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**4<sup>TH</sup> INTERNATIONAL ISTANBUL CONGRESS OF HEALTH SCIENCES**  
**ABSTRACT BOOK**

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12-13 December, 2025 | Istanbul, Türkiye

İSÜ | İSTİNYE  
ÜNİVERSİTESİ  
İ S T A N B U L

4<sup>th</sup>

# International Istanbul Congress of Health Sciences



December 12–13, 2025



08:30–17:00



Istinye University, Topkapi Campus  
Congress Center

**For abstract submission;**

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62.	Kübra	KILIÇ	MD, PhD (c)	Clinical Research, Faculty of Health Sciences	University of Southern Denmark	Denmark

SCIENTIFIC PROGRAMME

12 ARALIK 2025, CUMA							
SALON A		SALON B		WORKSHOP / KURS	BİLDİRİ SALONU 1	BİLDİRİ SALONU 2	BİLDİRİ SALONU 3
08:00-09:00	KAYIT						
09:00-09:30	AÇILIŞ KONUŞMALLARI						
09:30-10:30	AÇILIŞ KONFERANSI Oturum Başkanı: Prof. Dr. Yıldıız Yıldızdoğan						
09:30-10:00	Topay Zeka Kullanımının Hasta-Hekim İlişkisini Başlangıçta Etki Açısından Değerlendirilmesi Prof. Dr. İhan İkizci						
10:00-10:30	Sağlıkta Dijital Dönüşümde Nereye Gidiyorsunuz? Dr. Hikmet Çarvış						
KAHVE ARASI							
11:00-12:30	PANEL 1: BİYARET, ÖZREZİTE VE SAĞLIKLI BESLENME Oturum Başkanı: Prof. Dr. Okcan Başat	11:00-12:30	PANEL 2: SAĞLIKTA EŞİTSİZLİK: DEZAVANTAJLI GRUPLARDA ERİŞİMİ GÜÇLENDİRMEK Oturum Başkanı: Prof. Dr. Hilge Müzeyyen Çallıoğlu	WORKSHOP Sağlık Bilişimci Akademiye Kilitlenmeler: Akademi ve Sağlık Sektörü İçin Bir Kilitlenme Bahar Bıçen Aras Eğilim Kaynakları ve Kilitlenme Daire Başkan			
11:00-11:30	Tip 2 Diyabete Yavaş İrsülin İncisalı Müdahaleler Doç. Dr. Sabah Tüzün	11:00-11:20	İkili Mücadele: Heri Engelleme Heri Debelikle Yaşamak Dr. Öğr. Üyesi Tuğba Öz				
11:30-12:00	Sağlık Beslenmesi İçin Uygulanabilir Öneriler Prof. Dr. Seçil Arica	11:20-11:40	Yoksalatık Ve Yoksalatıkta Değişim İstem Modelleri Dr. Öğr. Üyesi Şehnem Gülmüççü				
		11:40-12:00	Herkes İçin HerkesizAdem edim Engelleme Toplamı Dr. Öğr. Üyesi Andrea Demeco				
12:00-12:30	Obuzite İle Mücadelede Yeni Dönem: 6-P1 Analizler ve Yaşam Tarzı Prof. Dr. Mehmet Sarıoğlu	12:00-12:20	Keşif Kaynakları Fikih Terapötik Belirgin Stratejileri Dr. Öğr. Üyesi Berkay Akın				
		12:20-12:30	Tartışma				
ÖĞLE YEMEĞİ							
13:30-15:00	PANEL 3: GÜÇ Oturum Başkanı: Prof. Dr. S. Uluhan Yurdalan	13:30-15:00	PANEL 4: DOĞRU STRATEJİLER FARK YARATIR Oturum Başkanı: Doç. Dr. Engin Ersoy Şimşek		BİLDİRİ OTURUMU 1		
13:30-13:50	Güç ve Sağlık Yöneliminde Hemerginlikte Entegrasyon Kontrol Uygulamaları Doç. Öğr. Üyesi Özcan Erdoğlan	13:30-14:00	Birinci Basamakta Memme Kanseri: Farklı EL Yöneliminde Değerlendirme Doç. Dr. Dilem Kafadar		Oturum Başkanları: Dr. Öğr. Üyesi Şehnem Gülmüççü, Dr. Öğr. Üyesi Yunus Emre Tütüoğlu		
13:50-14:10	Güç Sürecinde Debelikle Psikososyal Destek Üzm. Klinik Psik. Beyza Nur Ekiş	14:00-14:30	Sessiz Hırsız: Uzun Süreli Yaşam Stratejileri Doç. Dr. Zeynep Tuzaçar Yural				
14:10-14:30	Güçün Tedavisi İçin Entegrasyon ve Uygulama Örnekleri Sandra Emms						
14:30-14:50	Güçün Çocukların Sağlık Hakkında Fikih, Zorlukları, İhtiyaçları ve Önerileri Prof. Dr. Nigün Sarıoğlu	14:30-15:00	İşlevlerin Ötesinde: Değişim Yöneliminde Yeni Ufuklar Dr. Öğr. Üyesi Etiler Sarıoğlu				
14:50-15:00	Tartışma						
KAHVE ARASI							
15:30-17:00	PANEL 5: HİÇ DE NADİR OLMAYAN SORUNLAR Oturum Başkanı: Prof. Dr. İsmet Tamer	15:30-17:00	PANEL 6: PANDEMİ Oturum Başkanı: Doç. Dr. Refika Genç Koyucu	WORKSHOP Hizmet Terapi Dr. Öğr. Üyesi Mersed Akkan	BİLDİRİ OTURUMU 2		
15:30-16:00	Tanrı Kuvvetini Karşılamak İçin Anestezik Prof. Dr. Ferit Dabak	15:30-15:50	Pandemilerde Sağlık Yöneliminde Anestezik: Heri Karar, Doğru Koordinasyon Dr. Ferit Dabak		Oturum Başkanları: Dr. Öğr. Üyesi Fatma Akkan, Dr. Öğr. Üyesi Gökay Çakar		
16:00-16:30	Sessiz Çığık: Depresyonun İki Yüzü Doç. Dr. Murat Altıntaş	15:50-16:10	Post-Covid Psikolojik ve Sosyal Sorunlar Prof. Dr. Hamdi Badvan (A.B.D.)				
16:30-17:00	Birinci Basamakta Akademiye Kullanımı Dr. Öğr. Üyesi Münevver Çetin	16:10-16:30	Sağlık Sistemlerinde Dayanıklılık: Gelecekte Nasıl Hazırlanmalı? Prof. Dr. Arzu Kader Harmançoğlu				
		16:30-16:50	Çocuk Krizleri: Değişim Çağında İyi Olma Hattine Sağlık Perspektifinden Bakış Dr. Öğr. Üyesi Etiler Sarıoğlu				
		16:50-17:00	Tartışma				

13 ARALIK 2025, CUMARTESİ							
SALON A		SALON B		WORKSHOP / KURS	BİLDİRİ SALONU 1	BİLDİRİ SALONU 2	BİLDİRİ SALONU 3
09:00-10:30	PANEL 7: AFETLERLE YAŞAMAK Oturum Başkanı: Dr. Öğr. Üyesi Nurgül Dürübenli Elibeş			KURS Biyostatistik - 1* Prof. Dr. Can Öner, Doç. Dr. Sabah Tüzün	BİLDİRİ OTURUMU 3	BİLDİRİ OTURUMU 7	WORKSHOP Akademiye Girişle Metanalizis Doç. Dr. Fatma Çinar
09:00-09:20	Değişimdeki Durumlar Hakkında Hemerginlik ve Hızlı Değişim Dr. Öğr. Üyesi Hacer Çaman				Oturum Başkanları: Dr. Öğr. Üyesi Mersed Akkan, Dr. Öğr. Üyesi Helmi Şeyma Deniz		
09:20-09:40	Akıl Sağlığı: Yaşamın Her Anında İstikrarlı Bir Gece Prof. Dr. Fikri Çay						
09:40-10:00	Akıl Sağlığı: Çocuklarda Yaşamın Her Anında İstikrarlı Bir Gece Dr. Öğr. Üyesi Gülce Aleo Savtak						
10:00-10:20	Akıl Sağlığı: Çocukların İstikrarlı ve Konuşkan Olmaları İçin Dr. Öğr. Üyesi Ayman Aydoğan						
10:20-10:30	Tartışma						
KAHVE ARASI							
11:00-12:30	PANEL 8: BELEDİYEDE YATIRIM Oturum Başkanı: Prof. Dr. Ayça Yılmaz	11:00-12:30	PANEL 9: BULANIKLI OLMAYAN KRONİK HASTALIKLAR VE AĞRI Oturum Başkanı: Doç. Dr. Refika Genç Koyucu	KURS Biyostatistik - 2* Prof. Dr. Can Öner, Doç. Dr. Sabah Tüzün	BİLDİRİ OTURUMU 4	BİLDİRİ OTURUMU 10	PROF. DR. YASEMİN BURAN ÇIRAK LİSANS BÖLÜMÜ PROJELERİ SÖZEL BİLDİRİ ÖZÜLÜ
11:00-11:30	Çocukluk Çağı Ağrı Takvimindeki Değişiklikler ve Bireysel Durum Doç. Dr. Beray Gelmez Taş	11:00-11:20	Neoplastik Ağrıda Kişisel Tipi Uygulamaları Dr. Kübra Kılıç		Oturum Başkanları: Dr. Öğr. Üyesi Murat Tuzaçar, Dr. Öğr. Üyesi Gülce Aleo Savtak	Oturum Başkanları: Doç. Dr. Ayhan Kaplan, Dr. Öğr. Üyesi Umur Eren	Oturum Başkanları: Doç. Dr. S. Uluhan Yurdalan, Doç. Dr. Semir Kula Şahin
11:30-12:00	Herhangi Bir Hastalığın Kuvvetlendirilmesi İçin Hangi Ağrı Yaratılır? Prof. Dr. Beray Gelmez Taş	11:20-11:40	Kronik Hastalıklarda Bakım Yönelimi Prof. Dr. Gülten Kaplan				BİLDİRİ OTURUMU 8 Oturum Başkanları: Dr. Öğr. Üyesi Tuzaçar, Dr. Öğr. Üyesi İrem Güneş
12:00-12:30	Anemiye Pratik Yaklaşımlar Prof. Dr. Gül Deniz Yılmaz	11:40-12:00	Etiyolojik Perspektiften Bulunmayan Kronik Hastalıklar Doç. Dr. Mehmet Yaran				
		12:00-12:20	Fizyolojik Perspektiften Bulunmayan Kronik Hastalıkların Dr. Zeynep Tuzaçar				
		12:20-12:30	Tartışma				
ÖĞLE YEMEĞİ							
13:30-15:00	PANEL 10: METABOLİK SAĞLIKTA YENİ PARADİGMALAR Oturum Başkanı: Prof. Dr. Funda Elmecioğlu	13:30-15:00	PANEL 11: DİJİTAL SAĞLIK Oturum Başkanı: Prof. Dr. Emine Türkmen	WORKSHOP Araştırma Yöntemlerinde Yapay Zeka Uygulamaları Dr. Öğr. Üyesi Berkay Akkan	BİLDİRİ OTURUMU 5	WORKSHOP	BİLDİRİ OTURUMU 9 Oturum Başkanları: Doç. Dr. Gül Deniz Yılmaz, Yavaş Doç. Dr. Nigün Sarıoğlu
13:30-14:00	Kilo Vermenin Ötesinde Sağlık: Yaşamın Her Anında İstikrarlı Bir Gece Doç. Dr. Pinar Hamurcu	13:30-13:50	Medikal Sağlık Ekibi İçin: Evde Bakım Modelleri Doç. Dr. İnci Fikriye Fikriye		Oturum Başkanları: Dr. Öğr. Üyesi Salim Albayrak, Dr. Öğr. Üyesi Kübra Aydın	Eriken Müdahalede Birleşik ve Entegre Akademiye Hizmet Planı Hazırlama Dr. Öğr. Üyesi Ayşe Tuzaçar Çayhan, Üzm. Psik. Rahime Güvendi	Oturum Başkanları: Doç. Dr. Gül Deniz Yılmaz, Yavaş Doç. Dr. Nigün Sarıoğlu
14:00-14:30	Tanrı Kuvvetini Karşılamak İçin Anestezik Doç. Dr. Ferit Dabak	13:50-14:10	Debelikle Hemerginlik Dr. Öğr. Üyesi Nuran Aydın				
14:30-15:00	Kronik Hastalıklarda Yaşamın Her Anında İstikrarlı Bir Gece Doç. Dr. Ferit Dabak	14:10-14:30	Fizyolojik Perspektiften Bulunmayan Kronik Hastalıkların Dr. Öğr. Üyesi Gülce Aleo Savtak				
		14:30-14:50	Bebek Yaşlarında Bireysel Bakımın Önemi: Ebeveynlerin Rolü Doç. Dr. Ferit Dabak				
		14:50-15:00	Tartışma				
KAHVE ARASI							
15:30-17:00	PANEL 12: FARKLI BAĞIŞ AÇISI Oturum Başkanı: Prof. Dr. Zehra Aydan Sağlık	15:30-17:00	PANEL 13: SÜRDÜRÜLEBİLİRLİK Oturum Başkanı: Dr. Öğr. Üyesi Berkay Akkan	WORKSHOP Farklı Perspektiften Dr. Öğr. Üyesi Fatma Akkan	BİLDİRİ OTURUMU 6	BİLDİRİ OTURUMU 11	BİLDİRİ OTURUMU 12 Oturum Başkanları: Doç. Dr. Dilem Kafadar, Doç. Dr. Özlem Polat
15:30-16:00	Çok Yönelimli: Heri Hastalıkların Prof. Dr. Okcan Başat	15:30-15:50	Sürdürülebilirlik Perspektifinde: Akademiye Perspektifleri Doç. Dr. Öğr. Üyesi Kübra Kılıç		Oturum Başkanları: Dr. Öğr. Üyesi Nalan Seydi Engin, Dr. Öğr. Üyesi Tuzaçar	Oturum Başkanları: Doç. Dr. Yalçın Hacıoğlu, Dr. Öğr. Üyesi Ferda Kaya Zaman	
16:00-16:30	Ritmik Değişimlerde Sağlık: Heri Hastalıkların Doç. Dr. Yalçın Hacıoğlu	15:50-16:10	Sağlık Toplamı: Kaliteli ve Sürdürülebilirlik İçin Doç. Dr. İnan Tomarbay				
		16:10-16:30	Buğünün Sağlıkta: Değişim ve Etki İçin Destek Sistemleri Doç. Dr. Tuzaçar				BİLDİRİ OTURUMU 13 Oturum Başkanları: Doç. Dr. Beray Gelmez Taş
16:30-17:00	Topay Zeka Politikası Sektörde Ne Kadar Kullanılabilir? Doç. Dr. Hasan Münevver Mutlu	16:30-16:50	Debelikle Sürdürülebilirlik Perspektifinden Doç. Dr. Feride Yigit				
		16:50-17:00	Tartışma				
17:00-17:30	KAPANIŞ KONUŞMASI Prof. Dr. İsmet Tamer, Doç. Dr. Gül Deniz Yılmaz Yavaş						

## ORAL PRESENTATIONS

**OP1. Reflections of socioeconomic inequalities on child development: an examination of poverty, education, and access to opportunity**

Aleyna Gürkan, Dicle Oylum, Didem Elitez

**OP2. Evaluation of dental anxiety and oral-health-related quality of life before and after prosthetic treatment: a pilot study**

Esra Bilgi Özyetim

**OP3. The effect of shoulder mobilization on muscle strength and proprioception: a randomized double-blind study**

Ali Ömer Acar, Alimohammad Amani, Seyedehsanallah Ishani, Kimia Einollahi, Rahima Babayeva

**OP4. Investigation of respiratory muscle endurance in patients with systemic lupus erythematosus and its relationship with exercise capacity and fatigue level**

Zelal Apaydın, Melis Usul, Tuğba Çivi Karaaslan, Ela Tarakcı, Serdal Uğurlu

**OP5. An examination of attitudes, barriers, and decision-making processes toward hearing aids in the geriatric population**

Mert Kılıç, Meltem Yıldız

**OP6. Strengths, limitations, and future role of AI-based diet planning E**

Zehra Vedia Güzel, Kübra Ergan

**OP7. The role of trauma-informed yoga in asthma management**

İrem Özbay, Sevgi Özalevli

**OP8. First aid knowledge level among university students**

Nagehan Naldemir, Sila Nur Ağun, Canan Çeçen, Emine Ekici

**OP9. Emergency psychiatric nursing – crisis intervention, violence, and de-escalation techniques**

Rana Ceviz

**OP10. Current approaches to the diagnosis and management of enteral feeding intolerance**

Gülten Karahan Okuroğlu, Gülizar Demir

**OP11. Fall risk prediction using machine learning and computer vision: development of a clinical decision support system in nursing**

Ahmet Ceviz, Gürkan Özden

**OP12. Determining the factors affecting nurses' breaking bad news skills**

Sümeyye Ak, Seda Er, Servet Cihan, Aslı Özbay, Sevim Buzlu

**OP13. Assessment of body perception, visual spatial perception, and cognitive attention skills in lower limb amputations**

Elif Yaren Tavli, Burcu Dilek

**OP14. Muscle and reaction time alterations associated with smartphone addiction in university students**

Engin Ramazanoğlu, Sinemhan Gülis, Melek Yıldırım, Berke Han Çelik, İrem Balıçok, Naciye Dilruba Tektaş Gülbil

**OP15. Preventive measures and approaches to gynecological problems in women's health**

Edanur Akgün, Refika Genç Koyucu

**OP16. Development and evaluation of a mother–child education program for preventing home accidents in children aged 3–6 years**

Hatice Oluz, Fatmanur Oluz, Yaren Karaca, Selvinaz Albayrak

**OP17. Assessment of nutrition knowledge and its association with body composition in adults**

Gizem Elvan Hacıoğlu, Mutlu Tuçe Ülker, Bilge Tekin Elkaan, Elif Nur Özen

**OP18. Evaluation of mediterranean diet adherence and nutritional knowledge levels in individuals with metabolic syndrome**

Tuğbanur Karkas, Bilge Nur Çöl Çetinkaya

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**OP1****Reflections of socioeconomic inequalities on child development: an examination of poverty, education, and access to opportunity**Aleyna Gürkan<sup>1</sup>, Dicle Oylum<sup>1</sup>, Didem Elitez<sup>1</sup>*<sup>1</sup>Istinye University, Department of Child Development*

Socioeconomic inequalities serve as fundamental structural elements that shape children's developmental domains, academic progression, and social determinants through a holistic perspective. The environmental and economic ecosystem surrounding the child provides a foundational context that determines access to resources, the quality of learning experiences, parent-child interaction patterns, and future educational trajectories throughout childhood and adolescence. Within this framework, poverty extends beyond a state of mere material deprivation; it directly transforms developmental opportunities by influencing the quality of the home environment, caregiver attitudes, environmental safety, and the stability of daily routines. The most distinct and decisive reflection of socioeconomic disparity is observed in the processes of access to education. Variables such as the quality of education, teacher competencies, the equipment of physical learning environments, and the accessibility of digital and physical resources are critical factors determining a child's academic starting point and pace of progress. In this context, inequality of opportunity is not a phenomenon limited solely to participation in formal education. Instead, it exhibits a multi-layered structure that encompasses the child's integration into social support networks, access to cultural capital, and the utilization of development-supporting services. These multidimensional inequalities shape children's developmental processes through societal and structural factors rather than individual characteristics. Consequently, policy proposals aimed at addressing disadvantages must be designed with an integrated perspective that includes educational investments covering all developmental stages, support mechanisms that strengthen the family, and social interventions that prioritize equal opportunity.

**Keywords:** Child Development, Living Conditions, Poverty, Social Environment, Socioeconomic Factors

**OP2****Evaluation of dental anxiety and oral-health-related quality of life before and after prosthetic treatment: A pilot study**Esra Bilgi Özyetim<sup>1</sup>*<sup>1</sup>Istanbul Yeni Yuzyil University, Faculty of Dentistry, Department of Prosthodontics*

**Purpose:** Dental anxiety is a significant problem that affects patients' behavior in seeking treatment and can impact quality of life related to oral health. This study aimed to evaluate the level of dental anxiety and quality of life related to oral health in patients scheduled for prosthetic treatment and to examine the relationship between these two variables and demographic characteristics.

**Methods:** This survey study included volunteer patients aged 18 years and older who applied to the Istanbul Yeni Yüzyil University, Faculty of Dentistry, Department of Prosthodontics and were indicated for prosthetic treatment. The questionnaires were completed by participants before treatment and 3 weeks after the delivery of the prosthesis. Dental anxiety level was assessed using the Modified Dental Anxiety Scale (MDAS), and oral health-related quality of life was assessed using the Oral Health Impact Profile-14 (OHIP-14). Statistical analyses of the data were performed using the Kruskal-Wallis and Mann-Whitney U tests in the SPSS 27 program ( $p < 0.05$ ).

**Results:** 64% of participants were female and 36% were male. The mean MDAS score decreased significantly from  $10,12 \pm 4,25$  before treatment to  $9,52 \pm 4,06$  after treatment ( $p = 0.017$ ). The OHIP-14 score decreased significantly as well, from  $9,40 \pm 7,39$  to  $8,24 \pm 6,70$  ( $p = 0.035$ ). Changes in MDAS and OHIP-14 scores were not associated with gender, age, chronic disease, reason for visit, dentist preference, or dental experience. Only the change in MDAS was significantly related to education level ( $p = 0.004$ ).

**Conclusion:** Prosthetic treatment reduced stress levels and improve quality of life related to oral health, regardless of demographic characteristics.

**Keywords:** Dental Anxiety, Oral Health, Quality of Life, Prosthetic Dental Treatment

**OP3****The effect of shoulder mobilization on muscle strength and proprioception: A randomized double-blind study**

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<sup>1</sup>Acibadem Mehmet Ali Aydınlar University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Türkiye

**Purpose:** This study aimed to investigate the acute effects of a single session of shoulder joint mobilization on muscle strength and proprioception in healthy young adults.

**Methods:** Forty-eight healthy university students aged 18–25 years were included and randomly assigned to mobilization (n=24) and sham (n=24) groups. The mobilization group received passive glenohumeral joint mobilization (inferior, anterior, and posterior glides). In the sham group, the therapist maintained the same hand positions and applied only superficial contact without any traction or glide force. Muscle strength was measured using a handheld dynamometer, and proprioception was assessed with a laser-assisted joint position reproduction (JPR) test. Measurements were taken before and immediately after the intervention. The study was approved by the Acibadem University and Acibadem Healthcare Institutions Medical Research Ethics Committee (ATADEK) (Decision No: 2025-04/185) and was registered at ClinicalTrials.gov (NCT06910332).

**Results:** No significant baseline differences were found between groups ( $p>0.05$ ). Post-intervention, group  $\times$  time interaction effects were not significant for muscle strength (flexion  $p=0.187$ ; abduction  $p=0.312$ ; external rotation  $p=0.269$ ; internal rotation  $p=0.658$ ) or proprioception (flexion  $p=0.215$ ; abduction  $p=0.901$ ). A near-significant time effect was observed in flexion proprioception ( $p=0.103$ ), indicating a potential general improvement regardless of intervention type.

**Discussion:** A single session of shoulder mobilization did not significantly alter muscle strength or proprioception in healthy individuals. Nevertheless, the trend toward proprioceptive improvement suggests that repeated sessions or applications in symptomatic populations with sensorimotor impairments may provide more clinically meaningful outcomes.

**Keywords:** Manual Therapies, Muscle Strength, Proprioception, Shoulder

**OP4****Investigation of respiratory muscle endurance in patients with systemic lupus erythematosus and its relationship with exercise capacity and fatigue level**

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**Purpose:** Systemic lupus erythematosus (SLE) is a chronic, inflammatory, autoimmune disease characterized by multisystem involvement and predominantly affects women. The aim of this study was to compare respiratory muscle endurance in patients with SLE with that of healthy individuals and to examine its association with fatigue level and exercise capacity.

**Methods:** A total of 20 patients with SLE (19 women, 1 man; mean age  $36.70\pm 12.23$  years) and 20 healthy controls (16 women, 4 men; mean age  $31.75\pm 4.85$  years) were included in the study. Respiratory muscle endurance was assessed using the Maximal Voluntary Ventilation measurement. Exercise capacity was evaluated with the 6-Minute Walk Test, and fatigue was assessed using the Fatigue Severity Scale.

**Results:** The patients with SLE and the healthy control group were similar in terms of age and sex ( $p=0.10$ ,  $p=0.34$ ). In the SLE group, respiratory muscle endurance ( $p<0.001$ ) and exercise capacity were reduced ( $p<0.001$ ) compared to the healthy control group, while fatigue level was increased ( $p=0.008$ ). A moderate positive correlation was found between respiratory muscle endurance and exercise capacity ( $r=0.65$ ,  $p=0.002$ ), whereas no correlation was found with fatigue level ( $r=-0.008$ ,  $p=0.97$ ).

**Conclusion:** A review of the literature reveals that the exact prevalence of lung disease associated with SLE remains unclear, and previous studies have shown considerable variation in their estimates. Increasing awareness of potential pulmonary involvement may facilitate earlier detection and help reduce cumulative damage. Our study will serve as a guide for future research on respiratory involvement in patients with SLE.

**Keywords:** Exercise Capacity, Fatigue, Maximal Voluntary Ventilation, Systemic Lupus Erythematosus

**OP5****An examination of attitudes, barriers, and decision-making processes toward hearing aids in the geriatric population**Mert Kılıç<sup>1</sup>, Meltem Yıldız<sup>2</sup><sup>1</sup>University of Health Sciences, Hamidiye Faculty of Health Sciences, Department of Audiology, İstanbul, Türkiye<sup>2</sup>University of Health Sciences, Hamidiye Faculty of Health Sciences, Department of Audiology, Undergraduate Program, İstanbul, Türkiye

**Purpose:** Hearing loss is a common issue in the geriatric population, and various factors related to hearing aid use influence the hearing aid acquisition and usage process. This study aims to examine the attitudes, barriers to use, decision-making processes, and satisfaction levels of hearing aids among geriatric individuals with hearing loss.

**Methods:** A total of 228 individuals aged 65 years and older with hearing loss (119 males, 109 females; mean age=74.38 years) were included in the study. Among them, 87 participants used hearing aids and 141 did not. Of the users, 41 wore a unilateral device and 46 wore bilateral devices. Data were collected face-to-face using a questionnaire developed by the researchers based on the literature, which included items on hearing loss history, hearing aid use, attitudes toward hearing aids, usage experiences, and satisfaction levels. Analyses were conducted using descriptive statistics and chi-square tests.

**Results:** Financial (28.3%) and aesthetic (20.6%) reasons were predominant among individuals who did not use hearing aids, and unilateral users' reasons for not preferring bilateral use were particularly associated with financial factors (46.3%). Aesthetic concerns regarding hearing aids were reported by 35.1% of the participants. It has been observed that the most decisive criterion for purchasing a device was budget-friendliness (47.4%), followed by ease of daily life (25%). The main concern about continuing device use was not seeing sufficient benefit (56.1%), and daily use problems (30.7%) also contributed. While 66.7% of device users reported satisfaction, 33.3% expressed dissatisfaction. Aesthetic concern was higher in women ( $p<0.05$ ). Bilateral users showed higher satisfaction compared to unilateral users ( $p<0.05$ ).

**Conclusion:** Financial, aesthetic, and usage-based barriers appear to influence hearing aid use in geriatric individuals. Findings highlight the importance of information and appropriate support services to increase device acquisition and continued use.

**Keywords:** Geriatric Population, Hearing Aid, Hearing Loss, Satisfaction

**OP6****Strengths, limitations, and future role of AI-based diet planning E**Zehra Vedia Güzel<sup>1</sup>, Kübra Ergan<sup>1</sup><sup>1</sup>İstanbul Yeni Yüzyıl University, Faculty of Health Sciences, Department of Nutrition and Dietetics, İstanbul, Türkiye

**Purpose:** Artificial intelligence (AI) refers to computer programs that perform human-like thinking, reasoning, problem-solving, perception, and decision-making. AI use has increased recently and is widely applied for recommendations and task execution. Individuals often use these applications for health and nutrition advice. This study examines the reliability and limitations of AI-based diet planning and nutrition recommendations, as well as their impact on dietary adherence, nutrition awareness, and potential future applications.

**Methods:** Articles published in English and Turkish between 2020 and 2025 were reviewed using databases such as Science Direct, Web of Science, Scopus, ULAKBİLİM, PubMed, and Cochrane Library. Keywords included "artificial intelligence and nutrition," "personalized nutrition," "nutrition planning," and "AI software in nutrition."

**Results:** AI models provide detailed nutrient information and support nutrition awareness. However, they may occasionally err in portion control and calculation of energy and nutrient content, leading to incorrect recommendations. In individuals with chronic diseases, pregnant, or breastfeeding women, inaccurate suggestions may cause health issues. Additionally, AI cannot fully evaluate emotional states or personal preferences, limiting fully personalized plans.

**Conclusion:** Studies indicate AI positively affects nutrition, but its use alone is insufficient. It is recommended as a supportive tool under dietitian guidance. A multidisciplinary approach involving nutrition and engineering can enhance AI's accuracy and personalization. In the future, AI could track daily emotional states and meals, detect nutrient deficiencies—such as suggesting a bowl of yogurt for protein shortage—and provide evidence-based recommendations.

**Keywords:** Artificial Intelligence, Diet Planning, Personalized Nutrition

**OP7****The role of trauma-informed yoga in asthma management**İrem Özbay<sup>1</sup>, Sevgi Özalevli<sup>2</sup><sup>1</sup>Dokuz Eylül University, Institute of Health Sciences<sup>2</sup>Dokuz Eylül University Faculty of Physical Therapy and Rehabilitation

**Purpose:** Asthma is a common chronic disease characterized by shortness of breath, coughing, and wheezing. Psychosocial stress and Adverse Childhood Experiences (ACEs) can increase chronic stress responses and make asthma management more challenging. With the growing recognition of asthma as a biopsychosocial condition, integrating stress-regulation strategies into treatment has gained importance. This study aims to examine the relationship between asthma, ACEs, and Trauma-Informed Yoga (TIY) and to discuss the potential role of trauma-sensitive body-based practices in asthma management.

**Methods:** A literature search was conducted using the keywords asthma, adverse childhood experiences, and trauma-informed yoga in the Pubmed database.

**Results:** Approximately 14 randomized controlled trials have investigated yoga and breathing techniques in asthma management. Interventions commonly include pranayama, yoga postures, relaxation, and stress management, with reported improvements in symptom severity and quality of life. However, despite the high prevalence of trauma exposure among individuals with asthma, existing protocols do not include TIY, and no study directly evaluating the asthma-TIY relationship has been identified.

**Conclusion:** TIY supports nervous system regulation through principles such as safety, choice, predictability, and body awareness, which may help reduce anxiety, panic, and perceived breathlessness frequently observed in asthma. Although the literature contains important gaps, available evidence suggests that TIY may be a promising complementary approach for reducing asthma symptoms and improving quality of life. Further large-sample, trauma-informed clinical studies are needed.

**Keywords:** Adverse Childhood Experiences, Asthma, Trauma-Informed Yoga

**OP8****First aid knowledge level among university students**Nagehan Naldemir<sup>1</sup>, Sila Nur Ağun<sup>1</sup>, Canan Çeçen<sup>1</sup>, Emine Ekici<sup>1</sup><sup>1</sup>Maltepe University, School of Nursing

**Purpose:** This study was conducted to determine the first aid knowledge levels of university students and to examine the factors that influence these levels.

**Methods:** The study was conducted with 214 students as a cross-sectional descriptive study. Descriptive data such as age, gender, grade level, faculty, previous first aid training, and application status were collected. Students' first aid knowledge was assessed using the "First Aid Knowledge Level Scale" (23 items; total score range: 0-46). Since two items (item 7 and item 22) of the scale contained reverse-coded statements, reverse coding was applied. Participants scoring 40 or above on the scale were considered to have sufficient knowledge.

**Results:** In this study, it was determined that the first aid knowledge levels of university students remained below the competency threshold of 40 points (mean = 34.65±5.35). No significant differences were found between knowledge scores and gender ( $p=0.155$ ), year of study ( $p=0.132$ ), faculty ( $p=0.543$ ), or having received prior first aid training ( $p=0.270$ ). However, students who had previously performed a first aid intervention had significantly higher knowledge scores ( $p=0.035$ ). These findings indicate that hands-on experience is an important determinant of higher first aid knowledge. To ensure students reach adequate knowledge levels, it is recommended that universities strengthen practical and repeated first aid training within their curricula.

**Conclusion:** It was observed that university students generally possess insufficient levels of first aid knowledge, while previous experience and hands-on practice appear to positively influence their knowledge scores. The findings suggest that theoretical instruction alone is inadequate for improving first aid knowledge; rather, training approaches that are practice-based, repetitive, and grounded in real-life experience are more effective, consistent with existing literature. Regardless of students' faculty or year of study, the results indicate that all university students require additional support and structured education in first aid.

**Keywords:** First Aid Knowledge, Health Education, University Students

**OP9****Emergency psychiatric nursing – crisis intervention, violence, and de-escalation techniques**Rana Ceviz<sup>1</sup><sup>1</sup>Malatya Turgut Özal University Faculty of Health Sciences, Department of Nursing, Malatya, Turkey

Emergency psychiatric nursing is a field that provides initial contact with individuals experiencing crises and assumes critical responsibility for creating a safe care environment. Agitation, aggression, and self-harm tendencies that arise during mental health crises necessitate effective crisis intervention approaches. In this context, the use of de-escalation techniques has become a fundamental component of contemporary psychiatric care. The literature reports findings that de-escalation strategies such as active listening, empathetic approach, appropriate body language, and safe communication reduce the intensity of aggressive behavior and decrease the need for physical restraint. It is stated that in clinical settings where these techniques are applied, significant reductions in incident severity and intervention time have been observed.

The effectiveness of crisis intervention is not limited solely to the individual competence of nurses; the physical conditions of the institution, organizational culture, and internal communication processes also directly affect violence management. There is evidence that training programs increase nurses' self-efficacy levels during crises and reduce their tendency to use physical intervention. However, due to methodological differences in existing studies, it is emphasized that evidence evaluating the effectiveness of training programs needs to be further developed in terms of consistency.

Approaches developed in recent years are reported to contribute significantly to preventing violence risk, enhancing patient safety, and maintaining ethical care standards, particularly in forensic and acute psychiatry settings. Overall, crisis intervention and de-escalation skills in emergency psychiatric nursing are considered an indispensable element of modern psychiatric care in terms of both patient and staff safety.

**Keywords:** Crisis Intervention, De-Escalation Techniques, Emergency Psychiatric Nursing, Violence Management, Patient and Staff Safety

**OP10****Current approaches to the diagnosis and management of enteral feeding intolerance**Gülten Karahan Okuroğlu<sup>1</sup>, Gülizar DEMİR<sup>1</sup><sup>1</sup>Marmara University, Faculty of Health Sciences, Department of Nursing Fundamentals

**Purpose:** Enteral nutrition is a key method for meeting metabolic needs in intensive care and clinical patients. However, Enteral Nutrition Intolerance (ENI) is a frequent complication that prevents achieving nutritional goals and increases morbidity, mortality, and length of hospital stay. This review aims to examine current literature on the diagnosis, risk factors, and management of ENI and to provide evidence-based recommendations for clinical practice.

**Method:** A literature search was conducted in PubMed, CINAHL, and Scopus databases for articles published between 2020 and 2025 in English and Turkish. Using identified keywords, 50 studies were reviewed. Findings were systematically analyzed and categorized under similar themes to highlight current evidence on nurses' knowledge and practices in diagnosing and managing ENI.

**Results:** The most frequently reported ENI symptoms were gastric residual volume increase, abdominal distension, diarrhea, and vomiting, which lead to interrupted feeding, decreased patient comfort, and higher aspiration risk. Prominent risk factors included mechanical ventilation, sedative and opioid use, high feeding rates, and underlying diseases, all negatively affecting gastrointestinal motility. Common management strategies consisted of proper patient positioning, residual monitoring, use of prokinetic agents, standardized feeding protocols, and strengthened nursing surveillance.

**Discussion:** Early diagnosis and effective management of ENI improve enteral nutrition success and overall patient outcomes. Implementation of evidence-based protocols, standardization of nursing care, and enhancement of clinical awareness are crucial for patient safety. Nurses should play an active role in ENI management, and the dissemination of evidence-based practices is strongly recommended.

**Keywords:** Enteral Feeding Intolerance, Gastrointestinal Intolerance, Nursing, Intensive Care, Nutritional Management

**OP11****Fall risk prediction using machine learning and computer vision: development of a clinical decision support system in nursing**Ahmet Ceviz<sup>1</sup>, Gürkan Özden<sup>1</sup><sup>1</sup>*İnönü University Faculty of Nursing, Department of Internal Medicine Nursing, Malatya, Turkey*

**Purpose:** The purpose of this study was to develop a clinical decision support system capable of predicting fall risk in nursing practice by using machine learning and computer vision techniques, and to evaluate its relationship with the Morse Fall Scale.

**Methods:** This design and development study was conducted with 177 participants between December 2024 and May 2025. Gait videos and pocket-carried accelerometer data were collected. Gait parameters were extracted using YOLOv8, and seven machine learning algorithms were trained. Data were divided into training (70%), validation (15%), and test (15%) sets. Model performance was compared using accuracy, sensitivity, specificity, and AUC metrics.

**Results:** Among all models, the Boosting algorithm showed the highest performance (test accuracy = 91.4%; AUC = 0.864; sensitivity = 0.914; specificity = 0.814; F1 score = 0.920;  $p < 0.05$ ). Gait speed ( $r = -0.61$ ) and postural stability ( $r = -0.56$ ) were negatively correlated with fall risk, while step time ( $r = 0.72$ ), mediolateral sway ( $r = 0.69$ ), and anteroposterior sway ( $r = 0.66$ ) showed positive correlations ( $p < 0.05$ ). The most influential predictors were mean gait speed (32%), step variability (20%), and trunk sway (15%).

**Conclusion:** The findings indicate that integrated sensor and computer-vision-based multidimensional analyses can reliably estimate fall risk and complement traditional clinical assessment tools. The developed system may support clinical decision-making by providing early warnings and real-time monitoring, especially for high-risk patients.

**Keywords:** Algorithm, Computer Vision, Fall Risk, Machine Learning, Nursing

**OP12****Determining the factors affecting nurses' breaking bad news skills**Sümeyye Ak<sup>1</sup>, Seda Er<sup>2</sup>, Servet Cihan<sup>3</sup>, Aslı Özbay<sup>4</sup>, Sevim Buzlu<sup>4</sup><sup>1</sup>*Istanbul University-Cerrahpaşa, Florence Nightingale Faculty of Nursing, University*<sup>2</sup>*Istanbul University-Cerrahpaşa, Institute of Graduate Studies*<sup>3</sup>*Istanbul Prof. Dr. Cemil Taşcıoğlu City Hospital, Training Department*<sup>4</sup>*Istanbul University-Cerrahpaşa, Florence Nightingale Faculty of Nursing, Department of Mental Health and Psychiatric Nursing*

**Purpose:** This study aimed to identify factors influencing nurses' skills in breaking bad news.

**Methods:** This cross-sectional-correlational study was conducted with 205 nurses working in a hospital in Istanbul between March-September 2025. Data were collected using the Individual Information Form, the Questionnaire on Communicating Bad News (CBN-questionnaire) and the Health Professionals Communication Skills Scale (HP-CSS). Descriptive analyses, the Mann-Whitney U test and the Kruskal-Wallis H test were used for data evaluation.

**Results:** Of the participants, 80% were women ( $n=164$ ), with a mean age of  $29.35 \pm 4.47$  years; 80.5% held a bachelor's degree ( $n=165$ ). A total of 27.8% worked in intensive care ( $n=57$ ), 87.8% ( $n=180$ ) had encountered situations requiring the delivery of bad news. Most nurses stated that bad news should primarily be delivered by physicians. Sadness was the predominant emotion experienced during the process. Patient age and the emotional reactions of family members were identified as the most challenging factors. Mean scores of CBN-questionnaires and HP-CSS were  $50.10 \pm 5.85$  and  $79.03 \pm 11.96$ , respectively. Nurses working in obstetrics-gynecology, pediatrics, and oncology, as well as those who had received training or used communication protocols, had significantly higher CBN-questionnaire scores. A moderate, significant positive correlation was found between CBN-questionnaire and HP-CSS scores ( $r = 0.464$ ,  $p < 0.001$ ).

**Conclusion:** Given the limited number of studies, these findings emphasize the importance of integrating structured bad news communication training into nursing education and clinical practice. Further research should focus on developing and evaluating educational models that strengthen nurses' competencies in communicating bad news.

**Keywords:** Breaking Bad News, Communication, Nursing

**OP13****Assessment of body perception, visual spatial perception, and cognitive attention skills in lower limb amputations**Elif Yaren Tavlı<sup>1</sup>, Burcu Dilek<sup>2</sup><sup>1</sup>Trakya University, Institute of Health Sciences, Edirne, Türkiye<sup>2</sup>Trakya University, Faculty of Health Sciences, Department of Occupational Therapy, Edirne, Türkiye**Purpose:** To evaluate body perception, visuospatial perception, attention and cognitive flexibility in lower limb amputees.**Methods:** The study included an amputee [n=14; age (years) (mean±SD) =38.6±13.0] and a control group [n=40; age (years) (mean±SD) = 27.4±6.63]. The accuracy rate (%) and reaction time (ms) of all participants were measured using Lateralization Test, visual spatial perception skills were measured using the Benton Line Orientation Test (BLOT), and attention and cognitive flexibility parameters were measured using The Central Nervous System (CNS).**Results:** The foot lateralization test showed a significant difference between groups in accuracy rates ( $F_{(52-1)} = 4.76$ ;  $p=0.034$ ;  $\eta^2=0.056$ ). Significant differences were found in terms of difficulty levels ( $F_{(1-52)} = 17.44$ ;  $p<.001$ ;  $\eta^2= 0.042$ ) and laterality ( $F_{(1-52)} = 6.93$ ;  $p=0.011$ ;  $\eta^2= 0.01$ ). Regarding reaction time, a significant difference was found in terms of difficulty levels ( $F_{(1-52)} = 44.27$ ;  $p = <.001$ ;  $\eta^2 = 0.08$ ). In terms of visual-spatial abilities, a significant difference was found between the groups in the BLOT results ( $U=115$ ;  $p=0.001$ ;  $d=0.59$ ). Lastly, regarding CNS results, a significant difference was found between the groups in attention ( $U =105.5$ ;  $p<.001$ ;  $d=0.62$ ), the amputee group had lower cognitive attention ( $t=1.93$ ). Additionally, a significant difference was found between the groups with respect to cognitive flexibility ( $U =120.0$ ;  $p=0.002$ ;  $d=0.57$ ); the control group had higher cognitive flexibility levels ( $t=2.86$ ).**Conclusion:** Amputees exhibited reduced levels of body awareness, visual-spatial abilities, and neurocognitive skills in comparison to the control group. In amputees, it is essential to assess visual-spatial abilities and neurocognitive skills in conjunction with body image.**Keywords:** Amputation, Body Image, Cognitive Science, Executive Function

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**OP14****Muscle and reaction time alterations associated with smartphone addiction in university students**Engin Ramazanoğlu<sup>1</sup>, Sinemhan Gülis<sup>2</sup>, Melek Yıldırım<sup>2</sup>, Berke Han Çelik<sup>2</sup>, İrem Balıçok<sup>2</sup>, Naciye Dilruba Tektaş Gülbil<sup>3</sup><sup>1</sup>Mardin Artuklu University, Faculty of Health Sciences, Physiotherapy and Rehabilitation, Mardin, Türkiye<sup>2</sup>SANKO University, Faculty of Health Sciences, Physiotherapy and Rehabilitation, Gaziantep, Türkiye<sup>3</sup>Beykent University, Istanbul, Faculty of Health Sciences, Physiotherapy and Rehabilitation, Istanbul, Türkiye**Purpose:** The primary aim of this study was to determine the changes in muscle tone, stiffness, and elasticity parameters in students with high levels of smartphone addiction and to evaluate the relationship between these changes and movement-based reaction times measured using the SWAY application.**Methods:** This cross-sectional study included 216 university students (144 females, 72 males). Participants were divided into addicted (n=112) and non-addicted (n=104) groups according to the results of the Smartphone Addiction Scale–Short Version. Muscle properties were assessed using MyotonPRO®, and reaction times were evaluated with the SWAY mobile application.**Results:** The addicted group showed significantly higher tone and stiffness values in the bilateral Brachioradialis, Flexor Carpi Radialis, Flexor Digitorum Superficialis, and Extensor Carpi Radialis muscles compared to the non-addicted group ( $p<0.05$ ). Increased values were also observed in certain parameters of the Biceps Brachii and Flexor Carpi Ulnaris muscles ( $p<0.05$ ). These differences were more prominent among females ( $p<0.005$ ). A strong correlation was found between the SWAY average and daily screen time ( $r=0.869$ ,  $p<0.001$ ). Generally, low-level and, in some muscles, moderate correlations were identified between muscle parameters and reaction time ( $p<0.05$ ).**Conclusion:** The findings suggest that smartphone addiction may affect the viscoelastic properties of upper extremity muscles and lead to prolonged reaction times. These results highlight the importance of developing early physiotherapy-based preventive strategies against neuromuscular alterations associated with excessive digital device use.**Keywords:** Muscle Tonus, Muscles, Reaction Time, Smartphone

**OP15****Preventive measures and approaches to gynecological problems in women's health**Edanur Akgün<sup>1</sup>, Refika Genç Koyucu<sup>2</sup><sup>1</sup>*Istinye University, Faculty of Health Sciences, Department of Midwifery*<sup>2</sup>*Istinye University, Faculty of Health Sciences, Department of Midwifery*

Regular gynecological examination once a year and screening tests at appropriate intervals by women enable early treatment of gynecological diseases and cancers. In the women's health survey conducted by the General Directorate of Health Research of the Ministry of Health of the Republic of Turkey (2014), it was determined that 48.83% of women have never had a gynecological examination and that women only have gynecological examinations due to pregnancy or birth-related reasons. It was determined that they sought solutions for gynecological complaints on their own, such as consulting neighbors/relatives, self-medicating, and washing with vinegar water, and 29.42% of women were seen to see a health professional when they experienced gynecological complaints. When the disease burdens related to reproductive health of women and men were examined, it was determined that women experienced reproductive health problems more than men, and therefore gynecological problems were more common in the reproductive age group (15-49 years), and gynecological problems experienced during this period increased morbidity and mortality rates in women. Gynecological cancers also reduce women's fertility, affect the quality of sexual life, family and social life. Common women's health problems such as pelvic pain, pelvic organ prolapse, urinary incontinence, endometriosis, infertility, menopause, gynecological cancer screenings, and evidence-based practices of women's health such as prenatal, postnatal and postnatal periods are also included. Early detection of gynecological problems, treatment and taking precautions against problems will increase women's health and quality of life, therefore gynecological examinations in which problems are detected have an important place in the controls performed to protect and improve women's health.

**Keywords:** Gynecology, Gynecological Examination, Women

**OP16****Development and evaluation of a mother-child education program for preventing home accidents in children aged 3-6 years**Hatice Oluz<sup>1</sup>, Fatmanur Oluz<sup>2</sup>, Yaren Karaca<sup>3</sup>, Selvinaz Albayrak<sup>4</sup><sup>1</sup>*Medicana Zincirlikuyu Hospital, Istanbul, Turkey*<sup>2</sup>*Istinye University, Faculty of Health Sciences, Department of Nursing, Undergraduate Student, Istanbul, Turkey*<sup>3</sup>*Bezmialem Vakıf University Hospital, Istanbul, Turkey*<sup>4</sup>*Istinye University, Faculty of Health Sciences, Department of Nursing, Istanbul, Turkey*

**Purpose:** This study aimed to develop the "Mother-Child Education Program (MCEP)" designed to prevent home accidents among children aged 3-6 years and to evaluate its effects on mothers' knowledge and ability to identify safety measures, as well as on children's awareness of household hazards.

**Method:** This quasi-experimental study was conducted using a single-group pretest-posttest design. The sample consisted of 57 mothers and their 3-6-year-old children, selected by simple random sampling among those registered at the Gaziosmanpaşa Children's Library. Within the scope of MCEP, mothers received a three-session (each 50 minutes) training titled "Home Accidents and First Aid in Children," while children participated in a play-based awareness activity supported with visual materials illustrating risky situations in various areas of the home. Data were collected between March 28 and May 31, 2024, using an "Information Form" and the "Scale for Mother's Identification of Safety Measures Against Home Accidents for Children of 0-6 Years Age Group (HASMI)". The scale was administered before the training and again three months after training. Data were analyzed using SPSS 26.0 with descriptive statistics and paired-sample t-tests.

**Results:** The mothers' mean pre-training HASMI score was 83.44±21.22, which increased to 164.97±11.65 following the training; the difference between the two measurements was statistically significant ( $t = -23.49$ ,  $p < 0.001$ ). One month after the training, 26.31% of the children had experienced a home accident; accidents occurred most frequently in the kitchen (50%) and predominantly as falls (53.58%). Mothers' rate of intervening after an accident was 80%, and the rate of taking additional safety measures at home was 66.67%.

**Conclusion:** The developed training effectively improved mothers' knowledge and ability to identify safety measures for preventing home accidents, while also enhancing children's awareness of household hazards. The program is recommended as a valuable approach to support preventive health services aimed at reducing childhood home accidents.

**Keywords:** Maternal Education, Child, Home Accident, Prevention

**OP17****Assessment of nutrition knowledge and its association with body composition in adults**

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**Purpose:** This study aimed to evaluate the nutritional knowledge levels of adult fitness center members and to examine the relationship between their nutrition knowledge and body composition.

**Methods:** Conducted as a cross-sectional and descriptive study, a total of 200 individuals, including 122 women and 78 men aged between 18 and 65 years, from a fitness center in Istanbul participated. Anthropometric measurements were taken, and body composition was assessed using Bioelectrical Impedance Analysis (BIA). Nutritional knowledge was measured with the "Nutrition Knowledge Level for Adults" scale. Descriptive statistics and Pearson correlation analysis were applied, with statistical significance set at  $p < 0,05$ .

**Results:** The mean score for basic nutrition knowledge was 52 in men and 53 in women, while the mean score for food preferences was 37 and 38, respectively, indicating a moderate level of knowledge. Among participants, 54,5% demonstrated a moderate level of basic nutrition knowledge, and 34,5% showed a good level of food preference knowledge. Correlation analyses revealed no statistically significant association between body fat percentage, BMI, and nutrition knowledge scores. The low correlation coefficients suggested that the relationship between these variables was weak.

**Conclusion:** The findings indicate that fitness center members possess moderate levels of nutritional knowledge, which may contribute to supporting a healthier body composition. Enhancing nutrition knowledge could help physically active individuals improve their body composition and overall health.

**Keywords:** Body Composition, Nutritional Behavior, Nutritional Knowledge

**OP18****Evaluation of mediterranean diet adherence and nutritional knowledge levels in individuals with metabolic syndrome**

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**Purpose:** Metabolic syndrome increases the risk of type 2 diabetes, cardiovascular disease, and some cancers. The Mediterranean diet, rich in olive oil, plant foods, whole grains, nuts, fish, and omega-3 fatty acids, has antioxidant and anti-inflammatory effects. This study evaluated Mediterranean diet adherence and nutrition knowledge in individuals with metabolic syndrome.

**Methods:** The study, conducted from December 1, 2022 to January 31, 2023, included 105 volunteers aged 18–65 years with metabolic syndrome diagnosed according to NCEP ATP-III criteria who attended the outpatient clinics of Avrupa Şafak Hospital. Demographic data, dietary habits, and physical activity were obtained through face-to-face interviews. Mediterranean diet adherence was assessed with the Mediterranean Diet Adherence Screener (MEDAS), nutrition knowledge with the Adult Nutrition Knowledge Scale (YETBİD), and physical activity with the International Physical Activity Questionnaire–Short Form (IPAQ-SF). Anthropometric data were collected using an InBody-120 device.

**Results:** Among participants, 93.3% showed low adherence, 2.9% moderate adherence, and 3.8% high adherence to the Mediterranean diet. The mean MEDAS score was  $4.20 \pm 2.00$ , indicating generally low adherence. No significant differences in diet adherence scores were observed according to sex, age, marital status, or education level ( $p > 0.05$ ), whereas BMI was associated with a significant difference ( $p = 0.04$ ). A weak positive correlation was found between food preference and basic nutrition knowledge ( $r = 0.364$ ,  $p < 0.05$ ).

**Discussion:** The results show low adherence to the Mediterranean diet among individuals with metabolic syndrome, underscoring the need to strengthen nutrition education and awareness in this population.

**Keywords:** Mediterranean Diet, Nutrition Knowledge Level, Metabolic Syndrome

#### OP19

### The role of nutrition in symptom management during the premenopausal period: a current literature review

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**Purpose:** This review aims to examine the role of nutrition in women's health and premenopausal symptoms during the premenopausal period, in light of current literature. The review also aims to evaluate the potential of nutritional approaches to protect health and support quality of life, and to present evidence-based nutritional strategies.

**Method:** A literature review was conducted using the keywords 'premenopausal symptoms', 'premenopause and nutrition', and 'premenopause and women's health'. Research was collected from databases including PubMed, Scopus, ScienceDirect and Google Scholar. The effects of nutrition on symptom management in women during the premenopausal period were evaluated in academic studies.

**Conclusion:** Studies indicate that the intensity and tolerability of symptoms during the premenopausal period are not solely limited to hormonal changes, but are also influenced by individual lifestyle and dietary habits. However, it is emphasised that diet alone is insufficient for managing symptoms. When combined with physical activity, stress management, sleep patterns and general lifestyle interventions, however, symptoms can be controlled more effectively. Multidisciplinary and evidence-based strategies are therefore critical for managing symptoms and supporting the overall health of premenopausal women. The symptoms caused by hormonal changes during the premenopausal period are closely related to lifestyle and dietary habits. Studies suggest that a balanced, anti-inflammatory diet can effectively reduce symptom severity and improve quality of life. However, a holistic approach is needed for effective symptom management, incorporating physical activity and other lifestyle interventions alongside diet.

**Keywords:** Nutrition, Women's Health, Menopause, Premenopause, Premenopausal Symptoms

#### OP20

### Metabolic, hormonal, and psychological effects of diet and exercise in polycystic ovary syndrome (PCOS)

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**Purposes:** Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder among women of reproductive age and is associated with both hormonal and metabolic disturbances. This study examines the effects of diet-based interventions and physical activity on the management of PCOS. The aim of this research is to evaluate how dietary approaches—such as low glycemic index diets and ketogenic diets—affect hormonal profile, insulin sensitivity, and weight management in women with PCOS. Additionally, the contribution of physical activity to metabolic improvement is investigated.

**Method:** A study conducted in January 2025 included 37 women with PCOS, divided into two groups: 19 participants followed a low glycemic index diet, while 18 followed a diet with normal glycemic index values. The macronutrient distribution of the ketogenic diet (55–60% fat, 35% protein, 5–10% carbohydrate) was assessed based on existing literature. Furthermore, findings related to the impact of regular physical activity were examined.

**Results:** The group receiving the low glycemic index diet showed improved ovulation frequency, reduced serum androgen levels, and significant enhancement in insulin resistance. The ketogenic diet was associated with increased fat oxidation through ketosis, which contributed to more effective weight loss. Physical activity improved insulin sensitivity and reduced body fat.

**Conclusion:** The findings indicate that dietary regulation and exercise play a crucial role in PCOS management. Low glycemic index and ketogenic diets improve metabolic parameters, while physical activity supports these benefits and enhances psychological well-being. Lifestyle-based interventions should be considered fundamental components of PCOS treatment.

**Keywords:** Diet, Metabolic State, PCOS

**OP21****The relationship between pelvic floor dysfunction and temporomandibular dysfunction symptoms in women**

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**Purpose:** The aim of this cross-sectional study was to determine the prevalence of temporomandibular joint symptoms in women with pelvic floor dysfunction and to investigate the relationship between these symptoms and the severity of pelvic floor symptoms.

**Methods:** A total of 41 women diagnosed with pelvic floor dysfunction were included in the study. After recording the women's sociodemographic characteristics and number of births, pelvic floor dysfunction severity was assessed using the Pelvic Floor Distress Inventory-20, and temporomandibular joint dysfunction severity was assessed using the Fonseca Anamnestic Index.

**Results:** The mean age of the participants was 43.17 ± 9.39 years, and the mean number of births was 2.22 ± 0.85. A positive, moderate, and statistically significant correlation was identified between the Fonseca Anamnestic Index score and the Pelvic Distress Inventory-20 score ( $p < 0.001$ ). In contrast, no statistically significant relationship was found between the number of births and either temporomandibular joint dysfunction ( $p = 0.08$ ) or pelvic floor dysfunction ( $p = 0.67$ ).

**Conclusion:** This study demonstrated a significant relationship between temporomandibular joint dysfunction symptoms and pelvic symptom severity in women diagnosed with pelvic floor dysfunction. The lack of a correlation between the number of births and dysfunction suggests that postural and neuromuscular factors may play a more influential role. These findings emphasise the importance of a holistic evaluation and treatment approach in patients diagnosed with chronic pelvic floor dysfunction or temporomandibular disorders.

**Keywords:** Pelvic Floor, Temporomandibular Joint, Women's Health

**OP22****Investigation and comparison of the effects of kinesiotaping and medial longitudinal arch supported insoles in university athletes with ankle instability and pes planus**

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**Purpose:** This study aimed to investigate and compare the effects of kinesiotaping and medial longitudinal arch (MLA) supported insoles on balance, ankle stability, and functional performance in university-level basketball and volleyball athletes with pes planus.

**Methods:** Thirty athletes aged 18–23 years with flexible pes planus and a history of ankle sprain were included. Participants were randomly allocated into two groups and performed foot core and proprioception exercises three times weekly for six weeks. Additionally, one group used MLA supported insoles, while the other received kinesiotaping with an antipronation spiral stirrup technique. Dynamic balance was assessed with the Y Balance Test, ankle stability with the Foot and Ankle Ability Measure (FAAM) Sport Subscale, functional performance with the Vertical Jump Test, and agility with the 5-10-5 Pro Agility Test. Statistical analyses were conducted using SPSS 28.0 with a significance level of  $p < 0.05$ .

**Results:** Significant improvements were observed in the kinesiotaping group in the Y Balance Total Score ( $p = 0.003$ ) and FAAM ( $p = 0.019$ ). In the insole group, improvement was found only in the Y Balance Total Score ( $p = 0.023$ ). No significant changes occurred in functional performance or agility in either group ( $p > 0.05$ ), and no between-group differences were detected.

**Conclusion:** Both interventions appear beneficial for improving balance, yet neither demonstrates superiority or meaningful effects on functional performance and agility. These findings highlight the comparable impact of the two methods and underscore the relevance of multi-component intervention approaches in athletes with pes planus.

**Keywords:** Ankle Stability, Balance, Insoles, Kinesiotaping, Pes Planus

### OP23

#### Effects of mindfulness-based breathing and core exercises on stress, endurance, and relaxation in university students

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**Objective:** This study investigates the impact of a 12-week exercise program combining music, breathing techniques, core stabilization, and relaxation on stress, anxiety, and core endurance in university students.

**Method:** In a randomized controlled trial, 80 students were divided into an intervention group (n=40) and a control group (n=40). The intervention group followed a four-day-a-week program with slow-tempo classical music. Effectiveness was measured using the Perceived Stress Scale (PSS), Smith Relaxation States Inventory (SRSI-3), and core endurance tests: Biering–Sorensen, Lateral Plank, and Trunk Flexor Endurance tests.

**Results:** Baseline measurements showed no significant differences ( $p>0.05$ ). After 12 weeks, the intervention group experienced a clinically insignificant decrease in body mass index ( $-0.16$  kg/m<sup>2</sup>;  $p=0.003$ ) and significant reductions in PSS and STAI-S scores (both  $p<0.05$ ). Significant improvements were found in the Lateral Plank test (right:  $t(73)=2.11$ ;  $p=0.038$ ; left:  $t(73)=2.03$ ;  $p=0.046$ ) and a highly significant increase in the Trunk Flexor Endurance Test ( $t(67)=3.21$ ;  $p=0.002$ ). No significant difference was observed in the Biering–Sorensen test ( $t(68)=0.48$ ;  $p=0.63$ ).

**Discussion:** Incorporating music into exercise programs effectively enhances physical endurance and supports stress management.

**Keywords:** Breathing Exercises, Core Stabilization, Endurance, Music Therapy, Stress

### OP24

#### A comparison of the effects of combined exercise programme in addition to physical therapy modalities on pain, functional and emotional status in women with primary dysmenorrhoea

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**Purpose:** This study aimed to compare the effects of a combined exercise program added to TENS and hotpack applications on pain, functional, and emotional status in women with primary dysmenorrhea.

**Methods:** Thirty-six women aged 18-25 years with primary dysmenorrhoea were divided into experimental and control groups using the closed paper pulling method. Data were collected using Demographic Information Form, Menstruation Symptom Scale (MSS), Functional and Emotional Dysmenorrhoea Scale (FEDS) and Visual Analogue Scale (VAS). The control group received TENS for 20 minutes and hotpack for 20 minutes on the most painful day of the 1st and 2nd menstrual cycles. The experimental group received the same treatment plus a combined exercise programme (breathing, progressive relaxation, stretching and core stabilisation). The evaluations were performed three times: before treatment, mid-treatment, and post-treatment.

**Results:** At the beginning of the study, no significant difference was observed between the groups in all measurement parameters ( $p>0.05$ ). At week 4, no difference was observed in the VAS assessment measuring the level of pain ( $p>0.05$ ), at week 8, a significant decrease was detected in favor of the experimental group ( $p<0.05$ ). A significant decrease was observed only in the experimental group in FEDS and MSS measurements ( $p<0.05$ ). Combined exercise program applied in addition to physical therapy modalities is effective in the management of symptoms related to primary dysmenorrhea.

**Conclusion:** Adding combined exercise to physical modalities appears to be an effective approach for improving pain, functional and emotional status in primary dysmenorrhea.

**Keywords:** Exercise, Menstrual Symptoms, Pain, Physical Modalities, Primary Dysmenorrhea

## OP25

### Exercise induced oxidative stress in athletes: performance, recovery, and nutritional interventions

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**Purpose:** Intense exercise increases oxidative stress levels in athletes by increasing the production of reactive oxygen species (ROS). This has been associated with physiological effects such as muscle fatigue, decreased performance, prolonged recovery time, and tissue damage. This study aims to share the mechanisms of exercise-induced oxidative stress, its effects on performance and recovery, and nutritional interventions.

**Method:** Studies published in the last 5 years were included in the scope of the research and Pubmed, Science Direct and Cochrane databases were searched with the keywords 'Oxidative Stress', 'Oxidative Stress and Performance', 'Oxidative Stress and Exercise' 'Antioxidant Nutrition' 'Antioxidant and Health' 'Antioxidant Sources'.

**Results:** The literature reports that prolonged, intense exercise significantly increases ROS production, leading to oxidative modifications in muscle proteins, lipid peroxidation, and DNA damage. Mitochondrial electron leakage and the hypoxia-reperfusion cycle are among the primary sources of oxidative stress, particularly in athletes. High levels of ROS accumulation accelerate physiological exhaustion and prolong recovery time. Conversely, low-to-moderate oxidative stress has been shown to activate adaptive signaling pathways, supporting mitochondrial biogenesis and training adaptations. Numerous studies report that antioxidant vitamins, polyphenols, flavonoids, and omega-3 fatty acids reduce markers of oxidative stress and reduce muscle damage biomarkers.

**Conclusion:** Exercise-induced oxidative stress can have a dual effect in athletes, both in terms of negative performance outcomes and adaptive physiological responses. Controlled antioxidant nutritional strategies reduce muscle damage, accelerate recovery, and support oxidative balance. Long-term studies are needed to better understand this issue.

**Keywords:** Antioxidants, Exercise, Nutrition, Oxidative Stress, Performance

## OP26

### Mitochondrial health in metabolic fitness

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**Purpose:** Metabolic fitness refers to the organism's optimal capacity to produce, utilize, and regulate energy. This review aims to examine the role of mitochondrial function in metabolic fitness and to explore the effects of different dietary patterns on mitochondrial health.

**Methods:** A comprehensive review of studies published over the last 20 years was conducted. Research investigating the relationships between mitochondrial function, metabolic fitness, and dietary patterns—particularly Western, Mediterranean, and Asian diets—was evaluated.

**Results:** Evidence indicates that Western dietary patterns promote mitochondrial fission and impair fusion processes, thereby negatively affecting mitochondrial functionality. In contrast, Mediterranean and Asian dietary patterns activate cellular signaling pathways that support mitochondrial biogenesis, exhibit anti-apoptotic effects, and enhance cellular energy production. Mitochondrial dysfunction has been associated with chronic diseases such as type 2 diabetes, cardiovascular diseases, metabolic syndrome, cancer, and Alzheimer's disease.

**Conclusion:** Dietary patterns and nutritional components play a crucial role in modulating mitochondrial function. The synergistic effects of bioactive compounds found in Mediterranean and Asian diets may significantly contribute to the maintenance of metabolic fitness. This review provides practical nutritional perspectives for supporting mitochondrial health.

**Keywords:** Dietary Patterns, Metabolic Fitness, Mitochondrial Function

**OP27****Investigation of the relationship between attention levels, nutritional status and anthropometric characteristics of female archers**

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**Purpose:** Archery is a sport that requires a high level of attention and focus and is closely associated with cognitive performance. Adequate and balanced nutrition is known to positively affect cognitive functions. This study aimed to examine the relationship between nutritional habits, anthropometric characteristics, and attention levels of female archery athletes.

**Methods:** The study was conducted with 16 female archery athletes from Anka Sports Club with a mean age of 16.75±2.66 years. Attention levels were assessed using the d2 Attention Test, nutritional status was evaluated through 3-day food consumption records, and anthropometric measurements were obtained. Data were analyzed using the SPSS 20.0 statistical software package.

**Results:** The mean body fat percentage of the participants was 15.33±2.24%. Mean daily energy intake was 1545.61±372.81 kcal, and mean water consumption was 831.36±294.23 ml. A positive correlation was found between carbohydrate intake (%) and concentration performance (CP) ( $r=0.545$ ,  $p=0.029$ ), between selective attention (E1) and iron intake ( $r=0.582$ ,  $p=0.018$ ), and between fiber, vitamin B1, potassium intake and CP scores ( $p<0.050$ ). A negative but not statistically significant relationship was observed between vitamin C intake and attention fluctuation (FR) ( $r=-0.480$ ,  $p=0.060$ ).

**Conclusion:** The findings indicate that attention levels are associated with specific nutrient intakes. However, attention is not solely influenced by nutrition and may also be affected by factors such as sleep duration, anxiety level, and training intensity. Further studies with larger sample sizes are recommended.

**Keywords:** Attention, Nutrition, Archery, Cognitive Performance, Athlete Health

**OP28****Social exclusion in adolescents: the role of temperament and neurodevelopmental flexibility**

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**Purpose:** In today's rapidly changing and complex social environment, adolescents face an increasing need to develop social adaptation and emotional resilience. Social exclusion is among the psychosocial risk factors emphasized in intelligent health approaches. Emotional responses to exclusion are closely related to awareness, temperament traits, and neurodevelopmental processes. This study aims to examine the emotional impact of social exclusion during adolescence and to identify the role of temperament in shaping adaptation, awareness, and resilience capacities.

**Methods:** The study included 225 adolescents aged 13–18. Social exclusion was induced through a scenario-based paradigm, and participants' negative emotions were assessed using self-report measures. The Affective Neuroscience Personality Scale–Short Form and the Child and Adolescent Resilience Scale were also administered. Data were analyzed using correlation and mediation analyses.

**Results:** Findings show that social exclusion significantly increases negative emotions in adolescents. The Care and Fear temperament dimensions played significant mediating roles in the relationship between social exclusion and feelings of being offended ( $p < .01$ ). Temperament traits also indirectly influenced emotional responses through psychological resilience and family support, indicating their broader regulatory role.

**Conclusion:** Adolescents perceive social exclusion differently depending on their temperament. Individualized interventions supported by family involvement appear essential for promoting adaptation, awareness, and psychological resilience—key components of intelligent health approaches. These results underscore the importance of integrating neurodevelopmental processes into the restructuring of health services and enhancing interdisciplinary collaboration.

**Keywords:** Adolescence, Neurodevelopment, Social Exclusion, Temperament

**OP29****The Impact of Attention Deficit Hyperactivity Disorder on Team Cohesion and Flexibility in the Workplace: A Current Literature Review**Ezgi Şengel<sup>1</sup>*<sup>1</sup>Üsküdar University, Neuroscience MSc Program, İstanbul, Türkiye*

**Purpose:** The purpose of this literature review is to summarize recent research findings on team cohesion and workplace flexibility among adults with attention deficit hyperactivity disorder (ADHD) and to evaluate the recurring patterns reported across studies.

**Methods:** Scientific publications from 2024 to 2025 were reviewed using Google Scholar, PubMed, and Springer databases with the keywords “ADHD,” “team cohesion,” “workplace adaptability,” and “executive functioning.” Studies published by Chan et al. (2024), Hotte-Meunier (2024), Fuermaier et al. (2025), and Quintero et al. (2025) were analyzed through content-based review, and statistical results were summarized as reported in the original articles.

**Results:** The reviewed literature demonstrates significant relationships between ADHD symptoms and workplace outcomes, including team cohesion, coworker communication, and adaptation to change. Chan et al. (2024) reported that hyperactivity and time-management difficulties negatively predicted coworker satisfaction ( $p < 0.05$ ). Hotte-Meunier (2024) showed that inadequate workplace support leads to reduced performance in tasks requiring flexibility. Fuermaier et al. (2025) identified executive function impairments as significant predictors of reduced work performance ( $p < 0.01$ ). Quintero et al. (2025) reported that low organizational awareness of neurodiversity negatively affects team communication ( $p < 0.05$ ).

**Discussion:** The findings of recent literature indicate that ADHD is a significant factor influencing team cohesion and workplace flexibility. Implementing structured communication strategies, clarifying roles and responsibilities, improving environmental supports, and providing training on ADHD awareness may enhance team integration and workplace adaptation for employees with ADHD.

**Keywords:** ADHD, Team Cohesion, Workplace Flexibility, Neurodiversity, Executive Functions

**OP30****The hidden burden of unnecessary TSH repeat testing: impact of 30-day and 6-week intervals on workload and costs**Merve Sena Odabaşı<sup>1</sup>*<sup>1</sup>Department of Biochemistry, Seyrantepe Hamidiye Etfal Training and Research Hospital, İstanbul, Türkiye*

**Purpose:** Clinical guidelines recommend repeating TSH testing no sooner than 6–8 weeks. This study aimed to determine the frequency of unnecessary TSH repeats over six months.

**Methods:** A total of 123,356 TSH tests from 103,080 patients recorded between May–November 2025 were retrospectively reviewed. Repeat testing within  $\leq 6$  weeks and  $\leq 30$  days for the same patient was defined as “unnecessary repetition.” An additional subgroup analysis was performed for patients with TSH values within the reference interval (0.4–4.0 mIU/L). Cost calculations were based on the SUT reimbursement rate for TSH (21.3 TL/test).

**Results:** Of all TSH tests, 9,505 (7.7%) were repeated within 6 weeks and 7,153 (5.4%) within 30 days. At the patient level, 7,184 of 103,080 individuals (7.0%) underwent a repeat test within 6 weeks. Among 89,388 patients with normal-range TSH levels, unnecessary repeats were observed in 5,544 (6.2%). The total estimated financial impact of unnecessary testing was 202,456 TL. Each unnecessary TSH request generated additional procedures—including venipuncture, tube and label use, sample reception, and analyzer run time—resulting in 9,505 extra laboratory operations. When distributed over the six-month study period, this corresponds to approximately 53 additional procedures per day, representing an estimated 8–12% increase in routine daily workload.

**Conclusion:** Non-adherence to recommended TSH retesting intervals leads to substantial excess testing, measurable financial loss, and a significant rise in laboratory workload. Implementing electronic decision-support alerts and optimizing request pathways may help reduce unnecessary repeat testing and improve resource utilization.

**Keywords:** TSH, Pre-Analytical Process, Unnecessary Test Ordering

**OP31****Investigation of social appearance anxiety, social exclusion, and bullying in pubertal gynecomastia: a case-control study**Yavuz Meral<sup>1</sup>, Mehmet Sezgin<sup>1</sup>*<sup>1</sup>Istanbul Medeniyet University, Faculty of Medicine, Department of Child and Adolescent Psychiatry, Istanbul, Türkiye*

**Purpose:** This study aimed to determine whether the presence or clinical severity of gynecomastia is associated with social appearance anxiety and to examine how interpersonal experiences contribute to appearance-related vulnerability in adolescents aged 11–17 years.

**Methods:** Psychosocial variables were assessed using the Social Appearance Anxiety Scale, the Social Exclusion Scale, and the Child-Adolescent Bullying Scale. Body mass index (BMI) and gynecomastia grades were obtained through standardized physician-based clinical examinations.

**Results:** Group comparisons revealed no significant differences between adolescents with gynecomastia and healthy controls in social appearance anxiety ( $p=0.431$ ,  $d=-0.160$ ), perceived unimportance ( $p=0.437$ ,  $d=-0.160$ ), social exclusion ( $p=0.877$ ,  $d=0.030$ ), or bullying ( $p=0.788$ ,  $d=0.050$ ). Correlation analyses showed that social appearance anxiety was associated only with perceived unimportance ( $r=0.253$ ,  $p=0.012$ ) and was not related to social exclusion, bullying, age, or BMI. The presence of gynecomastia was not significantly associated with social appearance anxiety ( $p=0.641$ ,  $\eta^2p=0.002$ ), whereas perceived unimportance remained a significant covariate ( $p=0.035$ ,  $\eta^2p=0.048$ ). In contrast, analyses based on gynecomastia severity demonstrated that clinical grade was a strong predictor of social appearance anxiety ( $p=0.003$ ,  $\eta^2=0.226$ ). BMI also contributed independently to the model ( $p=0.040$ ,  $\eta^2=0.078$ ).

**Conclusion:** The findings suggest that the psychosocial impact of pubertal gynecomastia is primarily related to its clinical severity rather than its mere presence. Perceived unimportance also appears to be an important interpersonal factor associated with appearance-related anxiety.

**Keywords:** Adolescence, Bullying, Gynecomastia, Social Anxiety

**OP32****Examining the effect of social media on eating behavior and body image during pregnancy**Bilge Tekin Elkaan<sup>1</sup>, Elif Nur Özen<sup>1</sup>, Lal Sude Cavuldak<sup>1</sup>, Sinem Memişoğlu<sup>1</sup>, Namık Mısıllı<sup>1</sup>*<sup>1</sup>Istinye University, Faculty of Health Sciences, Department of Nutrition and Dietetics, Istanbul, Türkiye*

**Purpose:** This study aimed to examine the relationship between body image perception during pregnancy and the effect of social media on eating behavior and to evaluate differences according to sociodemographic variables.

**Methods:** This cross-sectional study was conducted with 215 pregnant women who applied to a private hospital in Istanbul. Data were collected through face-to-face interviews using the Social Media Influence on Eating Behavior Scale (SMYDÖ), the Body Image Scale in Pregnancy (GBİÖ), and a sociodemographic questionnaire. Descriptive statistics, Pearson correlation analysis, Independent Samples t-test, ANOVA, Kruskal-Wallis, and Dunn's post-hoc tests were used. Statistical significance was set at  $p<0.050$ .

**Results:** A significant negative correlation was found between participants' age and total GBİÖ score ( $r=-0.256$ ,  $p<0.001$ ). As age increased, avoidance of appearance-related behaviors ( $r=-0.302$ ,  $p<0.001$ ) and dissatisfaction with body parts ( $r=-0.219$ ,  $p=0.001$ ) also increased. A significant positive correlation was observed between total SMYDÖ and GBİÖ scores ( $r=0.193$ ,  $p=0.005$ ). Significant differences in both SMYDÖ and GBİÖ scores were identified according to education level and employment status ( $p<0.001$ ).

**Conclusion:** The findings indicate that social media significantly influences body image perception during pregnancy, particularly in relation to physical appearance, dissatisfaction, and perceived attractiveness. Sociodemographic factors such as age, education, and employment status also play an important role. Strengthening social media literacy and psychosocial support programs may help reduce body image-related risks during pregnancy.

**Keywords:** Body Image, Eating Behavior, Pregnancy, Social Media

**OP33****The effect of pre-operative fear and anxiety levels on vital signs during surgery**

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**Purpose:** This descriptive and correlational study was conducted to determine the effect of pre-operative fear and anxiety levels on vital signs during surgery.

**Method:** The sample consisted of 141 patients who presented to the general surgery clinic of a university hospital in Adana between March and June 2020. Data were collected using the "Patient Identifier," the "Surgical Procedure Information and Vital Signs Assessment Form," the "Surgical Fear Scale," which consists of short- and long-term subscales, and the "State-Trait Anxiety Scale," all developed by the researchers based on a literature review.

**Results:** The study found that patients' total surgical fear (20.1±4.6) and anxiety levels (36.6±3.2) were low before surgery. While preoperative pulse, systolic and diastolic blood pressure, body temperature, and partial carbon dioxide values decreased during and after surgery, respiration and oxygen saturations significantly increased (p<0.001). Surgical fear and anxiety levels were significantly higher in patients who were female, 49 years of age or younger, single, unemployed, had a chronic disease, were in ASA I class, and had previously received hospital treatment. A moderate positive correlation was found between preoperative surgical fear and anxiety (r=0.539; p<0.001), while no correlation was found between intraoperative vital signs (r=0.021; p=0.806).

**Conclusion:** This study suggests that planning care and treatment approaches to address surgical fear and anxiety levels in the preoperative period, based on the patient's introductory and surgical procedure information, helping the surgical team better manage patients' fear and anxiety levels during surgery, and conducting further research on the relationship between vital signs and surgical fear and anxiety levels will contribute to a comfortable and healing surgical process for patients.

**Keywords:** Anxiety, Intraoperative, Preoperative, Surgical Fear

**OP34****Supply-Side Demand in Healthcare Delivery: The Case Of Family Medicine**

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**Purpose:** This study aimed to assess whether the performance-based payment regulation introduced in August 2022, which tied additional compensation for family physicians to the number of consultations, led to an increase in service utilization consistent with supplier-induced demand within family medicine in Istanbul.

**Methods:** This quasi-experimental before-and-after study treated the August 2022 performance-based payment regulation as a natural experiment. Monthly total consultations from all family medicine units in Istanbul were obtained from institutional electronic records. The pre-intervention period was February–July 2022, and the post-intervention period was September 2022–February 2023; August 2022 was excluded as a transition month. Means, totals, and percentage changes were calculated, and differences were analyzed using Welch's t-test (p<0.05).

**Results:** Mean monthly consultations increased from 4,017,478 pre-intervention to 6,574,335 post-intervention. Total consultations rose from 24,104,870 to 39,446,010, indicating a 63.6% increase. The difference in means was statistically significant (p<0.001).

**Conclusion:** Following the introduction of the August 2022 regulation linking payments to consultation volume, family medicine consultations in Istanbul increased substantially and significantly. Despite limitations regarding demographic and seasonal factors, findings suggest the payment model may have encouraged behavior aligned with supplier-induced demand.

**Keywords:** Family Practice, Health Services Utilization, Pay for Performance, Supplier-Induced Demand

## OP35

**A nursing perspective on evidence-based aromatherapy practices in pediatrics**Gizem Zevne<sup>1,2</sup>, Ayşegül Şimşek<sup>3</sup><sup>1</sup>Marmara University, Institute of Health Sciences, Pediatric Nursing Master's Program, Istanbul, Türkiye<sup>2</sup>Başakşehir Çam and Sakura City Hospital, Neonatal Intensive Care Unit, Istanbul, Türkiye<sup>3</sup>Marmara University, Faculty of Health Sciences, Department of Pediatric Nursing, Istanbul, Türkiye

**Purpose:** Aromatherapy, within the scope of traditional and complementary medicine, involves the therapeutic use of volatile oils (essential oils) derived from plants to support physical, mental, and emotional health. In pediatrics, its use in nursing practice is limited. The aim of this systematic review is to evaluate the current level of evidence from a nursing perspective.

**Method:** The study is a systematic review in accordance with the PRISMA 2009 guidelines. Accessing 122 sources in the National Thesis Center, Journal Park, and UlakBim search engines, the keywords 'Aromatherapy', 'Aromatherapy in Pediatrics', and 'Aromatherapy and Nursing' were selected (October 2010-January 2024). Turkish, full-text randomized controlled experimental studies, systematic reviews, and research articles were examined.

**Results:** Sixteen studies were included in the review: seven randomized controlled experimental/quasi-experimental studies, three systematic reviews, and two research articles. Lavender, peppermint, eucalyptus, clove, angelica, and rose oils were the most frequently used. Aromatherapy applications were reported to significantly improve sleep duration, sleep efficiency, stress, pain, and nausea symptoms in children.

**Discussion:** Studies show that aromatherapy is particularly supportive in vulnerable groups such as newborn intensive care and children with chronic illnesses. Due to the legal regulations governing aromatherapy practices in our country, nursing practices are limited. Future studies should support evidence-based increases in nursing practices in line with legal regulations. Nurses play a critical role in ensuring safe aromatherapy practices.

**Keywords:** Aromatherapy, Nursing, Nursing Care, Pediatrics

## OP36

**Perceptions of fear of childbirth among midwifery and nursing students in relation to their clinical experience: a descriptive study**Mustafa Kılavuz<sup>1</sup>, Refika Genç Koyucu<sup>2</sup><sup>1</sup>Adıyaman University, Faculty of Health Sciences, Department of Nursing, Adıyaman, Türkiye<sup>2</sup>İstinye University, Faculty of Health Sciences, Department of Midwifery, Istanbul, Turkey

**Purpose:** This study aimed to evaluate the impact of clinical experiences on childbirth fear perception among midwifery and nursing students.

**Methods:** This descriptive study was conducted between December 2022 and February 2023 using an online survey. Data were collected from 228 students through a Descriptive Information Form and the Childbirth Fear Prior to Pregnancy (CFPP) Scale. Mann-Whitney U and Kruskal-Wallis tests were used for statistical analyses. The significance level was set at  $p < 0.05$ .

**Results:** The mean age of the students was  $21.88 \pm 2.34$ , and the mean CFPP score was  $36.32 \pm 14.95$ . Students whose desire to have children negatively changed after clinical experience had significantly higher childbirth fear ( $p = 0.029$ ). Those who preferred cesarean section had significantly higher CFPP scores than those preferring vaginal birth ( $p = 0.031$ ). Fear was significantly higher among students concerned about postpartum physical changes ( $p < 0.001$ ), vaginal aesthetic issues ( $p = 0.002$ ), and sexual problems after childbirth ( $p < 0.001$ ). No significant relationships were found with other variables ( $p > 0.05$ ).

**Conclusion:** The findings indicate that students have moderate levels of childbirth fear, and clinical exposure combined with concerns regarding physical and sexual health increases this fear. Providing psychosocial support and accurate information during maternity clinical training is recommended.

**Keywords:** Childbirth Fear, Clinical Experience, Midwifery Student, Nursing Student, Pre-Pregnancy Childbirth Fear

**OP37****The effects of media on women's health**Aisha Noorzai<sup>1</sup>, Refika Genç Koyucu<sup>2</sup><sup>1</sup>Istinye University, Health Sciences Institute, Midwifery Department, Istanbul, Türkiye<sup>2</sup>Istinye University, Faculty of Health Sciences, Midwifery Department, Istanbul, Türkiye

Media plays a significant role in individuals' access to health information, development of awareness, and shaping of behavior. In terms of women's health, media functions as an informative and influential tool in many areas such as sexuality, reproductive health, aesthetic concerns, and breast cancer awareness. However, these effects are not always positive. The widespread presence of unverified content on social media causes misinformation among women and leads to poor health decisions. Misleading information about contraception encourages women to opt for less effective methods. Moreover, such content contributes to distorted body image and psychological issues. In Latin America, the censorship of reproductive health content on Meta platforms (Instagram, Facebook) has limited women's access to reliable information, restricting their access to health services. Therefore, it is essential to improve media literacy and promote the distribution of evidence-based, verified health information. When used effectively, media can be a powerful tool in supporting women's health; however, uncontrolled and irresponsible use poses serious risks. In this context, it is crucial that social media platforms assume ethical responsibility and that content creators provide transparent and scientifically grounded information.

**Keywords:** Health Literacy, Media, Misinformation, Social Media, Women's Health

**OP38****Epidemiology of gynecologic cancers in Türkiye and worldwide**Fariba Rostamvand<sup>1</sup>, Refika Genç Koyucu<sup>2</sup><sup>1</sup>Istinye University, Faculty of Health Sciences, PhD Program in Midwifery, Istanbul, Türkiye<sup>2</sup>Istinye University, Faculty of Health Sciences, Department of Midwifery, Istanbul, Türkiye

**Purpose:** To summarize the current global and national (Türkiye) epidemiological burden of cervical, endometrial (corpus uteri), ovarian (tubo-ovarian; ovary, fallopian tube and primary peritoneal), vulvar and vaginal cancers; and to identify key trends, risk factors and priority action areas.

**Methods:** IARC–GLOBOCAN 2022 estimates, WHO screening/vaccination documents, and 2015–2024 guideline updates were reviewed to compare incidence, mortality and regional disparities. Staging/classification followed the FIGO 2021 ovary–fallopian tube–peritoneum system; epidemiological reporting treated the tubo-ovarian group jointly (ICD-10: C56, C57.0, C48.1–C48.2). Türkiye data were extracted from the GLOBOCAN country profile.

**Results:** In 2022, gynecologic cancers accounted for approximately 1.47 million new cases and ~680,000 deaths worldwide. Cervical cancer remains a leading contributor in many LMICs due to limited HPV vaccination and primary HPV-DNA screening; endometrial cancer incidence is increasing with population ageing and obesity/metabolic risk. Ovarian (tubo-ovarian) cancers maintain a high mortality burden given the lack of effective population screening and frequent late presentation. In Türkiye, new cases in 2022 were corpus uteri 7,847, ovary (tubo-ovarian) 3,855, and cervix 2,593.

**Conclusion:** Priorities include: (1) scaling up HPV vaccination and primary HPV-DNA screening for cervical cancer; (2) strengthening population-level policies to reduce obesity/metabolic risk for endometrial cancer; and (3) enhancing risk stratification, awareness and rapid referral for ovarian (tubo-ovarian) cancer. Improving data quality and reducing disparities align with the 2030 targets.

**Keywords:** Gynecologic Cancers, Cervical Cancer, Endometrial Cancer, Ovarian (Tubo-ovarian) Cancers, HPV Vaccination

### OP39

#### Genital Hygiene Behaviors of Female University Students: Original Research Article

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**Purpose:** This study aimed to determine the genital hygiene behaviors of female university students and the factors influencing them.

**Methods:** This descriptive cross-sectional study was conducted with 315 female students from the Faculty of Health Sciences between January and July 2023. Data were collected online using the Introductory Information Form and the Genital Hygiene Behaviors Scale (GHBS). Statistical analyses were performed with SPSS 23 using descriptive statistics, independent t-test, Mann–Whitney U, and Chi-square tests ( $p < 0.05$ ).

**Results:** The mean GHBS score was  $84.85 \pm 9.03$ . Significant differences were found between GHBS scores and age at menarche, receiving hygiene education, and not using a basin during bathing ( $p < 0.05$ ). No significant differences were observed with family type, income status, or place of residence ( $p > 0.05$ ).

**Conclusion:** Female university students' genital hygiene behaviors were below the desired level. Hygiene education positively influences menstrual and genital hygiene practices and can help prevent genital infections among adolescents.

**Keywords:** Adolescent Health, Female Student Health, Genital Hygiene, Menstrual Hygiene, Reproductive Health

### OP40

#### The relationship between lean leadership and sustainable performance: the case of a public hospital

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**Purpose:** The main purpose of this thesis is to reveal the relationship and dimensions of the relationship between lean leadership and the sustainability of employee performance in the management processes carried out in hospitals.

**Methods:** This study was conducted with a total of 320 healthcare professionals, including doctors, nurses/midwives, health graduates, health officers, public workers, Giresun Training and Research Hospital. Data obtained in the study were analyzed using SPSS software. Statistical methods such as correlation, t-test and one-way analysis of variance (ANOVA) as well as reliability and validity tests, were utilized in the analysis.

**Results:** The research concluded that lean leadership is a strong determinant of sustainable performance. Supporting employees' individual development increases their sustainable contributions. The analysis revealed that the sub-dimensions of lean leadership culture development/improvement, personal development, competence, gemba and hoshin kanri were significantly correlated with employee sustainable performance ( $p < 0.05$ ) and that these dimensions positively impact employee sustainable performance.

**Conclusion:** A comparison with the literature reveals parallels with studies by Mulders (2016) and Poksinska et al. (2013). These studies also emphasize the visibility of leadership, gemba practices and the transformations of the manager's role to focus on employee development. Consequently, lean leadership practices are understood to be a critical determinant of sustainable employee performance.

**Keywords:** Healthcare Workers, Lean Leadership, Sustainable Performance

**OP41****An evaluation of mothers' attitudes toward measles vaccination and vaccine hesitancy**Aslı Nur Şahin<sup>1</sup>, Ayşegül Şimşek<sup>2</sup><sup>1</sup>Çamlıca Medica Hospital, Maternity Ward, Istanbul<sup>2</sup>Marmara University, Faculty of Health Sciences, Department of Pediatric Nursing

**Purpose:** The increase in vaccine-preventable diseases is related to vaccine refusal/hesitancy. The study aimed to determine mothers' attitudes toward the measles vaccine, their levels of vaccine hesitancy, and the factors influencing this hesitancy.

**Methods:** This descriptive, cross-sectional study was conducted between October 2023 and May 2024 using convenience sampling with a total of 403 mothers living in the same household as their children. Data were collected using a mother and child information form, a vaccination information form, and a scale measuring perceptions about infectious diseases. Significance was at a 95% confidence interval.

**Results:** Mothers were 32.3 years old on average, and about half were university graduates. 88.1% stated they wanted to be vaccinated, 72% stated they trusted vaccine information, and it was reported that those who were vaccinated and contracted measles had mild cases. A total of 67.7% reported that they were not influenced by the opinions of people around them regarding vaccines and that they believed the vaccination program in our country was reliable. The average score on the scale was 112 points. Parents' educational status ( $p=0.000$ ) and income level ( $p=0.000$ ) affected their perception of infectious diseases. In addition, having a family member with autism also affected the scale score ( $p=0.005$ ).

**Discussion:** Health professionals' information is important in negative attitudes stemming from lack of knowledge. It is recommended that social projects aimed at eliminating vaccine refusal/hesitancy be implemented and that these be based on scientific evidence.

**Keywords:** Attitude, Measles, Vaccination, Vaccine Hesitancy, Vaccine Refusal

**OP42****Emergency obstetric care systems and the epidemiology of obstetric trauma in Turkey and the world**Fariba Rostamvand<sup>1</sup>, Refika Genç Koyucu<sup>2</sup><sup>1</sup>Istinye University, Graduate School of Education, PhD Program in Midwifery, Istanbul, Turkey<sup>2</sup>Istinye University, Faculty of Health Sciences, Department of Midwifery, Istanbul, Turkey

**Purpose:** This study aims to examine emergency obstetric care systems in Turkey and globally, focusing on team structures, preventable maternal mortality causes, and barriers to accessing services, while presenting effective prevention and intervention strategies.

**Methods:** A literature review and national/international health reports were used to analyze causes of maternal deaths, team composition, the role of midwives, telemedicine applications, out-of-hospital services, training strategies, and health system infrastructure.

**Results:** Emergency obstetric care includes interventions for life-threatening maternal conditions during pregnancy, childbirth, or within 42 days postpartum. Globally, 73% of maternal deaths are due to direct obstetric causes—hemorrhage (25%), infection (15%), hypertensive disorders (12%), unsafe abortion (13%), and obstructed labor (8%). In the USA, maternal mortality has tripled over the past 30 years, with ICU admissions postpartum reaching 62–92%. An estimated 60% of maternal deaths are preventable. In Turkey, preventable maternal deaths account for 37.9%. Early identification of risk factors and rapid intervention are vital. Excluding midwives from emergency teams compromises care quality, despite their legal and professional responsibility in evidence-based interventions. Telemedicine is effective in managing high-risk conditions such as hypertension, preeclampsia, and postpartum depression. In low-income countries, out-of-hospital care faces major challenges like transportation, equipment shortages, and lack of trained personnel.

**Conclusion:** Effective emergency obstetric care requires multidisciplinary teams, strong health systems, and widespread implementation of training programs like ESMOE. Socio-cultural barriers delaying care-seeking—outlined in the “Three Delays Model”—should be addressed through health policy reforms. Telehealth solutions play a strategic role in early diagnosis, timely intervention, and reducing healthcare inequalities.

**Keywords:** Emergency Obstetric Care, Maternal Mortality, Midwifery, Telemedicine, Access to Health Services

**OP43****Central serous chorioretinopathy as a potential marker for coronary artery disease: a retrospective angiographic case-control study**Eyyup Tusun<sup>1</sup>, Necmettin Korucuk<sup>2</sup><sup>1</sup>Sanliurfa SBU Mehmet Akif Inan Training and Research Hospital, Department of Cardiology, Sanliurfa<sup>2</sup>Antalya City Hospital, Cardiology Clinic, Antalya

**Purpose:** Central serous chorioretinopathy (CSC) is characterized by localized serous retinal detachment and is often linked to stress. It may indicate systemic vascular dysfunction. This study aimed to investigate the relationship between CSC and the prevalence, severity, and complexity of angiographically proven coronary artery disease (CAD).

**Methods:** In this retrospective case-control study, we screened 8,184 consecutive patients undergoing spectral-domain optical coherence tomography (SD-OCT) from 2022 to 2025. We included 45 patients with recurrent CSC ( $\geq 2$  subretinal fluid episodes) who had coronary angiography within 12 months. Patients using steroids or with uveitis/other retinopathies were excluded. Forty-seven age- and sex-matched controls with normal OCT and angiography were selected. CSC required subretinal fluid  $\geq 150\mu\text{m}$  and choroidal thickening  $>350\mu\text{m}$  on EDI-OCT. CAD was defined as  $\geq 50\%$  stenosis; complexity was assessed using the SYNTAX score.

**Results:** The cohort included 45 CSC patients and 47 controls. The prevalence of CAD was significantly higher in the CSC group (26.7% vs. 10.6%,  $p=0.043$ ). CSC positively correlated with SYNTAX scores ( $r=0.210$ ,  $p=0.044$ ), indicating more complex coronary disease. Correlation analysis revealed significant associations between CSC and CAD ( $r=0.206$ ,  $p=0.048$ ) and diabetes mellitus ( $r=0.220$ ,  $p=0.042$ ).

**Conclusion:** CSC is associated with angiographically proven CAD and greater coronary lesion complexity, independent of traditional risk factors. Patients with recurrent CSC should undergo cardiovascular risk assessment and be referred to cardiology.

**Keywords:** Central Serous Chorioretinopathy, Coronary Artery Disease, Optical Coherence Tomography, Retrospective Study, SYNTAX Score

**OP44****The association between lower-limb muscle strength and patient-reported osteoarthritis severity in individuals with symptomatic early-stage knee osteoarthritis**Aynur Şahin, Müge Kırmızı<sup>2</sup>, Cem Özcan<sup>3</sup>, Derya Özer Kaya<sup>2</sup>, Elif Umay Altaş<sup>4</sup>, Sevtap Günay Uçurum<sup>2</sup><sup>1</sup>Izmir Katip Celebi University, Institute of Health Sciences, Department of Physiotherapy and Rehabilitation, İzmir, Türkiye<sup>2</sup>Izmir Katip Celebi University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, İzmir, Türkiye<sup>3</sup>Izmir Katip Celebi University, Faculty of Medicine, Department of Orthopedics and Traumatology, İzmir, Türkiye<sup>4</sup>Izmir Bakircay University, Faculty of Medicine, Department of Physical Medicine and Rehabilitation, İzmir, Türkiye

**Purpose:** To investigate the relationship between patient-reported osteoarthritis (OA) severity and lower-limb muscle strength in individuals with symptomatic early-stage knee OA.

**Methods:** Seventy-four individuals with symptomatic Kellgren-Lawrence grade 1-2 knee OA were included. Patient-reported OA severity was assessed using the Laquesne Algofunctional Index (LAI) subscales: pain/discomfort, maximum walking distance (MWD), and activities of daily living (ADL). Lower-limb muscle strength (hip, knee, ankle) was measured using a digital hand-held dynamometer. Lower-limb alignment was evaluated calculating the hip-knee-ankle (HKA) angle from standing radiographs. Partial correlations controlling for demographics (age, gender, and body mass index) were performed. Variables showing significant correlations were entered into hierarchical regression analyses. Demographics were included in Step 1, and significantly correlated variables were entered sequentially based on correlation coefficient magnitude. Only variables providing significant additional variance were retained.

**Results:** Pain/discomfort correlated with knee extensor ( $r=-0.300$ ), hip extensor ( $r=-0.276$ ), and ankle invertor ( $r=-0.276$ ) strength ( $p<0.05$ ). MWD correlated with knee flexor ( $r=-0.319$ ), hip abductor ( $r=-0.293$ ), ankle invertor ( $r=-0.250$ ), and knee extensor ( $r=-0.241$ ) strength ( $p<0.05$ ). ADL correlated with knee extensor ( $r=-0.275$ ), ankle evertor ( $r=-0.271$ ), knee flexor ( $r=-0.254$ ), and ankle invertor ( $r=-0.244$ ) strength ( $p<0.05$ ). The HKA angle was not correlated with any LAI subscale ( $p>0.05$ ). In regression analyses, knee extensor strength significantly contributed to pain/discomfort ( $\Delta R^2=0.084$ ; final  $R^2=0.157$ ) and ADL ( $\Delta R^2=0.070$ ; final  $R^2=0.148$ ), while knee flexor strength contributed to MWD ( $\Delta R^2=0.067$ ; final  $R^2=0.410$ ) ( $p<0.05$ ). Other variables added no further variance ( $p>0.05$ ).

**Conclusion:** In symptomatic early-stage knee OA, patient-reported OA severity may be related to lower-limb muscle strength rather than lower-limb alignment.

**Keywords:** Function, Knee Alignment, Muscle Strength, Osteoarthritis, Pain

**OP45****Investigation of the relationship between psychosocial factors and cervical flexor muscle endurance in temporomandibular joint dysfunction**Berfin Erdemli<sup>1</sup>, Pınar Kaya Sarıbaşı<sup>2</sup><sup>1</sup>Istanbul Kent University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Türkiye<sup>2</sup>Istanbul Medipol University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Türkiye

**Purpose:** Temporomandibular joint dysfunction (TMJD) is a multifactorial disorder characterized by the interaction of biomechanical and psychosocial factors is associated with psychological domains such as anxiety and pain catastrophizing. The literature includes psychosocial effects on cervical muscle endurance in several chronic conditions apart from TMJD. This study investigated the relationship between psychosocial factors and cervical flexor muscle endurance in individuals with TMJD and compared these outcomes with healthy controls.

**Methods:** The study included 64 individuals (TMJD=32; control=32) aged 18–65 who presented with chronic TMJ pain and were diagnosed with myalgia according to DC/TMD. Psychosocial factors were assessed using Generalized Anxiety Disorder-7 (GAD-7) and Pain Catastrophizing Scale (PCS), while cervical muscle endurance was measured with the cervical flexor muscle endurance test. Statistical analyses was conducted using SPSS 22.0. Normally distributed variables were compared with the Independent Samples t-test and correlations were examined using Pearson analysis.

**Results:** In individuals with TMJD, cervical flexor muscle endurance demonstrated negative correlations with pain catastrophizing ( $r=-0.354$ ;  $p=0.047$ ) and anxiety levels ( $r=-0.378$ ;  $p=0.033$ ). PCS scores ( $p=0.016$ ;  $d=0.620$ ) and GAD-7 levels ( $p=0.007$ ;  $d=0.704$ ) were significantly higher in the TMJD group compared with healthy controls whereas cervical flexor muscle endurance was significantly lower in TMJD group ( $p=0.000$ ;  $d=1.540$ ).

**Conclusion:** In individuals with TMJD diagnosed with chronic myalgia, an increased psychosocial burden may be considered a significant determinant contributing to reduced cervical flexor muscle endurance. These multidimensional interactions highlight the necessity for clinical interventions in TMJD to address not only local symptoms but also underlying psychosocial factors.

**Keywords:** Cervical Muscle Endurance, Psychosocial Factors, Temporomandibular Joint Disorders

**OP46****Acute investigation of the effects of local vibration applied to the neck muscles on backward postural instability in patients with Parkinson's Disease**Ayşe Yarengül Toraman<sup>1</sup>, Sibel Aksu Yıldırım<sup>2</sup>, Muhammed Kılıncı<sup>2</sup>, Fatma Ayvat<sup>2</sup><sup>1</sup>Istanbul Kent University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul<sup>2</sup>Hacettepe University, Faculty of Physical Therapy and Rehabilitation, Department of Physiotherapy and Rehabilitation, Ankara

**Purpose:** The aim of this study is to evaluate the acute effects of local vibration applied to the neck muscles of individuals with Parkinson's disease on posterior balance.

**Methods:** Thirty-eight individuals with Parkinson's disease were included in this study and were divided into "PD-Neck Vibration" and "PD-Sham" groups. Vibration at 80 Hz was applied to the neck muscles for 10 minutes. All participants were assessed with the Retropulsion Scale, 3-Meter Backward Walking Test (3MBWT), limits of stability, postural sway, and subjective fear of falling. Measurements were performed in both groups before and after the intervention.

**Results:** Significant improvements were observed in the intervention group in the Retropulsion Scale, 3MBWT, right way limits of stability, and postural sway on foam with eyes open ( $p<0.001$ ,  $p<0.001$ ,  $p=0.041$ ,  $p=0.027$ ). In between-group analysis, the pre-post differences in the Retropulsion Scale and the 3-Meter Backward Walking Test were significantly higher in the intervention group compared to the sham group ( $p<0.001$ ). These findings indicate that the intervention is particularly effective on reactive and dynamic balance as well as functional mobility.

**Conclusion:** The significant differences in retropulsion and 3-meter backward walking between the groups suggest that the intervention may particularly target posterior postural stability, balance, and functional mobility. This effect may be associated with the increased proprioceptive input and enhanced postural stability resulting from the "lengthening" illusion created by vibration on the muscle spindles.

**Keywords:** Parkinson's Disease, Postural Balance, Vibration

**OP47****Investigating the impact of physical activity on cardiovascular risk through skin autofluorescence**

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**Purpose:** Cardiovascular diseases remain a major cause of global mortality, with Advanced Glycation End Products (AGEs) contributing significantly to their development. AGEs form through non-enzymatic glycation and oxidation processes and are influenced by lifestyle factors such as diet, smoking, and physical activity. Skin autofluorescence (SAF) is a non-invasive biomarker reflecting AGE accumulation and cardiovascular risk.

**Methods:** This cross-sectional study was conducted between February and March 2023 and included 164 healthy young adults aged 19–30 years. Sociodemographic characteristics and lifestyle habits were collected, anthropometric parameters were measured, and SAF levels were assessed using the AGE Reader device.

**Results:** Women showed significantly higher SAF values ( $1.49 \pm 0.24$ ) than men ( $1.38 \pm 0.19$ ) ( $p = 0.001$ ). Smokers also had increased SAF levels ( $1.53 \pm 0.19$ ) compared to non-smokers ( $1.42 \pm 0.23$ ) ( $p = 0.05$ ). A positive correlation was found between age and SAF ( $r = 0.279$ ,  $p = 0.01$ ), while negative correlations were detected between SAF and height ( $r = -0.231$ ,  $p = 0.01$ ) and between smoking and SAF ( $r = -0.200$ ,  $p = 0.05$ ). Physical activity levels measured with IPAQ were not significantly associated with SAF values ( $r = 0.082$ ,  $p > 0.05$ ).

**Conclusion:** The findings indicate higher SAF levels in women and smokers, suggesting increased cardiovascular risk in these groups. Although physical activity positively influences cardiometabolic health, its lack of association with SAF in this study may reflect the young age of participants, as AGE accumulation becomes more pronounced later in life. Reducing smoking and dietary AGE intake may help lower SAF levels and support cardiovascular risk reduction.

**Keywords:** Advanced Glycation End Products, Cardiovascular Risk, Physical Activity, Skin Autofluorescence, Smoking

**OP48****Investigation of the relationship between pain, disability, and posture in office workers with chronic mechanical low back pain**

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**Purpose:** This study aimed to investigate the relationship between pain severity, disability level, and postural characteristics in office workers with chronic mechanical low back pain.

**Methods:** Seventy-six participants aged 25–50 years, performing at least 6 hours of desk-based work daily and with a Visual Analog Scale (VAS) pain score  $\geq 3$ , were included. Individuals with lumbar disc herniation, spinal surgery or trauma in the past 6 months, or orthopedic/neurological conditions were excluded. Demographic data were collected through a researcher-designed form. Postural characteristics were evaluated using the AI Posture Evaluation and Correction System (APECS). Pain severity was measured with VAS, and disability with the Oswestry Disability Index (ODI). Correlation analyses were conducted, and statistical significance was set at  $p < 0.05$ .

**Results:** The mean age was  $32.82 \pm 8.67$  years; 56.6% were female, 43.4% male. The median VAS score was 5 (range: 0–8), and the median ODI score was 23.5 (range: 3–52). A moderate, positive, and significant correlation was found between VAS and ODI ( $r = 0.488$ ;  $p < 0.001$ ). Pain intensity also showed significant positive correlations with anterior trunk inclination, shoulder asymmetry, and knee position ( $p < 0.05$ ). No significant relationships were observed between pain and head tilt, pelvic tilt, ankle position, or lateral trunk inclination.

**Conclusion:** In office workers with chronic mechanical low back pain, higher pain severity is associated with greater disability and specific postural deviations, including anterior trunk inclination, shoulder asymmetry, and altered knee position. These results emphasize the importance of ergonomic interventions and postural awareness for individuals who spend prolonged periods sitting.

**Keywords:** Low Back Pain, Office Workers, Posture

**OP49****Frailty in the elderly: current intervention approaches**Şükran Acar<sup>1</sup>, Sezen Karabörklü Argut<sup>2</sup><sup>1</sup>*Istanbul University–Cerrahpaşa, Institute of Graduate Studies, Master's Program in Physiotherapy and Rehabilitation, Istanbul, Türkiye*<sup>2</sup>*Istanbul University–Cerrahpaşa, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Türkiye*

**Purpose:** Frailty is a common, multidimensional, and dynamic geriatric syndrome characterized by a progressive decline in physiological reserves and increased vulnerability to stressors with aging. Chronic diseases, sarcopenia, physical inactivity, malnutrition, and socioeconomic disadvantages are among the key risk factors contributing to frailty. The study aims to investigate the most effective intervention strategies in vulnerability management.

**Methods:** In the study, a literature review was conducted using keywords such as 'frailty and exercise,' 'frailty and rehabilitation,' and 'frailty and geriatrics.' The research was collected from databases such as PubMed, Scopus, and ScienceDirect. The evaluation was based on academic studies investigating the effects of intervention approaches related to the prevention or reversal of frailty.

**Results:** Multicomponent interventions—especially programs that include resistance exercises, balance training, nutritional support, and cognitive stimulation—appear to be effective in preventing and reversing frailty.

**Conclusion:** With the increasing older population, the early identification of frailty, the development of individualized approaches, and the integration of multidisciplinary interventions into clinical practice are critically important for supporting healthy aging. The fact that frailty is still in the process of being conceptualized also offers significant research opportunities for national health policies and societal intervention models.

**Keywords:** Exercise, Frailty Syndrome, Geriatrics, Rehabilitation

**OP50****The invisible face of women's health in societies: factors affecting women's health in different cultures**Çağla Karakaya<sup>1</sup>, Refika Genç Koyucu<sup>1</sup><sup>1</sup>*Istinye University, Institute of Health Sciences, Department of Midwifery*

Women's health is a long process that begins with the conception of the fetus in the womb and continues through adulthood and old age until the woman's death. Women's health and related issues vary according to the level of development of countries, but the problems are universal. A country's level of development is influenced by many factors such as the level of education, socio-cultural characteristics, and lifestyle behaviors. Culture refers to the attitudes and behaviors that are learned, shared, and passed down from generation to generation by a group of people. Culture has profound effects on women's health. Cultural and social norms, traditions, beliefs, and gender roles are among the factors that affect women's health. One of the most significant issues in women's health is the lack of equal and timely access to healthcare services. Underlying this fundamental problem are gender inequality, insufficient education, early marriage, and cultural and religious pressures. Cultural roles imposed on women, infertility, female genital mutilation, and culturally variable practices such as abortion legislation carry significant adverse impacts on women's physical and psychological health.

**Keywords:** Culture, Gender Roles, Social Norms, Women, Women's Health

**OP51****The Effect of primitive reflex integration exercises on trunk stabilization and cognitive functions in chronic stroke: a case report**Melisa Topaloğlu<sup>1</sup>, Ayşe Zengin Alpözgen<sup>2</sup><sup>1</sup>*Istanbul University–Cerrahpaşa, Institute of Graduate Studies, Department of Physiotherapy and Rehabilitation*<sup>2</sup>*Istanbul University–Cerrahpaşa, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation*

**Purpose:** The aim of this case report is to evaluate the effects of Primitive Reflex Integration Exercises (PRIE) on trunk stabilization, balance, spasticity, and cognitive functions in an individual diagnosed with chronic stroke.

**Methods:** A 64-year-old male who experienced an ischemic stroke in 2014 participated in the study. PRIE sessions were applied twice weekly for 8 weeks, each lasting 30–40 minutes. Reflex examination revealed active asymmetric tonic neck reflex (ATNR), symmetric tonic neck reflex (STNR), and tonic labyrinthine reflex (TLR), guiding the individualized intervention. Outcome measures included the Modified Rankin Scale, Brunnstrom Stages, Modified Ashworth Scale, Barthel Index, Trunk Impairment Scale, Activities-specific Balance Confidence Scale, and Mini-Mental State Examination (MMSE), assessed before and after the intervention.

**Results:** Post-intervention, the Barthel Index improved from 85 to 100, balance confidence increased from 73.75 to 83.75, and trunk control improved from 13 to 16. MMSE scores rose from 12 to 16. Spasticity in the biceps brachii decreased from grade 3 to 2. Clinically meaningful improvements were observed across motor and cognitive measures.

**Conclusion:** The findings suggest that PRIE may positively impact both motor and cognitive functions in chronic stroke rehabilitation. Although results are limited to a single case, they highlight the potential utility of neurodevelopmental reflex integration in adult neurorehabilitation. Further research with larger samples is warranted.

**Keywords:** Primitive Reflex, Rehabilitation, Spasticity, Stroke, Trunk Stabilization

**OP52****Investigation of quantitative sensory parameters, neuromuscular activation, and functional performance in patients with knee osteoarthritis at different stages**Burcu Işıklı<sup>1</sup>, Gül Deniz Yılmaz Yelvar<sup>1</sup><sup>1</sup>*Istinye University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation*

**Purpose:** This study aimed to compare neuromuscular activation, muscle strength, quantitative sensory parameters, functional performance, and movement-related fear/avoidance levels in patients with knee osteoarthritis at different radiographic stages.

**Methods:** This cross-sectional comparative study included 36 individuals aged 45–67 years, classified as stage 2 (n=18) or stage 3 (n=18) knee osteoarthritis. Neuromuscular activation was assessed using surface electromyography (sEMG), and muscle strength was measured with a dynamometer. Sensory assessments included pressure pain threshold, temporal summation (TS), and conditioned pain modulation tests. Functional performance was evaluated using the Timed Up and Go Test (TUG), and fear/avoidance behavior was assessed with the Tampa Scale of Kinesiophobia.

**Results:** Demographic characteristics, pain intensity, muscle strength, TUG performance, and kinesiophobia scores were similar between groups ( $p>0,05$ ). While medial knee pain values did not differ, lateral knee pain was significantly higher in the stage 3 group ( $p=0.035$ ). Among sensory parameters, TS was significantly increased in stage 3 ( $p=0.020$ ). During single-leg stance, biceps femoris activation was markedly higher in stage 3 ( $p<0.001$ ), accompanied by significantly greater H/Q and VLO/VMO ratios ( $p=0.031$ ). The H/Q ratio during the squat task was also higher in stage 3 ( $p=0.025$ ). Additionally, rectus femoris activation during the step-down task was significantly elevated in the stage 3 group ( $p=0.003$ ).

**Discussion:** Although clinical symptoms were similar between stages, individuals with stage 3 knee osteoarthritis exhibited higher lateral knee pain, increased temporal summation, and a more hamstring-dominant activation pattern during dynamic tasks. These findings suggest that structural progression particularly influences pain sensitivity and neuromuscular control.

**Keywords:** Kinesiophobia, Knee Osteoarthritis, Muscle Activation, Pain Modulation

**OP53****Investigation of the relationship between hypermobility, foot posture, and scoliosis severity in individuals with adolescent idiopathic scoliosis**Tuğçe Yavuz<sup>1</sup>, Kübra Kardeş<sup>2</sup>, Akif Albayrak<sup>3</sup><sup>1</sup>*Istinye University, Institute of Graduate Studies, MSc Program in Sports Physiotherapy, Istanbul, Türkiye*<sup>2</sup>*Istinye University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Türkiye*<sup>3</sup>*Istanbul Rumeli University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Türkiye*

**Purpose:** Evidence suggests that hypermobility levels in Adolescents Idiopathic Scoliosis(AIS) may be associated with foot posture and lower-limb mechanics, and that foot posture may be linked to scoliosis curve severity. Therefore, aim of this study was to examine relationships among hypermobility, foot posture, and scoliosis severity in individuals with AIS.

**Methods:** A total of 22 volunteers aged 10–19 years with a diagnosis of AIS were included. Hypermobility was assessed using Beighton score and sit-and-reach test; foot posture was evaluated with Foot Posture Index(FPI) and Feiss line; and scoliosis severity was assessed using the Cobb angle. Relationships among variables were analyzed using Pearson correlation analysis, and factors predicting Cobb angle were examined through multiple linear regression.

**Results:** Mean age of participants was 13.41±2.44 years, mean Cobb angle was 22.86°±8.97°. Moderate positive relationship was found between FPI and Beighton score ( $r=0.46$ ,  $p<0.05$ ), and between FPI and Cobb angle ( $r=0.41$ ,  $p<0.05$ ). Weak-to-moderate negative relationship was observed between sit-and-reach test and Cobb angle ( $r=-0.33$ ,  $p<0.05$ ). Feiss line showed weak-to-moderate positive association with Cobb angle on right foot ( $\rho=0.38$ ,  $p<0.05$ ) and moderate positive association on left foot ( $\rho=0.41$ ,  $p<0.05$ ). For predicting Cobb angle, Beighton score, FPI, sit-and-reach performance were included in regression model. Model was significant ( $F(3,46)=5.21$ ,  $p<0.05$ , explained variance  $R^2=0.25$ ). FPI was strongest predictor of Cobb angle ( $\beta=0.34$ ,  $p<0.05$ ).

**Conclusion:** This study indicates that increased hypermobility and pronation tendency may be associated with greater curve severity in AIS. Findings highlight the need to evaluate not only spinal alignment but also lower-limb posture and flexibility in clinical assessment of AIS.

**Keywords:** Adolescent Idiopathic Scoliosis (AIS), Cobb Angle, Foot Posture, Hypermobility

**OP54****The effect of a wearable postural feedback device on pain, posture, and postural awareness in office workers with neck pain: preliminary results**Selin Uz Tunçay<sup>1</sup>, Gökşen Kuran Aslan<sup>2</sup><sup>1</sup>*Istanbul University-Cerrahpaşa, Institute of Postgraduate Education, Department of Physiotherapy and Rehabilitation, İstanbul, Türkiye*<sup>2</sup>*Istanbul University-Cerrahpaşa, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, İstanbul, Türkiye*

**Purpose:** The aim of this study is to investigate the effects of a wearable postural feedback device on pain levels, neck posture, and postural awareness in office workers with neck pain.

**Methods:** Twenty office workers with nonspecific chronic neck pain were included in the study. Participants were randomly assigned to two groups: Group 1, Exercise and wearable postural feedback device group ( $n=10$ ), and Group 2, Exercise-only group ( $n=10$ ). The exercise programs planned for both groups were implemented over 8 weeks, 3 days per week. In Group 1, the wearable postural feedback device was used for at least 3 hours a day, 3 days per week, for 8 weeks. Pain level, posture, and postural awareness were assessed before and after the intervention in both groups. Pain was evaluated using the Numeric Pain Rating Scale (NPRS) and pressure pain threshold measurements on the upper trapezius muscle using an algometer. Disability due to neck pain was assessed using the Neck Disability Index (NDI). Neck posture was evaluated by measuring the craniovertebral angle with photogrammetry, and postural awareness levels were assessed using the Postural Habits and Awareness Questionnaire. Data were analyzed with SPSS. For within-group comparisons, paired sample t-test and Wilcoxon Signed Rank Test were used; for between-group comparisons, independent t-test was applied.

**Results:** Significant improvements were observed in Group 1 in pain level ( $p<0.001$ ), NDI ( $p<0.05$ ), and postural awareness ( $p=0.001$ ). In Group 2, a significant reduction was observed only in pain level ( $p<0.05$ ). However, between-group comparisons revealed that the changes in the measured variables were similar in both groups ( $p>0.05$ ).

**Conclusion:** Although the wearable postural feedback device had positive effects within the group, these preliminary results suggest that it did not provide an additional benefit beyond exercise alone. Further studies with larger sample sizes are recommended to evaluate these results.

**Keywords:** Neck pain, Awareness, Feedback, Posture

**OP55****Emergency obstetric care and the prevalence of obstetric emergencies in turkey**Manzura Yılmaz<sup>1</sup>, Refika Genç Koyucu<sup>2</sup><sup>1</sup>*İstinye University, Institute of Graduate Education, Midwifery Doctorate Program, Istanbul, Türkiye*<sup>2</sup>*İstinye University, Faculty of Health Sciences, Department of Midwifery, Istanbul, Türkiye*

**Purpose:** This review aims to summarize the frequency of emergency obstetric conditions in Türkiye, key maternal–neonatal mortality indicators, and maternal near-miss data, while identifying strengths and gaps within the current emergency obstetric care system.

**Methods:** National maternal and infant mortality statistics, reports from WHO, UNFPA, UN Women, TÜİK, and the Ministry of Health, as well as national maternal mortality studies, obstetric emergency/near-miss investigations, and intensive care data were reviewed.

**Results:** Türkiye’s maternal mortality ratio decreased from 28.5 per 100,000 live births in 2005 to 13.5 in 2023, reflecting substantial improvement. WHO estimates 14.6 per 100,000 for 2021, positioning Türkiye mid-range among OECD countries. Most maternal deaths are attributed to direct obstetric causes, notably hemorrhage, hypertensive disorders, thromboembolism, and infection. Regional evidence shows a decline in near-miss cases but persistent issues related to delays in seeking care and referral processes. According to 2023 TÜİK data, infant mortality is 10 per 1,000 live births, while WHO estimates the neonatal mortality rate in 2022 at approximately 5 per 1,000.

**Conclusion:** Although Türkiye has achieved significant reductions in maternal and neonatal mortality over the past two decades, disparities and preventable obstetric complications remain. High institutional birth rates, national surveillance programs, and emergency obstetric care training are key strengths. Improvements are needed in primary-level risk assessment, referral coordination, community awareness, and systematic near-miss audits.

**Keywords:** Obstetric Emergency, Emergency Obstetric Care, Maternal Mortality, Maternal Near-Miss, Neonatal Mortality

**OP56****The effect of an educational intervention on increasing awareness of HPV cancer and vaccination among university students: a quasi-experimental study**Sude Akkan, İrem Ertuğ<sup>1</sup>, İlayda Türkmen<sup>1</sup>, Simge Çoşkun Pala<sup>1</sup><sup>1</sup>*Bolu Abant İzzet Baysal University Faculty of Health Sciences, Nursing Department, Bolu, Türkiye*

**Purpose:** Human Papillomavirus (HPV) is a sexually transmitted infection that is widespread worldwide and can cause various types of cancers, particularly cervical cancer. The aim of this study is to evaluate the effectiveness of an educational intervention on HPV awareness and its impact on vaccine acceptance among university students.

**Methods:** This quasi-experimental study employed a single-group pretest–posttest design and was conducted between March and June 2025 with 548 students at a university in the Black Sea region of Türkiye. Data were collected through online questionnaires administered before and after an interactive, face-to-face educational intervention delivered by student researchers. The questionnaire included a “Descriptive Characteristics Form” and the “Human Papillomavirus (HPV) Knowledge Scale.” Data were analyzed using SPSS 24.0 with descriptive statistics and paired-sample tests ( $p < 0.05$ ).

**Results:** Among the students, 81.8% had no prior HPV education, only 4.0% were vaccinated, and 43.6% did not want the vaccine. Significant differences were found between pre- and post-education scores in HPV knowledge, HPV screening, HPV vaccine knowledge, HPV vaccination program knowledge and the total HPV Knowledge Scale score ( $p < 0.001$ ). The rate of students willing to receive the HPV vaccine increased from 50.4% before the education to 75.0% after the education ( $p < 0.001$ ).

**Conclusion:** The findings demonstrate that interactive education effectively improves students’ HPV-related knowledge and promotes positive vaccination attitudes. Structured educational programs appear to be a valuable public health approach to enhancing HPV awareness and vaccine acceptance among young adults.

**Keywords:** Human Papillomavirus Infections, Papillomavirus Vaccines, Students, Health Education

**OP57****The effect of an activity-based education program on improving heat protection behaviors in preschool children**Emine Avcı<sup>1</sup>, Aylin Kurt<sup>2</sup><sup>1</sup>Bartın University, Faculty of Health Sciences, Department of Nursing<sup>2</sup>Bartın University, Faculty of Health Sciences, Department of Pediatric Nursing

**Purpose:** This study was conducted to evaluate the effectiveness of an activity-supported education program aimed at improving hot weather protection behaviors in preschool children.

**Methods:** A total of 64 children aged 4–5 participated in this quasi-experimental study. Data from participants, divided into training and control groups, were collected using the visually supported "Hot Weather Protection Behavior Questionnaire for Preschool Children." The education program was implemented over a five-week period; data were evaluated before, after, and again one month later. A  $p < 0.05$  level of significance was accepted for statistical analyses.

**Results:** The mean hot weather protection behavior score in the training group was  $6.85 \pm 2.14$  before the training, increased to  $12.18 \pm 1.52$  after the training, and was determined to be  $11.42 \pm 1.87$  one month later ( $F = 45.753$ ,  $p < 0.001$ ). No significant change was observed in the control group ( $p > 0.05$ ). In the education group, a significant increase was observed in the use of sunglasses, hats, and light-colored clothing, the use of sunscreen, and regular water consumption ( $p < 0.05$ ).

**Conclusion:** The results indicate that the activity-supported education program significantly improved preschool children's hot weather protection behaviors. Repeated implementation of the program can increase learning retention. The results demonstrate that interactive health education in early childhood is an effective tool for promoting behavioral change.

**Keywords:** Child Health, Early Childhood, Education Program, Heat Waves, Protection from Hot Weather

**OP58****Adaptation of the stroke knowledge test, determination of knowledge level, and preparation of an awareness brochure in hypertensive and post-stroke patients**Bilge Cana Çolak<sup>1</sup>, Sultan Tutar<sup>1</sup>, Zeynep Dilaver<sup>1</sup>, Hülya Şişli<sup>1</sup>, Furkan Çakır<sup>1</sup><sup>1</sup>Istanbul Bilgi University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation

**Purpose:** Individuals with hypertension, a major stroke risk factor, are an important group for improving stroke awareness. This study aimed to develop the Turkish version of the Stroke Knowledge Test (SKT-TR) and establish its validity and reliability in hypertensive individuals. Additionally, it aimed to prepare an informational brochure appropriate to the test content.

**Methods:** The tool was translated using the World Health Organization's translation-back translation protocol. Content Validity Index was calculated based on evaluations from 10 experts across different health disciplines. The sample comprised 100 hypertensive individuals. The internal consistency of the 20 items in the SKT-TR was assessed using the Kuder-Richardson 20 coefficient. For test-retest reliability, the test was administered to the same sample one week later, and the Intraclass Correlation Coefficient (ICC) was calculated.

**Results:** The Content Validity Index of the items was found to be 0.931. The Kuder-Richardson 20 analysis indicated good internal consistency (0.794). Test-retest reliability for the total score was high ( $ICC = 0.985$ ,  $p < 0.001$ ). The difficulty and discrimination values of the items were within acceptable ranges. The mean SKT-TR score of the participants was  $10.38 \pm 3.81$  out of 20.

**Conclusion:** The SKT-TR demonstrated strong validity, internal consistency, and test-retest reliability in hypertensive individuals. At the end of the study, the awareness brochure prepared by the researchers was distributed and explained to the participants. Testing the SKT-TR in broader and different risk groups will provide a strong foundation for future educational interventions aimed at increasing stroke awareness in the community.

**Keywords:** Awareness, Hypertension, Patient Education Handout, Stroke

**OP59****The relationship between respiratory muscle strength and upper extremity reaction time in individuals with asthma: preliminary findings**Pınar Atasoy<sup>1</sup>, Vildan Fidanoğlu<sup>1</sup>, Seda Saka<sup>1</sup><sup>1</sup>Haliç University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, İstanbul, Türkiye

**Purpose:** The increased respiratory workload during upper extremity movements in individuals with asthma may affect upper extremity functionality. This study aimed to investigate the relationship between upper extremity reaction time and respiratory muscle strength in individuals with asthma.

**Methods:** Eleven individuals (10 females, 1 male; 22.45±2.80 years) participated. Demographic characteristics were recorded. Respiratory muscle strength (maximal inspiratory pressure—MIP, maximal expiratory pressure—MEP) was measured using an intraoral pressure device. Upper extremity reaction time was assessed with Blazepod. Relationships were analyzed with the Pearson correlation test.

**Results:** The mean reaction time of the right upper extremity was 470.70±48.40 ms, total reaction time was 17.30±1.43 s. For the left upper extremity, mean reaction time was 471.30±47.65 ms, total reaction time was 17.31±1.32 s. Nine participants (81.8%) were right-hand dominant. Significant correlations were found between MIP and the total ( $r = -0.644$ ,  $p = 0.045$ ) and mean reaction time ( $r = -0.657$ ,  $p = 0.039$ ) of the right upper extremity. Significant negative correlations were also observed between MEP and the total ( $r = -0.715$ ,  $p = 0.020$ ) and mean reaction time ( $r = -0.724$ ,  $p = 0.018$ ) of the right upper extremity, as well as the mean reaction time of the left upper extremity ( $r = -0.644$ ,  $p = 0.044$ ).

**Conclusion:** The findings suggest that reduced inspiratory and expiratory muscle strength may negatively affect upper extremity reaction time in individuals with asthma. However, due to the small sample size, these results should be considered preliminary, and studies with larger samples are needed. This study was funded by the TÜBİTAK 2209-A University Students Research Projects Support Program.

**Keywords:** Asthma, Reaction Time, Respiratory Muscle Strength

**OP60****Upper extremity function in individuals with paraplegia: relationships between endurance, performance, and symptoms**Nurgül Dürüstkan Elbaşı<sup>1</sup>, Yunus Emre Tütüneken<sup>1</sup>, Hüsna Güzel<sup>2</sup>, Ömer Kaçırıl<sup>1</sup>, Berra Mina Ekşili<sup>1</sup>, Buse Deniz<sup>1</sup><sup>1</sup>Istinye University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, İstanbul, Türkiye<sup>2</sup>Istinye University, Institute of Graduate Studies, Department of Physiotherapy and Rehabilitation, İstanbul, Türkiye

**Purpose:** The functionality of the upper limbs is crucial for activity performance, independence in daily activities, and overall quality of life in individuals with SCI. Accurate and sensitive evaluation of upper extremity function is essential for effective planning and monitoring of rehabilitation. This study aims to investigate the relationship between upper extremity function, endurance, performance, and symptoms in individuals with paraplegia.

**Methods:** A total of 32 individuals with spinal cord injury (SCI) were included in the study. Upper extremity endurance was evaluated with the 6 Minute Pegboard and Ring Test (6BPRT), upper extremity function with the Minnesota Manual Dexterity Test (MDT), symptoms with the Disabilities of the Arm, Shoulder and Hand Questionnaire (DASH), hand grip strength with a hand dynamometer, functional independence with the Functional Independence Measure (FIM), and physical activity level with the Physical Activity Scale for Individuals with Physical Disabilities (PASIPD). Pearson correlation analysis was used for statistical analysis.

**Results:** A strong positive correlation was found between 6BPRT and handgrip strength ( $p < 0.001$ ). A strong negative correlation was found between the placement and turning subtests of MDT and 6BPRT, and a moderate negative correlation with FIM ( $p < 0.001$ ). DASH scores showed a negative correlation with hand grip strength, a positive correlation with MDT subtests, and a negative correlation with PASIPD ( $p < 0.001$ ). PASIPD was positively correlated with handgrip strength and FIM ( $p < 0.001$ ).

**Conclusion:** Significant relationships were found between upper extremity function, muscle endurance, functional independence, physical activity level, and symptoms in individuals with paraplegia.

**Keywords:** 6BPRT, Exercise Test, Functional Capacity Evaluation, Paraplegia, Upper Extremity Endurance

**OP61**

**Neuromuscular hip and knee strengthening exercises and Mulligan taping applied in addition to exercises in individuals with asymptomatic dynamic knee valgus: comparison of muscle strength, dynamic balance, and valgus**

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**Purpose:** This study aimed to compare the effects of neuromuscular hip and knee strengthening exercises alone and in combination with Mulligan taping on muscle strength, dynamic balance, and knee valgus angle in individuals with asymptomatic dynamic knee valgus (DKV).

**Methods:** In this randomized controlled trial, 44 female participants aged 18–45 years with DKV were randomly assigned to an exercise-only group (control, n=22) or an exercise plus Mulligan taping group (experimental, n=22). Both groups performed neuromuscular hip and knee strengthening exercises under physiotherapist supervision three times per week for six weeks. The experimental group additionally received Mulligan taping during the same period. Outcome measures included functional knee valgus (FPPA), hip abductor and knee extensor strength, hip internal and external rotation range of motion, dynamic balance (Y-Balance Test), and Q-angle. Assessments were performed before and after the intervention.

**Results:** Both groups demonstrated significant improvements in all parameters except the Q-angle ( $p < 0.05$ ). Between-group comparisons revealed that the experimental group showed significantly greater improvements in FPPA, hip abductor and knee extensor strength, hip internal and external rotation range of motion, and anterior and posterolateral reach distances on the Y-Balance Test ( $p < 0.05$ ).

**Conclusion:** Adding Mulligan taping to neuromuscular strengthening exercises enhances muscle strength, dynamic balance, and knee alignment in individuals with asymptomatic DKV. This study provides novel evidence supporting the combined use of taping and exercise in rehabilitation strategies for DKV.

**Keywords:** Dynamic Balance, Dynamic Knee Valgus, Neuromuscular Training, Mulligan Taping, Exercise

**OP62**

**The effect of dance-based exercises on balance, coordination and cognitive functions in preschool children**

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**Purpose:** This study aims to evaluate the effect of dance-based exercise programmes on balance, coordination and cognitive functions in children during the pre-school period, a critical stage in the formation of lifelong behaviour patterns.

**Methods:** Thirty children aged 4–6 years were randomized to an intervention group (n=15; 5.70±0.49 years) or a control group (n=15; 5.90±0.52 years). Balance was assessed with the Single-Leg Stance (SLST), Functional Reach (FRT), and Timed Up and Go (TUG) tests; coordination with the Ruler Drop (RDT), Finger-to-Nose (FTN), and Target Throwing (TTT) tests; and cognitive function with the Childhood Executive Functioning Inventory (CHEXI) – Teacher Form. The intervention group received dance-based exercise training for 6 weeks, twice weekly for 60 minutes, under physiotherapist supervision; the control group continued routine daily living and play activities. Assessments were conducted at baseline and at week 6. Data were analyzed using IBM-SPSS Statistics 28.0.

**Results:** No significant between-group differences were observed at baseline ( $p > 0.05$ ). Post-intervention, the intervention group showed significant improvements in balance, coordination, and cognition (all  $p < 0.05$ ). Between-group comparisons favored the intervention group for all outcomes ( $p < 0.05$ ). The largest improvement was observed in CHEXI-Teacher scores ( $\Delta -8.3 \pm 2.1$  points;  $p < 0.01$ ), followed by FRT ( $\Delta +5.3 \pm 1.2$  cm;  $p < 0.001$ ), TUG ( $\Delta -1.7 \pm 0.6$ s;  $p = 0.001$ ), and significant gains on the coordination tests, TTT and FTN (both  $p < 0.05$ ).

**Conclusion:** This study demonstrates that a six-week dance-based exercise programme yields significant improvements in balance, coordination, and cognitive functions in preschool children. These findings suggest that integrating rhythm- and movement-based approaches into preschool education programmes may beneficially support children's development.

**Keywords:** Balance, Cognitive Functions, Coordination, Dance-Based Exercise, Preschool Children

**OP63****The effect of upper extremity anthropometric characteristics on functional hand skills and reaction time**

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**Purpose:** This study aimed to investigate the relationship between upper extremity anthropometric measurements and their effects on functional skills and reaction time.

**Methods:** Forty-six healthy individuals aged 18–25 participated in the study. Measurements of the arm, forearm, and hand lengths and circumferences were taken using a tape measure. Functional skills were assessed with the Purdue Pegboard Test, and reaction time was measured using the Nelson Hand Reaction Test. Gross grip strength was evaluated with a dynamometer, and fine grip strength with a pinch meter. Statistical significance was accepted at  $p < 0.05$ .

**Results:** There were significant negative correlations between dominant arm, forearm, and hand circumferences and dominant hand Purdue Pegboard scores. Negative correlations were also observed between dominant hand circumference and non-dominant hand length with the assembly test, and between non-dominant hand circumference and non-dominant hand Purdue Pegboard scores ( $p < 0.05$ ). A positive correlation existed between non-dominant forearm circumference and reaction time ( $p = 0.046$ ). Additionally, significant positive correlations were found between upper extremity measurements and gross grip strength; arm circumference and hand length with lateral pinch strength; and forearm length with fine grip strength ( $p < 0.05$ ). All anthropometric values and grip strengths, except dominant forearm circumference, were significantly higher in males than females ( $p < 0.05$ ). Left-handed individuals demonstrated greater non-dominant hand grip strength compared to right-handed individuals ( $p < 0.05$ ).

**Conclusion:** Upper extremity anthropometric characteristics should be considered in the evaluation of functional skills and reaction time. These measurements may also influence gross and fine grip strength.

**Keywords:** Anthropometric measurement, Function, Reaction time

**OP64****Violence against women: a global issue and strategies for combating it**

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**Purpose:** Violence against women is a serious global public health issue that encompasses all forms of physical, sexual, psychological, and economic harm that violate women's human rights.

**Methods:** According to the World Health Organization, approximately 641 million women aged 15 and older worldwide have experienced intimate partner violence at some point in their lives. Among women aged 20–44, this rate ranges between 26–28%. Data on women aged 50 and above is limited, with most available information originating from high-income countries. Incidence rates are notably higher in regions such as South Asia (35%) and Sub-Saharan Africa (33%). Conversely, the lowest rates are reported in the four sub-regions of Europe (16–23%), as well as in Central Asia (18%), East Asia (20%), Southeast Asia (21%), and Australia and New Zealand (23%). These findings emphasize the significance of regional differences and the need for locally tailored intervention strategies.

**Results:** In response to this global issue, several international programs have been developed. The United Nations Millennium Development Goals (MDGs) and their successor, the Sustainable Development Goals (SDGs), aim to promote gender equality and empower women. The Spotlight Initiative, implemented in over 30 countries, has made significant progress in legal reforms, service provision, and support for women's rights organizations. The What Works program has contributed to 30–50% reductions in violence rates in targeted regions.

**Conclusion:** The One Billion Rising campaign uses art to raise awareness, while Guardian Girls International empowers women through self-defense training. Moreover, mobile applications such as Bright Sky, Circle of 6, and Saahas provide digital support for survivors, serving as valuable tools in the global fight against gender-based violence.

**Keywords:** Woman, Violence, Gender-Based Violence

## OP65

**Immediate gait effects of single-session curve-specific postural training in scoliosis**Ayşe Zengin Alpözgen<sup>1</sup>, Nilay Arman<sup>1</sup>, Merve Koyuncu Cenikli<sup>2</sup>, Elçin Akyürek<sup>2</sup><sup>1</sup>*Istanbul University-Cerrahpaşa, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, İstanbul, Türkiye*<sup>2</sup>*Istanbul University-Cerrahpaşa, Institute of Postgraduate Education, Department of Physiotherapy and Rehabilitation, İstanbul, Türkiye*

**Purpose:** This study aimed to evaluate the immediate effects of a single-session, curve-specific postural awareness training based on motor learning principles on gait parameters in individuals with scoliosis, by analyzing curve pattern, dominant side, and body statics.

**Methods:** Two adult individuals diagnosed with scoliosis were included: one with a right thoracic and the other with a left lumbar curve, both with the curve on the side opposite to their dominant limb. Gait analysis was performed using the Digitsole Pro-Smart Insole System, which assesses spatiotemporal parameters. Participants were asked to walk along a straight path at a natural pace for 2 minutes, and data were collected. Step length, walking speed, cadence, stance time, and foot progression angle were analyzed before and after the intervention. Balance was also assessed using a single-leg stance test with eyes open and closed.

**Results:** Initially, both cases exhibited reduced walking speed, shorter stance time on the side opposite the curve, and asymmetry in foot progression angles (right: 11.3°, left: 9.2°). Proprioceptive deficits were observed on the curved side (5–8s). Following the intervention, walking speed increased (6.2–5.7km/h), cadence improved (114→130 steps/min; 122→126 steps/min), and foot progression angles became more symmetrical (right–left: 8.5°–8.7°). Stance time approached the normative value (60%), and step length increased.

**Conclusion:** These findings suggest that short-term, curve-specific postural awareness training based on motor learning principles may immediately influence load transfer and gait patterns in individuals with scoliosis. Increased postural and movement awareness may also contribute to long-term behavioral change.

**Keywords:** Cadence, Curvature, Posture, Proprioception, Spine

## OP66

**TUBITAK 4008 project – paralympic athlete festival: learn, become aware, discover your talent, play with athletes**Mirsad Alkan<sup>1</sup>, Burcu Işıkcı<sup>1</sup>, Hatice Karabulut<sup>1</sup>, Nalan Soydaş Engin<sup>1</sup>, Güldeniz Yılmaz Yelvar<sup>1</sup>, Nilay Demir<sup>2</sup>, Ece Sarıbek<sup>2</sup>, Kübra Nur Yıkılmaz<sup>2</sup>, Burcu Dağ<sup>3</sup>, Engin Ekinci<sup>3</sup><sup>1</sup>*Istinye University Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation*<sup>2</sup>*Istinye University Physiotherapy and Rehabilitation Application and Research Center (ISU-FIZYOTEM)*<sup>3</sup>*Disabled Athlete Training and Solidarity Association*

**Purpose:** Participation in social life, access to physical activity, and engagement in sports are critical determinants of quality of life for individuals with disabilities. However, these individuals frequently encounter physical and social barriers that restrict involvement and may lead to isolation. This project aimed to enhance participation in physical activity, promote interest in Paralympic sports, and strengthen social inclusion by fostering equitable engagement in recreational activities with family members and close social networks. Additionally, the project sought to encourage individuals demonstrating potential talent in Paralympic disciplines.

**Methods:** The project was implemented as a one-day comprehensive festival organized around four core workshops. The “Learn Workshop” introduced concepts related to physical fitness, exercise physiology, and Paralympic sport biomechanics through hands-on instruction. The “Awareness Workshop” addressed themes such as fair play, accessibility, and social equity. The “Discover Your Talent Workshop” enabled participants to experience wheelchair basketball, boccia, and archery, while virtual and augmented reality applications increased the accessibility of sport simulations. Physiotherapists conducted functional assessments and directed participants toward sports disciplines aligned with their physical abilities. The “Play with Athletes Workshop” facilitated direct interaction with professional Paralympic athletes, strengthening role-model effects and motivating participants.

**Results:** Eighty individuals took part in the event. Families and university students were informed about physical activity and participation. The festival encouraged individuals with disabilities to engage in recreational sports. Two participants were guided toward professional Paralympic pathways (one to para-archery and one to basketball). Communication between participants and disability sports foundations and coaches was also supported.

**Conclusion:** The event successfully encouraged physical activity participation among individuals with disabilities. Caregivers of individuals with disabilities and professionals working in the field were given the opportunity to experience new methods on the basis of equal opportunity.

**Keywords:** Disability, Family Participation, Physical Activity, Athlete Health

**OP67****A comparative study on the acute effects of different passive warm-up methods applied prior to exercise on balance and jump performance**

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**Purpose:** This study aims to compare the acute effects of two passive warm-up methods—massage and infrared therapy—on motor performance. While passive warm-up may help prevent musculoskeletal injuries, improve muscle performance, and support postural control, related evidence in the literature remains limited. This research seeks to contribute to current findings and offer practical data for physiotherapy, rehabilitation, and sports sciences.

**Methods:** The study included 100 healthy volunteers aged 18–35 years with no musculoskeletal disorders or limitations to physical activity. Physical activity levels were assessed using the IPAQ-Short Form. Participants were randomly divided into two groups. Group one completed a 5-minute cycling warm-up followed by 10 minutes of infrared therapy. Group two underwent the same cycling protocol, followed by 10 minutes of massage. Pre- and post-intervention assessments included: Y Balance Test (dynamic balance), Flamingo Balance Test (static balance), MyJump2 app (vertical and horizontal jump performance), and muscle shortness measurements for the hamstring, gastro-soleus, and quadriceps.

**Results:** Mean age and BMI were similar between groups ( $p > 0.05$ ). Both groups showed statistically significant improvements after intervention ( $p < 0.05$ ), but no significant differences were found between groups in performance or muscle shortness changes ( $p > 0.05$ ). The degree of change between pre- and post-tests also showed no significant group differences.

**Conclusion:** Both methods positively impacted motor performance acutely. Although no significant intergroup differences were found, the greater effect size in the massage group suggests its potential as a preferred passive warm-up approach.

**Keywords:** Balance, Infrared Therapy, Massage, Passive Warm-Up, Vertical Jump

**OP68****Does rectus abdominis muscle fatigue affect muscle tone? - a pilot study**

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**Purpose:** The rectus abdominis (RA) muscle plays a key role in core stabilization, respiratory support, and the regulation of intra-abdominal pressure during functional movements. Neuromuscular alterations that occur following fatigue may influence biomechanical properties such as muscle tone, and objective assessment of these changes is important for both clinical and performance-related applications. Therefore, this study aimed to acutely evaluate the tonus response of the RA muscle to fatigue induced by two different exercises.

**Methods:** A fatigue protocol involving static trunk-hold and dynamic sit-up exercises was used to induce RA-specific muscle fatigue. RA muscle tone was measured before and after the protocol using the MyotonPRO™ device, and perceived fatigue was assessed with the Modified Borg Scale.

**Results:** 45 healthy young adult males (mean age:  $22.44 \pm 2.03$  years) participated in the study. RA muscle tone was  $11.65 \pm 2.31$  Hz before the fatigue protocol and  $11.48 \pm 2.28$  Hz afterward, and this difference was not statistically significant ( $p > 0.05$ ). The pre-protocol Borg score was  $1.27 \pm 0.45$ , increasing to  $6.00 \pm 1.04$  post-protocol, indicating a statistically significant rise in perceived fatigue ( $p < 0.001$ ).

**Conclusion:** Although the protocol successfully induced RA-targeted fatigue, no acute effect on muscle tone was observed. This suggests that the RA maintains its tonus characteristics despite short-term fatigue loading. Literature also indicates that abdominal muscles exhibit high endurance against brief loading, supporting the current findings. Future studies comparing different muscle groups or examining prolonged fatigue effects may provide a more comprehensive understanding of RA muscle tone variability.

**Keywords:** Fatigue, Muscle tone, MyotonPRO, Rectus Abdominis

#### OP69

##### Does prolonged desk work negatively affect cognitive status and balance?

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**Purpose:** The purpose of this study is to evaluate the effects of long-term desk work on cognitive status and balance.

**Methods:** The study was conducted at Istanbul Atlas University between January and May 2025. 42 individuals between the ages of 22-40 who worked at least 6 hours at a desk were included in the study. The cognitive functions of the participants were evaluated with the Stroop Test, Trail Making Test, Verbal Fluency Test, Digit Span Test, and California Verbal Learning Test; and their balance status was evaluated with the One-Legged Stand and Y Dynamic Balance Test. The measurements were performed twice, before and after work.

**Results:** Statistically significant differences were observed in some subparameters of the Stroop Test, Trail Making Test, and Verbal Fluency Test results before and after work ( $p < 0.05$ ). Increased error rates were detected after work in the California Verbal Learning Test results ( $p < 0.01$ ). In balance tests, a significant decrease was found in the time spent standing on one leg in the static assessment after work ( $p < 0.01$ ), while no significant change was observed in dynamic balance measurements ( $p > 0.05$ ).

**Conclusion:** Prolonged desk work leads to performance decreases, especially in cognitive areas such as attention, executive functions, and verbal memory; however, it has more limited effects on balance. The findings support the idea that work environments should be organized in a way that protects cognitive and physical health.

**Keywords:** Balance, Cognitive Function, Mental Fatigue, Office Workers

#### OP70

##### The role of the three delays model in explaining maternal morbidity and mortality in Türkiye: current evidence and implications

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**Purpose:** This review aims to examine the factors influencing maternal morbidity and mortality in Türkiye within the framework of the Three Delays Model, to evaluate the country-specific reflections of the model based on national and international literature published between 2020 and 2025, and to propose system-level recommendations to improve maternal health outcomes.

**Methods:** This narrative review examined studies published between 2020 and 2025 on the association between the Three Delays Model and maternal morbidity and mortality in Türkiye. Relevant national and international studies addressing delay components were included and thematically analyzed. Türkiye-specific findings were then compared with global evidence.

**Results:** The findings show that maternal morbidity and mortality in Türkiye are associated with the Three Delays Model, with some studies reporting statistically significant relationships ( $p < 0.05$ ). The first delay relates to delayed care-seeking, the second to transportation and referral barriers, and the third to facility-level care quality and EmONC capacity. Despite overall declines in maternal mortality, regional disparities remain.

**Discussion:** The Three Delays Model remains relevant in explaining maternal health challenges in Türkiye. Reducing regional disparities and strengthening referral and EmONC systems remain essential.

**Keywords:** EmONC, Maternal Morbidity, Maternal Mortality, Obstetric Care, Three Delays Model

**PP1****Brain – gut axis and effects of psychobiotics on mental status**

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**Purpose:** The bidirectional communication between the brain and the gut, known as the “gut-brain axis”, has attracted significant attention in recent years. This axis represents a complex interaction involving the gut microbiota, the nervous system, and the immune system, exerting a profound influence on individuals’ mental status. Psychobiotics play a crucial role within this interaction network. This study aims to summarize, based on the current literature, the potential effects of psychobiotics on mental health through the gut-brain axis.

**Methods:** In this review, Turkish and English articles published between 2020 and 2025 were searched across PubMed, Science Direct, and Google Scholar databases. Studies examining the effects of psychobiotics on mental health through the gut-brain axis were identified and evaluated.

**Results:** The gut-brain axis provides a strong biological framework for explaining the relationship between nutrition and mental health. Foods with psychobiotic properties, when consumed regularly, can be considered a complementary approach that supports psychological well-being. These findings highlight that psychobiotics should be considered not only in gastrointestinal but also in psychological health-focused nutritional therapies.

**Conclusion:** Foods containing probiotics and prebiotics are regarded as a promising approach for preventing and treating microbiota-related dysbiosis and neurodegenerative disorders. However, there remains a need for more comprehensive human studies to investigate the potential individual-level effects of various psychobiotic food groups on psychiatric disorders.

**Keywords:** Brain-Gut Axis, Psychobiotics, Microbiota

**PP2****The predictive role of handgrip strength on physical and cognitive functions in older adults**Muhammed Furkan Oruç<sup>1</sup>, Fatih Aykut Çavdar<sup>2</sup>, Ezgi Eryıldız<sup>2</sup>, Eren Timurtaş<sup>2</sup><sup>1</sup>*Marmara University, Institute of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Turkey*<sup>2</sup>*Marmara University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Turkey*

**Purpose:** Aging negatively affects independence and quality of life through declines in strength, endurance, balance, and cognition. Handgrip strength (HGS) reflects overall functional capacity and is linked to mortality, fall risk, and independence loss. However, studies examining its relation to both physical and cognitive functions are limited. This study investigated the effects of HGS, demographics, and chronic disease count on physical and cognitive performance in older adults.

**Methods:** In this cross-sectional study (Istanbul, January–August 2025), 66 older adults without severe functional limitations were recruited via snowball sampling. HGS was measured using a dynamometer. Physical performance was assessed by the Sit-to-Stand Test (STS), Countermovement Jump Test (CMJ), and 2-Minute Walk Test (2MWT); cognitive performance by the Symbol Digit Modalities Test (SDMT) and Raven’s Standard Progressive Matrices Test (RSPMT). Independent variables were HGS, age, sex, education, and number of chronic diseases; dependent variables were test scores. Analyses were conducted using Pearson correlation and multiple regression (SPSS 30.0).

**Results:** HGS correlated positively with STS, CMJ, 2MWT, and SDMT. The highest explanatory power was in the SDMT model (Adj.  $R^2=0.258$ ), followed by STS (0.135), RSPMT (0.110), 2MWT (0.103), and CMJ (0.096).

**Conclusion:** HGS predicts both physical and cognitive performance in older adults. As a low-cost, quick, and reliable screening tool, it can be applied in clinical and community settings and serve as an early biomarker in longitudinal research.

**Keywords:** Aging, Cognitive Dysfunction, Handgrip Strength, Physical Performance

**PP3****Investigation of the association between muscle strength, physical performance and activities of daily living in hospitalized patients with heart failure**

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**Purpose:** Muscle weakness is known to be an independent predictor of functional loss in older adults. Peripheral and respiratory muscle strength decreases in hospitalized patients with heart failure (HF). However, the association between muscle strength, physical performance, and activities of daily living is unclear. The purpose of this study was to investigate the association between muscle strength, physical performance and activities of daily living in hospitalized patients with HF.

**Methods:** Thirteen hospitalized patients with HF (4 females; 9 males) were included in this study. Grip strength was assessed with a hydraulic dynamometer. For respiratory muscle strength maximal inspiratory pressure (MIP) and maximal expiratory pressure (MEP) were evaluated using an electronic mouth pressure device. Physical performance was assessed with the Short Physical Performance Battery (SPPB), and activities of daily living were assessed with the Barthel index.

**Results:** The median age of the participants was 72.0 (67.0-77.5) and the median ejection fraction was 45.0 (27.5-57.5). There was a positive significant correlation between grip strength and SPPB ( $r=0.654$ ;  $p=0.015$ ) and Barthel index ( $r=0.558$ ;  $p=0.048$ ). MIP and MEP were found to be associated with SPPB MIP:  $r=0.714$ ;  $p=0.006$ ; MEP:  $r=0.571$ ;  $p=0.042$ ). There was a positive significant correlation between MIP and Barthel index ( $r=0.655$ ;  $p=0.015$ ).

**Conclusion:** Our study suggest that peripheral muscle strength and respiratory muscle strength are associated with physical performance and activities of daily living in hospitalized geriatric HF patients. Integrative approaches targeting both peripheral and respiratory muscles during early exercise-based rehabilitation in hospitalized geriatric patients with HF will also improve functional status.

**Keywords:** Functional Status, Heart Failure, Muscle Strength

**PP4****Smart technologies in women's health: breast health, early diagnosis, and risk assessment**

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**Purpose:** To examine the role of smart health technologies in supporting breast health in women; to reveal the impact of AI-supported screening systems, mobile health applications, and digital risk assessment tools on breast cancer early diagnosis, screening awareness, and individual risk management on women's health behaviors, knowledge levels, and self-care practices.

**Methods:** This study is a literature review. Research published between 2015 and 2025 was examined. The studies included in the review address developments in smart technologies used in breast health, artificial intelligence-supported imaging and early diagnosis systems, the experiences of women using mobile health applications, the impact of digital risk assessment tools on clinical practice, and women's digital literacy regarding breast health.

**Results:** The smart screening system provided higher diagnostic accuracy compared to traditional mammography. The artificial intelligence-based risk model is more effective than standard methods in identifying high-risk individuals. The mobile reminder application increased the rates of regular check-ups and early referral. Sensor-based tissue analysis reduced inter-observer evaluation differences. Users' acceptance level of smart technologies is high and supports clinical integration. The combined use of smart technologies has significantly increased the overall efficiency of the early diagnosis process.

**Conclusion:** Smart technologies have been shown to strengthen early diagnosis and risk assessment in breast health. Artificial intelligence applications reduce the workload of healthcare professionals, decrease diagnostic errors, and increase patient safety. Mobile health and wearable technologies raise women's awareness of their own health and support compliance with regular screenings.

**Keywords:** Breast Health, Early Diagnosis, Smart Technologies, Women's Health

**PP5****The usability of smart health technologies in menopause management: adaptation, awareness, and the nursing perspective**Mustafa Akman<sup>1</sup>, Mustafa Kılavuz<sup>1</sup><sup>1</sup>Adiyaman University, Faculty of Health Sciences, Nursing, Adiyaman, Turkey

**Purpose:** This review examines the applicability of digital health technologies during menopause, women's adaptation and awareness levels, and implications for nursing practice. The study addresses physiological, psychosocial, and clinical impacts of menopause within the context of digital monitoring tools, aiming to elucidate smart health applications' contribution to care processes.

**Methods:** This descriptive review analyzed studies investigating digital health applications in menopause management between 2015 and 2025. Literature search was conducted using PubMed and Google Scholar databases. Selected studies were evaluated under categories of digital monitoring of vasomotor symptoms, application-based behavioral interventions, digital health literacy, and nursing roles.

**Results:** Digital monitoring tools facilitate continuous tracking of menopausal symptoms including hot flashes, sleep disturbances, and anxiety. These tools reduce healthcare access time and support the development of personalized care plans. Smartphone applications provide behavioral interventions as alternatives to hormone therapy, thereby reducing symptom burden and enabling rapid information access. Increased digital health literacy correlates with significant enhancement in technology utilization. Nurses' educational, consultative, and tele-monitoring roles enhance the efficacy of digital platforms.

**Conclusion:** Findings indicate that digital health technologies improve quality of life in menopause management by ensuring symptom monitoring continuity and reducing temporal and spatial constraints. Infrastructure, motivational, and literacy-related limitations restrict widespread adoption, emphasizing nursing involvement's critical importance in sustaining digital menopause care. This review highlights the necessity of integrating digital health technologies into women's health services to promote accessible, consistent, and individualized care.

**Keywords:** Digital Monitoring, Menopause, Nursing Role, Smart Health Technologies, Quality of Life

**PP6****Digital awareness in women's health: fertility, menstrual cycle and hormonal tracking**Gizem Özkol<sup>1</sup>, Mustafa Kılavuz<sup>1</sup><sup>1</sup>Adiyaman University, Faculty of Health Sciences, Nursing, Adiyaman, Turkey

**Purpose:** This study aims to examine the importance of digital awareness in women's health and to reveal the effects of tracking fertility, menstrual cycles, and hormonal changes through mobile applications and digital tools on women's health behaviors, knowledge, self-management skills.

**Methods:** This study is a literature review. Research published between 2015-2025 was considered. The included studies focus on advances in women's health monitoring technologies, user experiences with digital tracking applications, the impact of digital tracking on clinical care, digital literacy, and applications used for women's health.

**Results:** Digital tracking applications significantly improved behaviors related to monitoring menstrual cycles, fertility, and hormonal processes. Women using digital tracking reported increased health awareness, earlier recognition of cycle changes, more accurate ovulation predictions, and better use of health services. Some clinical studies indicated high accuracy of digital tracking and significant improvements in user self-management ( $p < 0.05$ ). Data privacy concerns, algorithmic biases, and misinformation risks were identified as major factors limiting sustainable use. Women with low digital literacy faced difficulties using applications and showed a tendency to misinterpret data.

**Conclusion:** Health technologies positively influence behaviors by increasing women's body awareness. Digital applications are practical, accessible, and user-friendly, particularly for cycle tracking, fertility planning, and monitoring hormonal changes. Sustainable benefits require secure data management, scientifically accurate content, and improved digital health literacy. Integrating digital tools with healthcare professionals reduces the risk of misinformation and contributes to better clinical outcomes. Digital tracking plays a complementary role in women's health, but ethical and technological boundaries must be respected.

**Key Words:** Digital Health, Mobile Health, Women's Health

**PP7****Digital transformation in mental health: awareness applications and artificial intelligence**Ayşe Aslan<sup>1</sup>, Mustafa Kılavuz<sup>1</sup><sup>1</sup>Adiyaman University, Faculty of Health Sciences, Nursing, Adiyaman, Turkey

**Purpose:** This review aims to examine the effects of mindfulness applications and artificial intelligence-based digital tools, which constitute two fundamental components of digital transformation in mental health. Additionally, it seeks to evaluate the advantages, limitations, and potential contributions of these technologies to clinical practice.

**Methods:** This study is a review based on the analysis of national and international literature published between 2015 and 2024. The databases PubMed, Scopus, and Google Scholar were searched using the keywords “digital mental health,” “mindfulness applications,” “artificial intelligence,” and “mental health technologies.” Scientific studies that addressed digital mental health applications, mindfulness-based mobile tools, or AI-supported psychological interventions and had accessible full texts were included. The methods, scope, and findings of the selected studies were systematically examined, and their results were comparatively evaluated.

**Results:** Digital mindfulness applications have been shown to reduce stress, anxiety, and depression symptoms while improving sleep quality and emotion-regulation skills. AI-based systems enhance mental health monitoring through mood tracking, risk assessment, personalized recommendations, and early-warning mechanisms. AI-supported chatbots, particularly for mild to moderate psychological distress, can provide support based on principles of cognitive-behavioral therapy.

**Conclusion:** Digital mental health applications, particularly mindfulness-based tools and artificial intelligence supported systems, offer effective solutions that complement traditional psychological interventions. These technologies help individuals enhance self awareness, monitor their mood, and maintain daily functioning. Artificial intelligence strengthens clinical processes by providing decision support to professionals, while the development of hybrid models and the reinforcement of ethical frameworks will be essential in the future.

**Keywords:** Artificial Intelligence, Digital Mental Health, Mental Health Technologies, Mindfulness Applications

**PP8****Digital health management in childhood: vaccination schedule, infection monitoring, and risk assessment**Neslihan Durmaz<sup>1</sup>, Mustafa Kılavuz<sup>1</sup><sup>1</sup>Adiyaman University, Faculty of Health Sciences, Nursing, Adiyaman, Turkey

**Purpose:** This study aims to examine the impact of digital health management during childhood on vaccination schedule tracking, infection monitoring, and risk-assessment processes, and to demonstrate the contribution of digital applications to preventive health services.

**Methods:** The study was conducted by reviewing national and international scientific articles published between 2018 and 2024 on digital health management, immunization services, infection surveillance systems, and pediatric risk assessment. The literature search was carried out using PubMed and Google Scholar. Studies focusing on mobile health applications, electronic health records, digital monitoring systems, and artificial intelligence-based risk models were analyzed using a content-analysis approach.

**Results:** The studies reviewed show that digital health applications provide meaningful improvements in child health management. In vaccination schedule management, digital reminder systems and electronic immunization records enhance adherence and reduce delays. In infection monitoring, symptom-tracking applications and digital notification systems support early detection and referral. In risk assessment, electronic health data and AI-supported models help early identification of pediatric risks. Regular parental use of digital health applications is expected to positively influence children’s monitoring processes.

**Conclusion:** Digital health tools enhance continuity of care, facilitate parental education, and support clinical decision-making during childhood. However, digital literacy, data-security concerns, technological infrastructure differences, and lack of standardization remain significant limitations. Overall, digital health management has strong potential to strengthen preventive healthcare services, and supporting healthcare professionals in effectively using these technologies is recommended.

**Keywords:** Vaccination Schedule, Child Health, Digital Health, Infection Monitoring, Risk Assessment

**PP9**

**Investigation of the biomarker potential of extracellular mitochondrial and nuclear dna in familial mediterranean fever patients**

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**Purpose:** Familial Mediterranean Fever (FMF) is characterized by recurrent fever and serositis attacks, exhibiting a lifelong clinical course of inflammatory activity episodes followed by remission. While classical acute-phase reactants are primarily used for monitoring disease activity, the potential of extracellular nuclear DNA (cf-ncDNA) and mitochondrial DNA (cf-mtDNA) as next-generation inflammation biomarkers is gaining increasing interest. This prototype study involving 10 patients aimed to compare plasma levels of cf-ncDNA and cf-mtDNA and the ratios between these two fractions during attack and remission periods in FMF patients.

**Methods:** Blood samples collected during the attack and remission phases were processed by double centrifugation for plasma separation. Extracellular nucleic acids were isolated using commercial kits, and quantitative PCR was performed targeting the cf-ncDNA (GADPH) and cf-mtDNA (ATP6) regions. Individual patient profiles were compared across clinical phases.

**Results:** Preliminary data from 10 patients, although limited by small sample size, suggest that cf-mtDNA levels during attacks may be higher than in the control group. Furthermore, the majority of cases showed a trend of increased mtDNA in the remission-attack comparison. However, due to inter-individual variability, these findings require validation in larger patient cohorts.

**Conclusion:** This study demonstrates dynamic changes in cf-ncDNA and cf-mtDNA levels between FMF attack and remission phases, suggesting inflammation alters extracellular DNA composition. While these preliminary findings indicate cf-DNA's potential as an inflammatory biomarker in FMF, the limited sample size necessitates larger prospective studies to validate its clinical utility and establish reliable cutoff values for disease monitoring.

**Keywords:** Biomarkers, Cell-free DNA (cf-DNA), Familial Mediterranean Fever (FMF)