakkındaki bilgiler makale metnine dahil edilmelidir. Yayınlanacak hasta bilgileri ve görüntüleri için yazılı bilgilendirilmiş onamın hasta (lar) tarafından mı yoksa yasal olarak yetkili bir temsilci tarafından mı sağlandığına dair bir açıklama gereklidir. Kendi başına hastanın gizliliğini ihlal ettiği için, lütfen makale ile hastanın gerçek yazılı bilgilendirilmiş onayı gönderilmemelidir. Dergi, yazılı bilgilendirilmiş onay aldığını yazılı olarak onaylamanızı talep etmektedir. Ancak yazılı izin kendisi, örneğin bir hastanın hastane kaydında yazarlar / araştırmacılar tarafından tutulması gerekmektedir. Onay mektubu ayrı bir dosya olarak yüklenebilir. Lütfen ayrıca Araştırma Katılımcılarının Korunması için ICMJE Önerilerine bakın.

<http://www.icmje.org/recommendations/browse/roles-and-responsibilities/protection-of-research-participants.html>

Yayınlanmak üzere gönderilen hayvanları içeren tüm araştırmalar, çalışmaların yürütüldüğü tesisin gözetiminde bir etik komite tarafından onaylanmalıdır. Hayvanlar üzerinde yapılan çalışmalarda ağrı, acı ve rahatsızlık verilmesi için neler yapıldığı açık bir şekilde belirtilmelidir.

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi, International Association of Veterinary Editors tarafından yayınlanan Veterinerlik Dergileri için Hayvan Etiği ve Refahına İlişkin Mutabakat Yazım Kılavuzunu benimsemiştir.

<http://www.veteditors.org/consensus-author-guidelines-on-animal-ethics-and-welfare-for-editors/>

### **Klinik Araştırmalar:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi, ICMJE'nin , klinik araştırmaların DSÖ onaylı bir kamu araştırmaları kayıt defterine ilk hasta kaydı sırasında veya öncesinde, yayın için bir değerlendirme koşulu olarak kaydedilmesi şartına uyar. Özetin sonunda deneme kayıt adı ve URL'si ve kayıt numarası yer almalıdır.

### **Raporlama Yönergeleri:**

İlgili EQUATOR Ağı raporlama kılavuzları, çalışmanın türüne bağlı olarak takip edilmelidir. Örneğin, yayınlanmak üzere gönderilen tüm randomize kontrollü çalışmalar , şekil olarak tamamlanmış bir CONSORT akış şemasını içermelidir. Sistematik incelemeler ve meta-analizler, tamamlanmış PRISMA akış şemasına göre düzenlenmelidir. EQUATOR sihirbazı uygun kılavuz belirlemenize yardımcı olabilir.

Diğer kaynaklar, NLM'nin Araştırma Raporlama Yönergeleri ve Girişimlerinde bulunabilir.

### **Araştırma Verileri:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi olarak, araştırmaların açıklığının, şeffaflığının ve tekrarlanabilirliğinin kolaylaştırılması gerektiği düşüncesindeyiz. Konuyla ilgili olarak yazarları, araştırma verilerini etik değerlendirmelere tabi olarak uygun bir kamuya açık depoda paylaşmaya ve makale dosyalarına bir veri erişilebilirliği beyanı eklemeye teşvik ederiz.

## **MAKALE YAZIM KURALLARI VE ÖZELLİKLERİ**

### **Genel Bilgileri:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nin dili Türkçe ve İngilizcedir. Yazılar anlaşılır, akıcı, yalın bir dille yazılmalı ve uzun anlatımlardan kaçınılmalıdır. Yabancı sözcüklerin ve kısaltmaların Türkçe karşılıkları ilk geçtikleri yerde parantez içinde tam olarak yazılmalıdır. İlaçların jenerik adları kullanılmalıdır. Yazılarda dipnot kullanılmamalıdır.

Yazarların adları makale başlığının bir satır sağ altında yer almalı ve yıldız (\*) dipnotla unvanı, kurumu, adresi, telefonu, e-posta adresi verilmelidir. Yazara/metne özgü terminoloji ve/veya kısaltmalar ilk kullanımlarında dipnotla açıklanmalıdır. Yazar(lar) doğrudan çalışmayı yapan ve yazan kişi(ler) olmalıdır. Araştırma herhangi bir kuruluş tarafından maddi bir destek görmüşse veya bir kongrede tebliğ edilmişse makalenin başlığının son kelimesi üzerine (\*) konularak dip not olarak belirtilmelidir. Makaleler A4 kağıt boyutunun bir yüzüne, tüm kenarlardan 2,5 cm. boşluk bırakılarak, Times New Roman yazı karakteriyle, 12 punto ve 1,5 satır aralığıyla iki yana yaslı olarak yazılmalıdır. Alt başlıklar ve başlık sonrası paragraflar arasında boşluk olmamalı ve hiçbir paragraf girintili yazılmamalıdır. Dipnotlar kaynak gösterimi için değil ek bilgi vermek için kullanılmalı, sayfa altında numaralandırılmalı, 10 punto ve 1 satır aralığı ile iki yana yaslı olarak yazılmalıdır. Sayfa numaraları da 11 puntoyla, sağ altta yer almalıdır. Kabul edilen yazılar sıraya alınarak yayımlanır.

### **Makalelerin hazırlanması:**

Başlık sayfası

Yazının Türkçe ve İngilizce başlığı 19 kelimeyi geçmemelidir. Başlıkta kısaltma kullanılmamalıdır. Yazıda sadece çalışmaya doğrudan katkısı bulunan yazarların ad ve soyadları, unvanları, çalıştıkları kurumlar açık olarak yazılmalıdır. Çalışmayı destekleyen fon ve kuruluşlar başlık sayfasında belirtilmelidir. Başlık sayfasının en altına iletişim kurulacak yazarın iletişim bilgileri yazılmalıdır (Yazarın adı, soyadı, açık adresi, posta kodu, telefon numarası, faks numarası ve e-posta adresi yazılmalıdır).

### **Özetler:**

Özetler Türkçe ve İngilizce olarak yazılmalı ve en fazla 250 kelime içermelidir. Özet, amaç-yöntem-sonuçlar-tartışma bölümlerine göre düzenlenmelidir. Makale için verilecek Türkçe ve İngilizce anahtar sözcükler (3-8 adet) özetlerden hemen sonra verilmelidir. İngilizce anahtar kelimeler "Medical Subject Headings (MESH)"e uygun olarak verilmelidir (<http://www.nlm.nih.gov/mesh/MBrowser.html>). Türkçe anahtar kelimeler Türkiye Bilim Terimleri (TBT)'ne uygun olarak verilmelidir (<http://www.bilimterimleri.com>). Özetlerde kısaltma kullanılmasından mümkün olduğunca kaçınılmalıdır. Kısaltma

kullanılması mutlaka gerektiğinde, ilk geçtiği yerde parantez içinde tanımlandıktan sonra kullanılmalıdır.

#### **Makale Metni Gövdesi:**

Araştırma yazıları: Özetten sonra giriş-yöntem ve gereç-sonuçlar tartışma-kaynaklar alt başlıklarını taşımaları, konuyla ilgili en son bilgiler yer almalı, yöntem açık olarak yazılmalı, kullanılan ölçüm araçlarının geçerlilik ve güvenilirlik çalışmaları ile değerlendirme için kullanılan testler, standart sapma, test değerleri belirtilmelidir. Tartışmada sonuçların klinik ve kuramsal yönlerden yararları, uygulanma alanları, getirdiği yenilikler vurgulanmalıdır. Yazılar 3500 kelimeyi geçmemelidir. Yazıda en çok 6 tablo veya figür olmalıdır. Kaynak sayısının 50 kaynağı aşmamasına dikkat edilmelidir.

Derleme yazıları: Amacı, kullanılan yöntem, yararlanılan kaynaklar, çıkarılan sonuçlar belirtilmelidir. Yazılar 3500 kelimeyi geçmemelidir. Yazıda en çok 6 tablo veya figür olmalıdır. Kaynak sayısının 50 kaynağı aşmamasına dikkat edilmelidir.

Olgu sunumu: Olgu sunumlarında giriş bölümü, olguların tanımı, tartışma ve kaynaklar bölümü yer almalıdır. Yazı 3000 kelimeyi geçmemelidir. Klinik veya kuramsal eğitim yönünden yararlı görülen tipik veya az görülen olguların kaynak sayısının 30 kaynağı aşmamasına dikkat edilmelidir. Tablo veya figür sayısı en fazla 2 olmalıdır.

Bakış Açıları: Bu yazılarda giriş bölümü ile mesleği etkileyen tartışmalı veya tartışılmalı konulara ilişkin deneyime dayalı görüşler literatür eşliğinde tartışılmalıdır. Yazı 2500 kelimeyi geçmemelidir. Kaynak Sayısı 20'yi geçmemelidir. Tablo veya figür sayısı 2'den fazla olmamalıdır.

Pratik Psikoterapi: Bu yazılarda giriş bölümü ile psikoterapi uygulaması ile ilgili bilgiler literatür eşliğinde tartışılmalıdır. Yazı 2500 kelimeyi geçmemelidir. Kaynak Sayısı 20'yi geçmemelidir. Tablo veya figür sayısı 2'den fazla olmamalıdır.

Yorumlar: Giriş bölümü ile tartışılan makalenin özellikleri literatür eşliğinde tartışılmalıdır. Yazı 2500 kelimeyi geçmemelidir. Kaynak Sayısı 20'yi geçmemelidir. Tablo veya figür sayısı 2'den fazla olmamalıdır.

Mektup: Dergide yer alan değişik konularda tartışma forumu oluşturulabilecek görüşler mektup bölümünde yer almaktadır. Yazı 500 kelimeyi geçmemelidir.

Çeviri, kitap ve tez tanıtımı: Çeviri, kitap ve tez tanıtımları kısa olmalı, çeviri yazılarının ve tezin bir özgün kopyası gönderilmelidir. Yazı 500 kelimeyi geçmemelidir.

Teşekkür: Teşekkür yazısı katkı koyan bireylere veya çalışmayı destekleyen fon ve kuruluşlara varsa eklenebilir.

Kaynaklar: Dergide makale içi atıflar ve kaynakça uluslararası APA formatına göre gösterilmelidir. Ayrıntılı bilgi için web sayfasında Kaynaklar bölümüne bakınız.

#### **Metin İçinde Kaynak Gösterme**

Kaynaklar metinde parantez içinde yazarların soyadı ve yayın tarihi yazılarak belirtilmelidir. Birden fazla kaynak gösterilecekse kaynaklar arasında (;) işareti kullanılmalıdır. Kaynaklar alfabetik olarak sıralanmalıdır.

Tek yazarlı kaynak;

(Akyolcu, 2007)

İki yazarlı kaynak;

(Sayiner ve Demirci, 2007, s. 72)

Üç, dört ve beş yazarlı kaynak;

Metin içinde ilk kullanımda: (Ailen, Ciambri ve Welch 2000, s. 12-13) Metin içinde tekrarlayan kullanımlarda: (Ailen ve ark., 2000)

Altı ve daha çok yazarlı kaynak;

(Çavdar ve ark., 2003)

#### **Kaynaklar Bölümünde Kaynak Gösterme**

Kullanılan tüm kaynaklar metnin sonunda ayrı bir bölüm halinde yazar soyadlarına göre alfabetik olarak numaralandırılmadan verilmelidir.

Kaynak yazımı ile ilgili örnekler aşağıda verilmiştir.

Kitap

a) Kitap Örneği

Karasar, N. (1995). Araştırmalarda rapor hazırlama (8.bs). Ankara: 3A Eğitim Danışmanlık Ltd.

b) Kitap Çevirisi

Mucchielli, A. (1991). Zihniyetler (A. Kotil, Çev.). İstanbul: İletişim Yayınları.

c) Çok Yazarlı Türkçe Kitap

Tonta, Y., Bitirim, Y. ve Sever, H. (2002). Türkçe arama motorlarında performans değerlendirme. Ankara: Total Bilişim.

d) İngilizce Kitap

Kamien R., & Kamien, A. (2014). Music: An appreciation. New York, NY: McGraw-Hill Education.

e) İngilizce Kitap İçerisinde Bölüm

Bassett, C. (2006). Cultural studies and new media. In G. Hall & C. Birchall (Eds.), New cultural studies: Adventures in theory (pp. 220-237). Edinburgh, UK: Edinburgh University Press.

f) Türkçe Kitap İçerisinde Bölüm

Erkmen, T. (2012). Örgüt kültürü: Fonksiyonları, öğeleri, işletme yönetimi ve liderlikteki önemi. M. Zencirkıran (Ed.), Örgüt sosyolojisi kitabı içinde (s. 233-263). Bursa: Dora Basım Yayın.

Makale

a) Makale

Granqvist, P. ve Kirkpatrick, L. A. (2004). Religious conversation and perceived childhood attachment: a meta-analysis, The International Journal for the Psychology of Religion, 14(4), 223-250.

b) Yediden Fazla Yazarlı Makale

Rodriguez, E.M., Dunn, M.J., Zuckerman, T., Hughart, L., Vannatta, K., Gerhardt, C.A., Saylor, M., Schuele, C.M. ve Compas, B.E. (2011). Mother-child communication and maternal depressive symptoms in families of children with cancer: integrating macro and micro levels of analysis. Journal of Pediatric Psychology, 38 (7), 732-743

Tez, Sunum, Bildiri

a) Tezler

Karaaziz, M. (2017). Kıbrıs ve Türkiye Doğumlu Kumar Bağımlılarının Kumar Oynama Nedenlerinin ve Kültürlenme Tutum Farklılıklarının Karşılaştırılması. (Yayınlanmamış Doktora Tezi). Yakın Doğu Üniversitesi, Sosyal Bilimler Enstitüsü, Lefkoşa-KKTC.

b) Kongre Bildirisi

Çepni, S., Bacanak A. ve Özsevgeç T. (2001, Haziran). Fen bilgisi öğretmen adaylarının fen branşlarına karşı tutumları ile fen branşlarındaki başarılarının ilişkisi. X. Ulusal Eğitim Bilimleri Kongresi'nde sunulan bildiri, Abant İzzet Baysal Üniversitesi, Bolu.

#### **Tablolar ve Şekiller:**

Tablolar tek satır aralıklı olarak ayrı bir sayfaya yazılmalıdır. Her tablonun üstünde numarası ve açıklayıcı bilgi olmalıdır. Tabloda kısaltmalara yer verilmişse bu kısaltmaların açılımı alt yazı şeklinde tablonun altında ve alfabetik sıraya göre yer almalıdır. Daha önce basılmış veya elektronik olarak yayınlanmış tablolardan yararlanıldığında hem yazarı hem de basım evinden yazılı izin alınmalıdır ve bu, dergi editörlüğüne faks veya posta ile gönderilmelidir.

Tablo içerisinde enlemesine ve boylamasına çizgiler kullanılmamalı, sadece üst ve altına düz çizgi çizilmelidir.

Makalelerde yer alan görseller ve nota örnekleri kısa açıklamalarıyla birlikte ortalanmış olarak Şekil/Tablo 1. ... şeklinde numaralandırılmalıdır. Tüm görseller, baskıda çözünürlük problemi olmaması için minimum 300 dpi çözünürlükte ve JPG formatında ayrıca gönderilmelidir. Metin içerisindeki yerleştirmeler, gerektiğinde sayfa düzenine göre değiştirilebilirler.

Tablo, grafik, şekil ve fotoğraflar altıdan çok olmamalı, ayrı bir sayfaya konmalı, yazıdaki yeri belirtilmelidir. Arabik rakamlar ve ondalıklarda nokta kullanılmamalıdır.

#### **Makale Gönderme:**

Makale gönderimleri dergi park sistemi üzerinden olup aşağıda verilmiştir;

Link: <https://dergipark.org.tr/tr/>

#### **KÖR HAKEMLİK VE DEĞERLENDİRME SÜRECİ**

Kör hakemlik, bilimsel yayınların en yüksek kalite ile yayınlanması için uygulanan bir yöntemdir. Bu yöntem, bilimsel çalışmaların nesnel (objektif) bir şekilde değerlendirilme sürecinin temelini oluşturmaktadır ve birçok bilimsel dergi tarafından tercih edilmektedir. Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi gönderilen tüm çalışmalar aşağıda belirtilen aşamalara göre körleme yoluyla değerlendirilmektedir.

#### **Körleme Hakemlik Türü:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi, tüm çalışmalarında değerlendirme sürecinde çifte körleme yöntemini kullanmaktadır.

Çift körleme yönteminde çalışmaların yazar ve hakem kimlikleri gizlenmektedir.

#### **İlk Değerlendirme Süreci:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi gönderilen çalışmalar ilk olarak editörler tarafından değerlendirilir. Bu aşamada, derginin amaç ve kapsamına uymayan, Türkçe ve İngilizce olarak dil ve anlatım kuralları açısından zayıf, bilimsel açıdan kritik hatalar içeren, özgün değeri olmayan ve yayın politikalarını karşılamayan çalışmalar reddedilir. Reddedilen çalışmaların yazarları, gönderim tarihinden itibaren en geç bir ay içinde bilgilendirilir. Uygun bulunan çalışmalar ise ön değerlendirme için çalışmanın ilgili olduğu alana yönelik bir alan editörüne gönderilir.

#### **Ön Değerlendirme Süreci:**

Ön değerlendirme sürecinde alan editörleri çalışmaların, giriş ve alan yazın, yöntem, bulgular, sonuç, değerlendirme ve tartışma bölümlerini dergi yayın politikaları ve kapsamı ile özgünlük açısından ayrıntılı bir şekilde inceler. Bu inceleme sonucunda uygun bulunmayan çalışmalar en geç dört hafta içerisinde alan editörü değerlendirme raporu ile iade edilir. Uygun bulunan çalışmalar ise hakemlendirme sürecine alınır.

#### **Hakemlendirme Süreci:**

Çalışmalar içeriğine ve hakemlerin uzmanlık alanlarına göre hakemlendirilir. Çalışmayı inceleyen alan editörü, Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi hakem havuzundan uzmanlık alanlarına göre en az iki hakem önerisinde bulunur veya çalışmanın alanına uygun yeni hakem önerir. Alan editöründen gelen hakem önerileri editörler tarafından değerlendirilir ve çalışmalar editörler tarafından hakemlere iletilir. Hakemler değerlendirdikleri çalışmalar hakkındaki hiçbir süreci ve belgeyi paylaşmayacakları hakkında garanti vermek zorundadır.

#### **Hakem Raporları:**

Hakem değerlendirmeleri genel olarak çalışmaların; özgünlük, kullanılan yöntem, etik kurallara uygunluk, bulguların ve sonuçların tutarlı bir şekilde sunumu ve literatür açısından incelenmesine dayanmaktadır. Bu inceleme aşağıdaki unsurlara göre yapılır:

Giriş ve literatür: değerlendirme raporu çalışmada ele alınan problemin sunumu ve amaçları, konunun önemi, konuyla ilgili literatür kapsamı, güncelliği ve çalışmanın özgünlüğü hakkında görüş içerir.

Yöntem: değerlendirme raporu, kullanılan yöntemin uygunluğu, araştırma grubunun seçimi ve özellikleri, geçerlik ve güvenilirlik ile ilgili bilgilerin yanı sıra veri toplama ve analiz süreci hakkında görüş içerir.

Bulgular: değerlendirme raporu, yöntem çerçevesinde elde edilen bulguların sunumu, analiz yöntemlerinin doğruluğu, araştırmanın amaçları ile erişilen bulguların tutarlılığı, ihtiyaç duyulan tablo, şekil ve görsellerin verilmesi, kullanılan testlerin kavramsal açıdan değerlendirilmesine yönelik görüşler içerir.

Değerlendirme ve tartışma: değerlendirme raporu, bulgulara dayalı olarak konunun tartışılması, araştırma sorusuna/larına ve hipoteze/lerere uygunluk, genellenebilirlik ve uygulanabilirlik ile ilgili görüş içerir.

Sonuç ve öneriler: değerlendirme raporu literatüre katkı, gelecekte yapılabilecek çalışmalara ve alandaki uygulamalara yönelik öneriler hakkında görüş içerir.

Stil ve anlatım: değerlendirme raporu, çalışma başlığının içeriği kapsamı, Türkçe'nin kurallara uygun kullanımı, gönderme ve referansların Dergi yayın ilkeleri başlığı altındaki örneklere doğrultusunda tam metnin diline uygun verilmesi ile ilgili görüş içerir.

Genel değerlendirme: değerlendirme raporu çalışmanın bir bütün olarak özgünlüğü, literatüre ve alandaki uygulamalara sağladığı katkı hakkında görüş içerir.

Değerlendirme sürecinde hakemlerin çalışmanın tipografik özelliklerine göre düzeltme yapmaları beklenmemektedir.

#### **Hakem Değerlendirme Süreci:**

Hakem değerlendirme süreci için hakemlere verilen süre 3 haftadır. Hakemlerden veya uzman yayın kurulu üyesinden gelen düzeltme önerilerinin yazarlar tarafından 3 hafta içerisinde tamamlanması zorunludur. Hakemler bir çalışmanın düzeltmelerini inceleyerek uygunluğuna karar verebilecekleri gibi gerekliyse birden çok defa düzeltme talep edebilir.

#### **Değerlendirme Sonucu:**

Hakemlerden gelen görüşler, alan editörü tarafından en geç iki (2) hafta içerisinde incelenir. Bu inceleme sonucunda alan editörü çalışmaya ilişkin nihai kararını editörlere iletir.

#### **Yayın Kurulu Kararı:**

Editörler, alan editörü ve hakem görüşlerine dayanarak çalışma ile ilgili yayın kurulu görüşlerini hazırlar. Hazırlanan görüşler editör tarafından alan editörü ve hakem önerileri ile birlikte en geç 1 hafta içerisinde yazar(lar)a iletilir. Bu süreçte olumsuz görüş verilen çalışmalar intihal denetimi talep edilmeksizin iade edilir. Olumlu görüş verilen çalışmalar için son karar, intihal denetim raporları sonuçlarına göre verilir.

#### **Yayın Değerlendirme Süreci:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'ne gönderilen çalışmaların yayın değerlendirme sürecinin yaklaşık 3 ay içerisinde sonuçlandırılması öngörülmektedir. Ancak, hakem ya da editörlerin yazar(lar)dan düzeltme istedikleri tarih ile yazar(lar)ın düzeltmeleri tamamladıkları tarih arasındaki süre, bu 3 aylık süreye dahil edilmemektedir.

#### **Değerlendirme Sonucuna İtiraz Etme:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nde değerlendirme sonucuna, yazar (lar)ın itiraz etme hakkı saklıdır. Yazar(lar), çalışmalarını için yapılan değerlendirme sonucu görüş ve yorumlara ilişkin itiraz gerekçelerini bilimsel bir dille ve dayanaklarını referans göstererek "mehmet.cakici@neu.edu.tr" adresine e-postayla iletmelidir. Yapılan itirazlar editörler tarafından en geç bir ay içerisinde incelenerek (Çalışmanın hakemlerine yapılan itirazlar hakkında görüş talep edilebilir) yazar (lar)a olumlu veya olumsuz dönüş sağlanır. Yazar (lar)ın değerlendirme sonucuna itirazları olumlu bulunması durumunda, yayın kurulu çalışmanın konu alanına uygun yeni hakemlendirme yaparak değerlendirme sürecini yeniden başlatır.

#### **Atf ve Kaynakça Denetimi:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi yayın etiğine göre, makalelere atıfların doğru ve eksiksiz verilmesi zorunludur. Yazarlar tamamen orijinal eserler yazdıklarından ve yazarlar başkalarının eserlerini ve / veya sözlerini kullanmışlarsa, bunun uygun şekilde alıntılanmış olduğundan veya alıntı yapıldığından emin olmalıdırlar. Bu denetim, önce değerlendirme sırasında hakemlerce, sonra benzerlik-intihal (iThenticate) programı sonucuna göre editörlerce yapılır. Tüm çalışmalar intihal raporu intihal.net üzerinden de kontrol edilmektedir.

#### **Makalenin Erken Görünümü ve Yayınlanması:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nde sayfa düzenlemesi yapılan makaleler elektronik ortamda "Erken Görünüm" başlığı altında Dijital Nesne Kimlik Numarası (Digital Object Identifier, DOI) verilerek yayınlanır. Erken görünümdeki makaleler dergide yayınlanırken gerekli olduğunda küçük düzenlemeler yapılabilir. Erken görünümdeki makaleler sırası geldiğinde Editörler Kurulu'nun belirlediği cilt ve sayıda, üzerindeki "ERKEN GÖRÜNÜM" filigranı kaldırılarak yayınlanır. Elektronik dergi yayımlandıktan sonra, aynı ay içerisinde aynı makalelerin yer aldığı Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nin basılı hali de yayınlanır.

#### **Arşivleme:**

Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi'nde yayımlanan makalelere ilişkin veriler ve tam metinler .pdf olarak TÜBİTAK ULAKBİM DERGİPARK, OCLC WorldCat ve EBSCOhost dijital arşivleme sunucusunda yayımlanmaktadır (<https://dergipark.org.tr/en/pub/ktppdergisi/archive>), (<https://www.worldcat.org/>) erişime kapalı bir şekilde saklanır ve arşivlenir (LOCKSS; <https://dergipark.org.tr/en/pub/ktppdergisi/lockss-manifest>).

#### **Kalite Standartları Hakkında EASE Açıklaması**

Avrupa Bilim Editörleri Birliği, tüm editörleri COVID-19 hakkındaki araştırma raporlarının gerekli standartları karşılaması ve üzerinde anlaşılacak yönergeler uymasını, ve tüm sınırlılıkların açıkça belirtilmesini sağlamaya teşvik eder. EASE üyeleri COVID-19 pandemisi ile ilgili birçok çalışmada kötü raporlama standartlarına dikkat çekmiştir. Enfekte hastaları tedavi etmek ve koronavirüsün yayılmasını sınırlamak için tıbbi ve halk sağlığı önlemlerinin başarılı olması, yüksek kaliteli kanıtlara bağlıdır. EASE, pandemi ile ilgili verilerin toplanmasına ve yayımlanmasına dahil olan herkesi etik yönergeler uymaya ve standart raporlama yönergelerine (bkz. [www.equator](http://www.equator)

network.org), örneğin klinik arařtırmalar için CONSORT'a ve epidemiyolojik çalışmalar için STROBE'ye baęlı kalmaya davet etmektedir.

Demografik veriler tüm bireylerin yař ve cinsiyetini içermeli, ve cinsiyet ve toplumsal cinsiyet hakkındaki verilerin tam ve doęru bir şekilde raporlanmasını saęlamak için SAGER yönergelerini takip etmelidir. Mümkün olduęunda verilerin tam ve açık olarak paylařılmasını teřvik ediyoruz.

Kriz zamanlarında, gerekli tüm verilerin elde edilmesinin her zaman mümkün olmayabileceęini ve zorunlu olarak raporlamanın kısıtlanabileceęini kabul ediyoruz. Yanlıř yorumlardan kaçınmak ve aynı zamanda bilgilerin hızlı bir şekilde paylařılmasını kolaylařtırmak için, editörleri yazarların arařtırmalarına bir sınırlama bildirimini eklemeye teřvik ediyoruz. Bu, okuyucuları bilgilendirecek ve yayınlanan herhangi arařtırmaların kullanılıřlılıęını güçlendirecektir.

Buna ek olarak, her zaman yüksek dil standartlarını savunurken, önemli arařtırmaların hızlı bir şekilde yayılmasını kolaylařtırmak amacıyla, yayımlanmıř arařtırmanın anlaşılabilir olmasını saęlamak ve yazarlar üzerinde katı dil gereklilikleri uygulamamak için, editöryal katılımı sınırlamanın gerekli olabileceęini kabul ediyoruz.

İlgili bildiriye <https://ease.org.uk/publications/ease-statements-resources/ease-statement-on-quality-standards/web> adresinden ulařılabilir.



# KIBRIS RUH SAĞLIĞI ENSTİTÜSÜ



- ✓ NAADAC (ALKOL VE MADDE BAĞIMLILIĞI TERAPİSTİ EĞİTİMİ)
- ✓ POZİTİF PSİKOTERAPİ -TEMEL VE MASTER EĞİTİMİ
  - ✓ PSİKODRAMA EĞİTİMİ
  - ✓ SPOR PSİKOLOJİSİ EĞİTİMİ
- ✓ TERAPİDE KLİNİK GÖRÜŞME TEKNİKLERİ EĞİTİMİ
  - ✓ ADLİ PSİKOLOJİ EĞİTİMİ
  - ✓ ÇOCUK DİKKAT TESTLERİ EĞİTİMİ
  - ✓ YAŞAM BECERİLERİ EĞİTİMİ
  - ✓ YÖNETİM BECERİLERİ EĞİTİMİ
  - ✓ BEDEN DİLİ EĞİTİMİ
- ✓ MOTİVASYONAL GÖRÜŞME TEKNİKLERİ EĞİTİMİ

Adres: Meriç Sokak, No: 22, Kumsal-Lefkoşa-KKTC

Tel: +90 533 889 19 21

Koordinatör: Kübra ÖZSAT (ozsatk@gmail.com) - Enstitü Müdürü: Prof. Dr. Ebru ÇAKICI (ebru.cakici@neu.edu.tr)

Websitesi: www.ruhsagligienstitusu.com



Cyprus Mental Health  
Institute

ISSN 1302-7840

E-ISSN 2667-8225

# Cyprus Turkish Journal of Psychiatry & Psychology

*Kıbrıs Türk Psikiyatri ve Psikoloji Dergisi*

*Vol/ Cilt 6. Issue/Sayı:2, June 2024*

Investigating Social and Psychological Adaptation Among International Students: A Study of Factors Influencing Wellbeing

*Uluslararası Öğrenciler Arasında Sosyal ve Psikolojik Uyumun Araştırılması: İyi Oluşu Etkileyen Faktörler Üzerine Bir Çalışma*

Determining the Influence of Extrajudicial Justice on Perception of Police among Nigerian Citizens: A Scale Development Study

*Nijerya Vatandaşları Arasında Yargısız Adaletin Polis Algısı Üzerindeki Etkisinin Belirlenmesi: Bir Ölçek Geliştirme Çalışması*

Investigation of the Relationship Between Attention Level and Reading Speed in Children

*Çocuklarda Dikkat Düzeyi ile Okuma Hızı Arasındaki İlişkinin İncelenmesi*

Stress, Caregiving Burden and Family Functioning in Families Whose Children Have Been Diagnosed with Cancer

*Çocuklarına Kansere Teşhisi Konmuş Ailelerde Stres, Bakım Verme Yükü ve Aile İşlevselliği*

Trauma Exposure and Hopelessness as Predictors of Post-Traumatic Stress Disorder and Depression among War Veterans in South-East Nigeria

*Güneydoğu Nijerya'daki Savaş Gazileri Arasında Travma Sonrası Stres Bozukluğu ve Depresyonun Belirleyicileri Olarak Travmaya Maruz Kalma ve Umutsuzluk*

Examining the Predictive Role of Depression on Smartphone Addiction

*Depresyonun Akıllı Telefon Bağımlılığı Üzerindeki Yordayıcı Rolünün İncelenmesi*

Comparison of State Anxiety Levels of Strong and Weak Competitors in the Iraqi First League Basketball

*Irak Birinci Ligi'nde Basketbol Oynayan Güçlü ve Zayıf Rakiplerin Durumluk Kaygı Düzeylerinin Karşılaştırılması*

A Review of the Literature on the Influence of Peer Support Programs on Student Mental Health and Well-Being

*Akran destek programlarının öğrenci ruh sağlığı ve refahı üzerindeki etkisine ilişkin literatürün gözden geçirilmesi*

What should be the Focus of the Trauma-Related Interventions? Solutions-Exceptions or Details of Trauma: A Literature Study

*Travma Bağlantılı Müdahalelerin Odağı Ne Olmalı? Çözümler-İstisnalar ya da Travmanın Detayları: Bir Literatür Çalışması*