

Paris

PROCEEDINGS BOOK

BUSINESS JOURNAL 2ND
INTERNATIONAL PARIS
APPLIED SCIENCE
CONGRESS

December, 21-24, 2023
Paris, France

EDITOR:
ASSOC. PROF. DR. MÜNEVVER BAYAR

2023



BUSINESS JOURNAL 2nd INTERNATIONAL PARIS APPLIED SCIENCE
CONGRESS

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Assoc. Prof. Dr. Münevver BAYAR

by

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CONGRESS ID

CONGRESS TITLE

BUSINESS JOURNAL 2nd INTERNATIONAL PARIS APPLIED SCIENCE CONGRESS

DATE and PLACE

December, 21-24, 2023
Paris, FRANCE

ORGANIZATION

UBS-Institute of International Scientific Research and Strategy Development Association,
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NUMBER of ACCEPTED PAPERS- *(Türkiye-13, Other Countries-14)*

NUMBER OF ACADEMİCIANS ATTENDING THE CONGRESS:

Türkiye-13 Other Countries-14

PARTICIPANTS COUNTRY

Türkiye-13, India-3, Pakistan-1,
Romania-1, Algeria-4, Greece-1, Morocco-1, Kazakhstan-2, Oman-1

PRESENTATION

Oral presentation

EVALUATION PROCESS

All applications have undergone a double-blind peer review process

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BUSINESS JOURNAL 2nd INTERNATIONAL

PARIS CONGRESS

DECEMBER 21-24 / PARIS

CONFERENCE PROGRAM



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CONGRESS LANGUAGES: **English and All Turkish Dialects**

Opening Ceremony

• 23.12.2023 - 15⁴⁵–16¹⁵

Paris-FRANCE

Turkish Muzik Recital

Artist

Dr. A. EMSAL AKSIN ÇEVİK

Bağlama

Mehmet MUTLU

Mey-Duduk

Gökhan KULAY

Speeches:

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Universiti Malaya, Malaysia & NDU, Pakistan

BUSINESS JOURNAL 2nd INTERNATIONAL PARIS CONGRESS
FACE TO FACE PRESENTATIONS

23.12.2023



PARIS LOCAL TIME
10⁰⁰ : 12⁰⁰



ANKARA LOCAL TIME
12⁰⁰ : 14⁰⁰

HEAD OF SESSION: Assoc. Prof. Dr. Münevver BAYAR

Authors	Affiliation	Presentation title
Assoc. Prof. Dr. Zeynep KARAMAN ÖZLÜ Ress. Assist. Zeynep GÜRKAN	<i>Ataturk University, Faculty of Nursing Yüzüncü Yıl University, Faculty of Health Sciences</i>	A GROUNDBREAKING APPROACH IN MINIMALLY INVASIVE SURGERY: VIDEO ASSISTED THORACOSCOPIC SURGERY (VATS)
Assist. Prof. Dr. Hatice AZİZOĞLU Ress. Assist. Zeynep GÜRKAN MD. Mehmet AŞAM Nurse Yasemin BOZKURT Assoc. Prof. Dr. Canan DEMİR	<i>Yüzüncü Yıl University, Faculty of Health Sciences Health Sciences University Van Training and Research Hospital</i>	EFFECT OF LOCAL ANESTHESIC AGENTS ON OPIOID USE AND RECOVERY IN PATIENTS UNDERGOING OPEN HEART SURGERY
Assoc. Prof. Dr. Münevver BAYAR	<i>Social Security Institution, Türkiye</i>	HUMAN RESOURCES AND INNOVATION: LEADERSHIP AND CREATIVITY IN THE FUTURE BUSINESS WORLD
Dr. Nadire KANTARCIOĞLU	<i>International Scientific Research and Strategy Development Association, Ankara, Türkiye</i>	THE NEXUS OF HUMAN RESOURCE MANAGEMENT PRACTICES AND WORKPLACE CONTENTMENT: EXPLORING JOB SATISFACTION DYNAMICS
Ress. Assist. İlknaz KARA	<i>Binali Yıldırım University, Faculty of Health Sciences</i>	NURSING BASED ON CARE
Assoc. Prof. Dr. Nuran VARIŞLI	<i>Social Security Institution, Türkiye</i>	HUMAN RESOURCES MANAGEMENT: INNOVATIVE SOLUTIONS AND ORGANIZATIONAL DYNAMICS

**BUSINESS JOURNAL 2nd INTERNATIONAL PARIS SOCIAL
SCIENCE CONGRESS
ONLINE PRESENTATIONS**

23.12.2023

HALL-1 / SESSION-1



PARIS LOCAL TIME
14¹⁵ : 16⁰⁰



ANKARA LOCAL TIME
16¹⁵ : 18⁰⁰

HEAD OF SESSION: Assoc. Prof. Dr. Levent AKSU

Authors	Affiliation	Presentation title
Assoc. Prof. Dr. Sevgi IŞIK EROL	<i>Batman University</i>	THE EFFECT OF DIGITAL WORKING PLATFORMS ON EMPLOYEES
Assoc. Prof. Dr. Sevgi IŞIK EROL	<i>Batman University</i>	DIGITAL PLATFORM BUSINESSES: Within the Scope of Opportunities and Challenges Brought by Digitalization
Assoc. Prof. Dr. Can YARDIMCI	<i>Afyon Kocatepe University</i>	ANALYSIS OF RELATION BETWEEN INFLATION AND EXCHANGE RATE FOR TURKISH ECONOMY: APPLICATION OF VAR MODEL
Assoc. Prof. Dr. Can YARDIMCI	<i>Afyon Kocatepe University</i>	REVISITING THE RELATIONSHIP BETWEEN CURRENT ACCOUNT DEFICIT AND ECONOMIC GROWTH: A CASE OF TURKEY
Assoc. Prof. Dr. Levent AKSU	<i>Balıkesir University</i>	OBJECTIVES, TOOLS, MONETARY TRANSMISSION MECHANISM AND MONETARY TARGETING OF MONETARY POLICY
Assoc. Prof. Dr. Doğan KUTUKIZ Ayşe KIZIL	<i>Muğla Sıtkı Koçman University</i>	SITUATION AND CHANGES OF START- UPS AGAINST ECONOMIC DEVELOPMENTS IN THE WORLD
Ress. Assist. Mehmet MECEK Assoc. Prof. Dr. Vedat YILMAZ	<i>Afyon Kocatepe University Malatya Turgut Özal University</i>	EXAMINING THE ADMINISTRATIVE STRUCTURE OF CITY COUNCILS IN TURKEY: THE EXAMPLE OF METROPOLITAN CITY ASSEMBLIES
Prof. Dr. Mikail BATU Ress. Assist Büşra KÜÇÜKCİVİL	<i>Necmettin Erbakan University</i>	TO BE OR TO BE DIGITAL: HOW DO SMART TECHNOLOGIES AFFECT HUMAN BEHAVIOR?
Prof. Dr. Mikail BATU Zübeyir ÖZGÜR	<i>Necmettin Erbakan University Batman İluh Anadolu Lisesi</i>	CONSUMING AND EXHAUSTED INDIVIDUALS OF THE 21ST CENTURY: “TO HAVE OR TO BE”
Assist. Prof. Dr. Ömer Faruk BÜYÜKKURT	<i>Erzincan Binali Yıldırım University, Finance & Banking Department</i>	THE ASSOCIATION BETWEEN OF ACCRUAL EARNINGS MANAGEMENT PRACTICES AND FINANCIAL RATIOS: EVIDENCE FROM BIST (BORSA ISTANBUL)

(All speakers required to be connected to the session 10 min before the session starts)

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**BUSINESS JOURNAL 2nd INTERNATIONAL PARIS SOCIAL
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ONLINE PRESENTATIONS**

23.12.2023

HALL-2 / SESSION-1



PARIS LOCAL TIME
14¹⁵ : 16⁰⁰



ANKARA LOCAL TIME
16¹⁵ : 18⁰⁰

HEAD OF SESSION: Hazal Aybala Bekar

Authors	Affiliation	Presentation title
Ress.Assist. Rabia Vildan İŞCAN Assoc. Prof. Dr. İbrahim BOZACI Assoc. Prof. Dr. Cihat KARTAL	<i>Kırıkkale University</i>	GIFT TO SELF BEHAVIOR
Zümürd RƏSULZADƏ	<i>Bakü Avrasiya University</i>	SEMANTICS OF THE DERVISH IMAGE IN TURKISH SUFISM AND FOLKLORE TEXTS
Hazal Aybala BEKAR	<i>Bülent Ecevit University</i>	THE PROBLEM OF SIMPLIFYING AND CONCEPTUALIZING DAILY LIFE FROM A SOCIOLOGICAL PERSPECTIVE
Muhammad Yaqoob Dr. Muhammad Zia-ur-Rehman	<i>Dept of English Literature, Muslim Youth University, Japan Road Islamabad</i>	EFFECTIVE COMMUNICATION: THE ROLE OF BUSINESS ENGLISH
Shaiz Ullah Dr. Muhammad Zia-ur-Rehman	<i>Research Scholar, NDU, Islamabad Universiti Malaya, Malaysia & NDU, Pakistan</i>	CORPORATE STRATEGY AND CORPORATE REPUTATION
Maryum Iqbal Dr. Muhammad Zia-ur-Rehman	<i>Research Scholar, NDU, Islamabad Universiti Malaya, Malaysia & NDU, Pakistan</i>	STRATEGIC FORESIGHT AND BUSINESS MANAGEMENT
Dr. Mustafa Doruk Mutlu	<i>Yozgat Bozok University, Faculty of Economics and Administrative Sciences, Department of Business Administration</i>	EFFECTS OF DIGITAL TRANSFORMATION IN WORKING LIFE ON DIFFERENT GENERATIONS
Dr.YUSUF ERDEM TUNÇ	<i>Karadeniz Teknik University</i>	OCCUPATIONAL HEALTH AND SAFETY IN THE MINING SECTOR

(All speakers required to be connected to the session 10 min before the session starts)

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**BUSINESS JOURNAL 2nd INTERNATIONAL PARIS SOCIAL
SCIENCE CONGRESS**

ONLINE PRESENTATIONS

23.12.2023

HALL-3 / SESSION-1



PARIS LOCAL TIME

14¹⁵ : 16⁰⁰



ANKARA LOCAL TIME

16¹⁵ : 18⁰⁰

HEAD OF SESSION: Metin Mert KANTARCIÖĖLU

Authors	Affiliation	Presentation title
Doctor of Divinity Ananda MAJUMDAR	North Central Theological Seminary, Minneapolis, USA	THE MYTH OF HINDUISM AS DIVERSITY AND UNIVERSALITY
Assist. Prof. Dr. Muhammed SAMANCI	Yozgat Bozok University Yozgat, Türkiye	GAZA WAR AND A BENEFIT-COST ANALYSIS FOR ISRAEL
Dr. Abdulrezzak İKVAN Hami VELİÖĖLU	Adiyaman University Harran University	THE EFFECT OF BLOCK CHAIN TECHNOLOGY ON THE RECORDING FUNCTION OF ACCOUNTING: THREE-PARTY RECORDING SYSTEM
Dr. Abdulrezzak İKVAN Hami VELİÖĖLU	Adiyaman University Harran University	EVALUATION OF FINANCIAL LEASES WITHIN THE FRAMEWORK OF VUK, TAS 17 AND TFRS 16
Ress. Assist. SHABNAM ABBASOVA	Baku State University, Faculty of Philology, Department of Turkology	A LINGUISTICAL PERSPECTIVE ON POSITIVE AND NEGATIVE LANGUAGE UNITS IN TURKMEN
Assist. Prof. Dr. Hatice KELEŞ	Bayburt University	ORTHODOX CHRISTIAN SECT PHYSICIANS; ANARGYROI
Puji Rahayu FIRDAUS	Selçuk University	MOTHER TONGUE USE IN YOUNG TURKISH AND INDONESIAN EFL LEARNERS' CLASSROOM
Dr. MUHAMMAD FAISAL	Ilama Iqbal Open University, Ministry of Human Rights Commission, Pakistan	DIFFERENT TECHNIQUES ASSOCIATED WITH EACH MODULE USED IN THE CONTEXT OF AI-HRIMS PAKISTAN BY HUMAN RIGHTS RECOMMENDATIONS DATA ANALYTICS WITH UNITED NATIONS
Prof. Dr. Tuncay Ercan SEPETCİÖĖLU Assoc. Prof. Dr. Sibel Akova HAVALI	Yalova University	A REVIEW OF THE FILM "WHERE ARE YOU GOING, AIDA?" (QUO VADIS AIDA?) WITHIN THE FRAMEWORK OF BOSNIA, WAR AND COLLECTIVE MEMORY
Assoc. Prof. Dr. Sibel Akova HAVALI Prof. Dr. Tuncay Ercan SEPETCİÖĖLU	Yalova University	AN ANALYSIS OF THE PORTRAYAL OF VIOLENCE IN TURKISH MEDIA: EXAMINING PUBLIC SERVICE ANNOUNCEMENTS ADDRESSING VIOLENCE TARGETING WOMEN
Ana DROBOT	Technical University of Civil Engineering Bucharest, Romania	THE MEANING OF THE SHADOW IN TWO HAIKU POEMS

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**BUSINESS JOURNAL 2nd INTERNATIONAL PARIS SOCIAL
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23.12.2023

HALL-4 / SESSION-1



PARIS LOCAL TIME
14¹⁵ : 16⁰⁰



ANKARA LOCAL TIME
16¹⁵ : 18⁰⁰

HEAD OF SESSION: Dr. Zohaib Hassan Sain

Authors	Affiliation	Presentation title
Dr.Zohaib Hassan Sain	<i>Superior University, Faculty of Business & Management Sciences, Lahore, Pakistan</i>	BLENDED LEARNING: NAVIGATING CHALLENGES, FUTURE TRAJECTORIES, AND RECOMMENDATIONS
Dr.Zohaib Hassan Sain	<i>Superior University, Faculty of Business & Management Sciences, Lahore, Pakistan</i>	THE INTEGRATION OF ARTIFICIAL INTELLIGENCE FOR HIGHER EDUCATION ADVANCEMENT IN PAKISTAN
Abdülkadir KAYA Prof. Dr. Erkan ÖZDEMİR	<i>Bursa Uludağ University</i>	RESEARCH ON THE BUILDING MATERIALS INDUSTRY AND ARCHITECTS' CERAMIC TILE PURCHASING PREFERENCES
Ali ALADEMİROĞLU Prof. Dr. Erkan ÖZDEMİR	<i>Bursa Uludağ University</i>	THE EFFECTS OF RUSSIA - UKRAINE WAR ON SUPPLY CHAINS OF ENTERPRISES: A RESEARCH IN AUTOMOTIVE SECTOR
Asad Taimur Dr. Muhammad Zia-ur-Rehman	<i>Universiti Malaya, Kuala Lumpur, Malaysia</i>	STRATEGIC DECISION MAKING AND ORGANIZATIONAL AMBIDEXTERITY
Assist. Prof. Dr. Mahire ASLAN	<i>İnönü University</i>	THE PHENOMENON OF ALIENATION IN THE EDUCATION PROCESS
Assist. Prof. Dr. Mahire ASLAN	<i>İnönü University</i>	MULTICULTURALITY IN EDUCATION
Assoc. Prof. Dr. Burcu GEZER ŞEN	<i>Firat University</i>	A GLOBAL PERSPECTIVE ON EARLY CHILDHOOD EDUCATION
Assoc. Prof. Dr. Burcu GEZER ŞEN	<i>Firat University</i>	CURRENT TRENDS IN EARLY CHILDHOOD EDUCATION
Bilal Raza Naqvi Dr. Muhammad Zia-ur-Rehman	<i>Research Scholar, NDU, Islamabad Universiti Malaya, Malaysia & NDU, Pakistan</i>	BUSINESS MANAGEMENT: EFFECTIVITY OF THE BLUE OCEAN STRATEGY

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23.12.2023

HALL-5 / SESSION-1



PARIS LOCAL TIME
14¹⁵ : 16⁰⁰



ANKARA LOCAL TIME
16¹⁵ : 18⁰⁰

HEAD OF SESSION: Assist. Prof. Dr. İbrahim YIKILMAZ

Authors	Affiliation	Presentation title
Dr. Sercan CENGİZ	<i>Harran University</i>	REASONS FOR IRRESPONSIBLE USE OF WATER AND RELATED SOLUTION SUGGESTIONS
Dr. Sercan CENGİZ Dr. Ferhat Kaçar	<i>Harran University</i>	SEMIOTIC ANALYSIS OF ADVERTISEMENTS PUBLISHED ON DIGITAL PLATFORMS: DEFACTO EXAMPLE
Assoc. Prof. Dr. Naseem Akhter	<i>Department of Islamic Studies Shaheed Benazir Bhutto Women University, Peshawar, Pakistan</i>	CLIMATE RESILIENCE AND AGROECOLOGY UNDER ISLAMIC CONTEXT
Assoc. Prof. Dr. Naseem Akhter	<i>Department of Islamic Studies Shaheed Benazir Bhutto Women University, Peshawar, Pakistan</i>	EMPOWER WOMEN THROUGH ENTREPRENEURIAL SKILLS FROM ISLAMIC PERSPECTIVE
Summira Naeem Dr. Muhammad Zia-ur-Rehman	<i>Universiti Malaya, Kuala Lumpur, Malaysia</i>	INTERNAL FACTORS AFFECTING STRATEGIC MANAGEMENT IN AN ORGANIZATION
Assist. Prof. Dr. İbrahim YIKILMAZ	<i>Kocaeli University</i>	WORRYING WORKPLACE TREND: TOXIC RESILIENCE
Assist. Prof. Dr. İbrahim YIKILMAZ Dr. Havva DEĞİRMENCİ TARAKCI	<i>Kocaeli University Hitit University</i>	LOUD QUITTING VS. QUIET QUITTING: A CONCEPTUAL INVESTIGATION
Dr. Muhammad Zia-ur-Rehman Mrs. Affaf Zahra	<i>Research Scholar, NDU, Islamabad Universiti Malaya, Malaysia & NDU, Pakistan</i>	BUSINESS PERFORMANCE: ANALYZING THE ROLE OF WORK-FAMILY CONFLICT

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**BUSINESS JOURNAL 2nd INTERNATIONAL PARIS SOCIAL
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23.12.2023

HALL-6 / SESSION-1



PARIS LOCAL TIME
14¹⁵ : 16⁰⁰



ANKARA LOCAL TIME
16¹⁵ : 18⁰⁰

HEAD OF SESSION: Assoc. Prof. Dr. Uğur Korkut PATA

Authors	Affiliation	Presentation title
Abid Hussain Dr. Muhammad Zia-ur-Rehman	<i>Deputy Director Library, Institute of Strategic Studies Islamabad, Pakishtan Universiti Malaya, Malaysia & NDU, Pakistan</i>	SUCCESSFUL PROFESSIONAL DEVELOPMENT: THE ROLE OF EMPLOYABILITY SKILLS
Dr. Selin KARLILAR Assoc. Prof. Dr. Uğur Korkut PATA	<i>Azerbaycan Devlet İktisat University, Bakü Osmaniye Korkut Ata University, Osmaniye</i>	THE EFFECTS OF ENERGY SECURITY RISK AND FINANCIAL DEVELOPMENT ON RENEWABLE ENERGY USE IN TURKEY
Dr. Esra CEBECİ MAZLUM	<i>Selçuk Üniversitesi</i>	RELATIONSHIP BETWEEN HEALTH EXPENDITURES AND ECONOMIC GROWTH: THE CASE OF E7 COUNTRIES
Assoc. Prof. Dr. Uğur Korkut PATA Assoc. Prof. Dr. Mustafa Tefvik KARTAL	<i>Osmaniye Korkut Ata University, Borsa İstanbul Stratejik Planlama, Finansal Raporlama ve Yatırımcı İlişkileri Direktörlüğü, İstanbul/Türkiye</i>	TESTING THE STATIONARITY OF THE FOREST LOAD CAPACITY FACTOR IN TÜRKİYE, MEXICO, AND BRAZİL
Dr. Muhammad Azher Iqbal Dr. Muhammad Zia-ur-Rehman	<i>PhD Public Administration, Huazhong University of Science and Technology, Wuhan China Universiti Malaya, Malaysia & NDU, Pakistan</i>	SUSTAINABLE BUSINESS PERFORMANCE: ANALYZING THE ROLE OF PSYCHOLOGICAL CONTRACT
Dr. Keshab Chandra Mandal	<i>Head Master S.M. Nagar Derozio Smriti Vidyalaya S.M. Nagar Govt. Housing Sarkarpool, Kolkata, W.B. India</i>	FOREIGN POLICY AND PUBLIC POLICIES IN CONTEMPORARY INDIA: AN ANALYSIS
Ress. Assist. Hüseyin COŞKUN Assist. Prof. Dr. İlyas Kays İMAMOĞLU	<i>Bayburt University</i>	GLOBALIZATION, ENERGY CONSUMPTION, ECONOMIC GROWTH AND ENVIRONMENTAL PERFORMANCE: EVIDENCE FROM THE SWITZERLAND ECONOMY
Assist. Prof. Dr. İlyas Kays İMAMOĞLU Ress. Assist. Hüseyin COŞKUN	<i>Bayburt University</i>	ECONOMIC FREEDOM, ENTREPRENEURSHIP AND ECONOMIC GROWTH: A CAUSALITY ANALYSIS FOR EU COUNTRIES

(All speakers required to be connected to the session 10 min before the session starts)

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Fatima Ahsan, Dr. Muhammad Zia-ur-Rehman	<i>Research Scholar, NDU, Islamabad Universiti Malaya, Malaysia & NDU, Pakistan</i>	STRATEGIC MANAGEMENT: MANAGING CRISIS SITUATIONS
Deniz KAYA Doç. Dr. Önder A. AFŞAR	<i>Selçuk University</i>	MIGRATION AND MIGRATION POLICIES IN THE EUROPEAN UNION IN THE CONTEXT OF THE SYRIAN CRISIS
Dr. Muhammad Zia-ur-Rehman Research Scholar Hamna Ahsan	<i>Universiti Malaya, Malaysia & NDU, Pakistan Research Scholar, NDU, Islamabad</i>	THE IMPACT OF ORGANIZATIONAL ARCHITECTURE ON ITS BUSINESS IMAGE AND REPUTATION
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Janet Austin Dr. Muhammad Zia-ur-Rehman	<i>Research Scholar, NDU, Islamabad Universiti Malaya, Malaysia & NDU, Pakistan</i>	CHALLENGES FACED BY STRATEGISTS AND BUSINESS PERFORMANCE
Maheen Khattak, Dr. Muhammad Zia-ur-Rehman	<i>Research Scholar, NDU, Islamabad Universiti Malaya, Malaysia & NDU, Pakistan</i>	CEO PERSONALITY AND EMPLOYEE MOTIVATION: ANALYZING THE DYNAMICS

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HEAD OF SESSION: Dr. Muhammad Zia-ur-Rehman

Authors	Affiliation	Presentation title
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Dr. Saqib Anwar Siddiqui, Dr. Muhammad Zia-ur-Rehman	<i>Universiti Malaya, Malaysia & NDU, Pakistan</i>	DEVELOPING EMOTIONAL INTELLIGENCE FOR STRATEGIC BUSINESS MANAGEMENT: A QUALITATIVE STUDY
Soudah Sultana, Dr. Muhammad Zia-ur-Rehman	<i>Research Scholar, NDU, Islamabad Universiti Malaya, Malaysia & NDU, Pakistan</i>	STRATEGIC MANAGEMENT AND CORPORATE ENTREPRENEURSHIP
Dr. Muhammad Zia-ur-Rehman, Dr. Muhammad Shafique	<i>Universiti Malaya, Malaysia & NDU, Pakistan</i>	TALENT MANAGEMENT AND BUSINESS PERFORMANCE: ANALYZING THE PERSPECTIVES
Dr. Muhammad Zia-ur-Rehman, Muhammad Shahbaz	<i>Universiti Malaya, Malaysia & NDU, Pakistan Research Scholar, NDU, Islamabad</i>	DYNAMICS OF DIVERSITY IN WORKFORCE AND BUSINESS PERFORMANCE: AN ANALYTICAL OVERVIEW

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HEAD OF SESSION: Mella ISMELINA

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Jekimen AVDIAJIAH	European University of Tirana, Albania	TRANSFORMATION OF KOSOVO EDUCATION FROM TRADITIONAL INTO MODERN
Luna SHAMIEH	European University of Tirana, Albania	HUMAN SECURITY PROVIDERS IN FRAGILE STATE UNDER ASYMMETRIC WAR CONDITIONS
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Lilian Noronha NASSIF	Department of National Security - State University of Library Studies and Information Technologies, Bulgaria	TOWARDS A PROOF ACCEPTANCE BY OVERCOMING CHALLENGES IN COLLECTING DIGITAL EVIDENCE
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Antonios MANIATIS	Independent Researcher CentraleSupélec, France	HUMAN RIGHTS IN ARMED CONFLICTS AND CONSTITUTIONAL LAW
Aleksandra CHINIAEVA	Researcher, France	PROTECTION OF HUMAN RIGHTS IN EUROPE: THE PARLIAMENTARY DIMENSION

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HEAD OF SESSION: Dr. Subhashish DEY

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CHIBANI Houaria LARIBI Souad ALLAOUI Tayeb HEROUAL Samira Abdelkader Azzeddine BENGHARBI	<i>Laboratory of Energy and Electrical Engineering, Ibn Khaldoun University, Tiaret, Algeria</i>	NEURAL NETWORK DIAGNOSIS OF THREE-PHASE INVERTER OPEN-CIRCUIT FAULTS IN A PHOTOVOLTAIC SOLAR PUMPING SYSTEM
HEROUAL Samira BELABBAS Belkacem ALLAOUI Tayeb CHIBANI Houaria	<i>Electrical Engineering Department, ibn Khaldoun University, Tiaret, Algeria</i>	MODELING AND SIMULATION OF DC-DC CONVERTER-TYPE FLYBACK
Dr. Subhashish DEY	<i>Civil Engineering Department, Gudlavalleru Engineering College, Gudlavalleru, Andhra Pradesh, India</i>	ENVIRONMENTAL FOOTPRINT OF CONCRETE: A LIFE CYCLE ASSESSMENT APPROACH FOR SUSTAINABLE PRACTICES
Dr. Subhashish DEY	<i>Civil Engineering Department, Gudlavalleru Engineering College, Gudlavalleru, Andhra Pradesh, India</i>	USTAINABLE CONCRETE DEVELOPMENT TOWARDS THE ECO-FRIENDLY CONSTRUCTION: ENHANCING THE STRENGTH AND DURABILITY BY USING FLY ASH AND SILICA FUME
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Deiveegan Ramasamy Abdul Nazar N. Selvaraju Sivamani	<i>University of Technology and Applied Sciences, Salalah, Oman</i>	COST ESTIMATION AND ANALYSIS FOR CONSTRUCTION OF WATER STORAGE TANK IN CHEMICAL PROCESS UTILITY PLANTS
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Assoc. Prof. Dr. Funda ÖZPULAT Assit. Prof. Dr. Melike TAŞDELEN BAŞ	<i>Selcuk University, Aksehir Kadir Yallagoz School of Health, Konya / Türkiye</i>	THE EFFECT OF FLIPPED LEARNING ON NURSING STUDENTS' EMPATHY, PROFESSIONAL COMPETENCE, KNOWLEDGE, AND MOTIVATION
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Prof. Dr. Mehmet Emin DENİZ Prof. Dr. Ramazan KARAKUZU	<i>Batman University, Faculty of Engineering and Architecture, Batman, Turkey Dokuz Eylul University, Faculty of Engineering, Izmir, Turkey</i>	IMPACT RESPONSE OF CARBON/EPOXY AND GLASS/EPOXY COMPOSITE PLATES
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Assist. Prof. Dr. K.R.Padma Dr. K.R.Don Professor P. Josthna	<i>Department of Biotechnology, Sri Padmavati Mahila Visvavidyalayam (Women's) University, Tirupati, India</i>	COMPAROB: THE ROBOTIC ASSISTANT FOR SHOPPING CARTS ESPECIALLY FOR ELDERLY INDIVIDUALS
Dr. Saima SHAHEEN Assoc. Prof. Dr. Nabila SHER Hafza ZAFAR Assist. Prof. Dr. Gülnaz BEGÜM Dr. Sosan RAUF	<i>Biochemistry Department, Khyber Girls Medical College, Peshawar Pakistan Khyber Medical University Peshawar Pakistan</i>	EFFECT OF LIPID-BASED MULTIPLE MICRONUTRIENTS SUPPLEMENTATION IN UNDERWEIGHT PRIMIGRAVIDA PRE-ECLAMPTIC WOMEN ON MATERNAL AND PREGNANCY OUTCOMES: RANDOMIZED CLINICAL TRIAL
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Khaoula Mkhayar Kaouakeb El khattabi Samir Chtita Souad Elkhattabi	<i>Laboratory of Engineering, Systems and Applications, National School of Applied Sciences, Sidi Mohamed Ben Abdellah-Fez University, Fez, Morocco.</i>	IN SILICO VIRTUAL SCREENING, DRUG LIKENESS, ADMET, AND MOLECULAR DOCKING AND DYNAMICS STUDIES FOR THE DISCOVERY OF POTENTIAL ANTI-SLEEP DISORDER AGENTS FROM QUANABIS

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**A GROUNDBREAKING APPROACH IN MINIMALLY INVASIVE SURGERY:
VIDEO ASSISTED THORACOSCOPIC SURGERY (VATS)**

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Abstract

Developed on the basis of minimally invasive surgery principles, Video Assisted Thoracoscopic Surgery (VATS) symbolizes a significant evolution in surgical interventions by offering less tissue damage, a faster healing process and fewer postoperative complications than traditional surgical methods. The basic principles of VATS involve the use of a thin tube called a thoracoscope and special surgical instruments. This method allows the surgeon to access organs in the chest cavity in a minimally invasive manner. Advantages of the VATS technique include less tissue damage, faster recovery times, reduced postoperative pain, better cosmetic results, and shorter hospital stays. However, the technical challenges posed by VATS may require surgeons to receive special training and learn new skills. VATS is a groundbreaking approach in the field of minimally invasive surgery, and this review aims to highlight the importance of VATS in surgical practice, explain the current role of this approach, and provide a comprehensive resource for healthcare professionals.

Keywords: Video Assisted Thoracoscopic Surgery, Minimally Invasive Surgery, Thoracic Surgery

1. Introduction

Constant change, technological advances and scientific research in surgery have enabled the emergence of minimally invasive surgical methods and the development of groundbreaking approaches in this field. This review focuses on Video Assisted Thoracoscopic Surgery (VATS), one of the pioneers of minimally invasive surgery that plays an important role in today's surgical practice.

2. Minimally Invasive Surgery

Minimally invasive surgery refers to a surgical approach performed using endoscopic or laparoscopic techniques, using smaller incisions than traditional surgical methods. This modern surgical method was developed to minimize trauma resulting from surgical interventions, shorten patients' recovery times, reduce postoperative pain and minimize general post-surgical complications. Minimally invasive surgery, which emerged in the early 1980s, has many advantages such as accelerating the healing process, reducing postoperative pain and creating less risk of complications. However, minimally invasive surgery also has many disadvantages, such as high cost rates (Siddaiah-Subramanya et al., 2017; Kumar et al., 2016).

Minimally invasive surgery that allows the surgeon to control the procedure with the help of special tools and cameras with endoscopic or laparoscopic techniques; It is successfully applied

in general surgery, gynecology, urology, cardiovascular surgery and many other fields (Kumar et al., 2016; Shah et al., 2014).

3. Video Assisted Thoracoscopic Surgery (VATS)

Technological innovations such as robotic surgery systems, three-dimensional imaging technologies and advanced endoscopic devices have made minimally invasive surgery more effective, and many changes and developments have occurred in minimally invasive surgery, such as VATS (Gül et al., 2022; Holbek et al., 2015). As the use of minimally invasive surgical techniques by thoracic surgeons, especially in pleural diseases, has become widespread, the number of cases undergoing VATS and Non-Intubated Video Assisted Thoracoscopic Surgery (NI VATS) has also increased (Yanık et al., 2017). VATS, one of the minimally invasive surgical approach types, is used in more than half of thoracic surgery cases and is performed endoscopically (Yıldıran & Sunam, 2021; Holbek et al., 2015).

In the VATS method, high-tech equipment is used along with modern video technology. Thanks to this technology and equipment, VATS is based on an observation screen. VATS method; It is used in many diagnostic interventions such as cancer staging, chest wall biopsy, pleuroscopy, mediastinal lymph node biopsy, and many therapeutic interventions such as sympathectomy, thoracic duct ligation, spinal abscess drainage, thoracoscopic laminectomy, pericardial effusion drainage (Mehrotra et al., 2023).

Anesthesia in thoracic surgery has some disadvantages. These disadvantages can be listed as postoperative pain, delayed effective use of the diaphragm, and atelectasis. At the same time, the use of deep sedation and muscle relaxants has begun to be among the topics discussed when using the VATS method for older patients who pose a high risk for the use of anesthesia in thoracic surgery procedures. For these reasons, NI VATS has become a more used initiative in the last decade (Yıldıran & Sunam, 2021).

4. Advantages of VATS Technique

VATS, which is an increasingly popular intervention, has multiple advantages such as providing better respiratory function, less morbidity and lower costs (Yıldıran & Sunam, 2021).

Less Tissue Damage: The VATS method uses smaller incisions compared to traditional open surgery. Therefore, less tissue damage occurs during surgery. Smaller incisions can speed up the healing process of patients and reduce postoperative pain (Yanık, 2023).

Faster Healing Process: Smaller incisions and less tissue damage often allow patients to recover faster. Shorter hospital stays and earlier return to normal activities indicate that VATS provides a positive effect on patients (ALA, 2023; Harris et al., 2016).

Reduced Postoperative Pain: Due to its minimally invasive nature, VATS often reduces postoperative pain. This is an important advantage for patients who need pain control (Nobel et al., 2019; Harris et al., 2016).

Better Cosmetic Results: Surgery performed with VATS produces better cosmetic results because it is performed with smaller incisions. This ensures that patients' post-surgical scars are less obvious (Harris et al., 2016).

Reducing the Risk of Pneumothorax: During VATS, expansion is achieved by injecting carbon dioxide gas into the chest cavity. This allows the surgeon to work more comfortably and helps him see the organs in the chest cavity better. Additionally, there is a lower risk of pneumothorax compared to open surgery (Gallego-Poveda et al., 2017).

5. Disadvantages of VATS Technique

VATS has become a preferred method in many thoracic surgery practices because it positively affects patient outcomes with its advantages. However, like any surgical method, it is important to evaluate whether this method is suitable for certain conditions and diseases. VATS technique also has many disadvantages such as:

Technical Challenges: VATS requires technical skill, for which surgeons need special skills and training. It may involve more technical difficulties compared to traditional surgery, which may affect the surgeon's learning curve(Harris et al., 2016).

Equipment Cost: The special equipment used for VATS can often be more expensive than traditional surgery. This may pose a financial challenge for some healthcare institutions or surgeons(Abbas et al., 2020).

Limited Access: VATS may provide limited access to the surgeon in some cases. Especially in complex situations or large tumors, it can be difficult for the surgeon to maneuver as desired(Zhang et al., 2020).

Each method of surgery has advantages and disadvantages, and these may vary depending on the type of surgical procedure, the patient's condition, and the surgeon's experience. Patients should consult with their surgeon when evaluating their surgical options and their potential risks and determine the most appropriate treatment plan for their individual situation.

CONCLUSION

Developed based on the principles of minimally invasive surgery, VATS offers a number of advantages over traditional surgery, including less tissue damage, faster recovery times, reduced postoperative pain, better cosmetic results and shorter hospital stays. These advantages allow patients to have a more comfortable recovery process after surgical intervention and add a new dimension to surgical practice. However, as the review reveals, the technical challenges posed by VATS may require surgeons to receive special training. Additionally, factors such as equipment costs and the learning curve may limit widespread use of this method. It is thought that with the advancement of future research, technological advances, and surgical training programs, VATS may be further optimized and this method may become widespread. This could be an important step towards making surgical practice safer, more effective and more patient-friendly. As a result, VATS stands out as a groundbreaking approach in the world of surgery and is a candidate to become a surgical method that may gain even more importance with future developments.

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**EFFECT OF LOCAL ANESTHESIC AGENTS ON OPIOID USE AND RECOVERY
IN PATIENTS UNDERGOING OPEN HEART SURGERY**

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Abstract

Introduction: Open heart surgery often causes serious postoperative pain. The cornerstone of pain management in this setting has traditionally been opioids, but their use has many disadvantages. Therefore, the role of local anesthetic agents in relieving postoperative pain is receiving increasing attention. Accordingly, this study investigates the effect of local anesthetic use on opioid use and the recovery process in patients undergoing open heart surgery.

Aim: The aim of this study is to provide a comprehensive investigation of the dynamic relationship between the administration of local anesthetic agents and opioid use and to examine their effects on the recovery process of patients undergoing open heart surgery.

Method: The research was done experimentally. The population of the research consisted of patients who underwent open heart surgery at SBU Van Training and Research Hospital. The sample of the study consisted of 60 patients (30 patients in the experimental group - 30 patients in the control group) who voluntarily agreed to participate in the study. No intervention was made to the patients in the control group, but a total of 2 ampoules of Lidocaine 100 mg/5 ml were applied to the sternum area and around the thorax tubes of the patients in the experimental group, and the total amount of opioid used on the first postoperative day was examined and the healing process was evaluated. Data; It was collected using the Descriptive Characteristics Form and Postoperative Recovery Index (PRI). Coding and evaluation of the data was done on a computer using the SPSS 19.0 package program.

Results: Thanks to local Lidocaine applied to the experimental group, 26.7% of the patients started having pain 10 hours after the surgery and 53.3% of them did not use any opioids within 24 hours after the surgery, while 26.7% of the patients in the control group started having pain 6 hours after the surgery and 24 hours after the surgery. It was determined that 2 opioids were administered inside. When PRI and its sub-dimensions were examined, in all comparisons between the averages of the experimental and control groups, the scores of the experimental group were found to be significantly lower than those of the control group, and postoperative recovery in the experimental group was found to be faster thanks to the local Lidocaine applied. At the same time, while the correlation between the length of stay and the total scale score of the patients in the control group was statistically significant, the correlation between the decreased length of stay and the total scale score due to the effect of Lidocaine administered to the patients in the experimental group was found to be insignificant ($p>0.005$). While there was no statistically significant difference between the PRI and sub-dimensions of disease diagnoses in open heart surgery, there was no statistically significant difference between the averages of the experimental group, while the craving symptoms sub-score of the valve surgery patient group in the control group was found to be high and postoperative recovery took longer in this sub-dimension. When the comparison of the number of chest tubes with PRI and its sub-dimensions was examined, it was determined that as the number of chest tubes of the patients in the control group increased, the PRI score increased and the improvement in postoperative bowel symptoms was negatively affected. In the experimental group, it was determined that as the number of chest tubes increased, the PRI score increased and the improvement in the postoperative general symptoms subscale was negatively affected. In the comparison of the number of opioids with the PRI and its subscales, it was found that as the number of opioids administered to the control group increased, the postoperative recovery and physical activities subscales were negatively affected. There was no significant difference between the experimental group and PRI and its sub-dimensions ($p>0.05$).

Conclusion: As a result of this study, it is recommended that Lidocaine, a local anesthetic agent, be applied to the sternotomy incision area and around the chest tubes in patients undergoing open heart surgery to reduce the amount of opioid consumption in the postoperative period and to accelerate the healing process.

Keywords: Opioids, Local Anesthetics, Open Heart Surgery, Postoperative, Healing

NURSING BASED ON CARE

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Abstract

Nursing has evolved over the years with a paradigm shift from task-oriented approaches to a patient-centered model that places care at the center. This review critically examines the historical development of nursing and highlights the important role of pioneers such as Florence Nightingale in shaping the fundamental tenets of the profession. It also explores the various dimensions of care in nursing and emphasizes the importance of holistic care, which addresses not only the physical aspects of the patient's well-being but also their emotional, psychological and social needs. It explores the importance of effective communication, empathy, and compassion in developing therapeutic nurse-patient relationships that form the basis of quality care, and the contemporary challenges and opportunities of care-based nursing. Discussing the impact of technological advances, interprofessional collaboration, and evidence-based practices on the provision of compassionate care, this review also examines the role of cultural competence and diversity in nursing care and underscores the need for a culturally sensitive approach to meet the diverse needs of today's patient population. Ultimately, "Care-Based Nursing" underscores the enduring importance of care as the cornerstone of nursing practice. Advocating a paradigm shift that recognizes the profound impact of caring behaviors on patient outcomes and overall quality of healthcare, this review provides valuable information for educators, practitioners, and policymakers by highlighting the ongoing need to prioritize care in nursing education and practice to ensure the best possible patient outcomes and experiences. . In summary, this comprehensive article delves into the basic concept of nursing, focusing on the essence of care.

Keywords: Nursing, Patient Care, Surgical Nursing

1. Care-Based Nursing and Its Importance

Care-based nursing; It is an approach that focuses on the patient and takes into account individual needs and different conditions. This approach not only treats the symptoms of the disease, but also aims to improve the holistic health of the patient and increase the quality of life. With this approach, nurses focus on patient care by addressing not only physical care but also emotional and spiritual needs. At the same time, care-based nursing supports the approach that patients are individuals and partners. It is important to include the patient, his family and the society in the care process. With this approach, patients can understand their individual health processes, make decisions on this issue, and be a part of the care process (Jasemi et al., 2017).

The importance of care-based nursing emerges as it allows patients to achieve better results and increase patient satisfaction. With care-based nursing, patients' compliance with the treatment process can be increased, the recovery process can be accelerated, and treatment costs can be reduced. At the same time, this approach can increase the quality of patient care and adopt a patient-centered approach. Care-based nursing, which represents an understanding in which

nurses aim not only to treat symptoms but also to improve the quality of life of patients, makes nursing practices more effective, sensitive and patient-oriented (Karaca & Durna, 2019).

Communication and Empathy in Care-Based Nursing

In care-based nursing, communication and empathy have a fundamental role in patient care. Communication enables nurses to communicate effectively with patients and understand their needs. Empathy refers to the ability to understand the patient's emotions, make sense of them, and connect emotionally (Babaii et al., 2021).

Communication

Effective Communication: It is important for nurses to communicate clearly, understandably and sincerely. When communicating with the patient, the language and tone are understanding and supportive, making the patient feel comfortable (Kourkouta & Papathanasiou, 2014).

Listening Ability: Nurses need to listen actively to understand what patients say. This allows them to better understand the patient's feelings, concerns, and needs (Babaii et al., 2021).

Empathy

Looking from the Patient Perspective: It is important for nurses to try to understand the patient's perspective while caring for the patient. This allows them to better assess the patient's emotional and mental state (Hartley et al., 2020).

Establishing an Emotional Connection: Empathy involves establishing an emotional connection with patients. This makes patients feel more comfortable and safe (Moudatsou et al., 2020).

Patient-Centered Approach: Empathy supports a patient-centered approach in care-based nursing. It enables nurses to respect patients' emotional needs and experiences (Wu, 2021; Moudatsou et al., 2020).

In care-based nursing, communication and empathy help nurses form a strong bond with patients, be sensitive to their needs, and support holistic care. This contributes to patients achieving better treatment outcomes and a more positive experience during the care process.

The Effect of the Care-Based Approach on Patient and Family Relationships

The care-based approach has a profound impact on patient and family relationships because it adopts a patient-centered perspective and recognizes that the patient and family are active partners in the treatment process. The effects of this approach on patient and family relationships are as follows (Epstein & Street, 2011):

Participatory Approach: The care-based approach encourages actively involving the patient and family members in the treatment process. This enables patients and their families to participate in decision-making processes and plays an important role in creating the treatment plan.

Sensitivity and Empathy: Encourages nurses and healthcare professionals to be more sensitive to the emotional needs of patients and their families. An empathetic approach helps patients and their families understand and respond to their emotional needs.

Communication and Information Sharing: Effective communication with patients and family members is an important part of the care-based approach. Nurses share information about disease treatment and care with patients and their families, increasing their understanding and encouraging their active participation in treatment.

Patient Safety and Quality of Care: A solid relationship with the patient and family members improves the quality of care and ensures patient safety. Open communication about the health status of patients and their families helps reduce errors and ensure proper care.

Building Support and Trust: The care-based approach aims to provide support and build trust with the patient and family members. Nurses provide reliable support by responding to the emotional, physical and spiritual needs of patients and their families.

These effects of the care-based approach indicate that solid relationships with patients and family members are critical to the effectiveness of the treatment process and patient satisfaction. This approach allows patients and their families to take a more active and conscious role in the care process(Engle et al., 2021).

Evaluation and Planning Processes in Care-Based Nursing

Assessment and planning processes in care-based nursing include identifying and analyzing the patient's individual needs and care requirements and creating appropriate care plans. These processes include basic steps to understand patients' individual characteristics, health status and care needs.

Evaluation process:

Patient Assessment: Nurses evaluate the physical, psychological, social and spiritual conditions of patients. This evaluation process includes factors such as the patient's current health status, symptoms, medical history, and lifestyle(Toney-Butler, 2023).

Determining Patient Needs: Nurses determine the patient's priority needs and care requirements. This is accomplished based on physical examination, test results, and observations made with the patient, as well as the needs expressed by the patient(Kıskaç & Babaoğlu, 2021).

Evaluation Tools and Methods: Various tools and methods are used for patient evaluation. This may include methods such as standard evaluation forms, scales, interviews, observations, and review of medical records(Etgü & Güçlü, 2022).

Planning Process:

Patient-Centered Care Plans: Based on assessment results, nurses create patient-centered care plans. These plans are determined according to the patient's priority needs and goals (Basit, 2020).

Prioritization and Goal Setting: Nurses determine the urgent and priority needs of the patient and set care goals accordingly. These goals are determined with the participation and approval of the patient and family.

Care Strategies and Ways to Improve: Care plans include strategies determined by nurses for the needs of the patient. These strategies may include elements such as treatment modalities, medications, patient education, rehabilitation, and supportive care.

These processes aim to help nurses understand patients' individual needs, plan effectively, and provide appropriate care. Active participation and feedback of patients and family members in the care process play an important role in the success of the evaluation and planning processes.

Care-Based Nursing in the Future: Technology, Innovation and Developments

In the future, care-based nursing may experience major transformations with advances in technology, innovative practices and changes in the health sector. Here are some potential developments in this area:

Technological Advances: Technologies such as artificial intelligence (AI) and machine learning can be used in patient monitoring, data analysis and diagnostic support systems. These technologies can enable collecting more data about the health status of patients and creating better treatment strategies by analyzing this data (Keleş, 2022).

Mobile Health Applications: Nurses can interact more with patients in processes such as tracking their health data, patient education, sharing and tracking health plans through mobile health applications (Degerli, 2021).

Professional Development and Education: Nursing education can be revised in accordance with technological developments. Nurses can be trained to be more effective in caring for patients by using new technologies (Çetin & Eroğlu, 2020).

These developments may allow care-based nursing practices to be carried forward and patients to receive better care. However, it is important to constantly emphasize the human-oriented approach as well as technological developments. This can enable nurses to maintain the human touch and empathy while using technology effectively.

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NEURAL NETWORK DIAGNOSIS OF THREE-PHASE INVERTER OPEN-CIRCUIT FAULTS IN A PHOTOVOLTAIC SOLAR PUMPING SYSTEM

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Abstract

In recent decades the focus on renewable energy and water resource management has grown significantly, and this trend is expected to intensify in the coming years. Solar photovoltaic (PV) energy stands out as the most dependable, cost-efficient, and widely utilized sustainable energy source, especially in applications related to water pumping. These systems are particularly important in remote areas, where they are ideal for agricultural and irrigation use, even without energy storage. A solar water pumping system utilizing PV panels generally comprises four key elements: a PV array, a DC/DC converter paired with a voltage source inverter (VSI) to enhance energy utilization, a motor, and a centrifugal pump. Two categories of controllers are commonly employed in operating IM-based solar water pumps. Initially, various Maximum Power Point (MPP) tracking techniques have been introduced in the literature to extract the maximum available power from the photovoltaic array. Among these methods, perturbation and observation (P&O) along with incremental conductance (InC) are frequently utilized due to their effectiveness. The second type involves field-oriented control (FOC), enabling independent adjustment of flux and torque, resulting in exceptional dynamic performance comparable to a separately excited DC motor. Hence, voltage source inverters (VSI) have gained significant attention in water-pumping applications through their integration with induction motors (IM) and photovoltaic (PV) solar panels. Sinusoidal Pulse Width Modulation (SPWM) is employed for transistor switching control Insulated Gate Bipolar Transistors (IGBTs). This research focuses on identifying and diagnosing open-circuit faults occurring in IGBTs within three-phase voltage source inverters (VSI), typically applied in solar pumping systems. It encompasses the analysis of both single and multiple switching device faults. The research methodology employs Clarke transformation-based Artificial Neural Networks (ANN) to accurately determine fault angles, specifically designed for handling noisy conditions effectively. Results proved that the designed fault detection and diagnosis system is more robust, accurate, systematic, and dynamic in detecting both single and multiple faults.

Keywords: Artificial neural network, fault diagnosis, photovoltaic system, solar pumping, switch fault

MODELING AND SIMULATION OF DC-DC CONVERTER-TYPE FLYBACK

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Abstract

Modern electronic systems require high-quality, small, lightweight, reliable, and efficient power supplies however, Converters are used to transform power from one form to another form. Some common converters are rectifiers, inverters, Cyclo-converters, and DC–DC converters. Cyclo-Converter is used for stepping up or down AC voltages. Similarly, DC–DC converters step up or down the DC voltage levels. The main contribution is to propose modeling and simulation of new topologies of converter DC-DC called flyback. Thus, Flyback converters are widely used in isolated DC/DC applications because of their relative simplicity and low cost compared to alternative isolated topologies. Even so, designing a traditional flyback is not easy—the transformer requires careful design, and the whole structure is developed in the MATLAB/Simulink environment. The results validate the effectiveness and robustness of the proposed flyback converter.

Keywords Modern electronic systems, Converters DC-DC, Flyback, Topologies

**SUSTAINABLE CONCRETE DEVELOPMENT TOWARDS THE ECO-FRIENDLY
CONSTRUCTION: ENHANCING THE STRENGTH AND DURABILITY BY USING FLY
ASH AND SILICA FUME**

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Abstract

The cement industry is the primary source of environmental pollution as it intakes a huge amount of energy in the production and releases a lot of CO₂, which contributes to global warming. To reduce the use of cement for energy consumption, the use of supplementary cementitious materials (SCMs) like Fly ash (FA) and Silica fume (SF) in concrete is an interesting solution. FA and SF-based construction materials offer a lot of potential as alternatives to ordinary portland cement (OPC) because of their high performance and environmental friendliness. The present investigation is focused on the development of sustainable concrete using FA and SF as SCMs. Two binary mixes were developed by using FA and SF. The FA was substituted at 20%, 30% and 40%, and SF was substituted at 5%, 7.5% and 10% by weight. The ternary mix is prepared for constant percentages of silica SF like 5%, 7.5 % and 10%, the cement is further replaced with FA (20%, 30% and 40%) by weight to create ternary blended concrete. The mechanical properties such as compressive strength, split tensile strength, flexure strength, and durability characteristics such as sorptivity, rapid chloride penetrability and also micro structure analysis such as XRD, SEM of both binary and ternary mixes were studied. Besides this the cost-benefit analysis, environmental impact assessment and sustainability index for control, binary and ternary blended concrete mixes was also studied. The results of binary mixes show that the incorporation of SF and FA significantly impacts workability. Designing ternary concrete with FA and SF could aid in producing clean and eco-friendly concrete.

Keywords: Fly ash, Silica Fume, Eco-friendly concrete, Cement Industry, Compressive strength and

Split tensile strength, XRD and SEM

ENVIRONMENTAL FOOTPRINT OF CONCRETE: A LIFE CYCLE ASSESSMENT APPROACH FOR SUSTAINABLE PRACTICES

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Abstract

The cement industry is the primary source of environmental pollution as it intakes a huge amount of energy in the production and releases a lot of CO₂, which contributes to global warming. To reduce the use of cement for energy consumption, the use of supplementary cementitious materials (SCMs) like Fly ash (FA) and Silica fume (SF) in concrete is an interesting solution. FA and SF-based construction materials offer a lot of potential as alternatives to ordinary portland cement (OPC) because of their high performance and environmental friendliness. The present investigation is focused on the development of sustainable concrete using FA and SF as SCMs. Two binary mixes were developed by using FA and SF. The FA was substituted at 20%, 30% and 40%, and SF was substituted at 5%, 7.5% and 10% by weight. The ternary mix is prepared for constant percentages of silica SF like 5%, 7.5 % and 10%, the cement is further replaced with FA (20%, 30% and 40%) by weight to create ternary blended concrete. The mechanical properties such as compressive strength, split tensile strength, flexure strength, and durability characteristics such as sorptivity, rapid chloride penetrability and also micro structure analysis such as XRD, SEM of both binary and ternary mixes were studied. Besides this the cost-benefit analysis, environmental impact assessment and sustainability index for control, binary and ternary blended concrete mixes was also studied. The results of binary mixes show that the incorporation of SF and FA significantly impacts workability. Designing ternary concrete with FA and SF could aid in producing clean and eco-friendly concrete.

Keywords: Fly ash, Silica Fume, Eco-friendly concrete, Cement Industry, Compressive strength and

Split tensile strength, XRD and SEM

THE APPLICATION OF MESOPOROUS MATERIAL TYPE SILVER/SBA15

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Abstract

Porous materials have been intensively studied with regard to technical applications as atalysts, catalyst supports, and adsorbents. According to the IUPAC definition, porous materials are ived into three categories: microporous (pore size 50 nm) materials . The advantages of mesoporous materials are summarized as follows:

- (a) Mesoporous materials have highly ordered and controllable size which enable the sizeselective adsorption of small molecules but the size-exclusion of larger molecules, providing molecular weight cutoff in sample enrichment 1]
- (b) Mesoporous materials have high surface areas and large pore volumes which provide sufficient capacity for the adsorption of reactants.
- (c) The framework of mesoporous materials can be various oxides, including silica, alumina, or transition metal oxides [2]. The transition metal oxides are particularly important among non-silica mesoporous materials because they possess d-shell electrons confined to nanosized walls, redox active internal surfaces, and connected pore network [3].

Additionally, the mesoporous structure of SBA-15 allows for easy accessibility of reactants to the active sites on the silver nanoparticles, further enhancing the catalytic activity. The tunable pore size also allows for the possibility of size-selective catalysis, where only molecules of a certain size can access the active sites.

Key words : mesoporous materials , d-shell electrons , SBA15

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THE IMPACT OF AUTOMOTIVE CATALYTIC CONVERTERS ON REDUCING EMISSIONS INTO THE ATMOSPHERE

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Abstract

This study explores the profound impact of automotive catalytic converters on mitigating atmospheric emissions, aiming to comprehensively analyze their mechanisms, classifications, merits, and drawbacks. The research focuses on the efficiency of catalytic converters in reducing the emissions of harmful substances, including hydrocarbons, nitrogen oxides, and carbon monoxide – major contributors to air pollution with adverse effects on both human health and ecosystems. Special attention is given to technological innovations and advancements in catalytic converter design aimed at enhancing their effectiveness while minimizing negative environmental consequences.

The study's to quantitatively assess pollution levels emitted by vehicles equipped with operational catalytic converters, drawing a comparison with those without catalytic converters. The methodology involves the use of instruments such as the automotive scanner ELM 327 version 1.5 and the gas analyzer "ГАНК-4" for precise measurements and analysis. The comprehensive comparative analysis seeks to highlight the strides achieved by automotive catalytic converters in actively mitigating atmospheric emissions.

In the introduction, the study underscores the significant role of automotive transportation as a primary contributor to atmospheric pollution, releasing nitrogen oxides, hydrocarbons, carbon monoxide, and particulate matter. To address these environmental challenges, catalytic converters are employed, utilizing precious metals like platinum, palladium, and rhodium to catalyze chemical reactions that transform toxic gases into less harmful or inert substances. However, the study acknowledges the drawbacks associated with catalytic converters, including high costs, wear and tear, potential effects on engine performance, loss of activity, and the risk of secondary pollution.

The study provides a detailed examination of catalyst composition, highlighting the use of ceramic or metallic honeycombs with micro-layers of reactive metals. Modern catalytic converters are described as three-component systems, with each element addressing specific pollutants.

In conclusion, this research contributes valuable insights into the multifaceted aspects of automotive catalytic converters, offering a balanced assessment of their positive contributions to reducing atmospheric emissions and the challenges associated with their implementation. By conducting a quantitative analysis of pollution levels and a comprehensive comparative evaluation, the study aims to contribute to ongoing efforts in developing more efficient and environmentally friendly catalytic converter technologies.

The objective of this study is to scrutinize the operational principles, classifications, merits, and demerits of automotive catalytic converters. Additionally, a comprehensive evaluation will be conducted to gauge their influence on the surrounding environment. The primary objective is to quantitatively assess pollution levels emitted by vehicles equipped with operational catalytic

converters, juxtaposed with those without catalytic converters. Furthermore, the study aims to conduct a comprehensive comparative analysis of the strides achieved by automotive catalytic converters in mitigating atmospheric emissions.

Keywords: Automotive Catalytic Converters, Atmospheric Emissions, Air Pollution, Nitrogen Oxides, Hydrocarbons, Carbon Monoxide, Precious Metals, Environmental Impact, Technological Innovations, Comparative Analysis, Catalyst Composition, Three-Component Systems, Engine Performance, Secondary Pollution, Environmental Challenges.

**COST ESTIMATION AND ANALYSIS FOR CONSTRUCTION OF WATER
STORAGE TANK IN CHEMICAL PROCESS UTILITY PLANTS**

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Abstract:

The present study delineates a systematic approach for estimating the construction cost of a 750 m³ rectangular water storage tank erected above the ground. It encompasses critical factors including site preparation, type of foundation, material of construction of tank, and methods of construction. The cost estimation process is comprehensive, accounting for both capital investment and allowances to mitigate potential financial uncertainties. Furthermore, the study incorporates a detailed analysis of variable, fixed, and overhead costs, ensuring a holistic understanding of the economic requirements. By considering these elements, the abstract aims to offer a lucid and insightful overview of the methodology employed to ascertain the overall cost for the successful realization of the water storage tank, facilitating informed decision-making in the planning and execution phases. Keywords: Water storage tank, Construction, Cost estimation, Capital investment, Budgeting

PROBLEMS OF GROUNDWATER POLLUTION

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Abstract:

This article discusses groundwater pollution and the main aspects of its correct use. Groundwater pollution poses a critical challenge to water resource management in Kazakhstan, a vast country in Central Asia with diverse geological conditions. This article delves into the sustainable management of groundwater, focusing on Kazakhstan's efforts to minimize the use of underground water and proposing potential solutions. As a nation located in the heart of Eurasia, Kazakhstan relies on various water resources, including rivers, lakes, and underground water. Groundwater, found at depths ranging from 50 to 500 meters, plays a pivotal role in providing drinking water and meeting agricultural needs, serving as the primary water source for many settlements and irrigation.

Kazakhstan exhibits distinct groundwater horizons, primarily comprising Paleogene and Mesozoic deposits, as well as carbonate rocks. However, regional variations in groundwater levels present challenges, such as surface-reaching groundwater in Southern Kazakhstan leading to flooding and soil salinization. Moreover, high mineralization is a notable characteristic, rendering some groundwater unsuitable for drinking and irrigation due to excessive salt content.

The state of Kazakhstan's groundwater significantly impacts the country's ecosystem, as overexploitation can lead to decreased groundwater levels, negatively affecting vegetation and wildlife. Various factors contribute to groundwater pollution, including industrial emissions from factories and mines, agricultural activities employing pesticides and fertilizers, oil and gas operations causing leaks, and uncontrolled wastewater discharge in the absence of effective treatment systems.

This comprehensive exploration of Kazakhstan's groundwater situation emphasizes the need for sustainable practices to address pollution sources and protect this vital resource. The article sheds light on the interconnectedness of groundwater management, environmental conservation, and the well-being of both human and natural systems in the region.

Keywords: Kazakhstan, groundwater pollution, water resource management, sustainable groundwater use, Paleogene and Mesozoic deposits, carbonate rocks, mineralization, environmental impact, ecosystem, industrial emissions, agriculture, pesticides, fertilizers, oil and gas operations, wastewater discharge, Central Asia.

CHALLENGES OF DAILY LIFE FOR CHILDREN WITH CELIAC DISEASE

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Abstract

The challenges faced by children with celiac disease are varied and affect different aspects of their daily lives. Research has shown that children with celiac disease can experience limitations in their daily lives due to the gluten-free diet they must follow. Adherence to a gluten-free diet can lead to health problems and nutritional difficulties and affect overall well-being. Issues such as carefully following food labels, cooking rules and the limited gluten-free food alternatives present dietary challenges. At the same time, meetings with friends and social events can be very challenging for children. They cannot consume everything in their environment unconditionally like their peers. This situation leads to the child withdrawing from the social environment. Diet-related problems can also occur in the school environment. Limited dietary options and lack of access to available alternatives can lead to nutritional disorders. Traveling and eating out are difficult for children with celiac disease. It is important that they carry safe snacks and know reliable restaurants. Traveling to unknown destinations where gluten-free options are scarce requires extra planning and preparation. Children with celiac disease therefore face a variety of challenges in their daily lives, including dietary restrictions and effects on their psyche and general well-being. In order to fully support children with celiac disease, it is important to understand and overcome these challenges.

Keywords: Celiac Disease, Children, Challenges, Gluten

INTRODUCTION

Celiac disease is an autoimmune disorder that involves a strict gluten-free diet. The diseases this condition has come from avoiding foods containing barley and rye (Sharma et al., 2020). Children with celiac disease face many challenges in their daily lives. They most commonly experience dietary restrictions and limitations (Leinone et al., 2019). This abundance of restriction, especially the social epidemic where food is concerned, can be difficult. From the death of children with celiac disease, finding suitable options at parties or permanent can be difficult, leading to the erasure of dreams and borders of isolation (Bacigalupe and Plocha, 2015). The restrictions imposed by a gluten-free diet can also deplete children's nutritional intake, potentially leading to malnutrition and other health problems (Öhlund et al., 2010).

Social difficulties

Social isolation and exclusion are another common challenge faced by children with celiac disease (Bacigalupe & Plocha, 2015). Children with this condition may feel excluded from social situations that involve food, such as birthday parties, sleepovers, or school events. They may feel embarrassed or self-conscious about dietary restrictions, which can lead to social anxiety and reluctance to participate in activities. This social isolation can have a significant impact on a child's mental health, potentially leading to feelings of loneliness, depression, and low self-esteem (Ho et al., 2023).

Parents and caregivers can help by advocating for their child's needs and finding inclusive social activities that accommodate dietary restrictions. However, the emotional and psychological impact of celiac disease on children should not be ignored. Research has shown that children with celiac disease have a higher risk of mental health problems such as depression and anxiety (Coburn et al., 2019). The challenges of managing a gluten-free diet, coping with social isolation, and coping with the physical symptoms of the disease can be detrimental to a child's emotional health (White et al., 2016).

Another challenge faced by children with celiac disease is eating out with friends (Bacigalupe & Plocha, 2015). Many restaurants do not offer gluten-free diet options, and cross-contamination can be a significant concern. This can make it difficult for children to eat out with friends or participate in group meals, leading to feelings of isolation and exclusion. Additionally, the high price and bad taste of gluten-free products can make it difficult for kids to eat out with friends. These difficulties can lead to feelings of frustration and disappointment, making it difficult for children to participate in social activities (Czaja-Bulsa & Bulsa, 2018).

Dealing with peer pressure and misunderstandings can also be a significant challenge for children with celiac disease (Bacigalupe & Plocha, 2015). Many children may feel pressure to conform to the eating habits of their peers, which can lead to feelings of isolation and exclusion. Misconceptions about celiac disease and the gluten-free diet can also contribute to feelings of frustration and exclusion, making it difficult for children to navigate social situations. Parents have reported feeling stressed, angry, or sad when their children cannot eat treats like their peers (Wheeler et al., 2022). These difficulties can lead to a feeling of social isolation, making it difficult for children to participate in social activities and maintain healthy relationships with their peers (Taşdelen Baş & Çavuşoğlu, 2020).

Children with celiac disease face a variety of challenges in social situations, including finding safe foods to eat in social situations (Rocha et al., 2016). Celiac disease can only be treated with a strict, lifelong gluten-free diet, which can be difficult to maintain in social situations where food options may be limited or unknown (Czaja-Bulsa & Bulsa, 2018).

This can cause feelings of anxiety and stress in children with celiac disease and make it difficult for them to enjoy social activities that involve food. As a result, children with celiac disease may feel excluded from social activities, which can lead to social isolation and feelings of exclusion (Zingone et al., 2015). Another challenge faced by children with celiac disease is the need to educate their peers and raise awareness about the disease (Czaja-Bulsa & Bulsa, 2018).

Children with celiac disease may feel different from their peers and face questions and misunderstandings about their nutritional needs. Educating peers about celiac disease may help reduce stigma and increase understanding by making social situations more comfortable and inclusive for children with celiac disease (Ho et al., 2023). But this can be a challenging task for children and may require support from parents, healthcare providers, and educators. Children with celiac disease may also experience emotional difficulties, such as embarrassment or embarrassment, regarding their condition (Ho et al., 2023).

These emotional difficulties can affect their relationships with peers, lead to social difficulties, and have a negative impact on their general well-being (Taşdelen Baş & Çavuşoğlu, 2020). Parents can play a vital role in supporting their children with celiac disease by providing emotional support, helping them manage social situations, and advocating for their needs. Additionally, increasing awareness and labeling of gluten-free products may help improve the lives of children with celiac disease (MacCulloch et al., 2014).

Difficulties in Maintaining a Gluten-Free Diet

It is very important for children with celiac disease to maintain a gluten-free diet to avoid adverse health effects. However, adhering to a gluten-free diet can be challenging for children and their families due to limited food options and increased cost (MacCulloch & Rashid, 2014).

Availability, cost, and labeling of food products are the biggest barriers to adherence to a gluten-free diet for children with celiac disease and their families (Capacci et al., 2018). This is a problem for children's birthday parties, picnics, and school events where food is often a central part of the celebration. It can make it difficult to participate in social events. Lack of gluten-free options can lead to feelings of exclusion and frustration, making it difficult for children to enjoy social activities like their peers (Taşdelen Baş & Çavuşoğlu, 2020).

Gluten-free products are often more expensive than their gluten-containing counterparts, which can create a serious financial burden for families. Moreover, gluten-free products are not always available in grocery stores and may require a trip to a specialty store, making it difficult to maintain a gluten-free diet. These difficulties can lead to frustration and difficulty complying with the diet, potentially compromising the child's health (Capacci et al., 2018).

Another challenge faced by children with celiac disease is finding safe food when eating out (Singh & Whelan, 2011). Many restaurants may not have a clear understanding of celiac disease and the importance of avoiding gluten, which can lead to cross-contamination. This can make it difficult for children with celiac disease to participate in social activities that include eating out and can lead to feelings of isolation and exclusion (Thompson, 2015).

Moreover, the lack of gluten-free options available can limit a child's ability to explore new foods and enjoy different cuisines. Children with celiac disease may also experience social difficulties and emotional impacts due to feeling different from their peers (White et al., 2016). Following a gluten-free diet can make children feel like outsiders because they may not be able to eat the same foods as their friends. This can lead to feelings of shame, disappointment, and anxiety (Ho et al., 2023). Additionally, the child may feel like a burden when participating in social events, as dietary restrictions may require special accommodations. These social difficulties can have a significant impact on a child's emotional health; this highlights the need for support and understanding from family, friends, and the community (Ludvigsson et al., 2016; Ho et al., 2023).

Challenges faced by children with celiac disease in school life

One of the main challenges that children with celiac disease face in school is the limited food options in school cafeterias. Many school cafeterias do not offer gluten-free food options, and cafeteria staff often lack adequate training in preventing cross-contamination (Biagetti et al., 2013). The limited availability and high cost of gluten-free foods can make it difficult for children with celiac disease to access safe and nutritious meals during the school day (MacCulloch & Rashid, 2014).

This can lead to feelings of frustration, isolation, and anxiety, as well as potential health risks if the child accidentally consumes gluten. Another difficulty that children with celiac disease experience in school life is the difficulty of finding gluten-free snacks (Meyer & Rosenblum, 2018).

Snacks and treats are often an important part of school life, whether it's sharing snacks with friends or enjoying treats during a special event. However, many snacks contain gluten, making it difficult for children with celiac disease to fully participate in these activities. This can lead to feelings of social isolation and stigma associated with dietary restrictions. It can also be

challenging for children to handle these situations and defend themselves. Social isolation and stigma associated with celiac disease can also be a significant challenge for children in school (Olsson et al., 2009).

Children with celiac disease may feel excluded from social situations that involve food, such as birthday parties or school events. They may also be subject to ridicule or bullying from peers who do not understand their situation (Cadenhead et al., 2019). This can lead to feelings of anxiety, depression, and low self-esteem. Parents of children with celiac disease also report significant impairments in social activities such as family gatherings, school trips, and dining out (Ho et al., 2023). These challenges can have a significant impact on the mental and emotional well-being of children with celiac disease, as well as their academic performance and overall quality of life (Taşdelen Baş & Çavuşoğlu, 2020).

CONCLUSION

From a social perspective, it is very important to develop awareness and understanding within society. Hosting workshops, seminars, or information sessions can help educate others about celiac disease, its challenges, and the importance of inclusive practices. Encouraging open communication and dispelling myths can contribute to a more supportive environment.

On an individual level, it is important to inform friends, classmates, and teachers about the child's nutritional needs. This includes promoting gluten-free options in school cafeterias and social events. Additionally, improving a sense of inclusivity by planning activities that accommodate dietary restrictions can make a significant difference. Creating a support network with other parents, teachers, and health professionals can provide valuable resources and guidance for both the child and his or her family. Ultimately, creating an atmosphere of understanding and flexibility goes a long way in making the life of a child with celiac disease more manageable and enjoyable.

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THE EFFECT OF FLIPPED LEARNING ON NURSING STUDENTS' EMPATHY, PROFESSIONAL COMPETENCE, KNOWLEDGE, AND MOTIVATION

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Abstract

Aim: The flow of information allows us to develop or revise nursing education standards. In recent years, educators have widely used flipped learning in healthcare, especially in pharmacology, medicine, and nursing. This study investigated the effect of flipped learning on nursing students' empathy, professional competence, knowledge, and motivation.

Methods: This quasi-experimental study was conducted between April and June 2022. The sample consisted of 64 third-year nursing students randomized into experimental (n=32) and control (n=32) groups. The experimental group attended classes on "A Nursing Approach for a Child with Acute Lymphoblastic Leukemia" (ALL) delivered by an instructor using flipped learning. The control group attended classes delivered by the instructor using traditional teaching. The instructor delivered the classes face-to-face. Data were collected using the Competency Inventory of Nursing Students (CINS), the Instructional Materials Motivation Survey (IMMS), and the Toronto Empathy Questionnaire (TEQ).

Results: Both flipped learning and traditional teaching improved participants' empathy, professional competence, knowledge, and motivation ($p < .001$). However, flipped learning was more effective than traditional teaching.

Conclusion: Flipped learning helps nursing students learn about ALL and develop empathy skills. However, it has a moderate effect on their professional competence. In addition, it generates the necessary motivation for instructional materials.

Keywords: Flipped learning, acute lymphoblastic leukemia, nursing education, empathy, professional competence, motivation

1. INTRODUCTION

Although healthcare is a fundamental human right, not everyone has equal access to it. Two critical prerequisites for high-quality healthcare delivery are (1) prompting changes in healthcare systems to improve standards of care and (2) providing all healthcare professionals with access to education and lifelong learning opportunities to turn them into efficient and skilled experts that save lives. High-quality education plays an important role in improving knowledge and professionalizing nursing. Healthcare professionals must be caregivers, decision-makers, communicators, community leaders, and managers at their full potential (Atasoy & Sütütemiz, 2014). Nursing education should focus on helping students acquire new knowledge and skills and develop positive attitudes (Hwang & Chang, 2020). According to Gu

and Sok (2020), we need specialized and competent nurses to respond to rapidly changing healthcare environments, improve the quality of care, and ensure patient safety.

Educational approaches in nursing education are changing innovatively with the flow of knowledge. Barbour and Schuessler (2019) call for changes in nursing education to allow nurses to implement clinical interventions in complex medical settings. They also advocate that effective learning theories change teachers' beliefs about teaching and students' perceptions of learning. In the twenty-first century, there has been a significant paradigm shift from teacher-centered to student-centered instruction, from teacher-dominated and one-sided lecturing to a dynamic model of teacher-student interaction, from knowledge to capacity, from theory to practice, from principles and limited texts to problems and questions, from competition to collaboration, and from uniform to individual learning (Chung & Lee, 2018). Learning methods, techniques, and strategies have undergone changes, which have allowed us to use different ways to improve learning ability, professional competence, and empathy (Yang et al., 2020; Sentas, Malouff, Harris & Johnson, 2018; Leung et al., 2016; Lee & Park, 2018).

In recent years, educators have widely used flipped learning in healthcare, especially in pharmacology, medicine, and nursing (Lina, Hwang & Hsu, 2019). Flipped learning reverses a traditional model of in-class lectures followed by homework assignments. Flipped learning allows teachers to introduce learning materials to students before class. Then, students discuss with their peers and solve problems to better understand topics during class (El Miedany, 2019). The core concepts of flipped learning involve student-centered, self-paced, and self-directed learning and active interaction between students and teachers (Kim, Kim, Cho & Jang, 2017). Flipped learning allows students to meet their needs at the right time and place. Flipped learning promotes collaboration, student engagement, and active learning (El Miedany, 2019). In fact, the FL approach has been shown to be successful in medical education compared to TT (Traditional Teaching) and has effectively improved the skills of nursing students (Lina, Hwang, Hsu, 2019).

The competence of nurses has become a very important issue in the world (Leung et al., 2016). Nurses must improve their competence to adapt to new technologies, roles, working conditions, and health problems (Clark et al., 2016). Empathy is another essential component of nursing. Empathy is showing kindness and warmth towards a person in a way that makes the recipient feel understood and accepted. It allows healthcare professionals to build a trusting connection with their patients, resulting in high-quality care and increased satisfaction. In other words, healthcare professionals with empathy are more likely to understand their patients and get across the right information at the right time (Chen & Forbes, 2014).

We thought that the FL method, whose effectiveness has been demonstrated by various studies (Kim, Kim & Chae, 2021; Presti, 2016; Sullivan, 2022; Park & Park, 2017; Kim & Kim, 2018; Croy et al., 2020), would contribute to students' knowledge and learning motivation, professional competencies and empathy levels in nursing education. We also assumed that flipped learning integrated with scenarios and videos could help nursing students better understand their patients' health conditions and have more empathy for them. Therefore, this quasi-experimental study investigated the effect of flipped learning on nursing students' empathy, professional competence, and knowledge and learning motivation.

2. METHODS

2.1. Participants

The study was conducted between April and June 2022. The study population consisted of 67 third-year nursing students. However, as three students did not volunteer to take part in the study or did not fully participate in the study process, the study was completed with 64 students. At the beginning of the study, a pretest was carried out on third-year nursing students (n=64). In the next step, the students with odd school numbers were assigned to the experimental group (n = 32) and the students with even school numbers were assigned to the control group (n = 32), using the unbiased assignment model.

Leukemia is the most common cancer in children. Acute lymphoblastic leukemia constitutes 75% of all childhood leukemias (Porter et al., 2017). Acute lymphoblastic leukemia is characterized by the uncontrolled proliferation of abnormal and immature lymphocytes and precursor cells. It is a malignancy of B or T lymphoblasts leading to the displacement of bone marrow elements and other lymphoid organs (Roberts, 2018). Childhood cancers cause family members to suffer from anxiety, poor quality of life, and uncertainty (Van Schoors et al., 2017; Long et al., 2018).

Leukemia is a complex and challenging disease. Nursing students should be prepared for motivational practices to competently care for patients with cancer (Edwards et al., 2016). Therefore, we thought we needed to address nursing students' competence and knowledge levels to ensure they understand the complex physical and psychological conditions of patients with cancer and their family members. We focused on ALL to investigate the effect of flipped learning on nursing students' empathy, competence, knowledge and learning motivation.

2.1.1. Experimental Group

2.1.1.1. Pre-Intervention

Before the intervention, the experimental group filled out a personal information form, a Knowledge Questionnaire on ALL (KQALL), the Competency Inventory of Nursing Students (CINS-TR), and the Toronto Empathy Questionnaire (TEQ).



2.1.1.2. Intervention

The experimental group attended lessons on "A Nursing Approach for a Child with ALL." The researchers created an electronic messaging group with the experimental group participants and shared the 45-minute lecture video (developed by the instructor) and Khan Academy's videos with them three days before the face-to-face training. The researchers asked the experimental group participants to watch all the videos before the training.

In the first session of the face-to-face training (four hours of class = 120 minutes), the instructor divided the experimental group participants into groups of five to six people. The groups discussed the questions posed by the instructor about the videos. They also solved cross-puzzles and did learning exercises. The instructor held the second session of the face-to-face training (four hours of class = 120 minutes) one week after the first session. The groups discussed a case (scenario-based learning). The instructor prepared the findings regarding the case and presented them during class.

Case: A 17-year-old girl was diagnosed with ALL. Before being diagnosed, she was admitted to a healthcare institution for fatigue, weakness, dizziness, joint pain, night sweats, and fever.

Her complaints persisted despite antibiotics and muscle relaxants. Therefore, she was admitted to another healthcare institution and underwent blood tests. Based on the tests, she was diagnosed with anemia and thrombocytopenia. After bone marrow aspiration, she was diagnosed with ALL. Therefore, she started undergoing chemotherapy.

	Experimental Group (n=32)	Control Group (n=32)
Pretest	Personal Information Form Knowledge Questionnaire on ALL Competency Inventory of Nursing Students (CINS) Toronto Empathy Questionnaire (TEQ)	
	Flipped Learning	Traditional Teaching
Intervention	<div style="text-align: center;"></div> <p>Individual study</p> <ul style="list-style-type: none"> • 45-minute lecture video prepared by the instructor • "Leukemia Pathophysiology," "What is Leukemia?," "Classification of Leukemia," "Acute Leukemia," and "Leukemia Treatment" videos prepared by Khan Academy 	<div style="text-align: center;"></div> <p style="text-align: center;">Face-to-face Lecture</p> <ol style="list-style-type: none"> 1. Face-to-face lecture (120 min) <ul style="list-style-type: none"> • Group discussion • Instructor-led Q&A sessions • Learning exercises • Watching a video • Solving crossword puzzles 2. Face-to-face lecture (120 min) <ul style="list-style-type: none"> • Scenario-based learning on a case • An online quiz (https://kahoot.com)
Posttest	Knowledge Questionnaire on ALL, Competency Inventory of Nursing Students (CINS) Toronto Empathy Questionnaire (TEQ) Instructional Materials Motivation Survey (IMMS)	Knowledge Questionnaire on ALL Competency Inventory of Nursing Students (CINS) Toronto Empathy Questionnaire (TEQ)

The experimental group participants discussed the pre-diagnostic findings, diagnostic tests (bone marrow aspiration video and blood smear images), treatment protocol (preparation for chemotherapy, rules for treatment), lab tests before and after treatment, and side effects of chemotherapy. Afterward, they determined nursing diagnoses and planned nursing interventions according to the data.

After the discussion session, the experimental group participants asked each other questions under the instructor's guidance. The instructor held a quiz where she posed the questions she had prepared on the topic. The experimental group participants answered those questions on an online platform where they chose usernames for themselves.

2.1.1.3. Post-Intervention

Six weeks after the intervention, the experimental group participants filled out KQALL, CINS-TR, TEQ, and the Instructional Materials Motivation Survey (IMMS).

2.1.2. Control Group

The control group participants filled out the personal information form, KQALL, CINS-TR, TEQ. Then, the instructor delivered lectures face-to-face based on traditional teaching (four hours of class = 120 min). Six weeks after the intervention, the control group participants filled out KQALL, CINS-TR, TEQ.

2.2. Data Collection

The data were collected using a personal information form, a Knowledge Questionnaire on ALL (KQALL), the Competency Inventory of Nursing Students (CINS-TR), the Instructional Materials Motivation Survey (IMMS), and the Toronto Empathy Questionnaire (TEQ).

2. 2.1. Personal Information Form

The personal information form was based on a literature review conducted by the researchers. The form consisted of 13 items on sociodemographic characteristics.

2. 2. 2. Knowledge Questionnaire on ALL (KQALL)

The Knowledge Questionnaire on ALL (KQALL) was based on a literature review conducted by the researchers (Porter et al., 2017; Roberts, 2018; Van Schoors et al., 2017; Long et al., 2018; Edwards et al., 2016). The form consisted of 25 questions to determine how much participants knew about ALL. The total score ranged from 0 to 25.

2. 2. 3. Competency Inventory of Nursing Students (CINS-TR)

The Competency Inventory of Nursing Students (CINS) was developed by Hsu and Hsieh (2013) and adopted into Turkish (CINS-TR) by Ülker (2018). The instrument consists of 43 items and six subscales: clinical biomedical science (five items), general clinical skills (seven items), critical thinking and reasoning (four items), caring (six items), ethical and responsibility (15 items), and lifelong learning (six items). The items are rated on a seven-point Likert-type Scale. The total score ranges from 43 to 301, with higher scores indicating higher competence. The CINS-TR has a Cronbach's alpha of 0.97, while the subscales have a Cronbach's alpha of 0.79 to 0.97. In the present study, the CINS-TR had a Cronbach's alpha of 0.93, while the subscales had a Cronbach's alpha of 0.78 to 0.92.

2. 2. 4. Instructional Materials Motivation Survey (IMMS)

The Instructional Materials Motivation Survey (IMMS) was developed by Keller (1987) and adapted into Turkish by Kutu and Sözbilir (2011). The instrument consists of 36 items rated on a five-point Likert-type scale. It has four subscales: (1) attention, (2) relevance, (3) confidence, and (4) satisfaction. The Turkish version of the IMMS has a Cronbach's alpha (α) of 0.83, which was 0.91 in the present study. It consists of 24 items and two subscales: (1) attention-relevance ($\alpha=0.79$) and (2) confidence-satisfaction (0.69) (Kutu & Sözbilir, 2011). In the present study,

the “attention-relevance” and “confidence-satisfaction” subscales had a Cronbach’s alpha of 0.88 and 0.85, respectively.

2. 2. 5. Toronto Empathy Questionnaire (TEQ)

The Toronto Empathy Questionnaire (TEQ) was developed by Spreng, Kinnon, Mar, and Levine (2009). The instrument consists of 13 items rated on a five-point Likert-type scale. The questionnaire was adapted into Turkish by Totan, Doğan, and Sapmaz (2012). They conducted a confirmatory factor analysis and checked fit indices for construct validity. The confirmatory factor analysis showed that the questionnaire had good fit indices, indicating that the original form was confirmed in the Turkish population [$\chi^2= 234.67$, $df= 64$, $\chi^2/df= 3.67$, $NFI= .91$, $GFI= .94$, $RFI= .90$, $IFI= .94$, $CFI= .94$, $RMSEA= .07$, $RMR= .05$]. They also conducted a test-retest and used internal consistency methods to check for reliability. The results showed that the questionnaire had a reliability coefficient (internal consistency) of .79 and a test-retest reliability of .73. The questionnaire has a one-factor structure, with higher scores indicating higher levels of empathy (Totan, Dogan & Sapmaz, 2012). In the present study, the questionnaire had a Cronbach’s alpha of .89.

2. 3. Data Analysis

The data were analyzed using the Statistical Package for Social Sciences (IBM SPSS Corp; Armonk, NY, USA, v. 22.0). The Kolmogorov-Smirnov and Shapiro-Wilk tests were used for normality testing. The results showed that the data were normally distributed. Descriptive statistics (mean, percentage, arithmetic mean, and standard deviation) were used to analyze the sociodemographic characteristics. Dependent groups t-test was used to compare pretest and posttest scores. Cohen's d. was used to calculate the effect size.

3. RESULTS

Participants had an arithmetic mean age of $21.55 \pm .99$ years (min: 20 & max: 24). Most participants were women (79.7%). The majority of the participants had nuclear families (85.9%) and a neutral income (income = expense) (76.6%). Less than a quarter of the participants had a negative income (income < expense) (12.5%). Most participants chose the nursing profession willingly (75%) and took a course on leukemia (70.3%). Participants learned about ALL either from the “Internal Medicine” (75.6%) or the “Nursing of Pediatric Health and Diseases” courses (20%). Only seven participants had family members with cancer (10.9%).

TABLE 1 Participants’ knowledge of ALL

	Experimental Group (n=32)				Control Group (n=32)			
	Pretest	Posttest			Pretest	Posttest		
	M(SD)	M(SD)	p	Cohen's d			p	Cohen's d
KQALL	10.47±4.43	19.44±3.57	<.001	2.229	11.38±4.63	16.59±5.78	<.001	0.995

*Dependent groups t-test,

**The effect size value corresponding to each is shown as Cohen’s d. Effect size Cohen’s d (0.2–0.5 small effect, 0.5–0.8 moderate effect, > 0.8 large effect, > 1.2 very large effect, and > 2.0 huge effect)

Both experimental and control groups had significantly higher mean posttest KQALL scores than the pretest scores ($p < .001$). However, the experimental group had a significantly higher mean posttest KQALL score than the control group (**Cohen's d: 2.229**) (Table 1).

Table 2 CINS scores

	Experimental Group (n=32)				Control Group (n=32)			
	Pretest	Posttest			Pretest	Posttest		
	M(SD)	M(SD)	p	Cohen's d			p	Cohen's d
Clinical biomedical science	26.19±4.95	28.28±3.22	.007	0.500	19.88±4.23	21.28±9.36	.411	0.193
General clinical skills	41.31±9.46	42.84±4.51	.374	0.206	29.50±7.24	34.28±13.17	.051	0.449
Critical thinking and reasoning	21.88±6.39	23.94±3.02	.059	0.412	17.22±3.46	18.38±7.08	.347	0.208
Caring	35.47±9.30	37.13±4.16	.315	0.230	30.38±7.75	31.13±11.67	.709	0.078
Ethics and responsibility	92.03±22.09	96.03±9.27	.313	0.236	77.59±12.39	80.44±30.86	.643	0.121
Lifelong learning	36.06±8.69	38.03±3.31	.192	0.299	28.06±6.03	30.34±12.19	.354	0.237
Total CINS score	252.94±56.19	266.25±23.65	.174	0.309	207.59±20.34	215.84±81.87	.561	0.138

*Dependent groups t-test

**The effect size value corresponding to each is shown as Cohen's d. Effect size Cohen's d (0.2–0.5 small effect, 0.5–0.8 moderate effect, > 0.8 large effect, > 1.2 very large effect, and > 2.0 huge effect)

The experimental group had a significantly higher mean posttest CINS “clinical biomedical science” subscale score (28.28±3.22) than the pretest score (26.19±4.95) ($p = .007$) (Table 2)

TABLE 3 TEQ scores

	Experimental Group (n=32)				Control Group (n=32)			
	Pretest	Posttest			Pretest	Posttest		
	M(SD)	M(SD)	p	Cohen's d			p	Cohen's d
Toronto Empathy Questionnaire	53.13±5.94	55.56±2.94	.024	0.519	52.59±7.60	52.69±4.62	.939	0.015

*Dependent groups t-test

**The effect size value corresponding to each is shown as Cohen's d. Effect size Cohen's d (0.2–0.5 small effect, 0.5–0.8 moderate effect, > 0.8 large effect, > 1.2 very large effect, and > 2.0 huge effect)

The experimental group had a significantly higher mean posttest TEQ score than the pretest score ($p = .024$) (**Cohen's d: 0.519**) (Table 3).

The experimental group had a significantly higher mean posttest TEQ score than the pretest score ($p = .024$) (**Cohen's d: 0.519**) (Table 3). Participants had mean IMMS “relevance” and

“confidence” subscale scores of 45.91 ± 4.68 and 55.78 ± 5.37 , respectively. They had a mean IMMS total score of 101.69 ± 9.16 , indicating high motivation for instructional materials (Not shown in Table).

4. DISCUSSION

4.1. Participants’ Knowledge of ALL

Today, nurses need to continuously learn and improve intellectually to assume new roles and responsibilities. Therefore, academics should replace instructor-centered and rote-based educational approaches with active student-centered ones to ensure that students actively participate in learning-teaching processes, assume responsibilities, develop critical thinking skills, and feel motivated to learn new things (Filiz & Dikmen, 2017). In recent years, flipped learning has become a popular method replacing traditional teaching approaches. Academics in medical, pharmacy, and nursing schools employ flipped learning more and more to turn their students into qualified healthcare professionals with the knowledge and skills necessary to provide high-quality care to their patients (Jung, An & Park, 2018). Moreover, educators have turned to innovative and effective methods more and more since the COVID-19 pandemic. Flipped learning is an innovative and exciting way of engaging students in collaborative learning (Murphy, Strong & Jones, 2021). Our results showed that flipped learning was more effective than traditional teaching ($p < .001$) (Cohen’s d : 2.229) (Table 1). Research also shows that flipped learning helps students develop positive attitudes toward learning (Kim, Kim & Chae, 2021; Presti, 2016; Sullivan, 2022; Park & Park, 2017). Kim and Kim (2018) found that flipped learning was better at helping nursing students acquire knowledge and exhibit high academic performance than traditional teaching. Flipped learning also makes students more confident and improves educational efficiency and effectiveness (Croy et al., 2020). Therefore, it should be widely used in nursing education (Kim, Kim & Chae, 2021). All in all, we can state that flipped learning effectively helps nursing students acquire more professional knowledge. However, more research is warranted to better understand the effectiveness of flipped learning (Presti, 2016).

4.2. Participants’ Competence

Nurses play a critical role in protecting and promoting health and eliminating health problems for two reasons. First, treatment alone is not sufficient. Second, governments are interested in reducing health costs. Therefore, nurses should be experts who consider social realities through their critical thinking and problem-solving skills. At this point, academics have many responsibilities because they need to provide such an education that nursing students develop those skills to meet the demands of the modern world (Özkütük, Orgun & Akçakoca, 2018). Therefore, researchers have focused on new methods and techniques to meet students’ needs in teaching-learning processes and settings (Birgili, Seggie & Oğuz, 2021). Our results showed that both flipped learning and traditional teaching made participants more competent, but the difference was statistically insignificant (Table 2). On the other hand, Park, Han, Kim, and Lee (2021) reported that flipped learning improved class performance, overall assessment, self-efficacy, and problem-solving ability. Ghoneim and Badawy (2018) determined that flipped learning helped nursing students develop higher-order thinking skills and perform better academically. Lee, Chang, and Jang (2017) also documented that flipped learning improved nursing students' performance and essential life competencies. Research also shows that flipped

learning helps students develop self-learning (Jung & Lee, 2017), clinical (Park & Suh, 2021), critical thinking (Jung & Lee, 2017; Kim & Kim, 2017; Park & Suh, 2021), and self-leadership and problem-solving skills (Lee & Park, 2018). More competent nurses are likely to provide better care services. Although our results do not fully indicate that flipped learning effectively increases nursing competencies, literature show that it makes nursing students more competent.

4.3. Participants' Empathy

Empathy is a subject of psychology courses and a trait that counseling and other health professional programs aim to instill in students (Sentas, Malouff, Harris & Johnson, 2018). Nursing students should be competent in developing an effective relationship with their patients (Bas-Sarmiento, Fernández-Gutiérrez, Baena-Baños & Romero-Sánchez, 2017; Yang et al., 2020). Therefore, academics use various strategies to help nursing students develop empathy (Yang et al., 2020). Our results showed that flipped learning helped the experimental group participants develop empathy (Cohen's d : 0.519) (Table 3). Literature shows that educational interventions help students develop empathy (Bas-Sarmiento, Fernández-Gutiérrez, Baena-Baños, Romero-Sánchez, 2017; Yang et al., 2020; Sentas, Malouff, Harris & Johnson, 2018). However, think our results will fill a gap in the literature as this is the first study to address the effect of flipped learning on nursing students' empathy skills.

4.4. Participants' Motivation for Instructional Materials

Motivation should be considered when introducing a new teaching model (Pence, Franzen & Kim, 2021). Most nursing academics delivered their lectures in learning environments where students were passive recipients of information. Although lecturing is an effective teaching method, active learning strategies (e.g., flipped learning) can creatively engage and motivate nursing students differently (Pence, Franzen & Kim, 2021). Similarly, literature emphasize the importance of motivation for instructional materials. Park, Han, Kim, and Lee (2021) found that flipped learning helped students perform better academically and develop self-motivation, self-efficacy, and problem-solving skills. Jung and Lee (2017) argue that academics should use flipped learning more widely to improve students' self-directed learning skills, motivation, and satisfaction and enhance classroom teaching quality. Park and Suh (2021) determined that flipped learning made nursing students more satisfied with learning. Our results showed that flipped learning motivated the experimental group participants for instructional materials, which is consistent with the literature (Kutu & Sözbilir, 2011). Instructional materials should focus on motivating nursing students because motivated nurses are more likely to develop the necessary skills to provide high-quality care and enjoy their job.

5. CONCLUSIONS

Our results showed that flipped learning was better at helping nursing students learn more about ALL and have more empathy for people with ALL than traditional teaching. The results also showed that flipped learning was effective in helping nursing students develop moderately professional competence and high motivation for instructional materials. Earlier research has addressed the effectiveness of flipped learning through a semester's worth of courses. However, this study focused on only one course to investigate the effectiveness of flipped learning. Nursing students should have both professional knowledge and skills. Furthermore, academics should use the right teaching materials to help nursing students develop empathy skills. In this way, they can interact effectively with their patients. For this reason, it is recommended that the

number of studies demonstrating the efficacy of FL be increased. Our results indicate that academics using the right teaching materials can help students become professional nurses equipped with the knowledge and skills necessary to provide high-quality care to their patients and empathize with them.

Ethical Considerations

Research ethics approval was granted by the Selcuk Institutional Review Board (Decision No: 2022/229, E-70632468-050.01.04-275639). Permission was obtained from the authors who developed CINS-TR, IMMS, and TEQ. The research protocol and approval procedures adhered to the principles of the Declaration of Helsinki. All students were informed about the research purpose, procedure, and confidentiality. Informed consent was obtained from those who agreed to participate. Permission was also obtained to use Khan Academy - Turkey videos.

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IMPACT RESPONSE OF CARBON/EPOXY AND GLASS/EPOXY COMPOSITE PLATES

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Abstract

This study presents effects of the energy level on impact response of the carbon/epoxy and glass/epoxy composite plates. Composite plates with two different layering orientations such as $[0^\circ/90^\circ/\pm 45^\circ]_s$ and $[\pm 45^\circ/0^\circ/90^\circ]_s$ were produced with a vacuum infusion system. Low-speed impact tests were performed at three different impact energy levels such as 12.5J, 17.5J and 22.5J. Variation of contact force-time and energy-time for above impact energies are obtained. Also, in low-speed impact tests, the ductility indexes of the samples were calculated by calculating the areas under the contact force-time (F-t) curves of the samples for each parameter. Ductility indexes-energy level graphs were created separately for $[0^\circ/90^\circ/\pm 45^\circ]_s$ and $[\pm 45^\circ/0^\circ/90^\circ]_s$ layering orientations. Results show that impact energy level had a significant effect on the impact response of composite plates.

Keywords: Composite plates; Impact response; Ductility index; Impact energy level

INTRODUCTION

Increasing the resistance of composite materials under impact loads, which have a wide application area, has become one of the most important research topics today. The sea water effect on the behavior of glass/epoxy based composite pipes under three different impact energies such as 15J, 20J and 25J was investigated by Deniz and Karakuzu [1]. The samples were exposed to seawater for twelve months. The authors observed that both energy level and sea water had a significant effect on the impact behavior of glass/epoxy samples. It was observed that the contact force increased with the increase in the impact energy level and the impact behavior weakened with the increase in the exposure time to sea water. In the study conducted by Sikarwar et al. [2], the effects of fiber orientation and sample thickness of the glass/epoxy composite laminates were experimentally investigated in impact tests performed using a conical impact nose. The obtained experimental results were compared with the analytical results and good agreement was found. The effect of impactor diameter on the low-velocity impact behavior of composite plates produced using woven glass fiber and epoxy matrix was examined by Icten et al. [3]. Impact nose diameters were chosen as 12.7, 20.0, 25.4 and 31.8 mm. For the same impact energies, the maximum contact force was obtained at higher impactor diameters. Pernas-Sánchez et al. [4] experimentally analyzed the effect of high-velocity impacts of ice spheres on unidirectional carbon/epoxy laminates. They studied for two

different ice diameters (40 and 50 mm) and two different laminate thicknesses (4 and 6 mm). Panciroli and Giannini [5] conducted a study to compare the effects of stacking sequence and areal weight on the low-velocity impact response of E-glass/epoxy and flax/epoxy panels having similar properties. From the results, it was determined that the impact resistance of flax/epoxy samples was lower than glass/epoxy samples. A material characterization for flax/epoxy composites modeled through a MAT54/55 material card is provided by Giammaria et al. [6]. Authors present experimental results and a numerical optimization study to identify the material parameters of a flax/epoxy composite laminate subjected to low-velocity impact tests at three different energy levels such as 5J, 10J and 15J. It is seen that used strategy provides a good prediction of the experimental low-velocity impact behavior of flax/epoxy composites only for the energy level for which the optimization is performed. Rouphael et al. [7] conducted a study to compare the low-velocity impact behavior of UD-mat flax/epoxy composite laminates and glass/epoxy laminates with the same UD and cross-ply configurations (same number of plies and stacking arrays). When comparing with flax fiber laminates, the absorbed energy and energy absorption rate are on average 40% lower in glass laminates, and less damage is observed. While various damage modes are observed in flax/epoxy laminates, the main damage mode in glass/epoxy laminates is delamination.

In the present work, composite plates were created by combining carbon and glass fibers as reinforcement and epoxy resin as matrix. A series of low-velocity impact tests at three different energy levels such as 12.5J, 17.5J and 22.5J were carried out on these successfully produced composite plates. Herein, an experimental study is carried out to investigate and compare the impact behavior of carbon/epoxy and glass/epoxy composite plates for the above given energy levels.

MATERIALS AND METHOD

The carbon/epoxy and glass/epoxy composite plates were produced using 300 gr/m² (12K) carbon and 330 gr/m² (600 tex) glass fiber fabrics with unidirectional fiber alignment. The matrix material was obtained by mixing 1/3 ratio of FIBERMAK COMPOSITES brand F-1564 Resin and F-3486 Hardener. In this paper, carbon/epoxy and glass/epoxy composite plates were produced in eight layers using vacuum infusion technique (Figure 1). The infused plates were then allowed to cure at 100°C for 2 hours. For each layering type, carbon and glass fiber fabrics were prepared by cutting eight pieces of 700x700-mm dimensions in 0°, 90°, +45° and -45° orientations. The composite plates shown in Figure 1 were produced by following the same sequence of composite production stages given above for each layering type.

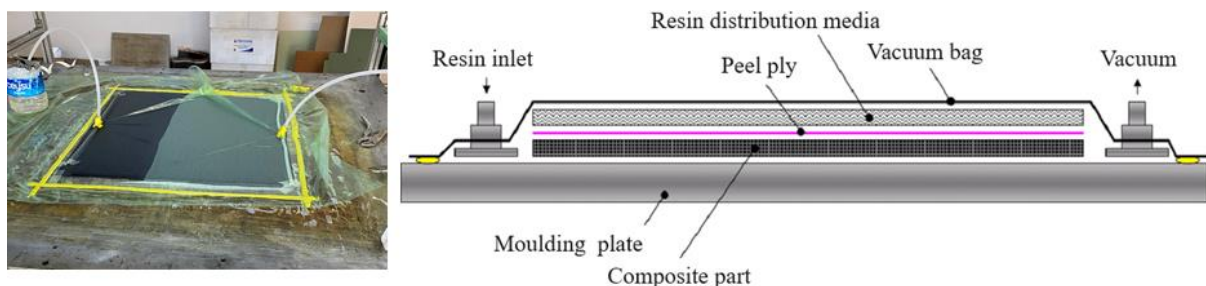


Figure 1. Production of composite plates

The produced composite plates are given in the Figure 2. The test specimens of 100×100 mm were obtained from those composite plates using water-jet cutting, and the average thickness of specimens was 2.34 mm.

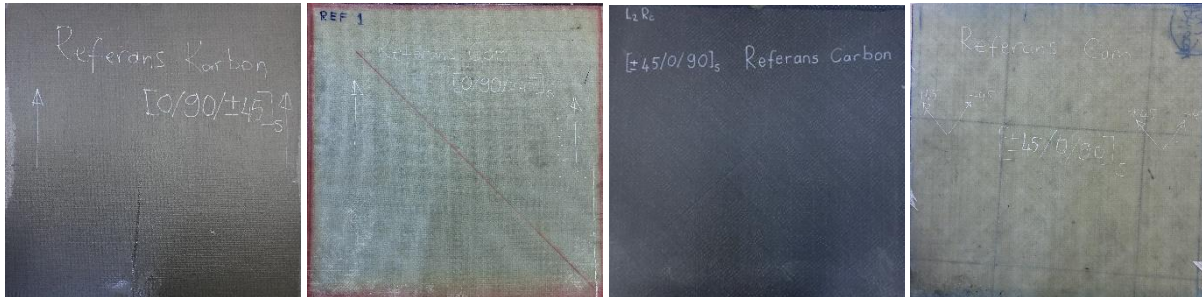


Figure 2. The produced composite plates

Low velocity impact tests were performed by using CEAST-Fractovis Plus impact testing machine in the Composite Research Laboratory at Department of Mechanical Engineering of Dokuz Eylul University (Figure 3). Two impact energies, 12.5J, 17.5J and 2.25J, were used for the tests. The impactor mass was 5.02 kg and the diameter of the semi spherical impactor nose was 12.7 mm. During impact tests anti-rebound device allows only a single impact.

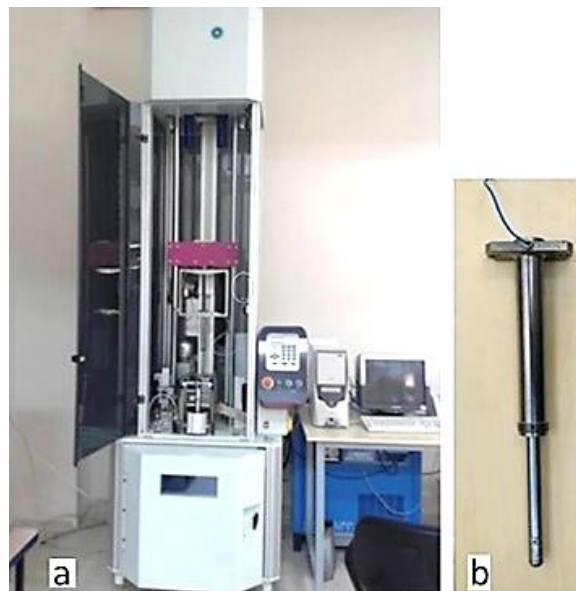


Figure 3. (a) Illustration of CEAST 9350 (Fractovis Plus) impact test machine and (b) impactor

RESULTS AND DISCUSSION

This research aimed to determine effects of energy level and fiber type on the impact response of carbon/glass and glass/epoxy composite plates as candidate materials for marine, aerospace applications. The fiber materials used are carbon and glass fabric. The matrix material used is an epoxy resin polymer. The vacuum infusion system is used to produce the composite plates.

Low-velocity impact tests were performed on both carbon/epoxy and glass/epoxy-based composite plates. A minimum of three samples were tested for each parameter, and the average values were calculated. The impact characteristics, including contact force, contact time (duration), absorbed energy, and ductility index were analyzed to assess the effects of the energy level on impact response of the carbon/epoxy and glass/epoxy composite plates. These characteristics play a crucial role in understanding the impact performances of the composite plates. In the Figure 4 is given typical force and energy – time curve and characteristic points after impact test.

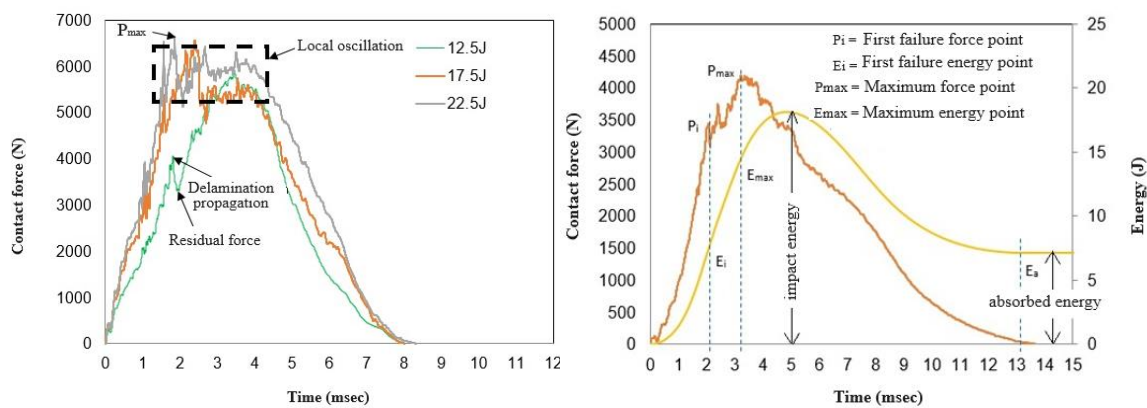


Figure 4. Typical force and energy – time curve and characteristic points for post-impact analysis

The contact force-time and impact energy- time curves were plotted using the obtained results from low-velocity impact tests. When the applied impact energy during the test is not sufficient to cause perforation in the sample, a rebound event occurs. However, as the applied energy level increases, the sample undergoes penetration and ultimately perforation. The energy that leads to damage on the sample during the test is referred to as the absorbed energy. Absorbed energy value can be obtained from energy-time curves. In these curves, the energy level reaches a point equal to the applied impact energy, and then the curves become horizontally continuous. The value of this horizontal curve represents the absorbed energy. The maximum contact force increases with the impact level. Considering the effect of fiber type, with glass fiber/epoxy, the sample materials soften and their rigidity decreases, resulting in reduced resistance to impact compared to carbon/epoxy. When comparing the absorbed energy values at fiber types, it is observed that the absorbed energy value is higher for glass fiber due to the softening of the samples and the decrease in material rigidity, compared to the tests conducted for carbon fiber/epoxy. In Figure 5-7, the contact duration between the impactor and the sample shows a significant increase before reaching a maximum value just before the perforation threshold. During the impact that are parallel and perpendicular to 0° and 90° directions of fibers, the fibers in these 2 ply bear the lesser load and the more severe matrix damage and fiber failure occur, which results in a larger dent depth. Whereas during the impact that is $\pm 45^\circ$ direction of fibers, the fibers in these 2 plies bear the main load and the more lesser matrix damage and fiber failure occur, which lead to a smaller dent depth.

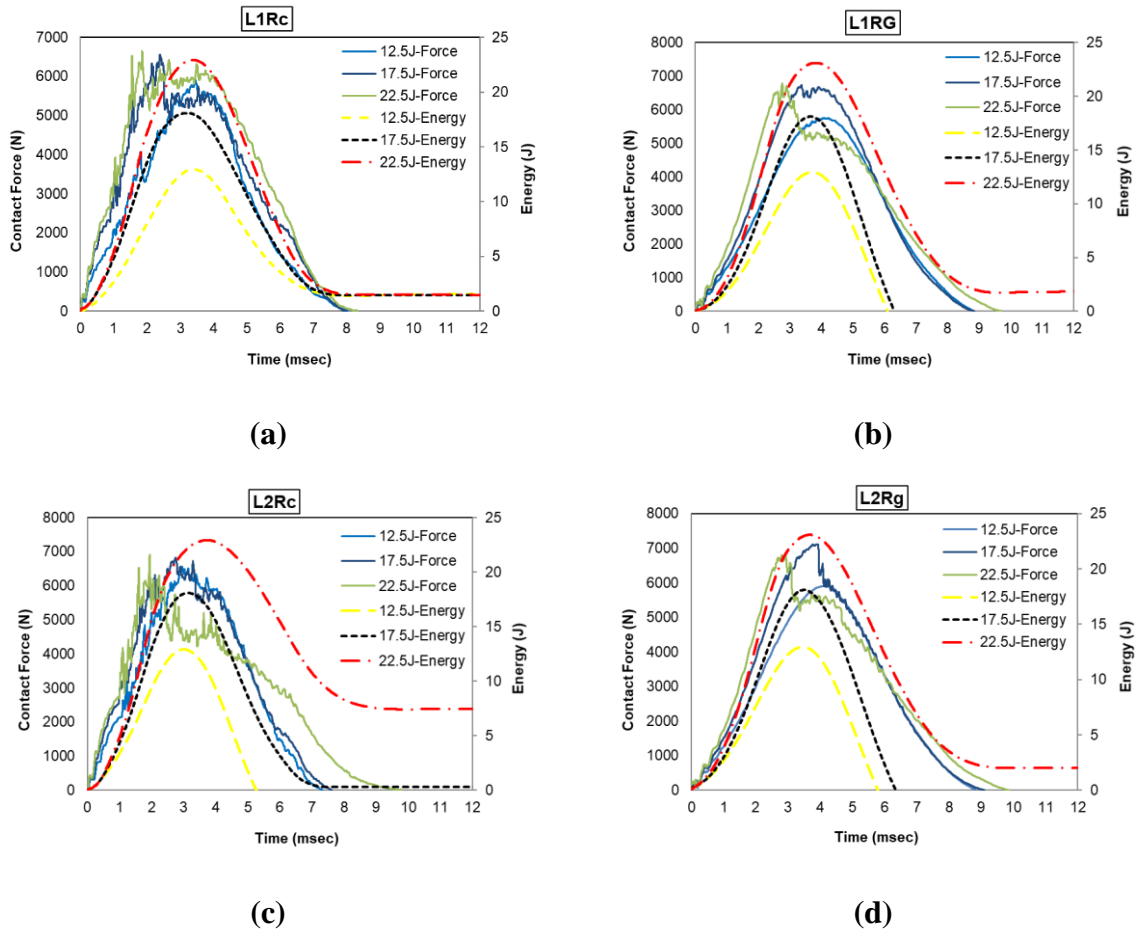
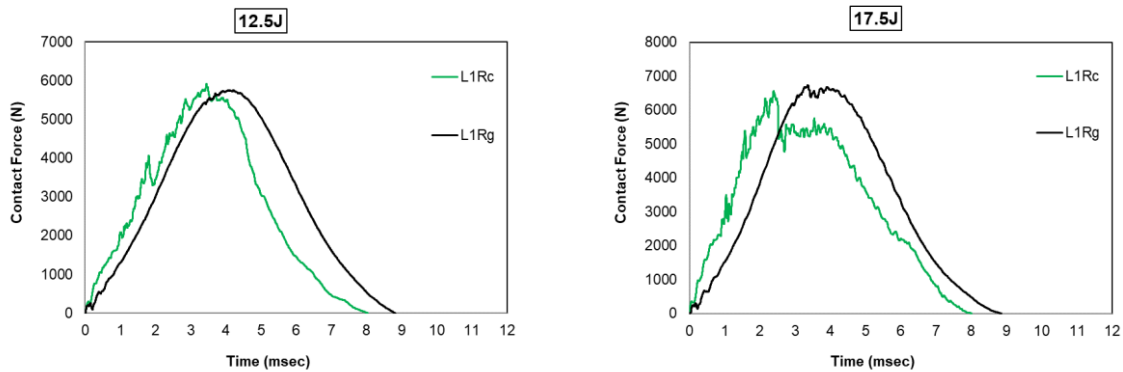


Figure 5. The contact force - time and energy - time change curves for three different impact energy levels of L1 referring to $[0^\circ/90^\circ/\pm 45^\circ]_s$ and L2 referring to $[\pm 45^\circ/0^\circ/90^\circ]_s$ laminated samples (a) L1Rc, (b) L1Rg, (c) L2Rc and (d) L2Rg



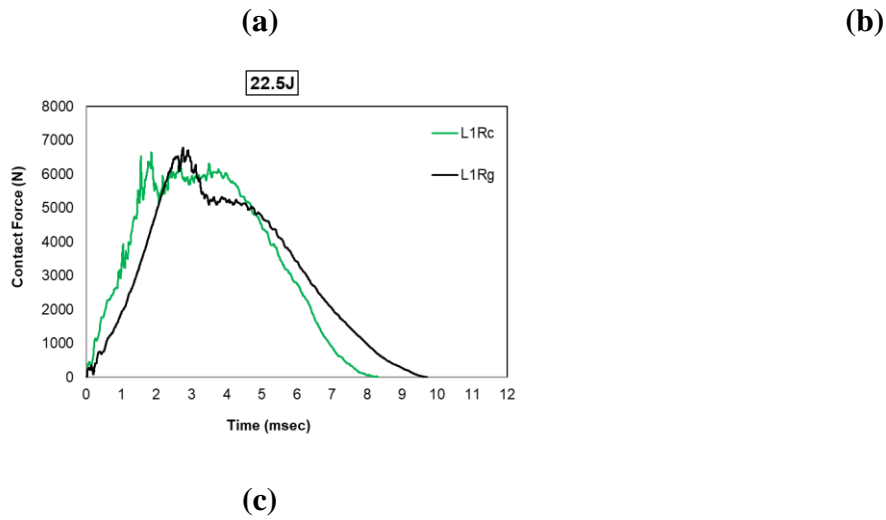


Figure 6. The contact force-time and energy-time change curves for L1Rc and L1Rg laminated samples at three different impact energy levels: (a) 12.5J, (b) 17.5J and (c) 22.5J

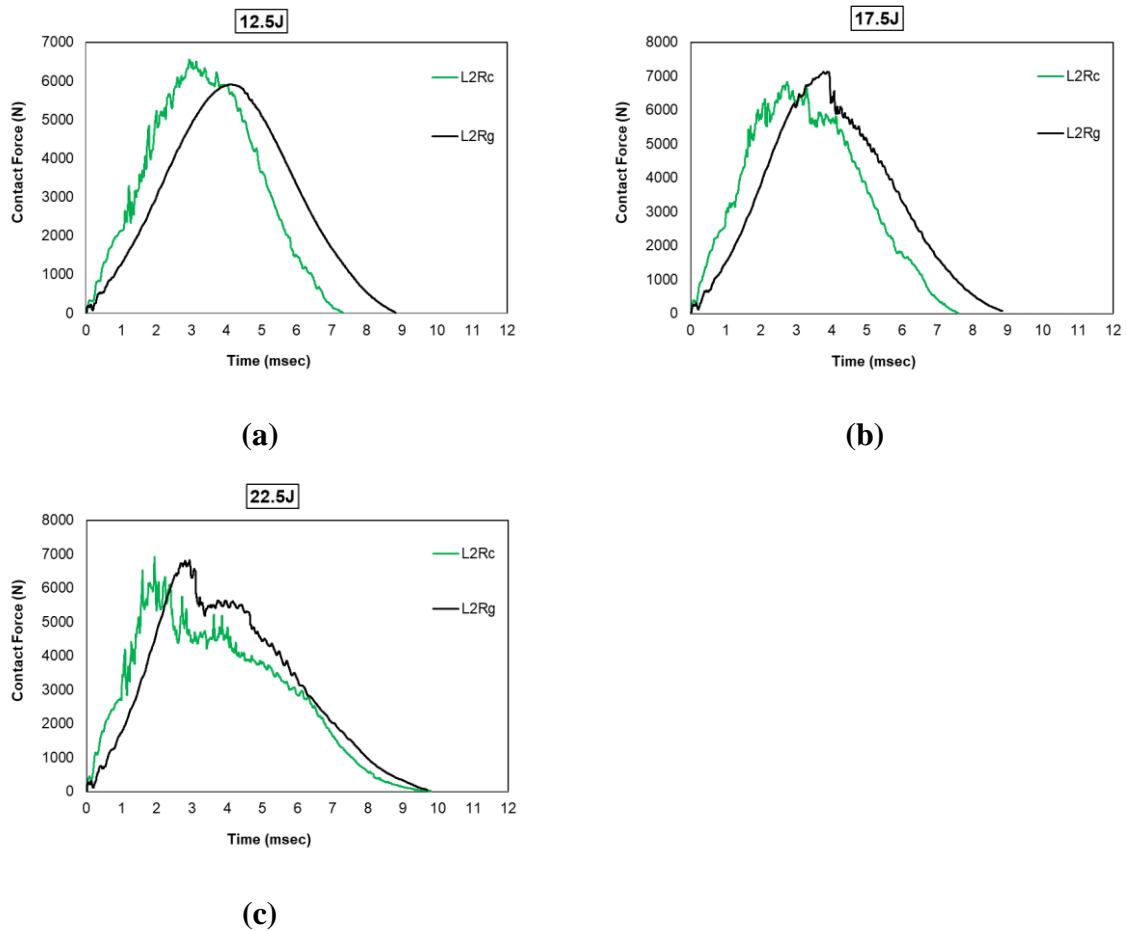


Figure 7. The contact force-time and energy-time change curves for L2Rc and L2Rg laminated samples at three different impact energy levels: (a) 12.5J, (b) 17.5J and (c) 22.5J

Ductility Index

The ductility indexes of the samples were determined by calculating the areas under the curve using the contact force- time (F-t) curves of the samples. Thus, the effects of both lamination type and fiber type on ductility were examined. Figure 8 shows the ductility indexes of both carbon/epoxy and glass/epoxy composite plates calculated after impact tests at 12.5J, 17.5J and 22.5J energies for two different lamination type such as $[0^\circ/90^\circ/\pm 45^\circ]_s$ and $[\pm 45^\circ/0^\circ/90^\circ]_s$. From Figure 7, it was determined that the ductility indexes of glass/epoxy samples were higher than carbon/epoxy samples.

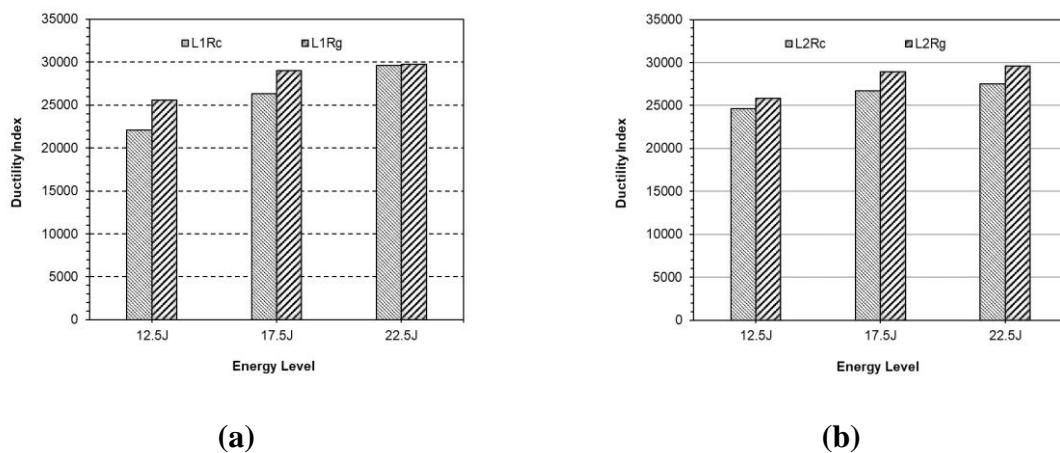


Figure 8. The ductility indexes for samples at three different impact energy levels (a) L1Rc and L1Rg, (b) L2Rc and L2Rg

The photos of the impacted samples at 22.5J energy level are given Figure 9. As can be seen these photos the damages started from the impact point and propagated in the direction of the layer orientation on the outer surface of the sample. The impact damage on glass/epoxy samples is greater than the damage on carbon/epoxy samples.

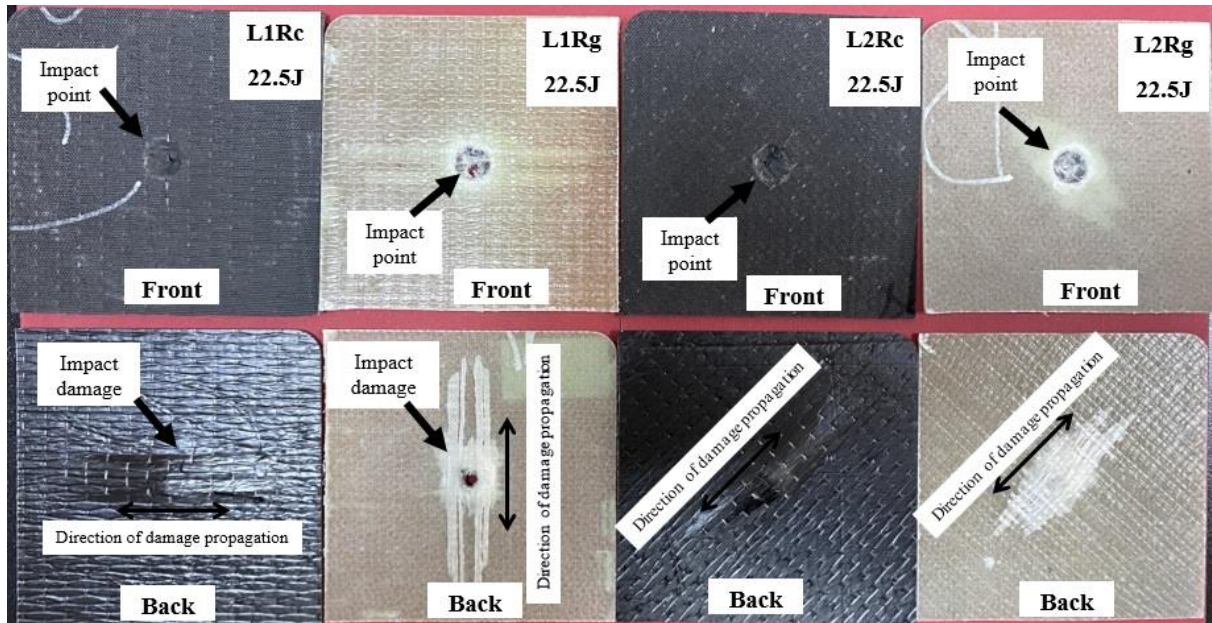


Figure 9. The damage photos of the impacted samples at 22.5J energy level

CONCLUSIONS

The effects of the impact energy level, fiber and lamination type on impact response carbon-fiber/epoxy and glass-fiber/epoxy composite plates are investigated according to the impact energy levels and lamination type, experimentally. From the obtained results, following conclusions can be made:

- The maximum contact force and absorbed energy change significantly with fiber type.
- The bending stiffness increases by changing from $[0^{\circ}/90^{\circ}/\pm 45^{\circ}]_s$ to $[\pm 45^{\circ}/0^{\circ}/90^{\circ}]_s$ lamination type
- Impact response of the sample decreases with increasing impact energies.
- The ductility indexes of glass/epoxy samples were higher than carbon/epoxy samples.
- Impact damages started from the impact point and propagated in the direction of the layer orientation on the outer surface of the sample.

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IMPACT BEHAVIOR AND RESIDUAL BIAXIAL TENSILE STRENGTH OF INTER-PLY HYBRID COMPOSITES

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Abstract

This study experimentally investigates the low-velocity impact behavior and residual biaxial tensile strength of carbon-glass/epoxy inter-ply hybrid composite laminates. Composite laminates in $[0^\circ/90^\circ/\pm 45^\circ]_s$ layering orientation were produced with a vacuum infusion system.

And then the cross-shaped samples prepared from the produced composite laminates were subjected to low-velocity impact loading at two different energy levels (12.5J and 22.5J). After then mechanical behavior was examined under biaxial tensile loading. Variation of contact force-time, energy-time, the biaxial tensile strength-impact energy level and the biaxial tensile strength versus interply laminate type graphs are obtained. Experimental findings were compared with the results of un-impacted (0J) specimens. According to the tests results, it was observed that the biaxial tensile strength values are notably decreased. Moreover, experimental results show that hybridization has significant effects on the impact behavior and biaxial strength of composite specimens in different ways.

Keywords: Impact behavior; Residual strength; Inter-ply hybrid composite; Biaxial tensile test

INTRODUCTION

It is important to determine of the effects of energy level and hybridization on the biaxial tensile strength after impact of carbon/glass hybrid composites as candidate materials for marine, aerospace applications. Various fiber types and resin systems are available to designers aiming to achieve composite properties such as high specific strength, high specific hardness, improved energy absorption and reduced the cost. Rajpurohit et al. [1] conducted an experimental a study on quasi-static tensile and compressive loading of composites hybridized with intraply and interply. It is obtained that two different hybridization methods can be used to balance the cost and performance of composites for structural and lightweight applications. A ballistic impact study on carbon and E-glass fiber based hybrid composite laminates for armor applications in order to get advantages of both the types of fibers was carried out by Reddy et al. [2]. Three hybrid composite laminates based on carbon and E-glass were fabricated in the weight ratio of 75:25, 50:50 and 25:75 with epoxy resin matrix. González et al. [3] investigated the effects of interply hybridization on the damage resistance and tolerance of interply hybrid laminates manufactured using polymer-matrix composite materials. Compression after impact tests are conducted to determine of the residual strength. It was found to have significant effects of

interply carbon and glass hybridization under low-velocity impact and CAI loading. Some current trends in fibers hybridized with many different configurations, such as pseudo-ductility, are described [4]. Kaya [5] contributed to the development of hybrid woven carbon/E-glass/polypropylene (PP) thermoplastic prepreg composites with her study. Impact response of hybrid carbon/glass fiber reinforced polymer composites designed for engineering applications. Hybrid composites to meet specific strength requirements are made of two different types of high-strength fibers with a relatively low-strength matrix [6]. The matrix solidifies more at low temperature than at room temperature that helps increase Young's modulus and ultimate tensile strength composites.

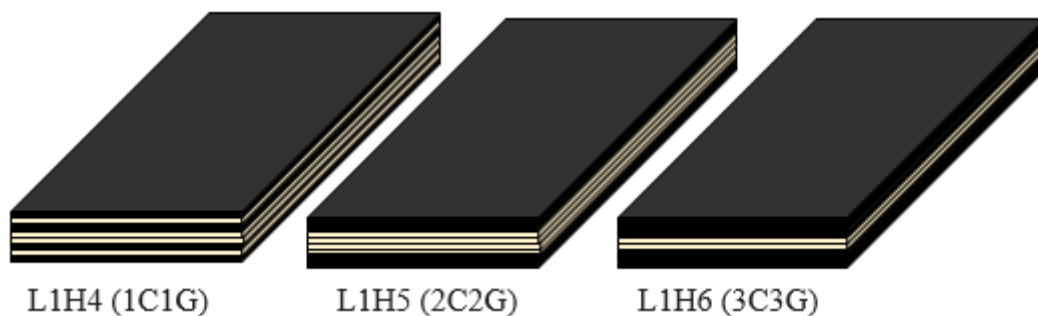
Tensile and impact properties of the intraply and interply hybrid composites based on E-glass and poly (vinyl alcohol) woven fabrics are determined by Pegoretti et al. [7]. Authors obtained a commercially available high-strength PVA fiber as a reinforcing material for applications in hybrid composites. Safri et al. [8] indicated that natural fiber based polymer composites have limited applications in advanced structural systems due to their low impact performance. Ramault et al. [9] carried out a study to obtain the failure stresses and strains in order to determine the failure envelopes of a certain material and lay-up. Makris et al. [10] investigated the mechanical behavior of carbon epoxy cross ply cruciform specimens under bi-axially and uni-axially in-plane loaded. The failure and biaxial residual strength after low-velocity impact of composite laminates are important for space and aviation applications [11]. It is seen that damage evolutions under biaxial loading vary greatly for different impact energy levels.

This research aimed to determine effects of the impact energy and hybridization on the mechanical properties of tensile after impact of the carbon/glass hybrid composites.

MATERIALS AND METHODS

Materials

Carbon-glass/epoxy hybrid composite plates were produced using 300 gr/cm² (12K) carbon and 330 gr/cm² (600 tex) glass fiber fabrics with unidirectional fiber alignment. The matrix material was obtained by mixing 1/3 ratio of FIBERMAK COMPOSITES brand F-1564 Resin and F-3486 Hardener. In this paper, carbon-glass/epoxy inter-ply hybrid based composite plates were produced in eight layers using vacuum infusion technique. The infused plates were then allowed to cure at 100°C for 2 hours. For each layering type, carbon and glass fiber fabrics were prepared by cutting eight pieces of 900x900-mm dimensions in 0°, 90°, +45° and -45° orientations. The composite plates shown in Figure 1 were produced by following the same sequence of composite production stages given above for each layering type.



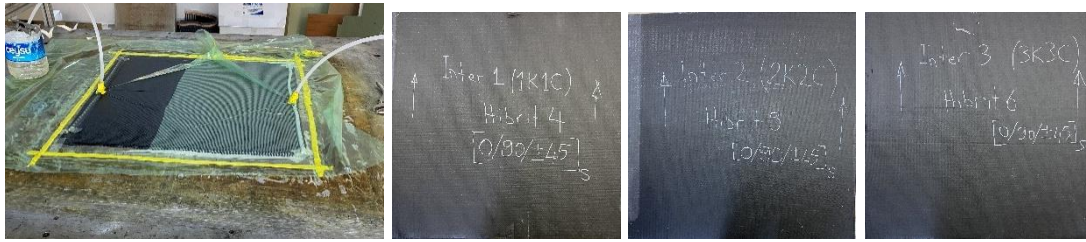


Figure 1. Composite fabrication and composite plates

After production, the samples were cut with water jet according to the study parameters of the composite plates, in the dimensions given in Figure 2.

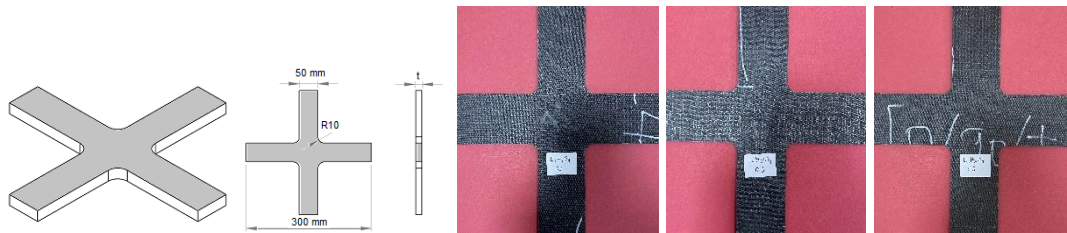


Figure 2. Specimens for impact and tensile tests

Impact Tests

Low velocity impact tests were performed by using CEAST-Fractovis Plus impact testing machine in the Composite Research Laboratory at Department of Mechanical Engineering of Dokuz Eylul University (Figure 3a). Two impact energies, 12.5J and 2.25J, were used for the tests. The impactor mass was 5.02 kg and the diameter of the semi spherical impactor nose was 12.7 mm. During impact tests anti-rebound device allows only a single impact.

Biaxial Tensile Test

Test samples are subjected to biaxial tensile tests before and after impact. These tests were performed by using Universal Shimadzu AG-IC testing machine having 250 kN loading capacity (Figure 3b). In the tests, the cross-head speed of testing machine was 1 mm/min. The biaxial tensile strength (σ_T) of the sample is calculated by dividing the maximum force to the cross sectional area of the specimen

$$\sigma_T = \frac{F_{\max}}{b.t} \quad (1)$$

where F_{\max} , $b = 50$ mm and $t = 2.34$ mm denote the maximum force, the width and the thickness of the test specimen, respectively.

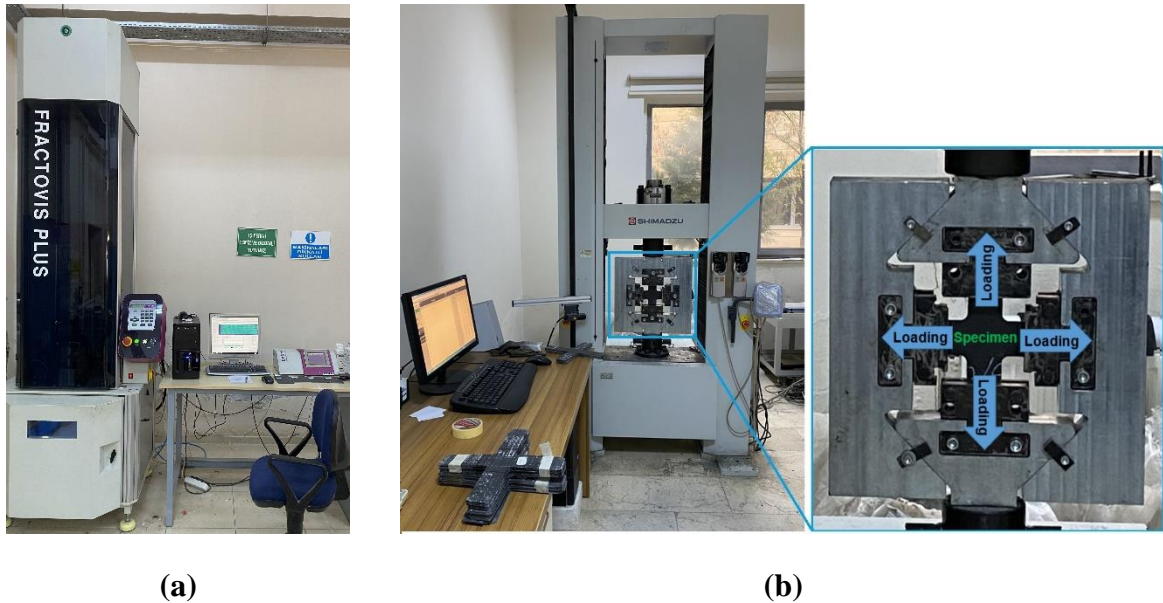


Figure 3. (a) Illustration of CEAST 9350 (Fractovis Plus) impact test machine, (b) Universal Shimadzu AG-IC testing machine

RESULTS AND DISCUSSION

In this study, the biaxial tensile strengths of samples prepared in different hybridization methods were examined before and after impact. Because the tensile strength of composite plates after impact and determining how much load the structure can carry after impact is an important issue. Thus, the results of the impacted and un-impacted samples were compared. The force–time and energy–time curves give significant information about the impact response of interply hybrid composite plates. Contact force–time and energy–time curves of the specimens for three hybridization case at two different impact energy levels are shown in Figure 4. In this study, after reaching a maximum contact force, the curves being symmetrical according to this situation means that there is a rebound situation. In this situation the main failure modes were matrix cracking, delamination and very little fiber breakage. Many fiber breaks do not occur. Namely, there is no significant fiber breakage. As can be seen from Figure 4 maximum contact force of the LH4 samples are similar. The main reason for this situation is that carbon and glass fibers are in the same amount by weight (Figure 1). It is also clear that bending stiffness increases as the amount of carbon fiber by weight increases.

The absorbed energy is the energy consumed through the formation of damage, and is the closed area between the load–deflection curve and the horizontal axis. Figure 4 gives the calculated absorbed energy values of composite samples with three hybridization types for two impact energies. From this figure, it is seen that absorbed energy increases with increasing impact energy and does not change significantly with hybridization types.

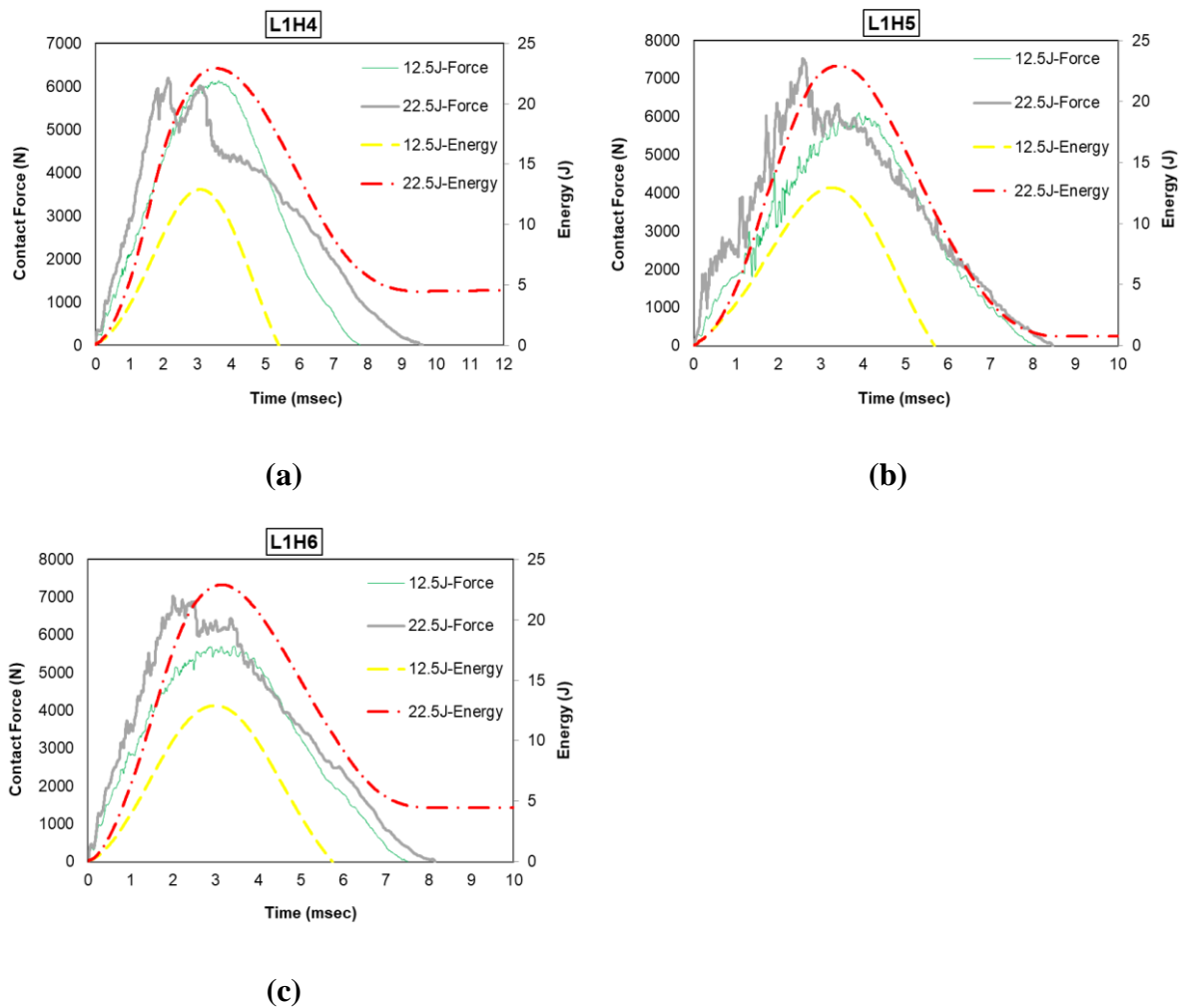


Figure 4. Contact force-time and energy-time curves of carbon-glass/epoxy interplay hybrid composites, (a) L1H4, (b) L1H5 and (c) L1H6 lamination type

The images of the un-impacted and impacted samples are given Figure 5. As can be seen these images that it appears that the main damage types are matrix crack and delamination.

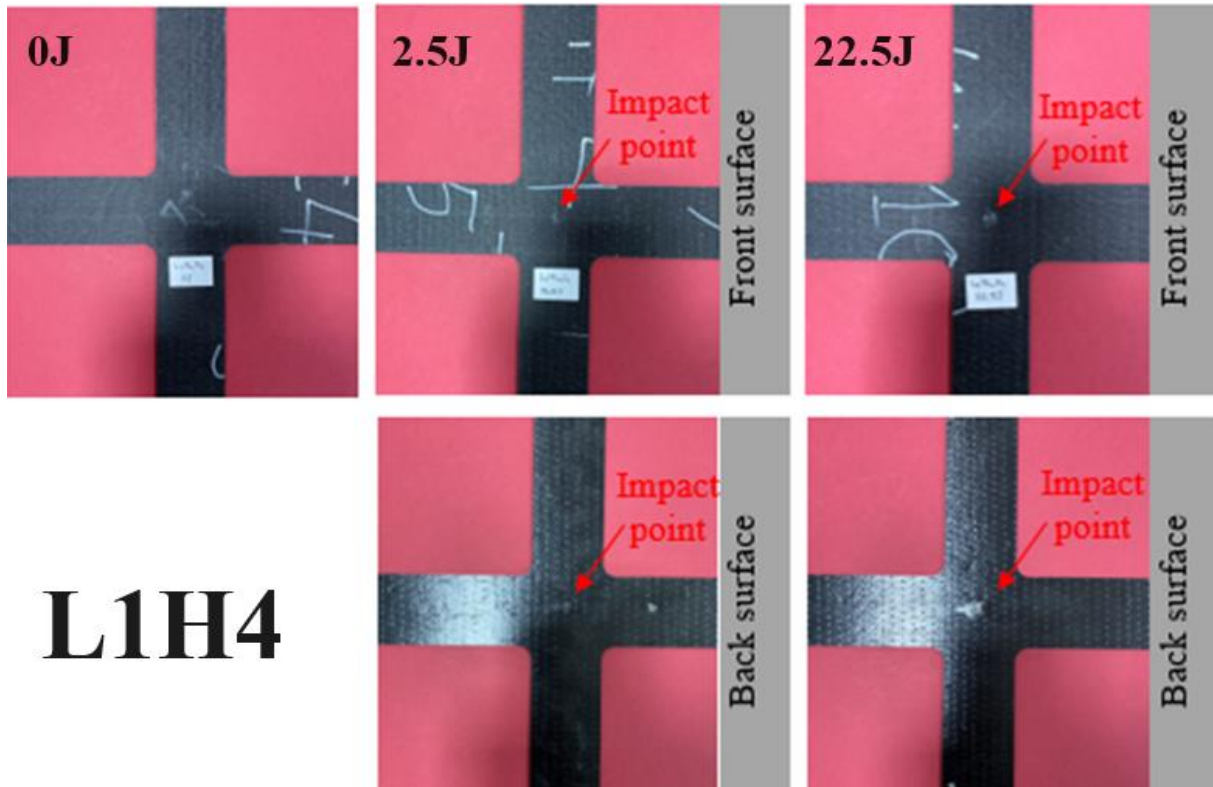


Figure 5. The front and back surface images of un-impacted and impacted samples

The tensile strength versus lamination type and the tensile strength versus energy level are shown in Figure 6 and 7. It can be seen from this figures that the tensile strength of the sample for each lamination type decreases with increasing impact energy. It is also seen that the biaxial tensile strength increases with changing lamination type L1H4 to L1H6 for each impact energy. Decrease in tensile strength exists between 6.40% and 1.42% for according to increasing impact energy for lamination type. This decrease also occurs between 10.62% and 5.92% according to the lamination type by increasing of the impact energy. It may be explained with changing the lamination type and impact energy, the tensile after impact behavior of hybrid composites changes significantly.

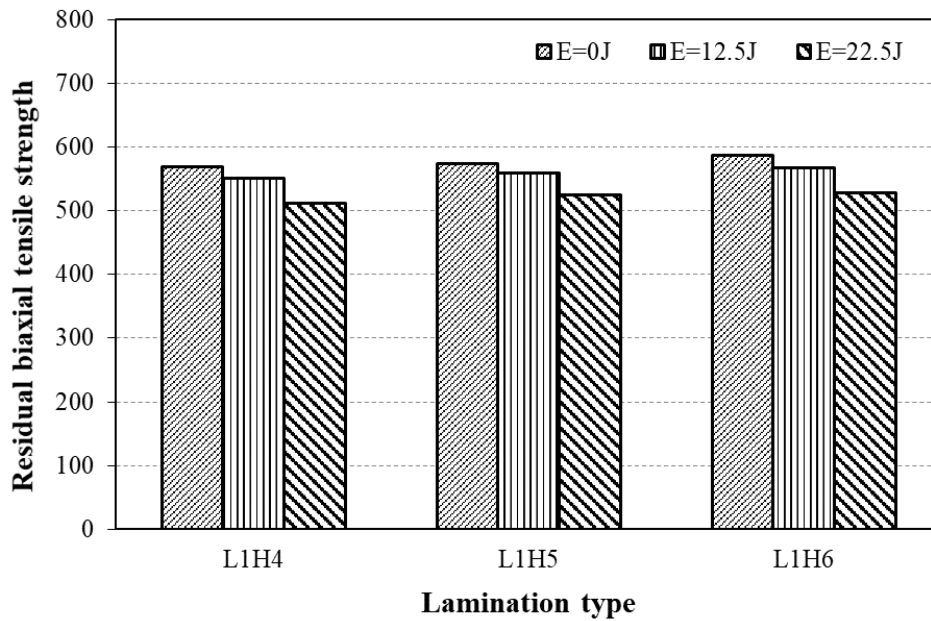


Figure 6. Residual tensile strength versus lamination type for various impact energies such as 0J, 12.5J and 22.5J

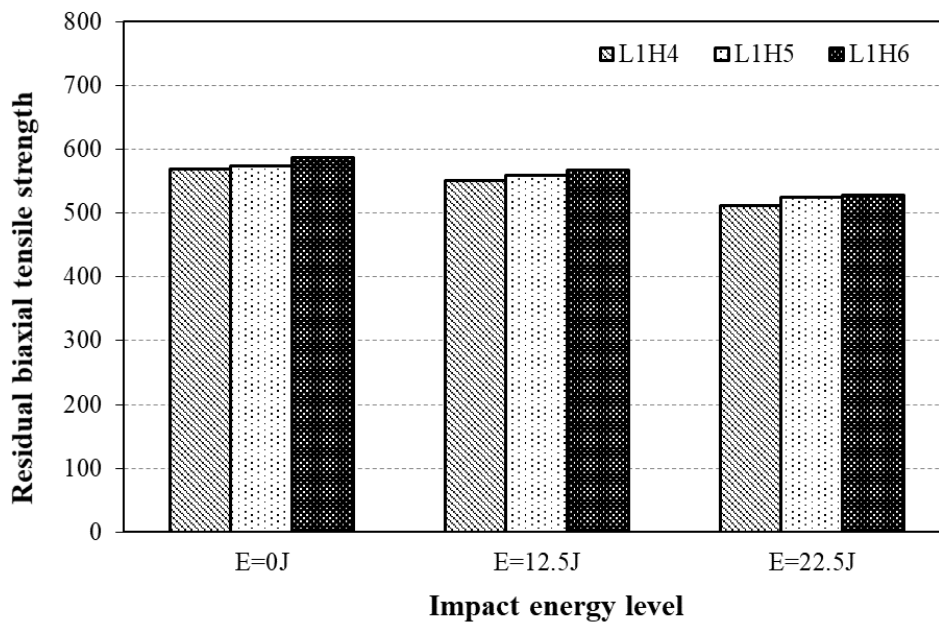


Figure 7. Residual tensile strength versus impact energy level for L1H4, L1H5 and L1H6 lamination type

Biaxial tensile damage images of impacted samples with 22.5J energy are given Figure 8. It is seen that fracture damage started between the sample arms and propagated towards the impact point, as shown in Figure 8. Tensile damages started between the arms of the sample and propagated towards the impact point in the direction of the orientation of the outer layer.

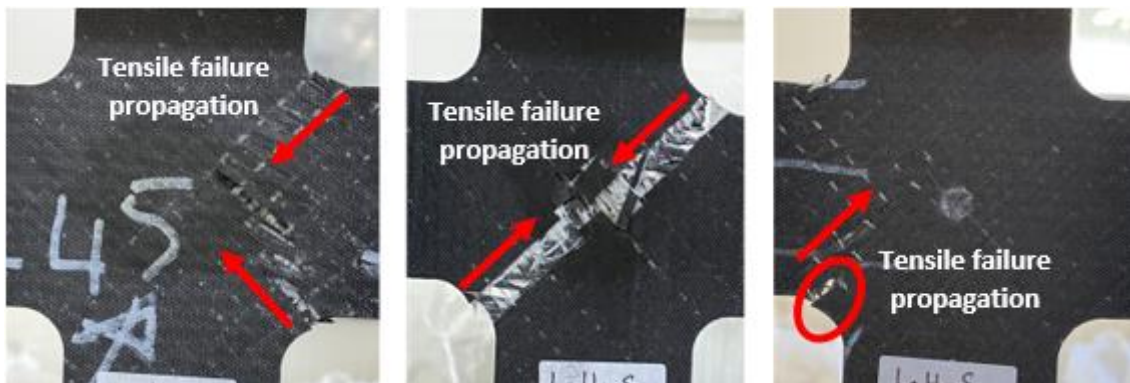


Figure 8. Image of damaged samples

CONCLUSIONS

In this study, tests are repeated for three times for each parameter. The results and the discussions were given below:

- In the impacted samples, the main damage types are matrix crack and delamination.
- Bending stiffness increases as the amount of carbon fiber by weight increases.
- Absorbed energy increases with increasing impact energy and does not change significantly with hybridization types.
- The biaxial tensile strength increases with changing lamination type L1H4 to L1H6 for each impact energy.
- The tensile strength of the sample for each lamination type decreases with increasing impact energy.
- Tensile damages started between the arms of the sample and propagated towards the impact point in the direction of the orientation of the outer layer.

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The authors would like to thank TÜBİTAK (The Scientific and Technological Research Council of Turkey) for supporting this study under Project number 222M396.

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DRUG ACTIVE SUBSTANCE DESIGN OF TAMOXIFEN MOLECULE DERIVATIVES WITH MODERN MOLECULAR MODELING METHODS

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Abstract:

The disease, caused by coronavirus infection, emerged in Wuhan, China in late 2019 and spread around the world. In February 2020, the World Health Organization (WHO) classified the disease as COVID-19 and the causative virus as "severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)"¹. According to WHO data, as of today, the total number of reported deaths worldwide is approximately 7,000,000 people². Coronavirus infection (COVID-19) has gradually spread around the world and turned into a pandemic. Its rapid spread, the lack of a clear treatment, and the fact that it is fatal increase the impact of the disease. The fact that COVID-19 and its different variants emerging day by day are a serious threat all over the world makes drug development attempts in this field unique in itself. One of the unique aspects of this study is that the starting molecules to be used as a basis are Tamoxifen, a molecule used in the treatment of breast cancer, which is also a very common threat to human health, and its derivatives are investigating the effectiveness of Tamoxifen and its derivatives against the virus. In addition to investigating the effects of existing and potentially effective drug active substances on the COVID-19 enzyme, new and synthesizable compounds that do not exist in the literature are also within the scope of the research. Another aspect that makes the study important and unique is that the experimental approaches used in such studies are expensive and laborious, while the theoretical approach to be used is cheap, simple and reliable.²⁻⁸ The efficiency of small molecules designed under the guidance of the X-Ray crystal structure of the protein, or in other terms, their druggability, is based on Docking, Molecular Dynamics and The use of MM/PB-SA calculations can be used to predict and guide experimental studies and constitute the first step in new drug discovery.⁸⁻¹⁰

Keywords: SARS-CoV-2, Tamoxifen, Molecular Docking

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**EFFECTS OF SOCIAL MEDIA AND SMARTPHONE APPLICATIONS ON THE
HEALTH OF PREGNANTS**
**SOSYAL MEDYA VE AKILLI TELEFON UYGULAMALARININ GEBELERİN SAĞLIĞI
ÜZERİNE ETKİLERİ**

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Abstract

Widespread accessibility and use of the internet has significantly increased the number of people using social media in recent years. Women tend to use the internet and social media to seek social and emotional support and to obtain information about their pregnancies. This situation increases the rate of women's use of social media and mobile health applications for care during pregnancy. Through social media websites, women can access health information and interact with health professionals and peers. The number of people with smartphones is increasing day by day. Due to this increase, many mobile health applications have been developed and installed by consumers. In addition to quick and easy access to health information, mobile health applications can improve interaction with the healthcare system; for example, consumers can monitor their health by recording or uploading health status data using apps. Many apps can also promote health behaviors, such as maintaining adequate physical activity and eating a healthy diet. One study reported that women frequently use social media for information regarding the perinatal process and parenting. Smith et al. (2020) stated in their study that digital media use is positively related to negative affect and self-criticism. In a meta-analysis study that included studies with high-risk pregnant women, social media and mobile health applications were found to be effective with a medium to large effect size in weight management, gestational diabetes and asthma control, and improving the physical health of the mother. In the same study, it was found that its effect level was high in improving the mother's mental health and level of knowledge about her pregnancy. Another study reported a relationship between excessive use of social media and mental health problems during pregnancy. In light of this information, it can be said that social media and smartphone applications play an important role in the lives of today's women. It is important for midwives to be familiar with social media resources to support women with the right approach. It should guide women in accessing safe information.

Key words: Social media, smartphone applications, pregnant, midwife

Özet

İnternetin yaygın erişilebilirliği ve kullanımı, sosyal medyayı kullananların sayısını son yıllarda önemli ölçüde arttırmıştır. Kadınlar sosyal ve duygusal destek aramak, gebelikleri ile ilgili bilgiler elde etmek için internet ve sosyal medya kullanımına yönelmektedir. Bu durum gebelik sürecinde kadınların bakıma yönelik sosyal medya ve mobil sağlık uygulamalarını kullanım oranını arttırmaktadır. Sosyal medya web siteleri aracılığıyla kadınlar sağlık bilgilerine ulaşabilmekte, sağlık profesyonelleri ve akranlarıyla etkileşim kurabilmektedirler. Akıllı telefona sahip kişi sayısı gün geçtikçe artmaktadır. Bu artış nedeniyle, sağlık konularında çok sayıda mobil sağlık uygulaması geliştirilmiştir ve tüketiciler tarafından da yüklenmiştir. Sağlık bilgilerine hızlı ve kolay erişimin yanı sıra, mobil sağlık uygulamaları sağlık sistemiyle etkileşimi geliştirebilir; örneğin tüketiciler, uygulamaları kullanarak sağlık durumu verilerini kaydederek veya yükleyerek sağlık durumlarını izleyebilirler. Birçok uygulama aynı zamanda yeterli fiziksel aktiviteyi sürdürmek ve sağlıklı beslenmek gibi sağlık davranışlarını da teşvik

edebilir. Bir çalışmada kadınların perinatal sürece ve ebeveynliğe yönelik bilgiler için sosyal medyayı sık kullandıkları bildirilmiştir. Smith ve ark. (2020), yaptığı çalışmada, dijital medya kullanımının olumsuz duygulanım ve özeleştirme ile pozitif yönde ilişkili olduğunu belirtmişlerdir. Riskli gebelerle yapılan çalışmaların dahil edildiği bir meta analiz çalışmasında, sosyal medya ve mobil sağlık uygulamalarının kilo yönetimi, gestasyonel diyabet ve astım kontrolünde, annenin fiziksel sağlığını geliştirmede orta ila büyük etki büyüklüğü ile etkili bulunmuştur. Aynı çalışmada annenin ruh sağlığını ve gebeliğine yönelik bilgi düzeyini iyileştirmede etki düzeyinin yüksek olduğu saptanmıştır. Başka bir çalışmada, sosyal medyanın aşırı kullanımı ile gebelik sırasındaki ruhsal sağlık sorunları arasındaki ilişki olduğu bildirilmiştir. Bu bilgiler ışığında, sosyal medyanın ve akıllı telefon uygulamalarının günümüz kadınlarının hayatında önemli bir rol oynadığı söylenebilir. Ebelerin, kadınları doğru yaklaşımla desteklemek için sosyal medya kaynaklarına aşina olması önemlidir. Kadınları güvenli bilgiye ulaşım konusunda yönlendirmelidir.

Anahtar kelimeler: Sosyal medya, akıllı telefon uygulamaları, gebe, ebe

INTRODUCTION

The widespread accessibility and use of the Internet has significantly increased the number of social media users in recent years. The widespread availability and use of the internet has greatly increased the popularity of social media platforms. In addition, the fact that the internet has become accessible to a wider audience has increased its use for access to information, communication and entertainment purposes. The widespread accessibility of the internet to homes, workplaces and mobile devices has enabled people to prefer online platforms for various purposes in daily life (1-2). Women turn to the internet and social media platforms to seek social and emotional support and to obtain information about their pregnancy. The internet provides a wide range of resources for obtaining information about the pregnancy process, sharing experiences, joining support groups and receiving information from health professionals. Social media allows women to share similar experiences and interact with each other. Through groups, forums or social media accounts on pregnancy-related topics, women can share similar experiences, ask questions and receive emotional support. In addition, posts and information about motherhood can reach a wide audience through social media. With the use of the internet and social media, it is important to be careful to ensure that information is obtained from accurate and reliable sources (1, 3).

Today, smartphone users are rapidly increasing worldwide (4-5). Today, there are more than 6.65 billion smartphone users worldwide and 83.07% of the world is connected to the internet. Since 2016, this figure has increased significantly worldwide (3.67 billion smartphone users or 49.40% of the world population). The number of smartphone users almost doubled between 2016 and 2022. Global smartphone users are expected to reach 7.33 billion in 2025 (5).

In general, women are particularly receptive to advice on healthy lifestyle during pregnancy, in which case there is a strong motivation to optimize their lifestyle to benefit the health of their baby. They download smartphone applications to receive advice about their pregnancy (6). The worldwide spread of mobile devices has increased the frequency of use of mobile health applications (7). In a study examining the determinants of active use of mobile health apps, it was estimated that more than 2.5 billion people will own smartphones by 2019 and more than 50% of them will have mobile health apps installed by 2017 (8). Mobile health applications have become an important part of managing personal health (6).

A study conducted in the United States found that smartphone apps for women's health and pregnancy accounted for 7% of all apps. In the same study, it was found that there were 110 applications related to maternal health in the Chinese application market. It was determined that

these applications had various functions and provided information to pregnant women about childbirth. This type of health guidance is superior to traditional methods and may even improve the quality of pregnancy care in areas where medical resources are scarce. Many apps also have social functions, professional counseling functions, and specialized tools such as calculating fetal movement, calculating due date, and measuring changes in body weight. These self-monitoring health status functions can be used to monitor the health of pregnant women (9). In their study, Greene et al. (2021) reported that women who used smartphone app support found it easy, enjoyable and affordable to track their nutrition. Compared to those with higher education, those with lower levels of education were more likely to enjoy dietary changes. The population with low socioeconomic status was found to be satisfied with the smartphone application support (10). In a meta-analysis study including studies conducted with high-risk pregnant women, social media and mobile health applications were found to be effective in weight management, gestational diabetes and asthma control, and improving maternal physical health with a medium to large effect size. In the same study, it was found to have a high level of effect in improving the mental health of the mother and her level of knowledge about her pregnancy (11). In a study evaluating existing mobile applications related to preeclampsia, 11 mobile applications were found. All mobile applications were identified in the Android operating system. However, only one mobile application was found in both Android and iOS operating systems. The study confirmed that the apps contained important information that could clarify doubts that pregnant women may have (12).

Women's frequent use of social media for information about the perinatal process and parenthood is seen as a way to meet the need to find support and share experiences by creating communities (13). In a study examining pregnant women's use of social media and their perceptions of social support, the majority of pregnant women reported that the main source of social support was their partners (92%). In addition, it was shown that 43% of pregnant women used blogs to communicate with other mothers, 99% used the internet for answers to parenting questions, and 89% used social media sites for questions and advice about pregnancy and/or parental roles. The study emphasized that social media plays an important role in the lives of today's mothers (3). In this study on information seeking and sharing by pregnant women, all participants used social media for pregnancy-related purposes. 95% of the participants reported that using social media during pregnancy had a positive mental effect (14). In the study examining the use of smartphone pregnancy applications by pregnant women and the effect of these applications on the mental health of pregnant women, it was reported that 18.2% of those who used smartphone pregnancy applications experienced psychological distress, while the other pregnant women did not experience psychological distress. The study also emphasized that pregnancy apps improve the mental health of pregnant women. It was determined that pregnant women whose mental health deteriorated decreased their energy or their tendency to use these applications decreased. It has been reported that the use of pregnancy practices may indicate the risk of deterioration in the mental health of pregnant women (15). In a study examining the relationship between digital media use, psychological well-being and maternal-fetus attachment, information seeking, emotional and social support (85.42%, 66.67%, 62.5%, respectively) were found to be the reasons for digital media use. Digital media use was positively associated with negative affect and self-criticism, but negatively associated with quality of life. No relationship was found between digital media use and maternal-fetus attachment (1). In a study conducted with midwife-managed social media groups, two secret (i.e. private/invitation only) social media groups were created. Both groups were managed by 2 qualified midwives. Pregnant women reported that interacting with midwives and other pregnant women through a social media group was convenient and accessible. Social media groups were found to provide a safe space for sharing and validating information about

motherhood. Social media groups mediated by midwives provided a highly effective way of providing individualized information and social support to pregnant women (16).

Factors that midwives should consider when counseling pregnant women in terms of social media and smartphone applications: Midwives should share accurate and reliable information on social media and smartphone applications. It is important that the information is scientifically based, up-to-date and from reliable sources. Midwives can build communities by sharing messages that support and motivate women. In this way, women can interact with other women who share similar experiences and support each other. Women's posts on health-related issues can often be private. Midwives should pay special attention to privacy and security issues on these platforms and raise women's awareness on these issues. Midwives should provide training for women to use social media and smartphone applications in a safe way and to access the right source of information. They should also raise awareness about digital health resources and direct women to these resources. Midwives should provide a broad perspective by referring women to different sources. Different communities, expert opinions and experiences can help women become better informed. In conclusion, midwives' effective use of social media and smartphone applications to support, raise awareness and guide women to access safe information plays an important role in improving women's health in today's digital age.

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EFFECTS OF SKIN-TO-SKIN CONTACT ON MOTHER, FATHER AND NEWBORN HEALTH

TEN TENE TEMASIN ANNE, BABA VE YENİDOĞAN SAĞLIĞI ÜZERİNE ETKİLERİ

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Abstract

Skin-to-skin contact is defined as placing the naked newborn directly on the mother's bare chest, right between the breasts, in the prone position immediately after birth or less than 10 minutes later. The World Health Organization has emphasized that uninterrupted skin-to-skin contact should ideally last more than an hour, and longer periods should be encouraged if well tolerated by both mother and baby. In a meta-analysis study conducted on the benefits of skin-to-skin contact, it was found that mothers who received skin-to-skin contact were more likely to breastfeed between one and four months after birth, continued breastfeeding for a longer period of time, and exclusively breastfed after discharge from the hospital. In the same study, they determined that babies who received skin-to-skin contact had higher cardio-respiratory system stability, body temperature and blood sugar levels six months after birth than those who did not. In another study, skin-to-skin contact was found to be very beneficial in improving the well-being of term babies and ensuring a smooth transition from fetal life to baby life. In a study examining the psychological impact of skin-to-skin contact on both parents, it was found that family dynamics improved and parents' ability to respond to their babies' needs also improved. Few studies have focused on fathers' involvement in skin-to-skin contact. Through skin-to-skin contact, fathers feel physical closeness with their babies, which helps them understand that their babies are real. It also makes them feel like an important participant in their baby's care. Skin-to-skin contact is clearly supported by the World Health Organization, the United Nations and UNICEF. As a result, skin-to-skin contact has positive effects on the mother and baby after birth, and providing father-baby skin-to-skin contact has also been found feasible and beneficial. Therefore, midwives should support and practice skin-to-skin contact.

Key words: Skin-to-skin contact, mother, newborn, father, midwife

Özet

Ten tene temas, doğumdan hemen sonra ya da 10 dakikadan daha kısa bir süre sonra çıplak yenidoğanın yüzüstü pozisyonda annenin direkt çıplak göğsüne, göğüslerin tam arasına yerleştirilmesi olarak tanımlanmaktadır. Dünya Sağlık Örgütü, kesintisiz ten tene temasın ideal olarak bir saatten fazla sürmesini ve hem anne hem de bebek tarafından iyi tolere edildiği takdirde daha uzun süreler teşvik edilmesi gerektiğini vurgulamıştır. Ten tene temasın yararlarına yönelik yapılan bir meta-analiz çalışmasında, tentene temas uygulanan annelerin doğumdan sonraki bir ila dört ay arasında emzirme olasılığının daha yüksek olduğu, emzirmeyi daha uzun süre devam ettirdikleri, hastaneden taburcu olduktan sonra sadece anne sütü verdikleri saptanmıştır. Aynı çalışmada ten tene temas alan bebeklerin almayanlara göre doğumdan altı ay sonra kardiyo-solunum sistemi stabilitesi, vücut sıcaklığı ve kan şekeri seviyelerinin daha yüksek olduğunu belirlemiştirlerdir. Başka bir çalışmada ten tene temasın, term

bebeklerin refahını artırma ve fetal yaşamdan bebek yaşamına yumuşak bir geçiş sağlama açısından oldukça faydalı olduğu bulunmuştur. Ten tene temasın her iki ebeveyn üzerindeki psikolojik etkisini inceleyen bir çalışmada, aile dinamiklerinin geliştiği ve ebeveynlerin bebeklerinin ihtiyaçlarına cevap verme becerilerinin de geliştiğini bulunmuştur. Az sayıda çalışmada babaların ten tene teması katılımlarına odaklanılmıştır. Ten tene teması aracılığıyla babalar bebekleriyle fiziksel yakınlık hissetmekte ve bu da bebeklerinin gerçek olduğunu anlamalarını sağlamaktadır. Ayrıca kendilerini bebeklerinin bakımında önemli bir katılımcı gibi hissetmelerini de sağlamaktadır. Ten tene teması, Dünya Sağlık Örgütü, Birleşmiş Milletler ve UNICEF tarafından açıkça desteklenmektedir. Sonuç olarak ten tene temasının doğumdan sonra anne-bebek üzerinde olumlu etkileri vardır ve baba-bebek ten tene temasının sağlanması da uygulanabilir ve faydalı bulunmuştur. Bu nedenle, ebeler ten tene teması desteklemeli ve uygulamalıdır.

Anahtar kelimeler: Ten tene teması, anne, yenidoğan, baba, ebe

INTRODUCTION

Skin-to-skin contact is the main component of kangaroo care and is a safe and inexpensive procedure that affects the health, physical and psychological development of the baby in the first years of life and provides benefits for neurological, autonomic, somatic, behavioral and motor development (1-3). Kangaroo care has three main components. These are skin-to-skin contact, exclusive breastfeeding and close monitoring (4). It was developed by Edgar Rey Sanabria and Hector Martinez in the late 1970s to prevent problems arising from incubator insufficiency and to help premature babies grow in a healthier way (5). Skin-to-skin contact is defined as placing the naked newborn directly on the mother's bare chest, right between the breasts, in the prone position immediately after birth or less than 10 minutes later (2, 6-8). UNICEF's baby friendly initiative standards guidelines emphasize that skin-to-skin contact should last at least one hour or until the first feeding is completed (8). Similarly, the World Health Organization states that uninterrupted skin-to-skin contact should ideally last for more than one hour and should be encouraged for longer periods if well tolerated by both mother and baby. Skin-to-skin contact can occur at any time when the baby needs to be comforted or calmed and contributes to an increase in the mother's milk supply (2).

Every year, approximately 30 million newborns are born under risky conditions and require some level of hospitalization (9). Today, WHO supports kangaroo mother care and continuous skin-to-skin contact to benefit more small and preterm babies (10). Prematurity is the leading cause of death in children under 5 years of age. An estimated 13.4 million babies are born preterm (before 37 weeks of gestation) each year and an even higher number (more than 20 million babies) have a low birth weight (less than 2.5 kg at birth). For these babies, kangaroo mother care is a proven, effective intervention to save lives and improve their health and development (10).

It is a powerful and easy-to-use method to promote the health and well-being of preterm as well as term babies. Care supports early breastfeeding and ensures timely hospital discharge with appropriate follow-up. In healthy newborns, the mother-father-infant interacts in a closer and more comfortable position in the first moments after birth (11).

The importance of skin-to-skin contact

There is a growing body of evidence that skin-to-skin contact after birth is beneficial for babies, their mothers and fathers. These benefits include Skin-to-skin contact calms and relaxes both

mother and baby. It regulates the baby's heartbeat and breathing, helping it to adapt better to life outside the uterus. It stimulates digestion and interest in feeding. Regulates body temperature. Protects against infections by colonizing the baby's skin with mother-friendly bacteria. Stimulates the release of hormones that support breastfeeding and motherhood (8).

In meta-analysis study, Durmaz et al. (2023) reported that skin-to-skin contact was effective in maintaining the body temperature, decreasing the heart rate and increasing the oxygen saturation level of babies, while the respiratory rate was not affected. Another meta-analysis study found that anxiety and stress states of mothers of postnatal premature infants decreased significantly with skin-to-skin contact, but it was not effective for more than 2 weeks (12). In another meta-analysis study, it was found that skin-to-skin contact had positive effects on breastfeeding and increased the success rate and duration of the first breastfeeding (7). In a qualitative study examining the psychological effects of skin-to-skin contact on both parents, it was found to improve family dynamics and parents' ability to respond to their infants' needs (13).

In a study examining the effects of kangaroo father care on premature infants and fathers, parents of premature infants completed a 90-minute kangaroo care session on consecutive days. Similar physiologic responses were found in both maternal and paternal kangaroo care (14). In the study examining the effect of kangaroo care on father attachment, the mean scores of patience and tolerance, enjoyment of interaction, love and pride, which are sub-dimensions of the father attachment scale, were found to be higher in kangaroo care recipients. It was determined that kangaroo care had an increasing effect on attachment to the father (15). In a study examining the effect of kangaroo father care on fathers' stress levels, it was reported that fathers of preterm babies admitted to the neonatal intensive care unit experienced a lot of stress that could negatively affect their mental health. Kangaroo care was found to be very effective in reducing these stress levels of fathers (16).

Conclusion

Since Skin-to-Skin Contact/Kangaroo Care is a non-invasive, effective, easily applicable and low-cost method, midwives should be encouraged to adopt it. Parents should be informed about Skin-to-Skin Contact/Kangaroo Care during pregnancy and trauma. Midwives should be trained about the importance and advantages of Skin-to-Skin Contact and their awareness should be increased. Midwives should establish effective communication with parents and support them to use Skin-to-Skin Contact/Kangaroo Care to increase their interaction with their babies. It is recommended that more studies with a high level of evidence on Skin-to-Skin Contact/Kangaroo Care be conducted.

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YOĞUN BAKIM HEMŞİRELERİNDE ÖLÜM ALGISI VE İYİ ÖLÜM KAVRAMI
DEATH PERCEPTION AND GOOD DEATH CONCEPT IN INTENSIVE CARE NURSES

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Özet

Yoğun bakım birimlerinde çalışan hemşireler, sık sık hastaların ölümüyle karşılaşmakta ve ölümle ilgili algılarını etkilemektedir. Bu bağlamda bu derleme; yoğun bakım hemşirelerinin ölüm algısını ve iyi ölüm kavramını ele almayı amaçlamaktadır. Yoğun bakım birimlerinde hastaların ölümü, yoğun bir stres kaynağı olabilmekte ve hemşirelerin duygusal tepkilerine yol açabilmektedir. Araştırmalar, yoğun bakım hemşirelerinin depresyon, anksiyete ve tükenmişlik gibi durumlarla başa çıkma becerilerinin ölüm algısıyla ilişkili olduğunu göstermektedir. Yoğun bakım hemşirelerinin ölüm algısını anlamak, hemşirelerin bu durumla başa çıkma becerilerini geliştirmelerine de yardımcı olabileceği düşünülmektedir. Bununla birlikte “iyi ölüm” kavramı da yoğun bakım hemşirelerinin ölüm algısını etkileyebilmektedir. Öyle ki iyi ölüm, insancıl bir şekilde, ağrısız ve huzurlu bir şekilde gerçekleşen ölüm olarak tanımlanmaktadır. Yoğun bakım hemşirelerinin, hastaların ölüm sürecinde iyi bir destek sağlayarak, iyi ölüm kavramını gerçekleştirmeye yardımcı olmaları önemlidir. Bu nedenle, hemşirelerin iyi ölüm kavramına olan inançları, hastaların bakımında da etkili bir rol oynayabileceği düşünülmektedir. Bunun yanı sıra yoğun bakım hemşirelerinin ölüm algısını ve iyi ölüm kavramını anlamak ve geliştirmeye yönelik yapılacak uygulamaların bireysel ve mesleki olumlu katkıları olabilir. Böylelikle yoğun bakım hemşirelerine duygusal destek sağlamak ve onların ölümle ilgili algılarını geliştirmek, hemşirelerin bu zorlu süreçte daha etkili olmalarını sağlayabilir. Ayrıca, hastaların ölüm sürecinde iyi bir destek sağlamak da hastaların ve ailelerin daha iyi bir deneyim yaşamalarını sağlayabilir. Sonuç olarak, yoğun bakım hemşirelerinin ölüm algısı ve iyi ölüm kavramı, hemşirelerin duygusal refahını ve hastaların bakım kalitesini önemli ölçüde etkileyebilir. Bu nedenle, hemşirelerin ölümle ilgili algılarının anlaşılması ve geliştirilmesi önemlidir. Bu bağlamda hemşirelere yönelik daha fazla destek ve eğitim sağlanması ve hastaların ve yakınlarının özellikle yaşam sonu süreçte daha iyi bir deneyim yaşamalarını sağlayabileceği düşünülmektedir.

Anahtar Kelimeler: anksiyete, tükenmişlik, ölüm algısı

Abstract

Nurses working in intensive care units frequently encounter the death of patients and affect their perceptions about death. In this context, this review aims to discuss intensive care nurses' perception of death and the concept of good death. The death of patients in intensive care units can be an intense source of stress and cause emotional reactions of nurses. Studies show that intensive care nurses' coping skills with depression, anxiety and burnout are related to their perception of death. Understanding the death perception of intensive care nurses is thought to help nurses improve their coping skills. In addition, the concept of "good death" may also affect the perception of death of intensive care nurses. In fact, good death is defined as death that occurs in a humane, painless and peaceful manner. It is important for intensive care nurses to help patients realize the concept of good death by providing good support during the dying process. Therefore, it is thought that nurses' beliefs in the concept of good death can play an effective role in the care of patients. In addition, practices to understand and improve intensive care nurses' perception of death and the concept of good death may have positive individual and professional contributions. Thus, providing emotional support to intensive care nurses and improving their perceptions of death may enable nurses to be more effective in this challenging process. In addition, providing good support to patients during the dying process may also help patients and their families to have a better experience. In conclusion, intensive care nurses' perception of death and the concept of good death can significantly affect nurses' emotional well-being and patients' quality of care. Therefore, it is important to understand and improve nurses' perceptions of death. In this context, it is thought that providing more support and training for nurses can provide patients and their relatives with a better experience, especially at the end of life.

Keywords: anxiety, burnout, emotional well-being and patients

GİRİŞ

Yoğun bakım ünitelerinde hastaların ölümü, hemşireler için zor ve duygu yüklü bir deneyimdir. Ölümün yoğun bakım hemşireleri üzerindeki etkisi strese, kaygıya ve depresyona yol açabilmektedir. Araştırmalar hemşirelerin ölüm algısının bu durumlarla baş edebilme becerileriyle yakından ilişkili olduğunu göstermektedir (Jung ve ark., 2023; Xu ve ark., 2022; Hynes ve ark., 2021). Bu nedenle yoğun bakım hemşirelerinin ölüm algısını etkileyen faktörlerin anlaşılması, onların başa çıkma becerilerinin geliştirilmesine yardımcı olabilir. Ayrıca iyi ölüm kavramı hastaların bakımında da büyük önem taşımaktadır. İyi bir ölüm; insani, acısız ve barışçıl bir ölüm olarak tanımlanmaktadır. Bu nedenle yoğun bakım hemşirelerinin ölüm sürecinde iyi destek sağlayarak hastaların iyi ölüm kavramını anlamalarına yardımcı olmaları önemlidir (Park ve ark., 2020).

Yoğun Bakım Hemşirelerinin Ölüm Algısı

Yoğun bakım hemşireleri, hastalarına yaşam sonu bakımı sağlamada birçok engelle karşılaşmaktadır ve ölümün onlar üzerindeki etkisi derin olabilmektedir. Yoğun bakım hemşirelerine yönelik Hynes ve arkadaşlarının yaptığı çalışma (2021), yaşam sonu bakımıyla ilgili bir dizi engel ve destekleyici davranışları ortaya çıkarmıştır. Bu engeller arasında yetersiz iletişim, hastalar veya aileleriyle etkileşim eksikliği ve yaşam sonu bakım konusunda bilgi ve beceri eksikliği yer almaktadır (Hynes ve ark., 2021). Öte yandan destekleyici davranışlar, ailenin ölüm sonrası yaşadığı travmayla baş etmeye yardımcı olmaktadır. Ayrıca hemşirelerin aileye sevdiklerinin bedeniyle vakit geçirebilmeleri için özel bir ortam sağlamak istedikleri de saptanmıştır (Jung ve ark., 2023). Yaşam sonu bakımın iyi olmasının önündeki engellerin ölümden önce var olduğu, hemşirelerin destekleyici davranışlarının çoğunlukla ölüm sonrası

bakımla ilgili olduğu bulunmuştur. Hemşirelerin, ölmek üzere olan hastalara bakım sırasındaki tutumlarının orta düzeyde olduğu, uygun bakım verildiğinde hemşirelerin ölümü olumlu bir deneyim olarak algıladıkları saptanmıştır (Jung ve ark., 2023; Xu ve ark., 2022; Ceyhan ve ark., 2018). Bu bağlamda ölümün yoğun bakım hemşireleri üzerindeki etkisini artırmak için belirlenen engellerin ele alınması ve olumlu davranışların desteklenmesi önemlidir. Bu, yaşam sonu bakım anlayışının geliştirilmesi ve eğitim yoluyla olumlu değişikliklerin teşvik edilmesiyle yapılabilir.

Ölüm algısı hemşirelerde ölüm ve ölmeye ilişkin kaygıya neden olabilmekte ve onlar üzerinde büyük bir duygusal etki yaratmaktadır (Cybulska ve ark., 2022). Dayanıklılık, ölüm ve ölümlle ilgili kaygıyı yönetmek için temel duygusal yeterliliklerden biri olabilir. Hemşireler, ölmekte olan hastaların gözlemlenmesiyle tetiklenen yüksek düzeyde stres ve güçlü duygular yaşamaktadırlar (Cybulska ve ark., 2022; Kostka ve ark., 2021). Ölüm ve ölmeye ilişkin güçlü duygular hemşireler için bir stres kaynağı olduğundan zor durumlarla etkili başa çıkma yolları geliştirilebilir. Ölüm algısı, hemşirelerin stres ve duygusal tepkilerle başa çıkma becerileri üzerinde etkili olabileceği düşünülmektedir çünkü sağlık çalışanlarının duygusal yönetim becerileri, kaliteli yaşam sonu bakım sağlama ve kendi sağlık durumlarını sağlama yetenekleri üzerinde doğrudan etkiye sahiptir (Kostka ve ark., 2021). Ölmekte olan hastaların bakımı, sağlık çalışanları için duygusal açıdan acı verici, stresli ve sıkıntı verici olabilir. Bu nedenle de hemşirelerin günlük işlerinin bir parçası olması nedeniyle ölüm ve ölümlle baş etme süreçlerinin farkında olmaları önem arz etmektedir (Cybulska ve ark., 2022). Ölüme yakınlık ve hastanın acı çekmesi, hemşireler de dahil olmak üzere sağlık çalışanlarının duygusal durumunu etkileyebilmektedir. Bu duygulara tepki verememek meslekten ayrılmaya ve sağlık sorunlarına yol açabileceğinden, stresle ve ölüme bağlı duygusal tepkilerle baş etmek hemşireler için yaşam kalitesinin korunması açısından önemlidir. Hemşirelerin, ölmekte olan hastaların gözlemlenmesiyle tetiklenen yüksek düzeyde stres ve güçlü duygularla karşı karşıya kalması nedeniyle, ölümlle ilgili zor durumlarla etkili başa çıkma yollarının geliştirilmesi önerilmektedir (Cybulska ve ark., 2022; Kostka ve ark., 2021). Ölümü ve ölmeyi zor bulan hemşirelerin kullandıkları başa çıkma mekanizmaları genellikle önleme, mesafeli olma ve kaçınmayı içermektedir. Hemşireler çaresizlik, yetersizlik, sıkıntı veya savunmacılık yaşayabilmektedirler. Diğer ortamlarda hemşireler tarafından kullanılan birey merkezli yaklaşımların hızlı tempolu acil servis ortamında başarılması zor olabilir ve hemşireler ölüm, ölüm ve aile kaybıyla uğraşırken önemli olumsuz duyguları tanımlamaktadırlar. Ailenin kederi ve sıkıntısıyla başa çıkma konusunda eğitim eksikliğinin yanı sıra aile öfkesiyle uğraşma zorunluluğu da yaşam sonu bakımın sağlanmasında potansiyel engeller arasında yer almaktadır (Jung ve ark., 2023; Cybulska ve ark., 2022; Kostka ve ark., 2021).

İyi Ölüm Kavramı

İyi ölümün tanımı herkes için açık değildir ve bir çelişki gibi görünebilir. Buna rağmen çeşitli teorik modellerde iyi ölüm kavramından bahsedilmektedir. Öyle ki iyi bir ölüm; hasta, aile ve bakıcılar için önlenebilir sıkıntı ve ızdırap içermeyen, genel olarak hastanın ve ailesinin isteklerine uygun ve klinik, kültürel ve etik değerlerle makul ölçüde tutarlı olan ölüm olarak tanımlanmaktadır (Xu ve ark., 2022). İyi bir ölüm, sevdiklerinin varlığını ve onların ölüm sürecine katılımını gerektirmekte, bu da onların deneyimi ve acıyı daha iyi işlemesine yardımcı olmaktadır. Ayrıca iyi ölüm kavramı bireysel tutumlar, kültürel altyapı, manevi inançlar ve tıbbi tedavilerle şekillenmekte ve tanımı bireyden bireye değişmektedir. Buna ek olarak iyi bir ölüm, doğru bakımın, desteğin ve sistemlerin mevcut olmasını, yaşam sonu deneyimi sırasında korunma ve güvende hissetmeyi ve bakıcılar ve sevdikleri için hangi desteğin mevcut olduğunu anlamayı içermektedir. Pek çok insanın "iyi ölüm" terimini kullanmasına rağmen, tüm bakış açılarını karşılayan net bir tanım oluşturmak zordur ve "iyi ölüm" tanımına ilişkin tartışmayı

destekleyecek çok az araştırma mevcuttur (Xu ve ark., 2022; Park ve ark., 2020; Meier ve ark., 2016).

'İyi ölüm' terimi, barışçıl bir ölüm ve haysiyeti korurken kontrolün kendi elinde olduğu hissi ile ilişkilidir. İyi bir ölümün sadece ağrısız değil, aynı zamanda hastanın bağımsız karar vermesine ve onurunu korumasına olanak tanıyan bir ölüm olduğuna inanılmaktadır. Ayrıca korku, belirsizlik, çözülmemiş sorunlar ve sevdikleriyle ilgili endişeler gibi duygusal sorunlar da iyi bir ölüm inancıyla ilişkilendirilmektedir. Hastaların bakımında, ölüme zamanında ve pratik bir şekilde hazırlanmak, inanç ve inançla ilgili hasta çatışmalarının çözümü, manevi bakım ve başucunda bir din adamının bulunmasıyla da iyi bir ölüm sağlanabilmektedir. Ayrıca, hastaların değerlerine saygı göstererek ve fikir ve duyguları ifade etmek için rahat bir ortam yaratarak hastaların acılarını yönetmeye yardımcı olması açısından yaşam sonu bakımında psikolojik destek önemlidir. Hasta ve ailesinin üzerindeki duygusal ve ekonomik yükü azaltmak da iyi bir ölüm sağlanmasında yarar sağlayabileceği düşünülmektedir. Ek olarak, aile desteği, hastanın ve ailesinin duygusal acısını azaltabileceği ve yaşamın sonunda daha iyi bir refaha yol açabileceği için iyi bir ölüme ulaşmada önemli bir faktördür (Keratichevanun ve ark., 2023; Dünya Sağlık Örgütü, 2023; Selter ve ark., 2022). Dolayısıyla, iyi bir ölüme olan inancın, yaşamın sonundaki hastaların bakımında rol oynadığı açıktır.

İyi Ölüm Kavramının Farkına Varılmasında Yoğun Bakım Hemşiresinin Görevleri

Yoğun bakım hemşireleri iyi ölüm kavramının anlaşılmasına yardımcı olmada önemli bir rol oynamaktadır. Hemşireler, hastanın ve ailesinin, yaşam sonu bakım konusunda karar vermelerini sağlayacak yeterli bilgi ve rehberliği almasını sağlayabilirler. Ayrıca duygusal destek sağlayabilir ve hastanın manevi ve kültürel ihtiyaçlarının karşılanmasını sağlayabilirler. Ayrıca hemşireler hastaya fiziksel konfor sağlayarak ve semptomlarını yöneterek iyi bir ölüm elde etmelerine yardımcı olabilirler (Siyu ve Kondo, 2019). Hemşireler aynı zamanda iyi bir ölümün ilkelerinin de bilincinde olmalıdırlar. Yapılan çalışmalarda hemşirelerin iyi bir ölüm algısının yüksek olduğu ve bunu tüm boyutlarıyla önemli gördükleri bulunmuştur. Ölmekte olan hastalara ve ailelerine etkili bir şekilde destek verebilmek için hemşirelerin hastaların biyo-psiko-sosyal, kültürel ve manevi gereksinimlerinin farkında olması gerekmektedir (Aksoy ve Kaşıkçı, 2023). Ölümcül hastalara yönelik barışçıl ölüm hizmetleri konusunda hekimlerin ve ailelerin farklı inançlara sahip olduğu durumlarda, hemşireler iyi bir ölüm kavramının gerçekleştirilmesine yardımcı olmak için aracı olabilirler. Hemşirelerin eğitim programlarında manevi bakımı ön planda tutmaları da önemlidir. Bunun nedeni, iyi bir ölüm kavramının farkına varma konusunda çoğu hemşire tarafından maneviyat boyutunun sıklıkla ihmal edilmesidir (Leern ve ark., 2014). Hemşireler, hastanın ölümlerini yalnız bırakılmamasını sağlayarak, onurlu bir şekilde ölmeyi kolaylaştırarak, hastanın yaşam sonu bakım konusundaki isteklerini takip ederek, hastanın ağrı ve rahatsızlığını yöneterek ve tedavinin daha erken bırakılmasını teşvik ederek iyi bir ölümün gerçekleşmesine yardımcı olabilirler. Ayrıca hemşirelerin ölmekte olan hastalara ve ailelerine iyi ölüm davranışları sunarken karşılaştıkları güçlükleri belirlemelerinde sağlık ekibi arasındaki iletişim de oldukça önemlidir (Beckstrand ve ark., 2006).

İyi ölüm bakımı davranışları hasta boyutu ve aile boyutu olarak ayrılmaktadır ve yoğun bakım hemşirelerinin bakım davranışlarını yönlendiren kavram ve inançlardır (Leern ve ark., 2014). İyi ölüm kavramının farkına varılmasına yardımcı olmak için hemşireler, hastanın huzur içinde ve ağrısız bir şekilde ölmesini sağlamalı, onurunu ve mahremiyetini tanımlamalı, manevi gereksinimlerin veya duygusal desteğin karşılanmasını kontrol etmelidirler (Aksoy ve Kaşıkçı, 2023). İyi bir ölümü oluşturan faktörlerin sıralaması bireyden bireye de değişkenlik gösterebilir.

Hemşirelerin Ölümüne Verilen Duygusal Tepkilerle Baş Etme Stratejileri

Ölüme verilen duygusal tepkilerle baş etme stratejilerine ilişkin bilgi eksikliği, hemşireler için zorlayıcı olabilir. Bu sorunu çözmek için hemşirelere baş etme stratejilerini öğretecek yapılandırılmış bir eğitim programına gereksinim vardır. Ayrıca hemşirelerin bu bağlamda kurumsal destek almaları da gerekmektedir. Hemşirelerin kullandığı başa çıkma stratejileri duygu odaklı olmalıdır. Hemşireler başa çıkma stratejilerini kendi deneyimleri ve kurumun değerleri aracılığıyla öğrenmektedirler. Ek olarak, merhamet yorgunluğunun ve empati ve sempati etrafındaki yanlış zihinsel modellerin ayrıntılı bir analizi gerekmektedir. Yetersiz başa çıkma stratejileri kullanmanın yüksek merhamet yorgunluğu riskine yol açabilir. Ölümüne verilen duygusal tepkilerle başa çıkmak için hemşireler egzersiz yapmayı, meslektaşlarıyla paylaşmayı ve aile üyelerine ve aile aktivitelerine odaklanmayı seçebilirler. Hastanın ölümüyle karşılaşan hemşireler iş ve sosyal yaşamlarında kaygı ve duygusal tükenme yaşayabilirler. Başa çıkma stratejileri, yorucu veya bunaltıcı durumların yönetilmesine yönelik bilişsel ve davranışsal çabalar ve sürekli değişmektedir. Hasta ölümüyle ilgili deneyimleri nedeniyle aşırı psikolojik stres yaşayan yoğun bakım hemşireleri kendilerini hazırlıksız hissedebilirler ve bu nedenle, hastaların ölümüyle ilgili güçlü duygular ve kaygıyla başa çıkma stratejilerini şekillendirmek için psikolojik ve eğitimsel müdahalelere gereksinim duyabilirler (Anguis ve ark., 2023; Kostka ve ark., 2021). Bu gibi durumlarda tepki verilmemesi meslektenden istifaya ve sağlık sorunlarına yol açabilmektedir. Ağlamak, hemşirenin yaşadığı durumu hafifleten ya da geleceğe yönelik bir strateji olarak geliştiren bir başa çıkma stratejisi olmayıp üzüntünün aşırı ifade edilmesi ya da o anın duygusuna kapılıp gitmesi profesyonel düzeyde olumsuz görülmektedir. Hemşirenin gösterdiği zihinsel bozulma, onun bakım verdiği diğer hastalara bakım verme becerisine zarar verebilmektedir. Akran desteği, sıradan sağlık merkezi devrelerinin dışında gayri resmi olarak gerçekleştirilmektedir. Akran desteği, olumsuz deneyimleri aynı şeyleri yaşayan diğer bireylerle paylaşmayı içerirken, hemşireler genellikle kendilerinin savunmasız olarak görülüp görülemeyeceğinden ve kendilerini hissettikleri gibi ifade edip edemeyeceklerinden emin olmamaktadırlar (Anguis ve ark., 2023). Ailelere yas desteği ve bakım sağlamak, yoğun bakım hemşireleri için duygusal ve psikolojik olarak zorlayıcı olabilir. Bu bağlamda hemşirelerin hasta ölümünden sonraki deneyimlerine ilişkin sınırlı bilgi mevcuttur (Bloomer ve ark., 2023). Bu bağlamda ölüme verilen duygusal tepkilerle baş etme, hemşirelerin yaşam kalitesini artırabilir ve olumsuz sonuçları önleyebilir.

SONUÇ

Yoğun bakım hemşirelerinin hastalarına yaşam sonu bakım sağlarken çok sayıda engelle karşılaştıkları ve bu engellerin hemşirelerin ölüm algısını derinden etkileyebilmektedir. Özellikle yetersiz iletişim, hasta ve aileleriyle etkileşim eksikliği ve yaşam sonu bakım konusunda bilgi ve beceri eksikliği önemli engeller olarak belirlenmektedir. Bununla birlikte, hastaların aileleri ve hemşirelerin kendileri için ölümle ilişkili travmayı hafifletmeye yardımcı olabilecek çeşitli destekleyici davranışları da tanımlanmaktadır. Bu davranışlar arasında aileye ölen hastayla vakit geçirebileceği özel bir ortam sağlamak, yaşam sonu bakım anlayışını geliştirmek ve eğitim yoluyla olumlu değişiklikleri teşvik etmek yer almaktadır. Ölüm algısının, hemşirelerin stresle baş etme ve duygusal tepkiler üzerinde etkili olabileceği, bunun da kaliteli yaşam sonu bakım sağlama becerilerini ve kendi refahlarını etkileyebileceğini belirtmek de önemlidir. Ölüm algısı ve iyi ölüm kavramının anlaşılması için hemşirelere yönelik etkili baş etme mekanizmalarının geliştirilmesi ve olumsuz ölüm algısına yol açan engellerin ve destekleyici davranışların daha iyi belirlenebilmesi için daha fazla araştırmaya gereksinim vardır. Bu bağlamda bu derlemenin yoğun bakım hemşirelerinin deneyimlerine, hastalar ve sağlık hizmeti sağlayıcıları için yaşam sonu bakımın iyileştirilmesinin önemli olduğunu vurguladığı düşünülmektedir.

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**ÜNİVERSİTE ÖĞRENCİLERİNDE ACİL SERVİSE BAŞVURU NEDENİ OLARAK
İNTİHAR GİRİŞİMİ**
SUİCİDE ATTEMPT AS A REASON FOR EMERGENCY DEPARTMENT
ADMISSION IN UNIVERSITY STUDENTS

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Özet

Üniversite öğrencilerinde intihar girişimi, son yıllarda artış gösteren bir sorun haline gelmiştir. Bu durum, gençler arasında önemli bir endişe kaynağı oluşturmakta ve ciddi bir halk sağlığı sorunu olarak değerlendirilmektedir. İntihar girişimleri, birçok farklı etkenle ilişkilendirilmektedir. Öğrenciler üzerindeki akademik baskı, sınav stresi, gelecek kaygısı gibi faktörler intihar düşüncesini beraberinde getirebilir. Bunun yanı sıra, sosyal izolasyon, duygusal sorunlar, ilişki problemleri, ailevi zorluklar gibi psikososyal etkenler de intihar riskini artırabileceği düşünülmektedir. Üniversite öğrencileri, genellikle akademik ve sosyal hayatlarında birçok zorlukla karşı karşıya kalmaktadırlar. Yoğun ders programları, sınavlara hazırlık süreci, dernek ve sosyal aktivitelere katılım gibi unsurlar, gençlerin üzerinde büyük bir baskı oluşturabilmektedir. Bu faktörler intihar düşüncesini tetikleyerek öğrencinin eyleme geçmesine neden olabilmektedir. İntihar girişiminde bulunan öğrencilerin özellikle ailesinin yaşadığı yerden uzakta öğrenim gören öğrenciler olduğu belirtilmekte ve acil servise arkadaşları ya da yaşadığı kurumdaki görevliler tarafından getirilmektedir. Bu bağlamda bu durum, kamu ya da vakıf yurtlarının yanı sıra üniversitelere ve sağlık hizmeti sunan kuruluşlara büyük bir sorumluluk yüklemektedir. Yurtlar ve üniversiteler, intihar riski taşıyan öğrencileri tespit etmek için daha etkin önleyici önlemler almalıdır. Bu önlemler arasında, psikolojik danışmanlık hizmetlerinin güçlendirilmesi, farkındalık kampanyaları düzenlenmesi, öğrencilere destek grupları sağlanması gibi adımlar yer alabilir. Ayrıca, acil servis hizmetleri de bu konuda önemli bir rol üstlenmelidir. İntihar girişiminde bulunan öğrencilere acil tıbbi yardımın yanı sıra, psikolojik değerlendirme ve tedavi imkanının da sunulması gerekmektedir. Sağlık personeli, bu konuda yeterli eğitim almış olmalı ve öğrencilere acil servis dışında da destek sunabilecek kaynaklar hakkında bilgi vermelidir. Sonuç olarak, intihar girişimlerinin çözümü için yurtlar, üniversiteler ve sağlık hizmeti sunan kuruluşlar, önleyici tedbirler almalı ve intihar girişiminde bulunan öğrencilere gereken desteği sağlamalıdır. Bu şekilde, intihar girişimi riski taşıyan öğrencilerin hayatlarının kurtarılması ve daha sağlıklı bir üniversite deneyimi yaşamaları mümkün olabilir.

Abstract

Suicide attempts among university students have become an increasing problem in recent years. This situation constitutes an important source of concern among young people and is considered a serious public health problem. Suicide attempts are associated with many different factors. Factors such as academic pressure on students, exam stress and future anxiety may lead to suicidal thoughts. In addition, psychosocial factors such as social isolation, emotional problems, relationship problems and family difficulties are also thought to increase the risk of suicide. University students often face many challenges in their academic and social lives. Factors such as intensive course schedules, preparation for exams, participation in associations and social activities can put great pressure on young people. These factors can trigger suicidal thoughts and cause students to take action. It is stated that students who attempt suicide are especially those who study far away from their families and are brought to the emergency room by their friends or the staff of the institution where they live. In this context, this situation imposes a great responsibility on public or foundation dormitories as well as universities and health service providers. Dormitories and universities should take more effective preventive measures to identify students at risk of suicide. These measures could include strengthening psychological counseling services, organizing awareness campaigns, and providing support groups for students. Emergency services should also play an important role in this regard. Students who attempt suicide should be offered psychological evaluation and treatment in addition to emergency medical assistance. Health personnel should be adequately trained in this area and should provide information about resources that can offer support to students outside the emergency services. In conclusion, dormitories, universities and health care providers should take preventive measures and provide the necessary support to students who attempt suicide. In this way, it may be possible to save the lives of students at risk of suicide attempts and provide them with a healthier university experience.

GİRİŞ

Üniversite öğrencileri arasında intihar girişimlerinin yaygınlığı giderek artan bir endişe kaynağıdır. İntihar davranışı doğal yaşama eğilimine aykırı olsa da intihar girişimi olasılığını artıran çeşitli risk faktörleri vardır. Çalışmalar sigara içmenin, önceden psikiyatrik bir bozukluğa sahip olmanın ve ailede psikiyatrik bozukluk öyküsünün bulunmasının intihar davranışına katkıda bulunan önemli risk faktörleri olduğunu göstermiştir (Apaydın ve ark., 2016; Kaya ve ark., 2005). Ayrıca Türkiye'de yapılan bir araştırmada (2004) Isparta kent merkezinde intihar girişimlerinin yaygın olduğu, kadın olmak, psikiyatrik tedavi öyküsü olmak, stresli yaşam olayları yaşamak gibi birçok risk faktörünün tespit edildiği belirtilmiştir (Atay ve ark., 2004).

Bu konuyu daha iyi anlamak için araştırmacılar intihar girişiminde bulunan ergenlerin demografik özelliklerini araştırmak üzere alt problemler oluşturmuşlardır. Bu alt sorunlardan bazıları, intihar girişiminde bulunanların yaşının, cinsiyetinin ve etnik kökeninin incelenmesinin yanı sıra, intihar davranışının altında yatan nedenlerin araştırılmasını da içermektedir (Savi-Çakar ve ark., 2020). Giderek büyüyen bu soruna çözüm bulmak ve üniversite öğrencileri arasında intiharı önlemeye yönelik etkili müdahaleler geliştirmek için daha fazla araştırmaya gereksinim olmaktadır. Bu bağlamda olumsuz sonuçları önlemek için üniversitelerin öğrenci popülasyonundaki bu risk faktörlerini tanıması ve ele alması önemlidir.

Üniversite öğrencileri intihar düşüncesine ve davranışına katkıda bulunabilecek çok sayıda akademik ve sosyal baskıyla karşı karşıyadır. İntihara iten risk faktörlerinden bazıları arasında ailede psikiyatrik bozukluk öyküsü, önceki psikiyatrik bozukluklar ve sigara kullanımı yer almaktadır. Aile içi iletişim sorunları ve kopmalar da ergenlerde ve hatta aile bireylerinde intihar riskini artırabilmektedir (Önder ve Karakaya, 2020). Pek çok üniversite öğrencisi, notlarını korumak ve seçtikleri alanda başarılı olmak için akademik baskılarla karşı karşıya

kalmakta; bu da mevcut zihinsel sağlık sorunlarını daha da kötüleştirebilecek stres ve kaygıya yol açmaktadır. Ek olarak, akranlarla uyum sağlama ve kendini izole edilmiş veya yalnız hissetme gibi sosyal baskılar, intihar düşüncesi ve davranışına daha fazla katkıda bulunabilir. Bu stres etkenleri ve risk faktörlerinin birleşimi, zihinsel sağlıklarıyla mücadele eden üniversite öğrencileri için mükemmel bir fırtına yaratabilir. Bu bağlamda da üniversitelerin yeterli zihinsel sağlık kaynakları sağlamasını ve öğrenci popülasyonu arasında intihar girişimlerini önlemek için destek sağlamasını hayati hale getirebilir.

İntihara Girişen Üniversite Öğrencilerine Acil Servis Müdahaleleri

Üniversite öğrencileri intihar girişiminde bulduklarında acil müdahaleye gereksinim duyabilmektedirler. İntihar girişiminden sonra acil servise gelen hastaların retrospektif incelemesini araştıran bir çalışma (2016); en sık kullanılan yöntemin kasıtlı kendini zehirleme olduğu, bunu kesme, asma ve düşmenin izlediği belirtilmektedir. Acil serviste intihara meyilli hastaları yönetmek için sağlayıcıların empatik, kanıta dayalı ve işbirlikçi bir yaklaşım benimsemeleri gerekmektedir. Bu, güvenlik planlaması ve ölümcül yollara yönelik danışmanlık gibi kısa müdahalelerin sağlanmasının yanı sıra dikkatli bir taburculuk planlamasının yapılmasını da içermektedir (Betz ve Boudreaux, 2016; Suicide Prevention Resource Center, 2023). İntihar, Amerika Birleşik Devletleri'nde önde gelen ölüm nedenlerinden biridir ve acil servis sağlayıcılarının gelecekteki yaralanma ve yaşam kaybını önlemek için etkili müdahaleler benimsemesi çok önemlidir (Stanley ve ark., 2016). Psikososyal müdahaleler açısından, üç yaygın intihar önleme stratejisi belirlenmiştir: takip temasları, hastaları ayakta tedavi randevularına katılmaya teşvik etmek ve İntihar Tedavisi için Aile Müdahalesi gibi kanıta dayalı yaklaşımların uygulanmasıdır (Asarnow ve ark., 2009; Zarka ve ark., 2023). Acil servis sağlayıcıları, bu müdahaleleri ve stratejileri içeren kapsamlı bir yaklaşımı benimseyerek, intihara meyilli üniversite öğrencilerini etkili bir şekilde yönetebilir ve daha fazla zararı önleyebilir.

Üniversite Öğrencilerinde İntihar Girişimlerini Önleme ve Tedavi Stratejileri

Üniversite öğrencileri arasında intiharı önleme stratejilerinin uygulanması büyük önem taşımaktadır. Yaklaşımlardan biri, belirli programlar geliştirmek için ruh sağlığı profesyonelleri ve üniversitelerle iş birliği yapmaktır. Bu iş birliği, üniversite öğrencileri arasında intihar girişimi riskini azaltabilecek Uygulamalı İntihara Müdahale Becerileri, Soru, İkna ve Yönlendirme ve İntiharı Önleme stratejileri gibi programların oluşturulmasıyla sonuçlanabilir. Ayrıca, intihar riski taşıyan bireylerin nasıl belirleneceği ve bu bireylere nasıl müdahale edileceği konusunda öğrencileri ve öğretim üyelerini eğitmek amacıyla Eğitimcilerle İşbirliğine Dayalı Çalışma programları uygulanabilir. Program, öğretmenlere, öğrenciler arasındaki tehlike işaretli davranışların nasıl tanınacağı ve ihtiyaç duyulduğunda nasıl yardım sağlanacağı konusunda eğitim verilmesini içerebilir. Bu iş birliği aynı zamanda risk altındaki öğrencilerin belirlenmesine de yardımcı olabilir ve onların kampüsteki ruh sağlığı kaynaklarına erişimlerini sağlayabilir. Üniversiteler, öğrencilere ruh sağlıklarını yönetebilmeleri için gerekli araçları sağlayarak, öğrenci nüfusu arasında intihar girişimlerini önlemeye yönelik adımlar atabilir.

Üniversite öğrencilerinde intihar davranışının yönetilmesinde etkili olduğu belirlenen çok sayıda strateji bulunmaktadır. Bu tür stratejilerden biri, intihar riski altında olabilecek öğrencilere gerekli destek ve müdahaleyi sağlamayı amaçlayan Uygulamalı İntihar Müdahale Becerileri, Soru, İkna ve Yönlendirme ve İntiharı Önleme Eğitimcilerle İşbirliğine Dayalı Çalışma programları gibi intihar önleme programlarının uygulanmasıdır (Gökkaya, 2023). İntihar girişiminde bulunan bireyle en çok ev ortamında etkileşime girdikleri için aile üyeleri de intiharı önleme çabalarında önemlidir. Ancak ebeveynlerin intiharı önleme stratejileri konusunda eğitim almadığı bilinmekte, bu da ailelerin sevdiklerindeki intihar davranışlarını nasıl tanımlayacakları ve yönetecekleri konusunda eğitim almaları gerektiğini vurgulamaktadır

(Önder ve Karakaya, 2020). Ayrıca arařtırmalar sosyal problem çözme becerileri, kişilerarası öfke ve suçluluk-utanç gibi deęişkenlerin üniversite öğrencilerinin intihar olasılığını etkilediğini göstermiştir (Gökhan, 2008). Bu spesifik risk faktörlerini ele alarak, intihar davranışı riski taşıyan üniversite öğrencilerinin benzersiz gereksinimlerini hedef alan özel müdahaleler geliştirilebilir.

Üniversite öğrencileri arasındaki intihar riskinin ciddi doğası göz önüne alındığında, üniversitelerin ve ruh sağlığı uzmanlarının kapsamlı destek sağlamak için birlikte çalışması çok önemlidir. Yaklaşımlardan biri, Uygulamalı İntihara Müdahale Becerileri, Soru, İkna ve Yönlendirme ve Eğitimcilerle İşbirliğine Dayalı Çalışma programları gibi intiharı önleme programlarının uygulanmasıdır (Gökkaya, 2023). Bu programlar öğrencileri uyarı işaretleri ve intihar riski taşıyan bireylere nasıl müdahale edilebilecekleri konusunda eğitmeyi amaçlamaktadır. Ancak üniversite öğrencilerinde sosyal problem çözme, kişilerarası öfke ve suçluluk-utanç gibi faktörlerin de intihar olasılığını etkileyebileceğini belirtmek önemlidir (Gökhan, 2008). Bu nedenle, intiharı önleme programlarının geliştirilmesinde ruh sağlığı uzmanlarıyla iş birliği yapılması, bu programların çok çeşitli risk faktörlerini ele almasını ve intihar girişimlerini azaltmada etkili olmasını sağlamak için gereklidir (Öksüz ve Bilge, 2014). Üniversiteler ve ruh sağlığı profesyonelleri birlikte çalışarak intihar girişimi riski taşıyan öğrencileri desteklemek için daha kapsamlı bir yaklaşım sağlayabilirler.

SONUÇ

Üniversite öğrencileri arasında intihar girişimi konusu giderek artan bir endişe kaynağıdır. Uygulamalı İntihara Müdahale Becerileri, Soru, İkna ve Yönlendirme, Eğitimcilerle İşbirliğine Dayalı Çalışma programları gibi intiharı önleme programlarının üniversite öğrencileri arasında uygulanması büyük önem taşımaktadır. İntiharı önleme programlarının geliştirilmesinde ruh sağlığı uzmanları ve üniversitelerin iş birliği, bu programların çok çeşitli risk faktörlerini ele almasını ve intihar girişimlerini azaltmada etkili olmasını sağlamak için önemlidir. İntihar girişiminde bulunan öğrencilerin özellikle ailesinin yaşadığı yerden uzakta öğrenim gören öğrenciler olduğu belirtilmekte ve acil servise arkadaşları ya da yaşadığı kurumdaki görevliler tarafından getirilmektedir. Bu bağlamda bu durum, kamu ya da vakıf yurtlarının yanı sıra üniversitelere ve sağlık hizmeti sunan kuruluşlara büyük bir sorumluluk yüklemektedir. Yurtlar ve üniversiteler, intihar riski taşıyan öğrencileri tespit etmek için daha etkin önleyici önlemler almalıdır. Bu önlemler arasında, psikolojik danışmanlık hizmetlerinin güçlendirilmesi, farkındalık kampanyaları düzenlenmesi, öğrencilere destek grupları sağlanması gibi adımlar yer alabilir. Ayrıca, acil servis hizmetleri de bu konuda önemli bir rol üstlenmelidir. İntihar girişiminde bulunan öğrencilere acil tıbbi yardımın yanı sıra, psikolojik değerlendirme ve tedavi imkanının da sunulması gerekmektedir. Sağlık personeli, bu konuda yeterli eğitim almış olmalı ve öğrencilere acil servis dışında da destek sunabilecek kaynaklar hakkında bilgi vermelidir. Ayrıca giderek büyüyen bu soruna çözüm bulmak ve üniversite öğrencileri arasında intiharı önlemeye yönelik etkili müdahaleler geliştirmek için daha fazla araştırmaya gereksinim bulunmaktadır. Sonuç olarak, risk faktörlerini doğru bir şekilde tanımlayıp tedavi ederek savunmasız gruplar arasında intihar girişimi vakalarını azaltmak mümkün olabilir.

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NEUROPEPTIDES AND THE MICROBIOTA-GUT-BRAIN AXIS IN AUTISM

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Abstract

Background The term “gut-brain axis” refers to the bidirectional communication between the gut and the brain. Neuropeptides comprise a class of evolutionarily well conserved molecules that, by definition, operate as transmitters in the enteric, peripheral and central nervous systems. **Objective** The gut microbiota also influences the profile of metabolites (including peptides) present in the brain. To arrive at these observations, the authors set out to study the role of Imuniplant in the management of dysfunctional responses and whether Neuropolen can be a potential treatment for autism. **Materials and methods** Neuropeptides such as substance P, calcitonin gene-related peptide and neuropeptide Y (NPY), vasoactive intestinal polypeptide, somatostatin and corticotropin-releasing factor are also likely to play a role in the bidirectional gut-brain communication. These effects are not only relevant to neurodegeneration and repair but may also be involved in the manifestation of psychiatric disorders, like autism. **Results** Thus, the gut microbiota communicate not only with gastrointestinal epithelial, immune and nerve cells in their immediate neighbourhood but also generate and release molecules that can signal to distant organs. Neuropeptides are important mediators both within the nervous system and between neurons and other cell types, they operate often via the same receptors and cellular transduction systems. **Conclusion** Thus, neurons as well as endocrine, immune, interstitial, muscle, epithelial and microbial cells can respond to these signalling molecules by expressing the appropriate peptide receptors. Taken all findings together, it would appear, therefore, that the roles of the symbiotic gut microbiota extend to brain function.

Keywords: neuropeptides, microbiota-gut-brain axis, Neuropolen, autism

COMPAROB: THE ROBOTIC ASSISTANT FOR SHOPPING CARTS ESPECIALLY FOR ELDERLY INDIVIDUALS

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Abstract

With the current advancement of technology, there is a great chance to create systems that can assist people in their own homes. Specifically, helping older individuals in their homes can make a big difference in their quality of life. To assist elderly individuals in performing regular duties like shopping, assistance is often required while providing care outside of their usual surroundings. The person-following shopping cart assistance robot that we present in this research can aid elderly shoppers with carrying groceries. Initially, the paper provides an overview of related systems that carry out this function, employing various techniques such as computer vision and attachable modules. The suggested system and its key features are then thoroughly described in the study. For a straightforward and efficient person localization and tracking system, the cart combines radio signals with ultrasonic sensors. In addition, the end user can benefit from the convenience of use by connecting the cart to a portable device such as a tablet or smartphone. In addition to simulations used to assess the prototype's scalability in bigger environments where several robots might coexist, the device has been tested at a grocery shop. In conclusion, the study analyses the system's applicability in a small grocery shop and its scalability for augmenting the number of robots in a simulated environment.

Keywords: Shopping cart assistance robot, Grocery shop, Elderly shoppers, Ultrasonic sensors, Smartphone.

**EFFECT OF LIPID-BASED MULTIPLE MICRONUTRIENTS
SUPPLEMENTATION IN UNDERWEIGHT PRIMIGRAVIDA PRE-ECLAMPTIC
WOMEN ON MATERNAL AND PREGNANCY OUTCOMES: RANDOMIZED
CLINICAL TRIAL**

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Abstract:

Background and Objectives: In pre-eclampsia, restricted blood supply due to the lack of trophoblastic cell invasion and spiral artery remodeling is responsible for adverse pregnancies and maternal outcomes, which is added to by maternal under nutrition. This study was designed to investigate the effects of lipid-based supplements (LNS-PLW) on pregnancy and maternal outcomes in underweight primigravida pre-eclamptic women.

Materials and Methods: A total of 60 pre-eclamptic, underweight primigravida women from the antenatal units of tertiary care hospitals in the Khyber Pakhtunkhwa Province, Pakistan, were randomly divided into two groups (Group 1 and Group 2). The participants of both groups were receiving routine treatment for pre-eclampsia: iron (60 mgs) and folic acid (400 ug) IFA daily. Group 2 was given an additional sachet of 75 gm LNS-PLW daily till delivery. The pregnancy outcomes of both groups were recorded. The clinical parameters, hemoglobin, platelet count, and proteinuria were measured at recruitment.

Results: The percentage of live births in Group 2 was 93% compared to 92% in Group 1. There were more normal vaginal deliveries (NVDs) in Group 2 compared to Group 1 (Group 2, 78% NVD; group 1, 69% NVD). In Group 1, 4% of the participants developed eclampsia. The frequency of cesarean sections was 8/26 (31%) in Group 1 and 6/28 (22%) in Group 2. The number of intrauterine deaths (IUDs) was only 1/28 (4%) in Group 2, while it was 2/26 (8%) in Group 1. The gestational age at delivery significantly improved with LNS-PLW supplementation (Group 2, 38.64 ± 0.78 weeks; Group 1, 36.88 ± 1.55 weeks, p-value 0.006). The Apgar score (Group 2, 9.3; Group 1, 8.4) and the birth weight of the babies improved with maternal supplementation with LNS-PLW (Group 2, 38.64 ± 0.78 weeks: Group 1, 36.88 ± 1.55; p-value 0.003). There was no significant difference in systolic blood pressure, while diastolic blood pressure (Group 2, 89.57 ± 2.08 mmHg; Group 1, 92.17 ± 5.18 mmHg, p-value 0.025) showed significant improvement with LNS-PLW supplementation. The hemoglobin

concentration increased with the LNS-PLW supplement consumed in Group 2 (Group 2, 12.15 ± 0.78 g/dL; Group 1, 11.39 ± 0.48 g/dL, p-value < 0.001). However, no significant difference among the platelet counts of the two groups was observed.

Conclusions: The pregnancy and maternal outcomes of underweight pre-eclamptic women can be improved by the prenatal daily supplementation of LNS-PLW during pregnancy, along with IFA and regular antenatal care and follow-up.

Keywords: pre-eclampsia; lipid-based nutritional supplements; pregnancy outcome; maternal outcome; Khyber Pakhtunkhwa Province of Pakistan

Registration: ISRCTN15485068, April 2018:<https://doi.org/10.1186/ISRCTN15485068>.

**KURUM İÇİNDE KURUM ARAMAK: KURULUŞUNDAN BU YANA GEÇEN 40
YILDA YILDIZ TEKNİK ÜNİVERSİTESİ ŞEHİR VE BÖLGE PLANLAMA
BÖLÜMÜ'NDE DEĞİŞEN İŞ YAPMA PRATİKLERİ, PAYDAŞLAR ARASI MEŞRU
KARŞILIKLI BEKLENTİLER, NORMLAR VE MEKÂN**

IN SEARCH OF INSTITUTIONS: UNDERSTANDING THE CHANGING NATURE OF
NORMS, LEGITIMATE MUTUAL EXPECTATIONS, AND WORKING PRACTISES AT A
FOUR-DECADE-OLD PLANNING SCHOOL (THE CASE OF YILDIZ TECHNICAL
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Özet:

1990'lı yıllarda ekonomik coğrafyanın tanıklık ettiği “*kültürel dönüş*”, bu disiplinin diğer sosyal bilimlerle yakınlaşma sürecini hızlandırmakla kalmamış, aynı zamanda kurumsal ekonomik coğrafya yaklaşımının ortaya çıkışında etkili olmuştur. Bu yaklaşımın temelinde “kurum(lar)” kavramı yatmaktadır. Literatürde kurumlar üzerinde henüz tam bir mutabakat sağlanmamış olsa da, kurumsal iktisadın en önemli temsilcilerinden Douglas North (1990) tarafından yapılan tanım yaygın olarak kabul görmektedir. North, bu kavramı açıklarken oyun metaforuna başvurmakta, toplumsal ve iktisadi hayatı bir oyun alanına benzetmektedir. Bu oyunda bireyler, firmalar, kuruluşlar ve diğer tüm aktörler oyunun oyuncularıyla, aktörlerin etkileşimini biçimlendiren her türden kısıtlayıcı ve/veya kolaylaştırıcı toplumsal düzenlemeler, oyunun kurallarına, yani kurumlarına işaret eder. Bu kurumlar, formel veya enformel olabilirler. İlki kuralları, yasaları ve yönetmelikleri içerir; ikincisi ise değerleri, toplumsal normları, düşünce ve davranış kalıplarını, inançları ve sosyo-kültürel, tarihi ve coğrafi koşulların getirdiği gelenekleri. Bu kavrayışta kimi araştırmacılar yerel ekonomik gelişmeyi açıklarken faydalandıkları “*ticari nitelikli olmayan karşılıklı bağımlılıklar*” meselesini (Storper, 1995) ve hatta “*sözleşmeleri*” de (Storper, 1998) kurumlar tartışmasına dâhil etmektedir. Yakın zamanda ise, kurumları “*meşru karşılıklı beklentiler ve yaptırımlar*” üzerinden tartışan bir literatürün gelişmekte olduğunu söylemek mümkündür (Bathelt ve Glückler, 2014; Glückler ve Lenz, 2016). Bu literatürün ilgi alanına giren bir diğer konu ise, kurumların ortaya çıkış ve değişim sürecidir (Streeck ve Thelen, 2005; Mahoney ve Thelen, 2009). Bu bildirinin amacı, bu yıl 40. yaşını kutlayan Yıldız Teknik Üniversitesi Şehir ve Bölge Planlama Bölümü'nde mevcut enformel kurumların ve bu kurumlarda meydana gelen değişimlerin analiz edilmesidir. Bu amaç doğrultusunda üç araştırma sorusu belirlenmiştir: (1) Kurumda yerleşik hale gelmiş farklı kurumlar (iş yapma pratikleri, meşru karşılıklı beklentiler ve yaptırımlar) nelerdir? (2) Bu kurumlarda son 40 yılda bir değişiklik yaşanmış mıdır? Evet, ise nasıl? Ve hangi dinamiklerin etkisinde? (3) Kurumların yerleşik hale gelmesinde ve/veya değişiminde kampüs/fakülte/bölüm fizik mekânının bir rolü var mıdır? Çalışmada bu üç sorunun yanıtları, bir yükseköğretim kurumunun varoluşsal üç ana faaliyet alanı (eğitim, araştırma ve bilginin yayılımı) bağlamında aranmaktadır. Saha çalışması bir nitel araştırma olarak kurgulanmıştır. Bu kapsamda, bölümde hizmet veren farklı kademelerden akademisyenler, kurumun emekli öğretim üyeleri ve idari

personeli ile bir dizi yarı yapılandırılmış derinlemesine görüşme yapılması öngörülmektedir. Keşfedici araştırma sırasında elde edilen ilk bulgular, bölümün 40 yıllık tarihi boyunca, kurumlarının değişimine yön veren (içsel ve dışsal kaynaklı) en az üç kırılma noktasının (olayın) yaşandığına işaret etmektedir. Buna ek olarak mekân, birtakım kurumların devamlılığını destekleyici bir faktör olarak karşımıza çıkmaktadır.

Anahtar Kelimeler: Kurum, Kurumsal Değişim, Yükseköğretim, Mekân, Şehir ve Bölge Planlama

Abstract:

Economic geography experienced a significant shift in the 1990s, commonly referred to as the "cultural turn." This shift not only fostered closer connections between this discipline and other social sciences but also paved the way for the development of the institutional approach. At the heart of this approach lies the concept of "institutions". Although the literature has not yet reached a consensus on the definition of this notion, the framework provided by North (1990) enjoys broad acceptance. By employing the metaphor of a game, North compares social and economic activity to a playground. In this game, individuals, firms, organisations, and all other actors are the players. Any restrictive and/or enabling social arrangements that influence the interaction of actors are indicative of the game's rules or institutions. These institutions can be formal or informal. The former refers to rules, laws, and regulations, whereas the latter comprises values, social norms, patterns of thought and behaviour, beliefs, and traditions of socio-cultural, historical, and spatial conditions. In this context, some scholars incorporate the concept of "untraded interdependencies" (Storper, 1995) and even "contracts" (Storper, 1998) into the institutions' discourse. Recently, we have witnessed a growing body of literature discussing institutions through "legitimate mutual expectations and sanctions" (Bathelt and Glückler, 2014; Glückler and Lenz, 2016). Another issue of interest in this literature is the emergence and change of institutions (Streeck and Thelen, 2005; Mahoney and Thelen, 2009). The aim of this paper is to analyse the informal institutions and institutional change in the Department of City and Regional Planning at Yıldız Technical University, which marked its 40th anniversary this year. We have three research questions. (1) What are the department's established institutions? (2) Has anything changed in the past four decades? If yes, then how? (3) Does the physical environment of the university play a role in this process? These questions will be answered in relation to the three primary ontological fields of a university organisation (e.g. education, research, and the dissemination of knowledge). The fieldwork has been designed as a qualitative study. It consists of semi-structured, in-depth interviews with academicians in the department, its retired professors, and administrative personnel. Initial findings from exploratory research indicate that there have been at least three milestones in the department's forty-year history that led to the institutional transformation. Furthermore, the place appears to be a supporting factor for the continuity of some institutions.

Keywords: Institutions, Institutional Change, Higher Education, Place, City and Regional Planning

**ASSESSMENT OF DIETARY HABITS AMONG POLISH AND GREEK STUDENTS
CONCERNING RECOMMENDATIONS BASED ON THE PRINCIPLES OF THE
MEDITERRANEAN DIET**

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Abstract

The way of eating significantly influences the physical and mental development of young individuals. It contributes to proper bone mineralization, muscle development, normal functioning of the nervous system, and also aids the learning process. For many years, the Mediterranean diet has been the most recommended eating style. Research shows that among all evaluated eating styles, the Mediterranean diet has the most beneficial impact on health. In this presented study, the aim was to determine whether the surveyed students adhere to healthy eating recommendations based on the principles of the Mediterranean diet.

Aim of the study

The aim of the study was to determine which of the studied groups more frequently consumes products recognized as beneficial for health and recommended in the prevention of lifestyle diseases

Materials and methods

The study included 200 students from the Academy of Physical Education in Warsaw (Poland) and 137 students from the National and Kapodistrian University of Athens (Greece). All participating students were asked to complete the Food Frequency Questionnaire (FFQ-6), which is used to assess dietary habits and the frequency of consuming basic food groups.

Results

Based on the gathered data, it can be observed that Greek students participating in the study consume fermented dairy products, cheeses, as well as fruits and vegetables significantly more often than Polish students. Conversely, Polish students more frequently consume eggs and fish compared to Greek students.

Conclusion

One can conclude that in both studied groups, students often consume products that have a positive impact on health. However, neither the diet of Polish students nor that of Greek students is fully rich in all the recommended health-promoting products.

Keywords: mental development, Mediterranean diet, nervous system

**PHARMACOPHORE MODELING, MOLECULAR DOCKING, 3D-QSAR AND
MOLECULAR DYNAMICS STUDY FOR INDOLYL-ARYL-SULFONE
DERIVATIVES AS NEW HIV1 INHIBITORS**

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Abstract

The present study deals with the *in silico* of 45 indolyl-aryl-sulfones known as anti-HIV1. The data were collected from recent previously reported inhibitors and divided into a sub-set of 33 compounds as the training set and the remaining 12 compounds were kept in the test set. The selected pharmacophore-ADRRR-yielded a statistically significant 3D-QSAR model containing high confidence scores ($R^2 = 0.930$, $Q^2 = 0.848$, and $RMSE = 0.460$). The predictive power of the established pharmacophore model was validated with an external test ($r^2 = 0.848$). A systematic virtual screening workflow shows an enrichment factor and has revealed a high predictive power. Then the model was used to screen the filtered PubChem database mapping all chemical features of model pharmacophore. The recognized hits were further assessed by *in silico* ADMET studies. Molecular dynamics also used to explore the stability of obtained complexes. Finally, these selected compounds are probably to become a good lead molecule for the development of effective anti-HIV-1 drugs.

Keywords: Indolyl-aryl-sulfone, HIV-1 inhibitor, Pharmacophore, 3D-QSAR, Molecular Docking, Molecular Dynamics.

**IN SILICO VIRTUAL SCREENING, DRUG LIKENESS, ADMET, AND
MOLECULAR DOCKING AND DYNAMICS STUDIES FOR THE DISCOVERY OF
POTENTIAL ANTI-SLEEP DISORDER AGENTS FROM QUANABIS**

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Abstract

Sleep disorders pose a significant problem due to their high prevalence, severity, and detrimental impact on patients' recovery and overall quality of life. Consequently, the identification of novel agents for treating sleep disorders is of utmost importance. This research aims to discover potent anti-sleep disorder compounds through a screening approach that combines molecular docking and dynamics simulations. As part of this study, we conducted a screening of 20 compounds derived from Cannabis sativa L plants against the orexin target. To refine the selection, we employed drug-like filters and conducted ADMET analysis on the identified molecules. The results of the drug-like and ADMET analyses guided us in visualizing and analyzing the protein-ligand complexes at the atomic level using docking tools. Ultimately, we selected two compounds as potential hits for further investigation, subjecting them to molecular dynamics simulations. The outcomes of these simulations revealed that these two hits exhibited significant inhibitory activity and displayed excellent ADMET characteristics, positioning them as promising candidates for the development of potent anti-sleep drugs. The molecular dynamics simulations extended for a duration of 50 ns, strengthening the foundation for future research into their anti-sleep properties.

Keywords: Quanabis, ADMET, Drug likeness, Molecular docking, molecular dynamics

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**ULUSLARARASI İŞLETME DERGİSİ 2. PARİS UYGULAMALI BİLİMLER
KONGRESİ**

21-24 Aralık 2023

Paris - FRANSA

Sayı:2023/32

İlgili Makama:

Uluslararası Bilimsel Araştırma ve Strateji Geliştirme Derneği (UBSDER) tarafınfan organize edilen “Uluslararası İşletme Dergisi 2. Paris Uygulamalı Bilimler Kongresi” 21-24 Aralık 2023 tarihinde Paris Fransa’da 9 farklı ülkeden (Türkiye’den 13, yurt dışından 8 farklı ülkeden 14 adet sunum) olmak üzere toplam 27 adet sunum yapılarak, yüz yüze ve çevrimiçi olarak düzenlenmiştir.

Kongremiz, 16 Ocak 2020’de Akademik Teşvik Ödeneği Yönetmeliğine getirilen “Tebliğlerin sunulduğu yurt içinde veya yurt dışındaki etkinliğin uluslararası olarak nitelendirilebilmesi için Türkiye dışından en az 5 farklı ülkeden sözlü tebliğ sunan konuşmacının katılım sağlaması ve tebliğlerin yaridan fazlasının Türkiye dışından katılımcılar tarafından sunulması esastır.” Değişikliğine uygun olarak düzenlenmiştir.

27.12.2023

Dr. Nadire KANTARCIOĞLU

UBSDER Başkanı

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Konu: Kongre Düzenleme Kurulu
Sayı:2023/024

01.09.2023

İLGİLİ KURUMA

İçişleri Bakanlığı tarafından tahsis edilen 06-139-180 tescil kodu ile Tüzel kişiliğe sahip olan Uluslararası Bilimsel Araştırma ve Strateji Geliştirme Derneği, 5253 sayılı kanuna uygun olarak “Bilimsel Araştırmalar ve Akademik Çalışmalar” alanında ulusal ve uluslararası düzeyde faaliyetlerini yürütmektedir.

Kurumumuzun Yönetim Kurulu 03.04.2023 tarihinde saat 14:00’da “Bilimsel Çalışmalarda Strateji Geliştirme” görüşmeleri ile “Bilimsel Kongreler Düzenlenmesi” gündemleri ile toplanmış ve alınan 3 nolu karara istinaden aşağıda detayları yazılı olan bilimsel etkinliğin düzenlenmesine ve etkinliğe ilişkin akademisyenlerin resmi olarak görevlendirilmesine oy birliği ile karar verilmiştir.

Bilgi ve gereğini arz ederim.

Dr. Nadire KANTARCIOĞLU

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Etkinlik Tarihi: 21-24 Aralık 2023

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