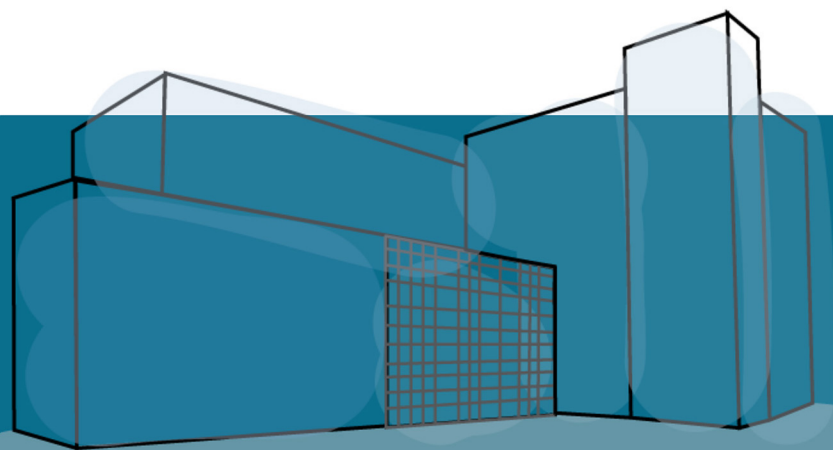




13th

INTERNATIONAL SCIENTIFIC
CONFERENCE
Research and Education in Nursing

Book of Abstracts, June 5th 2025, Maribor, Slovenia

E
D
I
T
O
R
S

Mateja
LORBER

Klavdija
ČUČEK TRIFKOVIČ

Sonja
ŠOSTAR TURK

Gregor
ŠTIGLIC



University of Maribor Press



University of Maribor

Faculty of Health Sciences

International Scientific Conference »Research and Education in Nursing«

Book of Abstracts

June 5th 2025, Maribor, Slovenia

Editors

Mateja Lorber

Klavdija Čuček Trifkovič

Sonja Šostar Turk

Gregor Štiglic

June 2025

Title <i>Naslov</i>	International Scientific Conference »Research and Education in Nursing« <i>Mednarodna znanstvena konferenca »Raziskovanje in izobraževanje v zdravstveni negi«</i>
Subtitle <i>Podnaslov</i>	Book of Abstracts, June 5th 2025, Maribor, Slovenia <i>Zbornik povzetkov, 5. junij 2025, Maribor, Slovenija</i>
Editors <i>Uredniki</i>	Mateja Lorber (University of Maribor, Faculty of Health Sciences) Klavdija Čuček Trifkovič (University of Maribor, Faculty of Health Sciences) Sonja Šostar Turk (University of Maribor, Faculty of Health Sciences) Gregor Štiglic (University of Maribor, Faculty of Health Sciences)
Review <i>Recenzija</i>	Leona Cilar Budler, Jožica Černe Kolarič, Margaret Denny, Suzanne Denieffe, Barbara Donik, Zvonka Fekonja, Sabina Fijan, Lucija Gosak, Barbara Kegl, Petra Klanjšek, Sergej Kmetec, Anton Koželj, Nataša Mlinar Reljič, Dominika Muršec, Kasandra Musović, Urška Rozman, Maja Strauss, Adrijana Svenšek, Dominika Vrbnjak, Cvetka Krel
Technical editor <i>Tehnični urednik</i>	Jan Perša (University of Maribor, University Press)
Cover designer <i>Oblikovanje ovitka</i>	Jan Perša (University of Maribor, University Press)
Conference <i>Konferenca</i>	13 th International Scientific Conference »Research and Education in Nursing«
Location & date <i>Kraj in datum</i>	Maribor, Slovenia, June 5 th 2025
Programme Committee <i>Programski odbor</i>	Mateja Lorber, Klavdija Čuček Trifkovič, Nataša Mlinar Reljič, Sonja Šostar Turk, Gregor Štiglic, Špela Krštinc (all University of Maribor, Faculty of Health Sciences)
Organizing Committee <i>Organizacijski odbor</i>	Klavdija Čuček Trifkovič, Mateja Lorber, Aleksandra Lovrenčič, Ines Mlakar, Sonja Šostar Turk, Gregor Štiglic, Marko Uršič (all University of Maribor, Faculty of Health Sciences)
Published by <i>Založnik</i>	University of Maribor University Press Slomškov trg 15, 2000 Maribor, Slovenia https://press.um.si , zalozba@um.si
Issued by <i>Izdajatelj</i>	University of Maribor Faculty of Health Sciences Žitna ulica 15, 2000 Maribor, Slovenia http://www.fzv.um.si , fzv@um.si

Edition
Izdaja 1st

Published at
Izdano Maribor, Slovenia, June 2025

Publication type
Vrsta publikacije E-book

Dostopno na
Available at <https://press.um.si/index.php/ump/catalog/book/978>



© University of Maribor, University Press
/ Univerza v Mariboru, Univerzitetna založba

Text © Authors & Lorber, Čuček Trifkovič, Šostar Turk, Štiglic, 2025

This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. / *To delo je objavljeno pod licenco Creative Commons Priznanje avtorstva-Nekomercialno-Deljenje pod enakimi pogoji 4.0 Mednarodna.*

This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format for noncommercial purposes only, and only so long as attribution is given to the creator. If you remix, adapt, or build upon the material, you must license the modified material under identical terms. / *Licenca dovoli uporabnikom reproduciranje, distribuiranje, dajanje v najem, javno priobčitev in predelavo avtorskega dela, če navedejo avtorja in širijo avtorsko delo/predelavo naprej pod istimi pogoji. Za nova dela, ki bodo nastala s predelavo, ni dovoljena komercialna uporaba.*

Any third-party material in this book is published under the book's Creative Commons licence unless indicated otherwise in the credit line to the material. If you would like to reuse any thirdparty material not covered by the book's Creative Commons licence, you will need to obtain permission directly from the copyright holder. / *Vsa gradiva tretjih oseb v tej knjigi so objavljena pod licenco Creative Commons, razen če to ni navedeno drugače. Če želite ponovno uporabiti gradivo tretjih oseb, ki ni zajeto v licenci Creative Commons, boste morali pridobiti dovoljenje neposredno od imetnika avtorskih pravic.*

<https://creativecommons.org/licenses/by-nc-sa/4.0>

CIP - Kataložni zapis o publikaciji
Univerzitetna knjižnica Maribor

616-083:377+001.891(082) (0.034.2)

MEDNARODNA znanstvena konferenca »Raziskovanje in izobraževanje v zdravstveni negi«
(13 ; Maribor ; 2025)

International Scientific Conference »Research and Education in Nursing«
[Elektronski vir] : book of abstracts : June 5th 2025, Maribor, Slovenia / editors
Mateja Lorber ... [et al.]. - 1st ed. - E-zbornik. - Maribor : University of Maribor,
University Press, 2025

Način dostopa (URL): <https://press.um.si/index.php/ump/catalog/book/978>

ISBN 978-961-286-997-7 (PDF)

doi: 10.18690/um.fzv.3.2025

COBISS.SI-ID 238034435

ISBN 978-961-286-997-7 (pdf)

DOI <https://doi.org/10.18690/um.fzv.3.2025>

Price
Cena Free copy

For publisher Prof. Dr. Zdravko Kačič
Odgovorna oseba založnika Rector of University of Maribor

Attribution Lorber, M., Čuček Trifkovič, K., Šostar Turk, S., Štiglic, G. (eds.) (2025).
International Scientific Conference »Research and Education in Nursing«: Conference Proceedings, June 5th, 2025, Maribor, Slovenia. Maribor: University Press. doi: 10.18690/um.fzv.3.2025
Citiranje

Table of Contents

Perspectives on Care in a Global Context	
<i>Predgovor</i>	1
Mateja Lorber	
Plenary lectures	5
<i>Plenarna predavanja</i>	
Perspectives on Care in a Global Context	7
Brendan McCormack	
Reflections on the Future of AI-Informed Healthcare	8
Beth A. Virnig	
The Spiritual Imperative in Nursing: Research and Education Perspectives for Innovative Practice	9
Jacqueline Whelan	
Implementing Interprofessional Education: Lessons from a Large-Scale First-Year Workshop	11
Jacqueline G Bloomfield	
Leveraging Large Language Models-Driven NurseBot to Improve Nurse Clinical Skills Competency	13
Vivian Hui, Shaowei Guan, John Law	
The Nurse-Led Shift: Advancing Healthcare Through Artificial Intelligence	15
Maxim (Max) Topaz	
Vključenost diplomantov zdravstvene nege v reanimacijske postopke	16
Anton Koželj, Maja Strauss, Maja Šikić Pogačar, Vita Poštuvan, Matej Strnad	
Triage Nurses' Perspectives on Patient Safety and Caring Behaviour in the Emergency Department: A Mixed-Methods Study	18
Zvonka Fekonja, Majda Pajnkihar, Matej Strnad	
The Impact of Mobile Learning via a Serious Game on Learning Outcomes in Adult Basic Life Support Education	20
Nino Fijačko	
Razvoj prehranskih presejalnih orodij za pediatrične paciente	21
Petra Klanjšek, Nataša Marčun Varda, Petra Povalej Bržan, Majda Pajnkihar	

Abstracts – Session 1 <i>Povzetki – Sekcija 1</i>	23
The Latest Development of Advanced Practice Nurses' role in Hungary Jozsef Betlehem	25
Izobraževalna delavnica za pacienta in družino pred radikalno cistektomijo: podpora samopodobi po adaptacijskem modelu Roy Katarina Grm, Majda Pajnikihar	27
Koncept skrbi v povezavi z zadovoljstvom pri delu in namerami o odhodu med zaposlenimi v zdravstveni negi: protokol za sistematični pregled Maja Gradišnik, Zvonka Fekonja, Dominika Vrbnjak	29
Implementacija teorije Benner v podporo kariernemu razvoju in znižanju namere po odhodu medicinskih sester zaposlenimi na urgenci Daniela Berdnik, Majda Pajnikihar	31
Communication Model for Preventing Violence in Healthcare Peter Kamničar	33
Developing a Scoping Review Protocol on Cancer Prevention and Co-production for Persons with IDD: A Cross European Approach Margaret Denny, Suzanne Denieffe, Colin Barry, Katarzyna Ćwirynkało, Ashna Ephraim, Fabrizio Fea, Spela Golubovic, Oliwia Kowalczyk, Dragana Milutinović, Vladimir Trajkovski, Gabriela Štefková, Laura Widger, Francois Hickey, Eda Sahin, Agnieszka Żyta, Sinead Foran	35
Health of Older Adults in the South Bohemia Region Iva Brabcová	38
Vloga bioelektrične impedančne analize pri celostni obravnavi pacientov s kronično ledvično boleznijo: pregled literature Matic Polc, Cvetka Krel, Lucija Gosak, Sebastjan Bevc	39
Long-Term Effects of Telerehabilitation of Patients with Cardiovascular Diseases: A Narrative Review Matic Jelen, Katarina Kante, Barbara Rodič	41
Traheotomija in k dekanilaciji usmerjena rehabilitacija: pregled literature in izkušnje iz klinične prakse Luka Mužina	43
Abstracts – Session 2 <i>Povzetki – Sekcija 2</i>	45
Izvajanje samooskrbe pri starejših pacientih s srčnim popuščanjem: pregled literature Nataša Kreft, Mateja Lorber	47
Integracija teorije interpersonalnih odnosov v urgenci Jože Rečnik, Sergej Kmetec, Majda Pajnikihar	49

Vpliv fluktuacije na kakovost in varnost v vojaško zdravstveni enoti Zlatko Kvržič, Majda Pajnkihar, Gregor Štiglic	51
Analiza koncepta: Adaptacija Andrej Černi, Sergej Kmetec, Majda Pajnkihar	53
Integrating Patient Voices in Healthcare Education: An Overview of the PULPIT Project Adrijana Svenšek, Lucija Gosak, Matilde Leal, Pedro Morgado, Catarina Lima, Barbara Kegl, Mateja Lorber, Ricardo, J. O. Ferreira	55
Nursing Education on Nutrition in Patients With Cardiovascular Disease Lenka Šedová, Sylva Bártlová, Lucie Havierníková, Věra Stasková, Andrea Hudáčková	57
Teaching Diversity Competences to Health Sciences Studies Students in Croatia and Slovenia: A Comparative Study Robert Doričić, Mirko Prosen, Ivana Tutić Grokša	59
Triage and the Impact of Pre-Hospital Medical Teams on Transport Decisions in the Pristina Region Kaltrina Azizi Sadiku, Adelina Lahu, Qendresa Sadrija	61
Abstracts – Session 3 <i>Povzetki – Sekcija 3</i>	63
Effectiveness of AI Chatbots in Improving Sleep Quality Marijana Gajić, Lucija Gosak, Gregor Štiglic	65
Prevention of Obesity, Sarcopenia and Sarcopenic Obesity in Retirement: Use of Mobile Application to Stimulate Healthy Lifestyle Behaviour Helena Michálková, Eva Topinková	67
Teaching Hand Hygiene and Cleaning Hospital Surfaces Using Virtual Reality Dominika Muršec, Adrijana Svenšek, Urška Rozman, Sabina Ratajc, Nataša Vogrin, Pamela Križan, Miha Lavrič, Sonja Šostar Turk	69
Co-Creating Quality in Person-centred Digital Counseling: A Practice Development Study Theresa Clement, Katharina Gabl, Hanna Mayer	71
Learning from Experience: A Qualitative Overview of Best Practices in Patient and Public Involvement in Interprofessional Education Adrijana Svenšek, Lucija Gosak, Matilde Leal, Pedro Morgado, Catarina Lima, Barbara Kegl, Mateja Lorber, Ricardo, J. O. Ferreira	73
Next-Generation Biomonitoring of Drava/Drau for Sustainable and Healthy Regional Development (ZDrauA) Miha Lavrič, Urška Rozman, Mateja Lorber, Sonja Šostar Turk, Boštjan Križanec, David Stanković, Astrid H. Paulitsch-Fuchs, Vid Švara	75

Effects of Plant-Based Air Purification on Indoor Air Quality and Human Health: A Scoping Review	77
Neşe Odabaş, Ayfer Tezel, Sonja Šostar Turk, Kasandra Musović, Miha Lavrič	
Impact of Climate Change of Gut Microbiome of Human	79
Benjamin Habinc	
Predstavitev projekta: »Krepitev globalnega zdravja preko na naravi temelječe rešitve zdravih gozdov«	81
Urška Rozman, Miha Lavrič, Dominika Muršec, Arnela Kuzma, Boštjan Križanec, Sonja Šostar Turk	
Abstracts – Session 4	83
<i>Povzetki – Sekcija 4</i>	
The Influence of Nurse-Facilitated Preoperative Therapeutic Play on Anxiety and Fear in School-Age Children: A Literature Review	85
Afërdita Lahu, Dominika Vrbnjak	
Psychosocial Needs of Oncology Patients: A Pilot Study on Methodological Feasibility Using Grounded Theory	87
Tihana Gašper, Gregor Štiglic, Dominika Vrbnjak	
Between Care and Burnout: the Perception of Personal Assistants and Parents on Caring for a Person with Cerebral Palsy	89
Leona Cilar Budler, Vanesa Kovač, Gašper Zigmund	
Probiotics as Support for Migraine: A Literature Review on the Impact on Occurrence and Pain Intensity	91
Sabina Fijan, Ana Peserl, Kasandra Musović	
The Utilisation of Psychobiotics and Nutritionally Balanced Diets to Promote Mental Wellness: Narrative Literature Review	93
Lana Friš, Tiana Čeh	
Interprofessional Collaboration in Pharmaceutical Care: A Path to Enhanced Safety and Treatment Efficiency	95
Marko Petrović, Mirko Prosen	
Psychosocial Support Provided by a Nurse to the Family of a Child With Autism Spectrum Disorder: A Literature Review	97
Maja Klemenc, Petra Klanjšek, Nataša Mlinar Reljić	
A Qualitative Literature Review of the Role of Autonomy and Motivation in Buurtzorg's Human-Centred Care	99
David Tramšek, Veronika Stepanova	
Nekoč tabu, danes terapija: Psihedelične droge v skrbi za duševno zdravje	101
Tamara Trajbarič	

Preface

ASSOC PROF MATEJA LORBER, PHD
University of Maribor, Faculty of Health Sciences, Dean

Dear participants, esteemed lecturers!

This year's traditional international conference brings together higher education teachers, researchers, healthcare professionals, and students in the fields of nursing, healthcare, and public health – both from Slovenia and abroad.

The aim of the conference is to promote the exchange of knowledge, research evidence, and best practices, and to connect researchers, academic staff, and healthcare professionals in order to strengthen professional collaboration and networking. At the same time, we hope this event contributes to the advancement and promotion of nursing and health sciences on both a local and global scale. The conference thus represents an important intersection of scientific reflection, pedagogical development, and clinical practice, which is crucial for the future of modern, person-centred healthcare.

We are honoured to host this year's keynote lectures by distinguished professors and researchers, who will share their extensive professional experience and modern approaches that integrate technology, education, clinical practice, and the spiritual dimension of nursing and health sciences. Topics will include the importance of humanity in person-centred care, the impact of artificial intelligence on clinical judgment and

healthcare practice, the development of digital solutions to support clinical skills, the importance of interprofessional collaboration in the education of healthcare workers, and the role of spirituality as a foundation for innovative and holistic patient care. This will be followed by lectures from invited domestic speakers, who will present, among other things, aspects of patient safety in the triage process, the experiences of healthcare workers in performing basic and advanced resuscitation procedures, the use of screening tools for early detection of malnutrition in children, and the impact of mobile learning on the implementation of basic resuscitation procedures.

Parallel professional sessions within individual sections will offer insights into the latest research and projects, whose findings significantly contribute to the development and quality of clinical practice. The conference is also an opportunity to establish new collaborations, strengthen existing ties, and shape shared visions for the future of nursing. Sincere thanks to all who, with your knowledge, professional dedication, and presence, help co-create this important event. We believe that you have found content in the program that enriches your knowledge, broadens your horizons, strengthens your professional identity, and will inspire new research and educational initiatives, while reinforcing the awareness of the key role of education and research as the foundations of high-quality, safe, and sustainable healthcare. We look forward to continued successful collaboration in the educational and scientific-research fields, which remain essential for the future of quality nursing care.

Predgovor

IZR. PROF. DR. MATEJA LORBER

[Univerza v Mariboru, Fakulteta za zdravstvene vede, dekanica](#)

Spoštovane udeleženke in udeleženci, cenjeni predavatelji!

Letošnja tradicionalna mednarodna konferenca združuje visokošolske učitelje, raziskovalce, zdravstvene delavce in študente s področja zdravstvene nege, zdravstva in javnega zdravja – tako iz Slovenije kot iz tujine.

Namen konference je spodbujati izmenjavo znanj, raziskovalnih dokazov in dobrih praks ter povezovati raziskovalce, visokošolske učitelje in zdravstvene delavce z namenom krepitve strokovnega sodelovanja in mreženja. Hkrati želimo z dogodkom prispevati k napredku in promociji zdravstvene nege ter zdravstvenih ved na lokalni in globalni ravni. Konferenca tako predstavlja pomembno stičišče znanstvene refleksije, pedagoškega razvoja in klinične prakse, kar je ključno za prihodnost sodobne in na človeka osredinjene zdravstvene oskrbe.

V veliko čast nam je, da bomo letos gostili vabljenaa predavanja uglednih profesorjev in raziskovalcev, ki bodo z nami delili bogate strokovne izkušnje ter sodobne pristope, ki povezujejo tehnologijo, izobraževanje, klinično prakso in duhovno komponento zdravstvene nege in zdravstvenih ved. Predstavljene bodo teme, ki zadevajo pomen človečnosti v na osebo osredinjeni oskrbi, vpliv umetne inteligence na klinično presojo in zdravstveno prakso, razvoj digitalnih rešitev za podporo kliničnim veščinam, pomen medpoklicnega sodelovanja v izobraževanju zdravstvenih delavcev ter vlogo duhovne razsežnosti kot temelja inovativne in celostne obravnave pacientov. Sledila bodo predavanja domačih vabljenih predavateljev, ki bodo med drugim predstavili vidike varnosti pacientov v procesu triaže, doživljanje zdravstvenih delavcev pri izvajanju temeljnih in dodatnih postopkov oživljanja, uporabo presejalnih orodij za zgodnje prepoznavanje podhranjenosti pri otrocih ter vpliv mobilnega učenja na izvajanje temeljnih postopkov oživljanja.

Vzporedna strokovna predavanja v okviru posameznih sekcij bodo ponudila vpogled v najnovejše raziskave in projekte, katerih izsledki pomembno prispevajo k razvoju in kakovosti klinične prakse. Konferenca je tudi priložnost za vzpostavljanje novih sodelovanj, utrjevanje obstoječih vezi in oblikovanje skupnih vizij za prihodnost zdravstvene nege. Iskrena hvala vsem, ki s svojim znanjem, strokovno zavzetostjo in prisotnostjo soustvarjate ta pomemben dogodek. Verjamemo, da ste v programu prepoznali vsebino, ki bogati vaše znanje, širi obzorja, krepi vašo strokovno identiteto in vas bo spodbudila k novim raziskovalnim in pedagoškim pobudam ter utrdila zavedanje o ključni vlogi izobraževanja in raziskovanja kot temeljev kakovostne, varne in trajnostne zdravstvene oskrbe. Veselimo se nadaljnjega uspešnega sodelovanja na izobraževalnem in znanstvenoraziskovalnem področju, ki ostajata ključna za prihodnost kakovostne zdravstvene nege.

Plenary lectures

Plenarna predavanja

Perspectives on Care in a Global Context

BRENDAN MCCORMACK

‘Personhood’ as an important consideration in (person-centred) care, and at the core of personhood is the authentic self. ‘Authenticity’ is that which holds a person’s beliefs, values, hopes, dreams and desires, and these are central considerations in how we provide care to another person. Through our discussions, reflections, debates, arguments, and agreements, our knowing of the person is shaped and reshaped, ordered and reordered, prioritized and reprioritized as life progresses. It is in this nexus of relationships between persons that we need to consider how the dynamic of (person-centred) care plays out. However, in the current post-humanist period, where non-human care interventions are increasingly privileged (AI, Digital, Apps etc) the threat to personhood and authenticity are very real. In this presentation I consider these issues and challenge us as nurses to rethink how we view our role as carers and what that means for models of care globally.

Keywords: personhood, authenticity, person-centred care, post-humanism

About the author

Professor **Brendan McCormack** D.Phil (Oxon.), BSc (Hons.), FRCN, FEANS, FRCSI, PGCEA, RMN, RGN, FAAN, MAE
University of Sydney, Faculty of Medicine and Health, The Susan Wakil School of Nursing and Midwifery, Sydney, Australia
brendan.mccormack@sydney.edu.au

Reflections on the Future of AI-Informed Healthcare

BETH A. VIRNIG

Introduction: Artificial intelligence (AI) is increasingly being used in clinical settings to facilitate consistent patient assessment, diagnosis, and treatment. How can the benefits of AI be balanced against the limitations? This abstract explores the role of AI in clinical scenarios, highlighting its potential to improve quality and consistency of care.

Methods: Through a series of examples, we will examine scenarios where AI improves the quality and consistency of care. We will explore how AI can facilitate machine reading and image analysis, enabling clinicians to make more accurate diagnoses.

Results: Complex algorithms, such as comparing images over time, benefit from machine reading and AI-based algorithms. However, complex patient scenarios and diagnostic uncertainty are not as well-suited for AI reliance. This highlights the importance of human clinical judgment in high-stakes decision-making.

Discussion and Conclusion: AI can never replace clinical interactions but can provide important support for specific, predictable clinical scenarios that may be prone to human error. By acknowledging the limitations of AI, clinicians can harness its potential to enhance patient care while maintaining the human touch. Future research should focus on developing AI systems that complement clinical expertise, rather than replacing it.

Keywords: artificial intelligence, clinical, diagnosis, treatment, healthcare

About the author

Beth A. Virnig, PhD, MPH
University of Florida, College of Public Health and Health Professions, Gainesville, Florida, United States of America
bvirnig@ufl.edu

The Spiritual Imperative in Nursing: Research and Education Perspectives for Innovative Practice

JACQUELINE WHELAN

Introduction: Spirituality is a distinct science within the healthcare professional landscape. The last decade has seen an exponential increase in spiritual research; however, a lack of consensus persists in reconciling education and practice dimensions to benefit patients. Substantial deficiencies remain in nurses' awareness, knowledge, comprehension, and competence to support spiritual care provision in practice.

Methods: This integrative review examines transformative educational advancements and innovative practices at the intersection of spirituality and nursing, grounded in a curated selection of influential research and scholarly literature.

Results: Ten key themes were identified; self-awareness, theoretical and conceptual approaches, spiritual needs, spiritual assessment, competency, self and organisational care, reflection, interprofessional team communication, mentoring, finding joy in the workplace to enable healthcare professionals' well-being to flourish.

Discussion and Conclusion: Theoretical approaches to spiritual care education in nursing is rooted in person-centered care and multiple ways of knowing. Courses should be offered at undergraduate and postgraduate levels to enhance awareness of spiritual needs and resources and integrate spiritual care into everyday practice. The establishment of a spiritual care education standard and consensus on spiritual care core competencies across Europe provides a crucial framework to facilitate the integration of spiritual care competencies into nursing education curricula and practice. Additional research is imperative for increasing consensus, refining educational programmes and translating evidence-based insights into effective spiritual care practices.

Keywords: spirituality, spiritual care, education, practice, nursing, strategies

About the author

Jacqueline Whelan, Academic Associate in Logotherapy, MSc Nursing (University of Manchester), MA (TCD), BNS (Hons.) (UCD), RNT, RCN, RGN
Trinity College Dublin, Faculty of Health Sciences, School of Nursing and Midwifery, Dublin, Ireland
whelanj1@tcd.ie

Implementing Interprofessional Education: Lessons from a Large-Scale First-Year Workshop

JACQUELINE G BLOOMFIELD

The importance of interprofessional education in healthcare curricula is widely recognised, with the World Health Organization defining IPE as occurring “when two or more professionals learn *about*, *from*, and *with* each other to enable effective collaboration and improve health outcomes.” Despite this recognition, the integration of authentic interprofessional learning experiences into health profession education remains a persistent challenge. Numerous barriers, such as timetabling conflicts, limited teaching spaces, geographic separation of disciplines, inconsistent educator preparedness, varying assessment requirements, lack of organisational support, and variable faculty attitudes, continue to impede the widespread adoption of IPE. These challenges have led many to view meaningful implementation as unachievable.

This presentation outlines the design and delivery of a large-scale, introductory IPE workshop, successfully delivered to over 2,800 first-year health students at the University of Sydney, Australia. The initiative demonstrates that strategic planning, interprofessional collaboration, and innovation can overcome traditional obstacles to IPE integration. Key enablers included the development of constructively aligned, authentic learning activities, and the early engagement of students, facilitators, and faculty champions. It also explores the adaptations necessitated by the COVID-19 pandemic, offering insights into the transition to an online delivery format. This now allows participation by students located in rural and regional areas. It concludes with a discussion of future directions and ongoing challenges in embedding sustainable, large-scale interprofessional learning within health education curricula.

Keywords: interprofessional education, health students, collaboration, teamwork, curricula, workshop

About the author

Professor of Nursing Education, **Jacqueline G Bloomfield**, PhD, MN, GradDip (Health Profession Education), GradDip (Midwifery), GradDip (Onc), BN, RN, SFHEA.

The University of Sydney Susan Wakil School of Nursing and Midwifery, Sydney, Australia

jacqueline.bloomfield@sydney.edu.au

Leveraging Large Language Models-Driven NurseBot to Improve Nurse Clinical Skills Competency

VIVIAN HUI, SHAOWEI GUAN, JOHN LAW

Introduction: Hospital clinical guidelines are essential for ensuring frontline nurses perform clinical procedures competently. However, traditional guidelines are often inaccessible, and the process of retrieving them is time-consuming and labour-intensive, resulting in delayed responses and reduced adherence. While LLM-driven chatbots have demonstrated effectiveness in various healthcare contexts, their role in supporting clinical nurses' procedural competency remains underexplored. Given the complexity of clinical procedures and the need for prompt information retrieval, this study explores the potential of AI chatbots in optimizing nursing clinical skills performance.

Methods: A mixed-methods approach was employed. We developed two LLM-driven chatbots, (1) Retrieval augmented generation (RAG) and (2) GraphRAG technique. We compared their performance of Assistant API, ChatGPT, and Qwen by evaluating their responses to 100+ clinical questions across nine nursing domains. The accuracy, relevance and completeness of the responses were evaluated using a 5-point Likert scale. A qualitative study was conducted through individual interviews with 12 nurses. Thematic analysis was performed using NVivo, and Cohen's Kappa was calculated.

Results: The Assistant API outperformed both ChatGPT and Qwen, achieving a mean accuracy score of 4.21/5 (95% CI 4.02-4.47, $P < .001$). The performance from RAG chatbot outperformed GraphRAG chatbot ($P < 0.001$). Qualitative insights highlighted NurseBot's potential to reduce staff workload, enhance clinical competency, and deliver evidence-based responses.

Discussion and conclusion: This study shed light on the potential of LLMs with RAG technique in clinical competency, offering scalable and continuous support. Further refinement and research will enhance NurseBot's ability to optimize clinical outcomes, and advance LLM-driven innovations in healthcare delivery.

Keywords: Generative AI, nursing informatics, clinical skills, competency, artificial intelligence, chatbot

About the authors

Vivian Hui, RN, BSN, PhD

Centre for Smart Health, School of Nursing, The Hong Kong Polytechnic University, Hong Kong, Kitajska
University of Pittsburgh, School of Nursing, Health and Community Systems, Pennsylvania, United States of America
vivianc.hui@polyu.edu.hk

Shaowei Guan

Centre for Smart Health, School of Nursing, The Hong Kong Polytechnic University, Hong Kong, Kitajska

John Law

Centre for Smart Health, School of Nursing, The Hong Kong Polytechnic University, Hong Kong, Kitajska

The Nurse-Led Shift: Advancing Healthcare Through Artificial Intelligence

MAXIM (MAX) TOPAZ

Artificial intelligence (AI) is reshaping the healthcare landscape, with nursing standing at a pivotal crossroads. This talk explores the rapid shift from long-term academic development cycles to accelerated industry-driven AI deployments. Drawing on over a decade of empirical research - including large-scale clinical studies like PREVENT, HOMECARE-CONCERN, and innovations in speech recognition - we examine how AI is already transforming nursing workflows, decision-making, and patient outcomes. However, a concerning gap persists: nurses are frequently absent from critical design and implementation conversations. This disconnect risks under-documentation, bias, and misalignment with core nursing values. The presentation outlines a roadmap for nursing leadership in AI - through standardized data, governance frameworks, and meaningful engagement in development. Attendees will also see demonstrations of cutting-edge AI tools currently used in clinical and research settings, offering practical insight into how nursing expertise can evaluate and guide these technologies. Now is the time for nurses to adapt to AI and lead its integration, ensuring it advances care, equity, and safety.

Keywords: artificial intelligence in nursing, nursing leadership, healthcare innovation, AI implementation, ethical and equitable care

About the author

Maxim (Max) Topaz PhD, RN, MA, FAAN, FACMI, FIAHSI Elizabeth Standish Gill Associate Professor of Nursing
Columbia University, Columbia University Medical Center, New York, New York, United States of America
Columbia University, Columbia University Data Science Institute, New York, New York, United States of America
mt3315@cumc.columbia.edu

Vključenost diplomantov zdravstvene nege v reanimacijske postopke

ANTON KOŽELJ, MAJA STRAUSS, MAJA ŠIKIĆ POGAČAR, VITA POŠTUVAN, MATEJ STRNAD

Uvod: Reanimacijski postopki spadajo med ene izmed najbolj stresnih intervencij v urgentni medicini. Osebe, ki pri teh postopkih sodelujejo, so zaradi omenjenega izpostavljeni določenim stresorjem, ki bolj ali manj učinkujejo nanje. Namen raziskave je bil ugotoviti vrste in nivo stresorjev, ki jih doživljajo diplomanti zdravstvene nege ob in po sodelovanju v reanimacijskih postopkih.

Metode: Izvedli smo presečno študijo z uporabo kvantitativne metodologije raziskovanja. V raziskavi smo anketirali 457 diplomantov zdravstvene nege, ki delujejo na urgentnem področju v zdravstvu oz. se pri svojem delu srečujejo z oživljanjem. Uporabili smo anketni vprašalnik Post-Code Stres Scale, ki je bil namensko razvit za proučevanje doživljanja stresa.

Rezultati: Kot eno izmed najbolj stresnih situacij so anketirani izpostavili oživljanje otrok oz. mlajših oseb (PV = 3,7; SO = 1,4), ko jim ne uspe vzpostaviti intravenske poti (PV = 3,5; SO = 1,4), ko je med reanimacijo prisotna kaotična situacija (PV = 3,4; SO = 1,4) in ko je treba sprejeti odločitve glede prekinitve reanimacijskih postopkov (PV = 3,1; SO = 1,5). Analiza intervjujev je pokazala doživljanje večjega števila stresorjev, ki bolj ali manj učinkujejo na izvajalce reanimacijskih postopkov.

Diskusija in zaključek: Raziskava je pokazala, da so medicinske sestre med in po postopkih oživljanja izpostavljene določeni meri stresa, vendar večini uspe stres učinkovito kompenzirati. Pri navedenih intervencijah pa smo ugotovili prisotnost negativnega kot pozitivnega stresa.

Ključne besede: emergency nurses, emergency medicine, resuscitation, experience, stress; emotions

O avtorjih

Viš. predav. dr. **Anton Koželj**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenia
anton.kozelj@um.si

Viš. predav. dr. **Maja Strauss**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenia
maja.strauss@um.si

Maja Šikić Pogačar

Univerza v Mariboru, Medicinska fakulteta, Maribor, Slovenia
Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenia
maja.sikic@um.si

Red. prof. dr. **Vita Poštuvan**

Univerza na Primorskem, Fakulteta za matematiko, naravoslovje in informacijske tehnologije, Oddelek za psihologijo, Koper, Slovenija
vita.postuvan@upr.si

Izred. prof. dr. **Matej Strnad**

Univerza v Mariboru, Medicinska fakulteta, Maribor, Slovenija
Zdravstveni dom Maribor, Center za nujno medicinsko pomoč in reševalne prevoze, Maribor, Slovenija
Univerzitetni klinični center Maribor, Urgentni center Maribor, Maribor, Slovenija
matej.strnad@um.si

Triage Nurses' Perspectives on Patient Safety and Caring Behaviour in the Emergency Department: A Mixed-Methods Study

ZVONKA FEKONJA, MAJDA PAJNKIHAR, MATEJ STRNAD

Introduction: Triage in emergency departments is a fast-paced and complex process where healthcare professionals assess patients' conditions and assign urgency levels. Throughout this process, the focus remains on both caring behaviours and ensuring patient safety. This study examined the relationship between safety culture and caring practices during triage and how these factors relate to implementing the triage process.

Methods: A sequential explanatory mixed-methods design was applied in 11 Slovenian emergency departments between May 2020 and July 2022. The quantitative phase involved surveys analysed using descriptive and inferential statistics. In the qualitative phase, semi-structured interviews were conducted and analysed using grounded theory. Integration of findings from both phases was achieved through the pillar integration process.

Results: The study identified seven core themes: (1) *Competence and knowledge*, (2) *Working conditions and environment*, (3) *Team dynamics and collaboration*, (4) *Patient care*, (5) *Triage process and triage system*, (6) *Character of triage health workers*, and (7) *Synergy of care and safety*.

Discussion and Conclusion: Findings emphasise the need to strengthen the safety culture within triage. The perceptions of triage professionals indicate that caring behaviour is deeply linked with patient safety and that these two aspects must be seen as interconnected components of effective triage practice.

Keywords: triage, emergency care, patient safety, caring, mixed-methods research

About the authors

Zvonka Fekonja

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
zvonka.fekonja@um.si

Majda Pajnikhar

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
majda.pajnikhar@um.si

Prof Dr **Gregor Štiglic**, PhD

University Medical Centre Maribor, Emergency Department, Maribor, Slovenia
University of Maribor, Faculty of Medicine, Maribor, Slovenia
Community Healthcare Center Maribor, Department for Emergency Medicine, Prehospital Unit, Maribor, Slovenia
gregor.stiglic@um.si

The Impact of Mobile Learning via a Serious Game on Learning Outcomes in Adult Basic Life Support Education

NINO FIJAČKO

Introduction: Out-of-hospital cardiac arrest affects millions of people worldwide, yet the rate of adult basic life support (BLS) performed by laypersons remains low. The European Resuscitation Council recommends the use of advanced technologies, such as mobile learning, to improve layperson knowledge and skills in BLS.

Methods: Using a mixed-methods design, we conducted a randomized wait-list controlled trial on a sample of 43 nursing students. Validated instruments were used to measure cognitive, behavioral, and motivational learning outcomes, as well as stress levels. Data were analyzed using t-tests, the Mann-Whitney U test, and content analysis.

Results: Two weeks of mobile learning using the serious game had a statistically significant impact on cognitive learning outcomes ($t(41) = 1.717, p = 0.047$), but showed no significant effect on behavioral ($p = 0.448$) or motivational ($p = 0.394$) learning outcomes, nor on stress levels ($U = 227.5; p = 0.465$).

Discussion and Conclusion: Mobile learning through a serious game appears to be a potentially effective tool for supporting adult BLS education for laypersons. The findings support its integration into traditional training courses and its use at home to refresh and maintain BLS knowledge.

Keywords: mobile learning, serious game, basic life support, learning outcomes, stress, nursing

About the author

Nino Fijačko

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
nino.fjacko@um.si

Razvoj prehranskih presejalnih orodij za pediatrične paciente

PETRA KLANJŠEK, NATAŠA MARČUN VARDA, PETRA POVALEJ BRŽAN,
MAJDA PAJNKIHAR

Uvod: Neprepoznana podhranjenost pri pediatričnih pacientih lahko privede do kronične podhranjenosti in negativnih kliničnih izidov. Za pravočasno odkrivanje in preprečevanje posledic podhranjenosti je priporočljivo ob sprejemu v bolnišnico presejati tveganje za podhranjenost z uporabo orodij, prilagojenih tej populaciji. Namen raziskave je bil razviti učinkovito prehransko presejalno orodje za ugotavljanje tveganja podhranjenosti pri pediatričnih pacientih.

Metode: Izvedli smo presečno opazovalno raziskavo z zaporednim eksplorativnim načrtom mešanih metod. V kvalitativnem delu smo razvili obrazec, ki smo ga uporabili v kvantitativnem delu. Vzorčenje je bilo zaporedno. Kvalitativni podatki so bili pridobljeni s pregledom literature in vsebinsko analizo, kvantitativni pa z uporabo razvitega obrazca pri pediatričnih pacientih in njihovih starših, oceno prehranskega tveganja in antropometričnih meritvah. Analiza je vključevala deskriptivno in inferenčno statistiko ter metode podatkovnega rudarjenja.

Rezultati: Iz 277 kazalnikov smo v razvoj presejalnega orodja vključili 30, ki so značilno povezani s tveganjem za podhranjenost. Razvili smo nezahtevno, enostavno in uporabno presejalno orodje, ki omogoča hitro izvedbo presejanja in vključuje le štiri spremenljivke. Razvito orodje je pokazalo visoko stopnjo učinkovitosti in natančnosti pri napovedovanju tveganja za podhranjenost pri pediatričnih pacientih: $Se = 93,3 \%$, $Sp = 91,3 \%$, $PPV = 87,5 \%$, $NPV = 95,5 \%$, $AUC = 0,977 (0,922, 1)$, $\kappa = 0,837 (0,659, 1,014)$.

Diskusija in zaključek: Razvito presejalno orodje je veljavno z visoko napovedno vrednostjo ugotavljanja tveganja za podhranjenost. Priporočamo testiranje orodja v drugih pediatričnih zdravstvenih institucijah. To bi omogočilo njegovo modifikacijo, dopolnitev in prilagoditev za uporabo v različnih kliničnih okoljih, s ciljem izboljšanja celovite zdravstvene obravnave otrok in mladostnikov.

Ključne besede: tveganje za podhranjenost, nedohranjenost, prehransko stanje, otrok, mladostnik

O avtorjih

predav. dr. **Petra Klanjšek**, dipl. med. sestra
Univerza v Maribour, Fakulteta za zdravstvene vede, Maribor, Slovenija
petra.klanjssek@um.si

red. prof. dr. **Nataša Marčun Varda**, dr. med., svétnica, specialistka pediatrije
Univerza v Maribour, Medicinska fakulteta, Maribor, Slovenija
natasa.mvarda@ukc-mb.si

doc. dr. **Petra Povalej Bržan**, prof. rač. z mat.
Univerza v Maribour, Medicinska fakulteta, Maribor, Slovenija
petra.povalej@um.si

prof. dr (Združeno kraljestvo Velike Britanije in Severne Irske) **Majda Pajnkihar**, univ. dipl., FEAN
Univerza v Maribour, Fakulteta za zdravstvene vede, Maribor, Slovenija
majda.pajnkihar@um.si

Abstracts – Session 1

Izvečki – Sekcija 1

The Latest Development of Advanced Practice Nurses' role in Hungary

JOZSEF BETLEHEM

Introduction: Hungary has started with a new model of training nurses at master's level in 2017. This concept of advanced practice nursing was adapted to the latest challenges of the Hungarian health care system.

Aim: The aim is to present an overview of the development of advanced practice nurse (APN) master's program in Hungary and to describe the measurements needed of integrating them into the Hungarian health care system.

Methods: Universities running APN program and National Directorate General for Hospitals were asked to provide data about novice nurses enrolled for MSc programme and employed in the health care system from 2019. Descriptive statistics were used for analyses.

Results: An extended role for MSc nurses is well known in many OECD countries. In Hungary in the first wave 155 students were enrolled in four universities. In the forthcoming years the enrolment was hectic between 60-200. Currently (2025) 424 APNs graduated from the program. Out of which 385 are working the Hungarian health care system. The distribution of APNs working in the system according to their specializations is the following: anaesthesiology nurse 12; intensive therapy nurse 40; geriatric nurse 25; primary health care nurse 110; perioperative nurse 14; emergency nurse 184. A very strong financial supportive system has been introduced: a new scholarship has been established for students between 320.000-640.000 HUF (1000-2100 Euro) pro semester. Hospitals and other health care institutions could apply for fee to substitute nurses who are studying for APN MSc. A new mentor programme has been initiated for MD's and other health care professional who take care for novice students. The field of emergency care has welcomed the APNs immediately in emergency rooms but the on-call duty services run by the National Ambulance Service provide a good opportunity for them to work. The most advanced negotiations regarding APN's competencies are present in the field of

community nursing. Addressing the employability challenges a new working regulation should come into force this summer. The most challenging part is the non-medical prescribing of their work. It still needs more consensus with medical doctors and authorities.

Conclusion: The education of new APNs has a good call among nurses, although only less and less nurses with BSc are applying for MSc studies. A new working regulation can increase nurses' willingness to take APN roles in the Hungarian health care system.

Keywords: Advanced Practice Nursing (APN) in Hungary, nurse education and training, integration of APNs into healthcare systems, health workforce development, non-medical prescribing challenge

About the author

Prof. dr. **Jozsef Betlehem**

University of Pecs Faculty of Health Sciences, Director of Institute, Pecs, Hungary
betlehem@etk.pte.hu

Izobraževalna delavnica za pacienta in družino pred radikalno cistektomijo: podpora samopodobi po adaptacijskem modelu Roy

KATARINA GRM, MAJDA PAJNKIHAR

Uvod: Radikalna cistektomija kot standardno kirurško zdravljenje mišično invazivnega raka mehurja pomembno vpliva na telesno samopodobo pacienta, psihosocialno delovanje in kakovost življenja pacientov. Spremembe po operaciji zadevajo tudi najbližje družinske člane, zato je ključna njihova pravočasna priprava na pričakovane spremembe. Namen prispevka je predstaviti predlog implementacije izobraževalne delavnice za paciente in njihove družine, ki bi izboljšala prilagajanje na spremenjeno samopodobo po operaciji.

Metode: Na podlagi pregleda znanstvene literature in Royevega adaptacijskega modela je bila oblikovana predlagana izobraževalna delavnica predvidena za izvedbo na enem izmed oddelkov javnozdravstvenega zavoda v Sloveniji, kjer se izvaja operacija radikalna cistektomija. Delavnica bo temeljila na samopodobi kot prilagoditvenem načinu znotraj adaptacijskega modela Roy in vključuje 11 indikatorjev adaptacije. Za ciljno skupino so predvideni pacienti, napoteni na radikalno cistektomijo v letu 2026, in njihovi družinski člani.

Rezultati: Predvideni rezultati in izidi izvedene izobraževalne delavnice vključujejo večjo pripravljenosti na spremenjeno samopodobo do katere pride po radikalni cistektomiji in posledično k boljši in hitrejši adaptaciji na spremenjeno samopodobo pacientov in njihovih družin po radikalni cistektomiji. Evalvacijo bomo predvideno izvedli z uporabo vprašalnika Appearance Orientation Scale in ankete zadovoljstva.

Diskusija in zaključek: Predlagana izobraževalna delavnica bi omogočala celostno pripravo pacientov in njihovih družin na posledice operacije ter prispevala k izboljšanju kakovosti in varnosti oskrbe. Hkrati bi omogočila oblikovanje socialne mreže med

udeleženci, kar omogoča izmenjavo izkušenj in nudi dodatno čustveno podporo po radikalni cistektomiji.

Ključne besede: operacija, urostoma, pogled na sebe, klinično okolje, edukacija

O avtorjih

Katarina Grm

Univerzitetni klinični center Maribor, Maribor, Slovenija

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija

katarina.grm@student.um.si

Majda Pajnikihar

Univerzitetni klinični center Maribor, Maribor, Slovenija

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija

majda.pajnikihar@um.si

Koncept skrbi v povezavi z zadovoljstvom pri delu in namerami o odhodu med zaposlenimi v zdravstveni negi: protokol za sistematični pregled

MAJA GRADIŠNIK, ZVONKA FEKONJA, DOMINIKA VRBNJAK

Uvod: Pomanjkanje medicinskih sester vpliva na kakovost oskrbe, zlasti v urgentnih centrih, kjer so zaposleni izpostavljeni visokemu stresu in izgorevanju. Skrbni odnosi so ključni pri zadržanju kadra, vendar njihova povezava z zadovoljstvom pri delu in namerami o odhodu ostaja premalo raziskana. Namen protokola je opredeliti metodološki okvir za sistematični pregled o povezavi med konceptom skrbi, zadovoljstvom pri delu in namerami o odhodu med zaposlenimi v zdravstveni negi.

Metode: Protokol temelji na osem stopenjskem modelu za sistematični pregled raziskav mešanih metod. Vključene bodo kvantitativne, kvalitativne in raziskave mešanih metod, identificirane v bazah CINAHL Ultimate (EBSCOHost), PubMed, ScienceDirect in Web of Science. Kakovost raziskav bomo ocenili z JBI kontrolnimi seznammi. Za sintezo podatkov bo uporabljena tematska analiza.

Rezultati: Predvidena sinteza bo osvetlila povezavo med konceptom skrbi, zadovoljstvom pri delu in namerami o odhodu zaposlenih v zdravstveni negi. Izsledki bodo prispevali k boljšemu razumevanju vpliva skrbnih odnosov na delovno okolje in zadržanje kadra.

Diskusija in zaključek: Rezultati bodo podlaga za razvoj strategij za izboljšanje zadovoljstva pri delu in zmanjšanje fluktuacije kadra na osnovi koncepta skrbi, kar bo prispevalo k varnejši in kakovostnejši oskrbi v urgentnih centrih.

Ključne besede: zadovoljstvo; fluktuacija; medicinske sestre; raziskave mešanih metod

O avtorjih

Maja Gradišnik mag. zdr. nege

Univerzitetni klinični center Maribor, Maribor, Slovenija

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija

maja.gradisnik@student.um.si

Doc. dr. **Zvonka Fekonja**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija

zvonka.fekonja@um.si

Izr. prof. dr. **Dominika Vrbnjak**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija

dominika.vrbnjak@um.si

Implementacija teorije Benner v podporo kariernemu razvoju in znižanju namere po odhodu medicinskih sester zaposlenimi na urgenci

DANIELA BERDNIK, MAJDA PAJNKIHAR

Uvod: Izkušene medicinske sestre imajo ključno vlogo pri zagotavljanju kakovostne in varne oskrbe pacientov. Kljub temu se soočajo z visoko delovno obremenitvijo, pomanjkanjem priznanja in omejenimi možnostmi kariernega razvoja, kar povečuje njihovo namero po odhodu. Namen prispevka je predstaviti idejno zasnovo za prepoznavanje medicinskih sester strokovnjakov na urgenci, z namenom zmanjšati fluktuacijo kadra ter izboljšati kakovost oskrbe.

Metode: Na podlagi pregleda znanstvene literature in Bennerjeve teorije »Od začetnika do strokovnjaka« je bil oblikovan predlagani model modula strokovne validacije kliničnih kompetenc, predviden za izvedbo na eni izmed urgenc v Sloveniji. Modul bi vključeval 20 medicinskih sester. Prvi del zajema samooceno kompetenc z orodjem Nurse Competence Scale, drugi del pa simulacije kompleksnih kliničnih primerov, ki omogočajo objektivno presojo klinične ravni.

Rezultati: Predvideni rezultati vključujejo boljše razumevanje strokovne usposobljenosti medicinskih sester, večje priznanje njihove vloge v organizaciji in večjo motivacijo za mentorstvo. Model podpira profesionalizacijo zdravstvene nege, krepi občutek strokovne vrednosti in lahko dolgoročno zmanjša namero po odhodu izkušenih medicinskih sester.

Diskusija in zaključek: Implementacija Bennerjeve teorije v urgentno okolje predstavlja potencial za sistematično prepoznavanje medicinskih sester strokovnjakov in njihovih kliničnih kompetenc. Predlagani model modula strokovne validacije, ki združuje subjektivno in objektivno oceno kompetenc je zasnovan z namenom spodbujanja kariernega razvoja. S tem bi prispevali k večji prepoznavnosti izkušenih medicinskih sester, izboljšani kakovosti in varnosti oskrbe in zmanjšanju namere po odhodu. Model temelji

na teoretičnih izhodiščih in literaturi, vendar njegovi učinki še niso empirično potrjeni, zato so za ustrezno evalvacijo potrebne nadaljnje raziskave.

Ključne besede: kompetence; fluktuacija kadra; profesionalizacija zdravstvene nege; kakovost in varnost oskrbe

O avtorjih

Daniela Berdnik, mag. zdr. - soc. manag
Univerzitetni klinični center Maribor, Maribor, Slovenija
Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
daniela.berdnik@student.um.si

Prof. Dr (Združeno kraljestvo Velike Britanije in Severne Irske) **Majda Pajnkihar**, FAAN, FEANS
Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
majda.pajnkihar@um.si

Communication Model for Preventing Violence in Healthcare

PETER KAMNIČAR

Introduction: Workplace violence in healthcare poses a serious concern to both staff and patient safety. Communication models that help prevent violence are crucial for improving professional practice and ensuring a safe healthcare environment. The purpose of this presentation is to present the issue of violence in healthcare and examples of good practices.

Methods: We conducted systematic literature review. International databases PubMed and The Cochrane Library were used to find literature published between from January 2019 to December 2024. Inclusion criteria were peer-reviewed articles in English focusing on workplace violence in healthcare and conflict de-escalation techniques. Excluded were non-healthcare studies, non-peer-reviewed sources, and not available in full-text.

Results: The proposed communication model consists of three key components: situational awareness, validation and tactical empathy. These components create a comprehensive approach to violence prevention. Situational awareness helps receiving and processing information from environment, validation of emotions enhances understanding and calms individuals, meanwhile tactical empathy provides a structured approach to conflict resolution.

Discussion: The model offers a structured, practical approach to workplace violence prevention, emphasizing clear communication, staff training, and leadership engagement for creating a culture of safety. Future research should evaluate the model's effectiveness across different healthcare settings and refine its components based on real-world implementation.

Keywords: workplace safety, conflict management, communication strategies, de-escalation techniques, situational awareness

About the author**Peter Kamničar**

Alma Mater Europaea University, Maribor, Slovenia

peter.kamnicar@almamater.si

Developing a Scoping Review Protocol on Cancer Prevention and Co-production for Persons with IDD: A Cross European Approach

MARGARET DENNY, SUZANNE DENIEFFE, COLIN BARRY, KATARZYNA
ĆWIRYNKAŁO, ASHNA EPHRAIM, FABRIZIO FEA, SPELA GOLUBOVIC,
OLIWIA KOWALCZYK, DRAGANA MILUTINOVIĆ, VLADIMIR TRAJKOVSKI,
GABRIELA ŠTEFKOVÁ, LAURA WIDGER, FRANCOIS HICKEY, EDA SAHIN,
AGNIESZKA ŻYTA, SINEAD FORAN

Introduction: Despite growing awareness of health disparities, persons with intellectual and developmental disabilities remain underserved in cancer prevention efforts across Europe. While co-production, actively involving persons with disabilities in shaping research and health initiative, is gaining traction, its application in cancer prevention remains limited. The COST Action Cancer – Understanding Prevention in Intellectual Disability united researchers from multiple European countries to develop a scoping review protocol. This protocol will guide a scoping review of existing literature on co-produced initiatives for persons with intellectual and developmental disabilities, ensuring future research, education about cancer prevention is inclusive and impactful.

Methods: Following Arksey and O'Malley's framework and Joanna Briggs Institute guidelines, the protocol outlines search strategies, inclusion criteria, quality assessment tools, and data extraction methods. Searches will be conducted in Scopus, PsycINFO, CINAHL, MEDLINE, and PubMed, covering literature from 2019 to 2025. The Mixed Methods Appraisal Tool will assess study quality, and thematic analysis will guide data synthesis.

Results: This protocol aims to establish a standardised methodology for conducting a scoping review that focuses on co-produced cancer prevention initiatives for persons with intellectual and developmental disabilities. The review will identify stakeholder engagement, discern research gaps, and outline best practices to ensure an inclusive and comprehensive evaluation process.

Discussion and Conclusion: This initiative will support evidence-based interventions, policy recommendations, and collaborative health initiatives. Findings will be shared through conferences, publications, and stakeholder networks.

Keywords: co-engagement, cancer education, European collaboration, inclusive health

About the authors

Dr **Margaret Denny**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia.
denny.margaret@gmail.com

Dr **Suzanne Denieffe**,

South East Technological University, Faculty of Arts and Humanities, Waterford, Ireland
suzanne.denieffe@setu.ie

Dr **Colin Barry**

Mater Hospital, Dublin, Ireland

Prof **Katarzyna Ćwirynka**

UWM University of Warmia and Mazury in Olsztyn, Olsztyn, Poland
k.cwirynka@uwm.edu.pl

Ms **Ashna Ephraim**

South East Technological University, Faculty of Arts and Humanities, Waterford, Ireland

Dr **Fabrizio Fea**

Associazione Scuola Viva onlus., Rome, Italy
f.fea@scuolaviva.org

Prof **Spela Golubovic**

University of Novi Sad, Faculty of Medicine, Novi Sad, Serbia
spela.golubovic@mf.uns.ac.rs

Dr **Oliwia Kowalczyk**

Nicolaus Copernicus University, Toruń, Poland
oliwia.kowalczyk@cm.umk.pl

Prof **Dragana Milutinović**

University of Novi Sad, Faculty of Medicine, Novi Sad, Serbia
dragana.milutinovic@mf.uns.ac.rs

Prof **Vladimir Trajkovski**

Cyril and Methodius University, Skopje, North Macedonia
vladotra@fzf.ukim.edu.mk

Dr. **Gabriela Štefková**

LF UPJŠ - Pavol Jozef Šafárik University in Košice, Faculty of Medicine, Košice, Slovakia
gabriela.stefkova@upjs.sk

Mag. **Laura Widger**

South East Technological University, Faculty of Education and Life Long Learning, Waterford, Ireland.
laura.widger@setu.ie

Mag. **Francois Hickey**

South East Technological University, Waterford, Ireland.

Assoc. Prof. **Eda Sahin**

Giresun University, Faculty of Health Science, Giresun, Turkey
edabasustaoglu@gmail.com

Prof **Agnieszka Żyta**

University of Warmia and Mazury in Olsztyn, Olsztyn, Poland
agnieszka.zyta@uwm.edu.pl

Dr **Sinead Foran**

Dublin City University, School of Nursing, Psychotherapy and Community Health, Dublin, Ireland
sinead.foran@dcu.ie

Health of Older Adults in the South Bohemia Region

IVA BRABCOVÁ

Introduction: The purpose of the research was to describe the level of health among older adults in the South Bohemian Region.

Methods: A descriptive and cross-sectional study was chosen. The study included 403 individuals (65+) selected by quota sampling. The sample is representative in terms of gender, age, and region. Quantitative research strategy using a questionnaire that included an assessment of subjective health status, supplemented by sociodemographic questions.

Results: The largest part of respondents (45.3%) rate their health as satisfactory, 39.8% of respondents rate it as good to very good, 14.2% rate their health as bad to very bad, and 0.7% of respondents do not know. The subjective assessment of their own health is statistically significantly influenced by the respondent's age, marital status, housing situation, and education.

Discussion and Conclusions: Future research should focus on the potential to increase health literacy and the impact of health literacy and health in older adults.

Keywords: health, older adults, health care, subjective health status

About the author

doc. Ing. **Iva Brabcová**, Ph.D.
University of South Bohemia in Ceske Budejovice, Faculty of Health and Social Sciences, České Budějovice, Czech Republic
brabcova@zsf.jcu.cz

Vloga bioelektrične impedančne analize pri celostni obravnavi pacientov s kronično ledvično boleznijo: pregled literature

MATIC POLC, CVETKA KREL, LUCIJA GOSAK, SEBASTJAN BEVC

Uvod: Kronična ledvična bolezen je progresivno stanje, za katero so značilne strukturne in funkcionalne spremembe ledvic. Vodi lahko v številne sistemske zaplete, kot so motnje pri uravnavanju tekočin, elektrolitov, krvnega tlaka, kislinsko-bazičnega ravnovesja in presnove. Takšno kompleksno bolezensko stanje zahteva celosten in multidisciplinaren pristop. Namen znanstvenega prispevka je bil raziskati vlogo bioelektrične impedančne analize v celostni obravnavi pacientov s kronično ledvično boleznijo.

Metode: Iskanje znanstvene literature smo izvedli v podatkovnih bazah PubMed, CINAHL Ultimate in Cochrane Library, pri čemer smo si pomagali s ključnimi besedami v angleškem jeziku: bioelectrical impedance analysis, bioimpedance, BIA, phase angle, PhA, nutritional status, body composition, hydration status, clinical management, chronic kidney disease in CKD. Potek iskanja smo prikazali s pomočjo PRISMA diagrama. Vključene raziskave smo predstavili s pomočjo evalvacijske tabele. Sintezo smo prikazali s pomočjo sintezne tabele, kjer smo prikazali glavne ugotovitve in izide vključenih raziskav.

Rezultati: V končno analizo smo vključili sedem raziskav. Ugotovili smo, da je bioelektrična impedančna analiza uporabna kot diagnostično orodje za oceno prehranskega stanja in hidracije ter kot podpora pri kliničnem odločanju v procesu celostne obravnave pacientov. Fazni kot je pomemben kazalnik slabše celične integritete in je lahko v pomoč pri zgodnjem odkrivanju podhranjenosti, beljakovinsko-energijske izčrpanosti, krhkosti in povečanega tveganja za kardiovaskularne dogodke.

Razprava in zaključek: Uporaba bioelektrične impedančne analize lahko pomembno vpliva na kakovost obravnave pri pacientih s kronično ledvično boleznijo. Omogoča natančnejše spremljanje prehranskega in hidracijskega stanja, podpira odločanje v

zdravstvenem timu in izboljšuje možnosti za pravočasno ukrepanje. Kljub temu ostajajo izzivi glede standardizacije uporabe, interpretacije rezultatov ter potrebe po dodatnem izobraževanju zdravstvenega osebja.

Ključne besede: fazni kot, zdravstvena nega, telesna sestava, prehransko stanje

O avtorjih

Matic Polc, dipl. zn.; predav.

Univerzitetni klinični center Maribor, Klinika za interno medicino, Oddelek za nefrologijo, Maribor, Slovenija
polcmaticek@gmail.com

Cvetka Krel, mag. zdr.-soc. manag.

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
cvetka.krel@um.si

asist. **Lucija Gosak**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
lucija.gosak2@um.si

red. prof. dr. **Sebastjan Bevc**, dr. med., svetnik

Univerzitetni klinični center Maribor, Klinika za interno medicino, Oddelek za nefrologijo, Maribor, Slovenija
sebastjan.bevc@ukc-mb.si

Long-Term Effects of Telerehabilitation of Patients with Cardiovascular Diseases: A Narrative Review

MATIC JELEN, KATARINA KANTE, BARBARA RODIČ

Introduction: Cardiovascular diseases are a global health burden. Although cardiac rehabilitation is beneficial, participation is low due to barriers. Telerehabilitation—remote rehabilitation via technology—offers an alternative. While short-term benefits are established, long-term effects in patients with cardiovascular diseases on cardiorespiratory fitness, quality of life, activity, and risk factor control remain unclear.

Methods: A narrative review was conducted using a descriptive approach. PubMed and CINAHL were searched for English full-text studies (2015–2024) due to recent advancements. Three reviewers independently screened, extracted, and qualitatively synthesised data. Systematic reviews, meta-analyses, and irrelevant or inaccessible studies were excluded.

Results: Ten randomized controlled trials were included in this narrative review. The impact of telerehabilitation and standard care on cardiovascular patients was compared. Telerehabilitation showed a statistically significant effect on cardiorespiratory fitness in 5 out of 8 studies, statistically significant effect on quality of life in 3 out of 8 studies, and statistically significant effect on physical activity in 2 out of 6 studies. The effect on cardiovascular risk factors was less pronounced, with most studies finding no statistically significant differences, except for waist and hip circumference, where improvements were reported in 3 out of 5 studies.

Discussion and Conclusions: Telerehabilitation has an impact on improving cardiorespiratory fitness, quality of life, and frequency of physical activity in patients with cardiovascular diseases. In the future, it will be important to optimize measurement tools for assessing cardiorespiratory capacity, as well as to focus research on developing individualized telerehabilitation programs.

Keywords: chronic diseases, remote access, remote rehabilitation, quality of life, prevention

About the authors

Matic Jelen, PT, BSc, MSc Student

University of Ljubljana, Faculty of Health Sciences, Ljubljana, Slovenia
matic.jelen7@gmail.com

Katarina Kante, PT, BSc, MSc Student

University of Ljubljana, Faculty of Health Sciences, Ljubljana, Slovenia
kante.katarina11@gmail.com

Barbara Rodič, PT, BSc, MSc Student

University of Ljubljana, Faculty of Health Sciences, Ljubljana, Slovenia
barbara.rodic@gmail.com

Traheotomija in k dekanilaciji usmerjena rehabilitacija: pregled literature in izkušnje iz klinične prakse

LUKA MUŽINA

Uvod: Traheostomska kanila je medicinski pripomoček, ki se uporablja za vzdrževanje proste dihalne poti. Čeprav omogoča preživetje, pomembno vpliva na pacientovo kakovost življenja. Močno se spremeni fiziologija dihanja, saj s traheostomo izvzamemo zgornji del dihalne poti. To vpliva na govor in komunikacijo ter oteži požiranje. Dosega kriterijev za dekanilacijo predstavlja pomemben mejnik v rehabilitaciji. Namen prispevka je predstaviti pomen ustrezne ocene pacienta s traheostomo in rehabilitacijske pristope, katerih cilj je uspešna dekanilacija.

Metode: Uporabljena je bila kvalitativna raziskovalna metoda. Prispevek temelji na izkušnjah iz prakse in pregleda literature. Iskanje je potekalo v bazah PubMed in Google Scholar, pri čemer so bili vključeni članki v slovenščini in angleščini, ki obravnavajo bolnike s traheostomo. Izključeni so bili prispevki brez klinične uporabnosti in omejeno dostopnostjo. Vključenih je bilo 23 člankov.

Rezultati: Za optimalno oskrbo pacienta je pomemben multidisciplinarni pristop, ki vključuje zdravnike, medicinske sestre, respiratorne fizioterapevte, delovne terapevte in logopede. Temeljita ocena bolnika je ključnega pomena, saj usmerja nadaljnje rehabilitacijske postopke. Študije kažejo, da sta učinkovitost kašlja in sposobnost dihanja ob zaprti kanili najpogosteje uporabljena napovedna dejavnika za dekanilacijo, obstaja pa še veliko drugih, ki pomembno napovedujejo uspešnost dekanilacije. Med te sodijo sodelovanje, aktivnost, klinična stabilnost bolnika, mišična moč, ustrezna funkcija požiranja idr.

Diskusija: Rezultati kažejo, da je za dekanilacijo ključna temeljita ocena bolnikovega stanja, na podlagi katere zdravstveni tim načrtuje potek rehabilitacije. Za dosego dekanilacije je nujno sodelovanje strokovnjakov različnih strok, ki skupaj stremijo k enakemu cilju in se med seboj dopolnjujejo.

Ključne besede: traheostomska kanila, respiratorna fizioterapija, respiratorna oskrba, multidisciplinarni pristop

O avtorju

Luka Mužina, dipl. fiziot. (UN)

Univerzitetni klinični center Ljubljana, Kirurška klinika, Klinični oddelek za anesteziologijo in intenzivno terapijo operativnih strok,

Služba za perioperativno respiratorno medicino, Enota za respiratorno fizioterapijo, Ljubljana, Slovenija

Univerza v Novem mestu, Fakulteta za zdravstvene vede, Novo mesto, Slovenija

luka.muzina@gmail.com

Abstracts – Session 2

Izvlečki – Sekcija 2

Izvajanje samooskrbe pri starejših pacientih s srčnim popuščanjem: pregled literature

NATAŠA KREFT, MATEJA LORBER

Uvod: V razvitem svetu, vključno s Slovenijo, se soočamo z naraščajočim javnozdravstvenim bremenom srčnega popuščanja. Zdravljenje vključuje samooskrbo, ki se sestoji iz vzdrževanja, spremljanja in upravljanja, dosledno izvajanje slednje izboljša kakovost življenja pacientov s srčnim popuščanjem, zmanjšuje hospitalizacije in obiske pri zdravniku, umrljivost in stroške zdravstvene oskrbe. Namen prispevka je pregled literature izvajanja vidikov samooskrbe pri starejših pacientih s srčnim popuščanjem.

Metode: Izvedena je bila deskriptivno metoda dela. Iskanje je potekalo v mednarodnih podatkovnih bazah PubMed, CINAHL, Medline in Web of Science. Pri iskanju in vključitvi literature smo upoštevali vključitvene kriterije: članke, ki obravnavajo tematiko samooskrbe pacientov, angleški jezik, objavljeni do novembra 2024.

Rezultati: V končno analizo smo vključili sedem raziskav. Najpogosteje uporabljeno orodje za merjenje vidikov samooskrbe je bila Evropske vedenjska lestvica samooskrbe pri srčnem popuščanju (EHFScBS-12 in EHFScBS-9), sledi Nizozemska/Nepalska lestvica srčnega popuščanja in indeks samooskrbe srčnega popuščanja (SCHFI). Pogosto je bilo izvajane samooskrbe obravnavano skupaj z znanjem o srčnem popuščanju, vzdrževanju samooskrbe, obvladovanju bolezni in povezanih simptomov, zaupanjem v lastno sposobnost izvajanja samooskrbe, kakovostjo življenja in zdravstveno pismenostjo.

Diskusija in zaključek: Velikokrat pacienti s srčnim popuščanjem ne izvajajo učinkovite samooskrbe, zaradi pomanjkanja znanja o bolezni, slabe prepoznavnosti simptomov ter omejenih funkcionalnih in kognitivnih sposobnosti. Kognitivne motnje, depresija, socialna podpora in zdravstvena pismenost so ključni dejavniki, ki vplivajo na uspešnost izvajanja samooskrbe. Za učinkovito izboljšanje samooskrbe je nujno, da zdravstveni delavci upoštevajo njihove individualne potrebe, vključno z zagotavljanjem dodatnega izobraževanja, podporo družine ter prilagojenimi intervencijami.

Keywords: srčno popuščanje, starejši, samooskrba

About the author

Nataša Kreft, mag. zdr.-soc. manag.

Splošna bolnišnica Murska Sobota, Murska Sobota, Slovenija

Univerza v Mariboru, Fakulteta za zdravstvene vede Maribor, Maribor, Slovenija

natasa.kreft@sb-ms.si

Izr. prof. dr. **Mateja Lorber**

Univerza v Mariboru, Fakulteta za zdravstvene vede Maribor, Maribor, Slovenija

mateja.lorber@um.si

Integracija teorije interpersonalnih odnosov v urgenci

JOŽE REČNIK, SERGEJ KMETEC, MAJDA PAJNKIHAR

Uvod: Teorija interpersonalnih odnosov, ki jo je razvila Peplau (1952), predstavlja ključno podporo v zdravstveni negi, osredotočen na dinamiko terapevtskih odnosov med medicinsko sestro in pacientom. Teorija izpostavlja pomen učinkovite komunikacije in vzpostavitve zaupanja med medicinskimi sestrami in pacientom, pri čemer poudarja vlogo medosebnih interakcij pri obvladovanju zdravstvenih izzivov. Raziskali smo uporabo teorije v urgenci.

Metode: Uporabljena je bila deskriptivna metoda dela, ter sistematični pregled in analiza literature. Iskana literatura je bila pridobljena v podatkovnih bazah: PubMed, CINAHL in Medline. Zastavili smo si tudi vključitvene in izključitvene kriterije. Opis, analiza in vrednotenje teorije je bilo opravljeno po metodi, ki jo opisuje Pajnkihar (2013). V diagramu PRISMA smo prikazali postopek iskanja literature v podatkovnih bazah.

Rezultati: : V podatkovnih bazah je bilo pridobljenih 34 zadetkov. Na podlagi vključitvenih in izključitvenih kriterijev, je bilo v raziskavo vključenih 10 člankov. Peplau opisuje strukturalne koncepte medosebnega odnosa, ki vključujejo štiri medsebojno povezane faze (orientacija, indentifikacija, interakcija in razrešitev). Glavni koncept teorije interpersonalnih odnosov je odnos, ki ga je Peplau opredelila kot zvezo in povezavo med dvema ali več osebami v interakciji.

Diskusija in zaključek: Uporaba Peplau teorije v urgentni zdravstveni negi omogoča boljše obvladovanje urgentnih situacij, saj poudarja pomen empatičnega in terapevtskega pristopa. Vendar pa raziskave kažejo, da so medicinske sestre pogosto soočene z izzivi, kot so pomanjkanje časa in visoka raven stresa, ki lahko vplivajo na kakovost odnosov. Kljub tem izzivom je integracija Peplau teorije ključna za izboljšanje izkušenj pacientov in učinkovitosti oskrbe v urgentnem okolju.

Ključne besede: komunikacija, Peplau, pacienti, učinkovitost

O avtorjih

Jože Rečnik, dipl zn

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
joze.recnik@student.um.si

doc. dr. **Sergej Kmetec**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
sergej.kmetec1@um.si

Prof. Dr (Združeno kraljestvo Velike Britanije in severne Irske) **Majda Pajnikihar**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
majda.pajnikihar@um.si

Vpliv fluktuacije na kakovost in varnost v vojaško zdravstveni enoti

ZLATKO KVRŽIČ, MAJDA PAJNKIHAR, GREGOR ŠTIGLIC

Uvod: Vojaško zdravstvene enote se soočajo z izzivi, ki presegajo običajne zahteve zdravstvenih sistemov. Eden ključnih problemov je fluktuacija zdravstvenega osebja, zlasti vojaških medicinskih sester, ki ima neposreden vpliv na kakovost oskrbe, varnost pacientov ter operativno pripravljenost enot. Fluktuacija pomeni izgubo strokovnega znanja, povečanje stroškov usposabljanja, večjo obremenitev preostalih zaposlenih in zmanjšanje timske kohezije. Posledično lahko pride do zmanjšanja kakovosti zdravstvene obravnave in večje ranljivosti sistema v kriznih razmerah. Namen prispevka je osvetliti dejavnike, ki vplivajo na fluktuacijo, ter analizirati posledice za kakovost in varnost dela v vojaško zdravstvenem okolju.

Metode: Uporabljen je bil pregled strokovne literature, vključno z domačimi in tujimi znanstvenimi članki ter poročili obrambnih zdravstvenih sistemov. Izbrana gradiva so bila analizirana s pomočjo primerjalne analize in vsebinske interpretacije znotraj konceptualnega okvira teorije skrbi Jean Watson. Poseben poudarek je bil namenjen organizacijski kulturi, delovnim pogojem in vlogi vodstvene podpore pri obvladovanju fluktuacije v vojaškem zdravstvenem okolju.

Rezultati: Analiza je pokazala, da so ključni dejavniki fluktuacije slaba organizacijska klima, pomanjkanje podpore vodstva, visoka čustvena in fizična obremenjenost ter omejene možnosti za napredovanje. Prisotnost skrbstvene kulture se kaže kot zaščitni dejavnik, ki zmanjšuje namero po odhodu.

Diskusija in zaključek: Za zmanjšanje fluktuacije so nujne sistemske spremembe, ki vključujejo empatično vodenje, varno in podporno delovno okolje ter jasno vrednotenje vloge vojaških zdravstvenih delavcev. To prispeva k večjemu zadovoljstvu, zmanjšanju izgorelosti ter izboljšanju kakovosti in stabilnosti oskrbe.

Ključne besede: fluktuacija, varnost, kakovost, vojaško zdravstvo, Watsonova teorija skrbi

O avtorjih

asist. **Zlatko Kvržić**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
zlatko.kvrzic@student.um.si

mag. zdr. nege; Prof. dr. (Združeno kraljestvo Velike Britanije in Severne Irske) **Majda Pajnikihar**
Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
majda.pajnikihar@um.si

Prof. dr. **Gregor Štiglic**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
gregor.stiglic@um.si

Analiza koncepta: Adaptacija

ANDREJ ČERNI, SERGEJ KMETEC, MAJDA PAJNKIHAR

Uvod: Adaptacija je koncept v zdravstveni negi, ki opisuje posameznikovo sposobnost soočanja s spremembami in dražljaji iz okolja. Jasna opredelitev koncepta pripomore k boljši klinični presoji in individualizirani obravnavi pacientov. Namen prispevka je bil analizirati koncept adaptacije v kontekstu zdravstvene nege, z izhodiščem v Teoriji Caliste Roy Adaptacijski model.

Metode: Izvedena je bila kvantitativna analiza koncepta po Cutcliffe in McKenna (2005). Iskanje literature je potekalo v podatkovnih bazah PubMed, CINAHL Ultimate in Web of Science z iskalnim nizom: (adaptation OR adjustment) AND nursing AND "concept analysis", omejeno na angleške objave do novembra 2024. Vključeni so bile raziskave s kvalitativno, kvantitativno metodologijo ali raziskavami mešanih metod, ki obravnavajo koncept adaptacije v zdravstveni negi. Analiza je temeljila na deskriptivnem pristopu.

Rezultati: Koncept adaptacije se pojavlja v pojasnjuje več dimenzijah: fiziološki, psihološki, socialni in duhovni vidik. Ključni atributi so odzivnost, prožnost, samoregulacija. Predhodniki vključujejo spremembe in stresorji, posledice pa ravnovesje, zdravje ali motnje v adaptaciji. Koncept je tesno povezan s prilagajanjem na bolezni, hospitalizacijo in okoljske spremembe. Koncept adaptacije je mogoče meriti z razvitimi kvantitativnimi orodji ali raziskovati s pomočjo kvalitativnih pristopov.

Diskusija in zaključek: Koncept adaptacije je kompleksen, vendar jasno opredeljen s široko uporabnostjo v zdravstveni negi. Priporočljive so nadaljnje raziskave, usmerjene v razvoj merskih orodij in kliničnih smernic. Uporaba koncept adaptacije lahko pomembno prispeva k obvladovanju stresa in izboljševanju izidov zdravljenja pri pacientih.

Ključne besede: zdravstvena nega, Teorija Caliste Roy Adaptacijski model, adaptivni načini

O avtorjih

Andrej Černi, mag. zdr. nege

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
andre.cerni@student.um.si

doc. dr. **Sergej Kmetec**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
sergej.kmetec1@um.si

prof. Dr (Združeno kraljestvo Velike Britanije in Severne Irske) **Majda Pajnikihar**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
majda.pajnikihar@um.si

Integrating Patient Voices in Healthcare Education: An Overview of the PULPIT Project

ADRIJANA SVENŠEK, LUCIJA GOSAK, MATILDE LEAL, PEDRO MORGADO,
CATARINA LIMA, BARBARA KEGL, MATEJA LORBER, RICARDO J. O.
FERREIRA

Introduction: Involving patients and the public (PPI) in the interprofessional education (IPE) of nursing students improves the quality of the educational programme, increases opportunities to interact with real patients, promotes teamwork across disciplines and enhances the student's educational experience. The aims of the PULPIT project are: (i) to analyse existing practices of PPI in undergraduate health education and IPE in higher education in Europe; (ii) to develop a free online training module to support the implementation of PPI and IPE and to make recommendations to improve these practices; (iii) to pilot validate a four-week training programme incorporating elements of PPI and IPE in four European countries.

Methods: This interdisciplinary consortium brings together educational institutions from Slovenia, Canada, Portugal, Belgium and the Netherlands, as well as patient organisations from Portugal, Belgium and the Netherlands. To investigate the current state of interprofessional education actively involving patients and informal carers in Europe, the project will conduct a review of best practices through in-depth interviews, a stakeholder questionnaire and finally a Delphi study to develop a recommendation.

Results: The results of PULPIT will provide international recommendations for the integration of PPI into IPE frameworks and the design of a comprehensive training programme, supported by MOOCs and supplementary materials.

Conclusion: The integration of PPI in IPE brings important benefits to health education. Involving patients as equal partners from the outset and providing ongoing support are essential for sustainable implementation. Well-integrated PPI contributes to more humane, reflective and effective health practice.

Keywords: public and patient involvement, interprofessional education, healthcare

About the authors

Adrijana Svenšek

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
adrijana.svenssek1@um.si

Lucija Gosak

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
lucija.gosak2@um.si

Matilde Leal

Nursing School of Lisbon, Lisbon, Portugal

Pedro Morgado

University of Minho, School of Medicine, Braga, Portugal

Catarina Lima

University of Minho, School of Medicine, Braga, Portugal

Barbara Kegl

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
barbara.kegl@um.s

Mateja Lorber

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
mateja.lorber@um.si

Ricardo J. O. Ferreira

Nursing School of Lisbon, Lisbon, Portugal

Nursing Education on Nutrition in Patients With Cardiovascular Disease

LENKA ŠEDO VÁ, SYLVA B ÁRTLO V Á, LUCIE HAVIERNIKOV Á,
V ĚRA STASKOV Á, ANDREA HUD ÁČKOV Á

Introduction: The evidence based on the relationship between nutrition and cardiovascular disease is extensive. The aim of our paper is to describe the relationship between educational level and nutritional literacy in the context of cardiovascular disease from the perspective of the public.

Methods: A non-standardized questionnaire was used to collect data. The total sample consisted of 1391 respondents. Statistical data processing was performed using SASD 1.5.8. and SPSS 29.0.2.0. For statistical testing, chi2, independence test and other test criteria were applied according to the nature of the properties.

Results: In terms of gender, the sample consisted of 700 (50,3 %) men and 691 (49,7 %) women aged 40–65 years ($M = 53$ years, $SD = 7,14$). Of the people who were educated about nutrition by a doctor, 462 (33,3 %) responded positively, while nurses educated 241 respondents (17,4 %) according to the public. Partial results show that nurse-led nutrition education was statistically significant with age ($p \leq 0,05$), gender ($p \leq 0,05$), more often women, and BMI ($p \leq 0,05$). Nurses more often focus on nutrition education on patients older than 65 years, and more often on women and overweight people (BMI 25-30).

Discussion and conclusion: The results show that nutritional literacy in CVD prevention has its limits. The limitations of our study include the disadvantage of using of the non-standardized questionnaire, since it may distort respondents' opinions. Nurses in the Czech Republic are not sufficiently involved in the education on modifiable risk factors.

Keywords: ischemic heart disease, modifiable risk factors, nutrition; nurse, public

doc. Mgr. **Lenka Šedová**, Ph.D.

The Institute of Nursing, Midwifery and Emergency Care, Faculty of Health and Social Sciences, České Budějovice, Czech Republic
lsedova@zsf.jcu.cz

doc. PhDr. **Sylva Bártlová**, Ph.D.

The Institute of Nursing, Midwifery and Emergency Care, Faculty of Health and Social Sciences, České Budějovice, Czech Republic

Mgr. **Lucie Havierníková**, Ph.D.

The Institute of Nursing, Midwifery and Emergency Care, Faculty of Health and Social Sciences, České Budějovice, Czech Republic

PhDr. **Věra Stasková**, Ph.D.

The Institute of Nursing, Midwifery and Emergency Care, Faculty of Health and Social Sciences, České Budějovice, Czech Republic

PhDr. **Andrea Hudáčková**, Ph.D.

The Institute of Nursing, Midwifery and Emergency Care, Faculty of Health and Social Sciences, České Budějovice, Czech Republic

Teaching Diversity Competences to Health Sciences Studies Students in Croatia and Slovenia: A Comparative Study

ROBERT DORIČIĆ, MIRKO PROSEN, IVANA TUTIĆ GROKŠA

Introduction: With the aim of improving the accessibility of healthcare for vulnerable groups, the concept of diversity competence has been introduced. Such a concept enables the provision of healthcare tailored to the needs of the individual and develops insight and empathy regarding the patient's beliefs, values, experience, and behaviour. Unlike cultural competences, diversity competences are aimed at a wide range of minority groups. The adoption and development of cultural competences has been included in the curricula of health professions study programmes in recent decades.

Methods: In this presentation, a comparative analysis of the level of diversity competences among health studies students at two universities, the University of Rijeka (Croatia) and the University of Primorska (Slovenia) will be presented.

Results: Analysis of the curricula of higher education institutions of healthcare professions in Croatia showed that there is a lack of education aimed at developing diversity competences. Furthermore, such absence is also indicated by the results of a quantitative study on diversity competences of students conducted among healthcare students at the University of Rijeka. In Slovenia, transcultural nursing content has been included in the nursing curriculum for more than 15 years, which is associated with higher self-reported levels of cultural competence among nursing students.

Conclusion: With the aim of improving students' diversity competences within the teaching process, based on the results of the conducted research, guidelines will be offered for a model for developing diversity competences in the education of students of health professions at the University of Rijeka, applicable also more widely.

Keywords: diversity competences, healthcare; students, education, Croatia, Slovenia

About the authors

Robert Doričić, Assistant professor, PhD

University of Rijeka, Faculty of health studies, Rijeka, Croatia

University of Rijeka, Faculty of medicine, Rijeka, Croatia

robert.doricic@medri.uniri.hr

Mirko Prosen, Associate Professor, PhD

University of Primorska, Faculty of health sciences, Koper, Slovenia

mirko.prosen@fvz.upr.si

Ivana Tutić Grokša, PhD

Adult Education Institution Dante, Rijeka, Croatia

Triage and the Impact of Pre-Hospital Medical Teams on Transport Decisions in the Pristina Region

KALTRINA AZIZI SADIKU, ADELINA LAHU, QENDRESA SADRIJA

Introduction: Triage is an essential component in the management of medical emergencies, enabling a systematic and rapid assessment of patients' clinical conditions. It facilitates the identification of individuals requiring immediate intervention to prevent the deterioration of their health. Pre-hospital medical teams, including emergency physicians and specialized nurses, are responsible for conducting triage and making critical decisions regarding the transport of patients to specialized healthcare institutions. Objective, the aim of this study is to analyze the impact of key factors within pre-hospital medical teams on the decision-making process for patient transport in Pristina. Additionally, the study examines the efficiency of current triage protocols and the need for their updates.

Methodology: This study employs a quantitative approach, analyzing data collected from a questionnaire derived from the scientific research titled "The Role of Emergency Medical Service Providers in the Pre-hospital Trauma Triage Decision-Making Process." The selected sample consists of pre-hospital medical professionals from the Pristina region.

Results: Findings indicate that intuition and experience have a moderate to strong correlation (0.347 for adult patients, 0.304 for pediatric patients, and 0.970 for the correlation between intuition and experience in pediatric cases). The Chi-Square test revealed a statistically significant relationship ($p = 0.001$) between the need for modifications in existing protocols and the inclusion of additional triage criteria.

Discussion and conclusion: In conclusion, the study highlights that pre-hospital triage protocols in the Pristina region are inadequate and require updates. Furthermore, the experience and intuition of emergency medical teams play a crucial role in decision-making regarding patient transport in critical situations.

Keywords: emergency care, treatment protocols, decision-making, Kosovo

About the authors

Phd.cand **Kaltrina Azizi Sadiku**

Heimerer College-Prishtinë, Prishtinë, Kosovo

kaltrina.azizi@kolegji-heimerer.eu

Phd.cand **Adelina Lahu**

Heimerer College-Prishtinë, Prishtinë, Kosovo

adelina.lahu@kolegji-heimerer.eu

Bsc **Qendresa Sadrija**

Heimerer College-Prishtinë, Prishtinë, Kosovo

Abstracts – Session 3

Izvlečki – Sekcija 3

Effectiveness of AI Chatbots in Improving Sleep Quality

MARIJANA GAJIĆ, LUCIJA GOSAK, GREGOR ŠTIGLIC

Introduction: Artificial intelligence (AI)-based chatbots, with their ability to simulate human-like conversations, are already a common addition to peoples' daily routines. AI chatbots use natural language processing (NLP), machine learning, and cognitive behavioral therapy (CBT) principles to provide personalized support and guidance to improve sleep quality. This study explores the effectiveness of AI chatbots in improving sleep quality by analyzing their role in monitoring sleep, offering sleep techniques, and sharing advice in managing stress and anxiety, and encouraging healthier sleep habits.

Methods: Three international databases (PubMed, Medline and CINAHL Ultimate) were searched using appropriate key words and search strategies. The exclusion criteria were limited to studies published within the last 10 years and written in English.

Results: The search yielded 188 articles, of which six met the inclusion criteria. The included studies involved diverse samples, ranging from oncology patients, geriatric populations and healthy individuals. Through the techniques chatbots have to offer, feasibility of the conversational agents in improving sleep quality, as well as in other aspects of peoples' lifestyles, the researchers recognize and highlight the positive impact of conversational agents on sleep quality.

Conclusion: AI chatbots have shown promising effectiveness in improving sleep quality by providing tailored sleep monitoring, techniques, and useful advice. The studies highlight that conversational agents can have a positive impact not only on sleep quality but also overall lifestyle improvements across diverse populations. To deepen understanding in this promising field, where conversational agents show great potential, more research is required.

Keywords: AI chatbots, sleep quality, cognitive behavioral therapy, natural language processing

About the authors**Marijana Gajić**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
marijana.gajic@student.um.si

Lucija Gosak

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
lucija.gosak2@um.si

Gregor Štiglic

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
gregor.stiglic@um.si

Prevention of Obesity, Sarcopenia and Sarcopenic Obesity in Retirement: Use of Mobile Application to Stimulate Healthy Lifestyle Behaviour

HELENA MICHÁLKOVÁ, EVA TOPINKOVÁ

Background: The aging population faces two major threats to healthy aging – high fat mass (obesity) and low muscle mass and function (sarcopenia). Their combination, known as sarcopenic obesity, significantly increases the risk of negative health outcomes. These conditions often co-occur, as they share common causes such as poor nutrition and physical inactivity.

Research: The SO-NUTS project aims to develop innovative strategies for preventing obesity, sarcopenia, and sarcopenic obesity by considering sociodemographic and health-related characteristics. The project will test the feasibility and effectiveness of a personalized SO-NUTS mobile application designed to help (future) retirees lose weight and maintain muscle mass.

Objectives: To prepare and carry out a pilot study evaluating the first effects of the SO-NUTS application, and to ensure its future implementation and dissemination across Europe and beyond. The ultimate goal is to add two healthy years to average life expectancy.

Methods: Focus groups were conducted to better understand strategies and barriers to adopting healthier lifestyles and using health technology. The development of the app was based on self-regulation theory, and a prototype was created through weekly development sprints.

Results: The first version of the SO-NUTS app includes personalized goal setting, action planning, performance tracking and feedback, home training sessions, healthy recipes, a calendar function, and educational content. Seventy participants from the Czech Republic tested the app over a six-week period. The System Usability Scale (SUS) and a questionnaire on usefulness, satisfaction, and ease of use were used for evaluation.

Conclusion: Participants viewed their involvement in the research positively. Many noted that participating increased their awareness of the need for lifestyle changes, which motivated them toward healthier habits.

Keywords: body composition, exercise, nutrition, sarcopenic obesity, obesity prevention, mobile application

About the authors:

Mgr. **Helena Michálková** Ph.D.

Institute of Nursing, Midwifery and Emergency Care, University of South Bohemia, České Budějovice, Czech Republic
Charles University, First Faculty of Medicine, Clinic of Geriatrics and Internal Medicine, Prague Czech Republic,
Helena.Michalkova@lf1.cuni.cz

Eva Topinková

Charles University, First Faculty of Medicine, Clinic of Geriatrics and Internal Medicine, Prague, Czech Republic

Teaching Hand Hygiene and Cleaning Hospital Surfaces Using Virtual Reality

DOMINIKA MURŠEC, ADRIJANA SVENŠEK, URŠKA ROZMAN,
SABINA RATAJC, NATAŠA VOGRIN, PAMELA KRIŽAN, MIHA LAVRIČ,
SONJA ŠOSTAR TURK

Introduction: Hand hygiene is one of the most important interventions to prevent the spreading of hospital-acquired infections. It is crucial to clean and disinfect hospital surfaces regularly and adequately. Continuous education of healthcare professionals is essential, and modern methods like virtual reality can offer realistic training experiences. This paper aims to present the teaching of hand hygiene and cleaning of hospital surfaces using virtual reality.

Methods: As part of the InTECHiE project, we developed a 360-degree educational video on hand hygiene and surface disinfection in a hospital setting, based on a scenario co-designed with infection control experts. Using a user-centered instructional design approach, we created and edited the video and added interactive elements such as quizzes and sentence completion.

Results: Once the recordings were ready, we gave them to experts in this field for review. The videos contain a total of 17 interactions that help participants learn and continuously test their knowledge. We now offer training videos for participants to watch using a virtual reality headset. We mainly educate nursing students and the public, such as employees in education and companies. Preliminary feedback from users suggests that the videos help visualize procedures more effectively than traditional materials.

Discussion and Conclusion: Virtual reality helps teach hand hygiene and keep hospital areas clean, as it is an interesting addition to existing educational methods. When designing and implementing new educational modalities, they must be thoughtfully based on the literature, as this is the only way to improve outcomes and increase quality in healthcare.

Keywords: education, hygiene, modern technologies

About the authors

ssist. **Dominika Muršec**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
dominika.mursec1@um.si

asist. **Adrijana Svenšek**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
adrijana.svensek1@um.si

doc. dr. **Urška Rozman**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
urska.rozman@um.si

Sabina Ratajc

University Medical Centre Maribor, Maribor, Slovenia

Nataša Vogrin

University Medical Centre Maribor, Maribor, Slovenia

Pamela Križan

University Medical Centre Maribor, Maribor, Slovenia

dr. **Miha Lavrič**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
miha.lavric1@um.si

prof. dr. **Sonja Šostar Turk**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
sonja.sostar@um.si

Co-Creating Quality in Person-centred Digital Counseling: A Practice Development Study

THERESA CLEMENT, KATHARINA GABL, HANNA MAYER

Introduction: Family caregivers make a significant contribution to sustaining the care system and need targeted support. Alles Clara, a digital counseling service in Austria, addresses this need. This research aimed to explore what constitutes high-quality, person-centred counseling in digital space and how it can be improved through practice development.

Methods: Practice development is a transformational journey. Our approach unfolded in three phases: (1) Setting the Scene—analyzing the usage of Alles Clara through in-app tracking and user feedback, (2) Encompassing Change—co-creating a quality framework with online counselors, and (3) Packing for the Journey—structuring strategies to enable high-quality counseling.

Results: Baseline data from 1.263 family caregivers and 342 counseling sessions provided insight into the heterogeneous nature of both users and their needs. Requests varied widely, reflecting the diverse demands on online counseling. Adapting the Practice Development Framework to Alles Clara resulted in the Compass of Change, a structured approach for defining quality through shared values, vision, and specific requirements. The quality development model integrates context-specific strategies and tools, emphasizing the interplay of knowledge, time, and attitude. This approach fosters continuous quality improvement, ensuring that person-centred digital counseling is not a static benchmark but a dynamic and evolving process.

Discussion and conclusion: High-quality person-centred digital counseling requires a shift from static quality definitions to an evolving, practice-driven approach. Through structured development, facilitation, and evaluation, quality remains a dynamic force—enabling counselors to go the extra mile for those seeking support.

Keywords: family caregivers, digital health, eHealth, facilitation; quality in care, person-centredness

About the authors

Theresa Clement, MSc (PreDoc),

Karl Landsteiner University of Health Sciences, Department of General Health Studies, Division Nursing Science with focus on Person-Centred Care Research, Krems, Austria

Theresa.clement@kl.ac.at

Katharina Gabl, MSc (PreDoc)

Karl Landsteiner University of Health Sciences, Department of General Health Studies, Division Nursing Science with focus on Person-Centred Care Research, Krems, Austria

Hanna Mayer, Prof.(Head of Division)

Karl Landsteiner University of Health Sciences, Department of General Health Studies, Division Nursing Science with focus on Person-Centred Care Research, Krems, Austria

Learning from Experience: A Qualitative Overview of Best Practices in Patient and Public Involvement in Interprofessional Education

ADRIJANA SVENŠEK, LUCIJA GOSAK, MATILDE LEAL, PEDRO MORGADO,
CATARINA LIMA, BARBARA KEGL, MATEJA LORBER, RICARDO,
J. O. FERREIRA

Introduction: Patients and the public involvement in interprofessional education has important benefits for students and patients - fostering empathy and collaboration. The aim of the review of best practice through in-depth interviews was to enable us to capture the experiences of six institutions and learn how they are successfully engaging patients and the public involvement in interprofessional education. This will enable us to understand potential challenges and strategies for engaging patients.

Methods: We developed an interview guide based on a literature review and identified countries where patients have been involved in the educational process. We invited institutions from these countries and conducted interviews with them. These interviews were transcribed, and we extracted key findings and essential results from the data.

Results: Effective implementation IPP in interprofessional education, requires institutional support, training of students, teachers and patient-partners, and clearly defined roles. Individuals with relevant experience are involved rather than being selected on the basis of willingness. Key challenges are faculty scepticism, logistical constraints and patients' emotional readiness. Structured support, mentoring and interdisciplinary collaboration are needed. PPI enhances empathy, communication and professional identity of students, so continuous monitoring of impact and adaptation of approaches is essential.

Conclusion: Despite the many challenges, patients and the public involvement I has significant benefits for students and patients - it promotes empathy, interprofessional collaboration and strengthens professional identity. With the right selection, training and support, barriers can be overcome. Early involvement of patients as equal partners in the educational process is crucial.

Keywords: Public and Patient Involvement, interprofessional education, healthcare

About the authors

Adrijana Svenšek

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
adrijana.svensek1@um.si

Lucija Gosak

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
lucija.gosak2@um.si

Matilde Leal

Nursing School of Lisbon, Lisbon, Portugal

Pedro Morgado

University of Minho, School of Medicine, Braga, Portugal

Catarina Lima

University of Minho, School of Medicine, Braga, Portugal

Barbara Kegl

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
barbara.kegl@um.si

Mateja Lorber

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
mateja.lorber@um.si

Ricardo J. O. Ferreira

Nursing School of Lisbon, Lisbon, Portugal

Next-Generation Biomonitoring of Drava/Drau for Sustainable and Healthy Regional Development (ZDrauA)

MIHA LAVRIČ, URŠKA ROZMAN, MATEJA LORBER, SONJA ŠOSTAR TURK,
BOŠTJAN KRIŽANEC, DAVID STANKOVIĆ, ASTRID H. PAULITSCH-FUCHS,
VID ŠVARA

Introduction: The Drava River is a vital resource for the environment, human health, and economic development in the Slovenia-Austria cross-border region. Despite the significance of Drava, existing (bio)monitoring systems are either nonexistent, outdated or inadequate to reach their full potential to address modern challenges. Interreg SI-AT project ZDrauA aims to develop the next-generation of (bio)monitoring, enabling early hazard detection (i.e. pathogen screening), improved resource management, and support for sustainable biodiversity and development of the river ecosystem.

Methods: Using a multidisciplinary approach, water, sediment, and biotic indicator samples will be collected at multiple locations along Drava in Slovenia and Austria. Samples will be analyzed using advanced analytical methods, including molecular tools and biological toxicity assessment tests. A digital system for data integration and visualization will be developed to serve as a decision-support tool for stakeholders/policymakers. Research will be conducted in collaboration with research institutions and local communities.

Results: Expected results include the identification of new molecular bioindicators, improved assessment of ecotoxicological burdens, pathogen screening, and the establishment of a digital platform for monitoring the state of the Drava River. The project will enable a better understanding of environmental factors' impact on human and ecosystem health, empower stakeholders to apply next-generation biomonitoring and foster interdisciplinary cross-border cooperation in water resource protection.

Discussion and Conclusion: The research will contribute to environmental monitoring modernization and empower local communities and authorities to make data-driven decisions. The approach, based on innovation, digitalization, and cross-sector collaboration, has the potential for a broader application in other European watercourses.

Keywords: molecular diagnostics, toxicity testing, environmental data integration, digital decision support, transboundary collaboration

About the authors

dr. **Miha Lavrič**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
miha.lavric1@um.si

Assist. Prof. Dr. **Urška Rozman**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
urska.rozman@um.si

Assoc. Prof. dr. **Mateja Lorber**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
mateja.lorber@um.si

Prof. dr. **Sonja Šostar Turk**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
sonja.sostar@um.si

dr. **Boštjan Križanec**

National Laboratory of Health, Environment and Food, Maribor, Slovenia

dr. **David Stanković**

National Institute of Biology, Department of Organisms and Ecosystems Research, Ljubljana, Slovenia
david.stankovic@nib.si

dr. **Astrid H. Paulitsch-Fuchs**

Carinthia University of Applied Sciences, Biomedical Science, Klagenfurt, Austria
astrid.paulitsch@medunigraz.at

dr. **Vid Švara**

Carinthia University of Applied Sciences, UNESCO Chair on Sustainable Management of Conservation Areas, Villach, Austria
vid.svara@fh-kaernten.at

Effects of Plant-Based Air Purification on Indoor Air Quality and Human Health: A Scoping Review

NEŞE ODABAŞ, AYFER TEZEL, SONJA ŠOSTAR TURK, KASANDRA MUSOVIĆ,
MIHA LAVRIČ

Introduction: Indoor air pollution is a growing public health concern in enclosed environments, including homes, offices, and schools. Plant-based air purification systems, including green walls, indoor plants, and phytoremediation techniques, have emerged as natural alternatives for enhancing air quality and promoting health. This scoping review aimed to map the current evidence on their effectiveness in real-world settings.

Methods: Following PRISMA-ScR guidelines, a literature search was conducted in PubMed, Web of Science, Cochrane Library, and CINAHL Ultimate up to March 2025. Search terms included concepts related to plant-based systems, indoor air quality, and health outcomes. Peer-reviewed experimental and observational studies with human participants in real indoor environments were included. Data were charted and synthesized thematically.

Results: Studies were conducted in diverse indoor settings, including offices, educational institutions, and residential-type environments. Most reported improvements in indoor air quality indicators such as reduced volatile organic compounds, increased relative humidity, and regulated carbon dioxide levels. Some also described positive effects on perceived air freshness, respiratory comfort, psychological well-being, and productivity.

Discussion and Conclusion: The findings suggest that plant-based air purification systems may contribute to healthier indoor environments by enhancing air quality indicators and promoting respiratory and psychological well-being. However, the heterogeneity in study designs, small sample sizes, and varied outcome measures limit the generalizability of current evidence. While these natural systems show promise as sustainable strategies for enhancing indoor environmental quality, further large-scale and

methodologically robust studies are needed to validate their effectiveness and guide their integration into public health and building design frameworks.

Keywords: indoor plants, indoor pollution, indoor environment, well-being, perceived comfort

About the authors

Neşe Odabaş

Ankara Yıldırım Beyazıt University, Department of Health Care Services, Elderly Care Program, Ankara, Türkiye
neseodabas@aybu.edu.tr

prof. dr. **Ayfer Tezel**

Ankara University, Faculty of Nursing, Ankara, Türkiye
atezel@ankara.edu.tr

prof. dr. **Sonja Šostar Turk**

University of Maribor, Faculty of Health Science, Maribor, Slovenia
sonja.sostar@um.si

asist. **Kasandra Musović**

University of Maribor, Faculty of Health Science, Maribor, Slovenia
kasandra.musovic1@um.si

dr. **Miha Lavrič**

University of Maribor, Faculty of Health Science, Maribor, Slovenia
miha.lavric1@um.si

Impact of Climate Change of Gut Microbiome of Human

BENJAMIN HABINC

Introduction: The gut microbiome plays a key role in maintaining human health by influencing metabolism, the immune system, and overall physiological balance. Climate change affects the availability and quality of food and increases exposure to pathogens, which may disrupt microbiome homeostasis. The aim of literature review was to examine how climate change impacts the composition, function, and stability of the human gut microbiome.

Methods: A systematic literature review was conducted following PRISMA guidelines. The search was performed in the PubMed, Scopus, and CINAHL databases for the period 2015–2025, using a defined search strategy and inclusion/exclusion criteria. Selected articles were analyzed based on content, methodology, and key findings.

Results: Six articles out of a total of 514 identified studies were included in the final analysis. The findings show that climate change has a multifaceted impact on the gut microbiome. Reduced intake of micronutrients and a higher proportion of processed foods decrease microbial diversity and disrupt the balance between beneficial and opportunistic bacteria. Heat stress increases intestinal permeability and triggers inflammatory responses. Environmental factors are associated with dysbiosis and a rise in autoimmune diseases.

Discussion and Conclusion: Climate change negatively affects the diversity and functionality of the gut microbiome, posing a risk for metabolic and inflammatory diseases. Further research, especially longitudinal studies, is needed to better understand causal relationships and population-specific vulnerabilities. The results support the development of public health measures, such as nutritional interventions and biodiversity preservation.

Keywords: heatwaves, nutrition, dysbiosis; microbiome, human health

About the author

Benjamin Habinc, dipl. zn. (VS)

University of Maribor, Faculty of Health Science, Maribor, Slovenia

benjamin.habinc@student.um.si

Predstavitev projekta: »Krepitev globalnega zdravja preko na naravi temelječe rešitve zdravilnih gozdov«

URŠKA ROZMAN, MIHA LAVRIČ, DOMINIKA MURŠEC, ARNELA KUZMA,
BOŠTJAN KRIŽANEC, SONJA ŠOSTAR TURK

Uvod: Projekt v okviru transnacionalnega razpisa Biodiversa+ z naslovom »Krepitev globalnega zdravja preko na naravi temelječe rešitve zdravilnih gozdov« raziskuje povezavo med zdravilnostjo gozdov, človekovim počutjem in ohranjanjem biotske raznovrstnosti. Glavni cilj je razviti na naravi temelječe rešitve, ki spodbujajo ohranjanje biotske raznovrstnosti, trajnostno upravljanje gozdov in izboljšanje zdravja ljudi. Poudarek je na zdravilnih učinkih terpenov v gozdnem zraku. Namen prispevka je predstaviti projekt in dosedanje preliminarne raziskave.

Metode: V preliminarjih raziskavah je bilo izvedeno vzorčenje iglic in zraka z absorpcijskimi cevkami v gozdu v Kranjski Gori maja 2024. Za analizo vzorcev je bila uporabljena ekstrakcije v trdni fazi ter detekcija s plinsko kromatografijo v sklopu z masno spektrometrijo. Slovenski partnerji bodo vključeni v raziskave in razvoj standardov za certificiranje »zdravilnih gozdov« kot tudi v izvedbo delavnic za vzorčenje iglic in zraka v gozdovih. Z metaanalizo podatkov o sestavi mikrobioma, prisotnosti BVOC in parametrih zdravja ter dobrega počutja se bo pripravil seznam bioloških indikatorjev za zdravilni gozd.

Rezultati: Preliminarni rezultati so pokazali prisotnost višjih vrednosti α -kadinola, α -pinena, β -pinena in limonena v vzorcih iglic. V vzorcih zraka prisotnost terpenov ni bila potrjena, zato bo naslednji korak uporaba metode pasivnega vzorčenja zraka, za katero se domneva, da zagotavlja rezultate z večjo učinkovitostjo.

Diskusija in zaključek: Projekt bo opredelil empirična izhodišča za obravnavo povezave med lastnostmi gozdov in vplivom obiskovanja gozda na zdravje. To nam bo omogočilo

analizo odvisnosti med različnimi biotskimi kazalniki gozdov ter merljivimi kazalniki zdravja ljudi, pri čemer bomo lahko opredelili tiste bistvene lastnosti gozda, ki značilno vplivajo na zdravje.

Ključne besede: zdravje ljudi, zdravje gozdov, zrak, iglice, hlapne organske spojine

O avtorjih

doc. dr. **Urška Rozman**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
urska.rozman@um.si

dr. **Miha Lavrič**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
miha.lavric1@um.si

asist. **Dominika Muršec**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
dominika.mursec1@um.si

Arneta Kuzma

Nacionalni laboratorij za zdravje, okolje in hrano, Maribor, Slovenija

dr. **Boštjan Križanec**

Nacionalni laboratorij za zdravje, okolje in hrano, Maribor, Slovenija

prof. dr. **Sonja Šostar Turk**

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
sonja.sostar@um.si

Abstracts – Session 4
Izvečki – Sekcija 4

The Influence of Nurse-Facilitated Preoperative Therapeutic Play on Anxiety and Fear in School-Age Children: A Literature Review

AFËRDITA LAHU, DOMINIKA VRBNJAK

Introduction: Preoperative anxiety and fear are frequent in school-age children undergoing surgery and may lead to adverse physical and psychological outcomes. Nurse-facilitated therapeutic play is an evidence-based intervention that prepares children for surgery in an engaging and supportive way. This review aims to examine evidence on its effectiveness in reducing anxiety and fear in children aged 6–12 years.

Methods: A literature review was conducted by searching PubMed, CINAHL Ultimate, and PsycINFO databases for peer-reviewed studies published between 2004 and 2024. Keywords included “preoperative anxiety,” “therapeutic play,” “pediatric surgery,” “nurse-facilitated interventions,” and “child anxiety management.” Inclusion criteria focused on studies involving children aged 6–12 years and evaluating structured, nurse-led play interventions. Eligible study designs included randomized controlled trials, quasi-experimental studies, and systematic reviews. A descriptive synthesis approach was employed to analyze and summarize findings.

Results: Findings consistently demonstrate that nurse-facilitated therapeutic play reduces anxiety and fear in school-age children. Techniques such as medical doll play, role-playing, and interactive storytelling help children become familiar with medical settings and procedures, reducing uncertainty and emotional distress. Several studies reported lower cortisol levels, fewer behavioral distress indicators, and improved cooperation during preoperative care.

Discussion and Conclusion: Nurse-facilitated preoperative therapeutic play is a valuable, evidence-based strategy for managing anxiety and fear in school-age children. Incorporating such interventions into standard pediatric surgical care may improve emotional well-being, procedural compliance, and overall patient experience. Further research should explore long-term outcomes and implementation in diverse healthcare environments.

Keywords: non-pharmacological interventions, pediatric surgery, child anxiety management

About the authors

Afërdita Lahu, RN, PhD student,
University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
aferdita.lahu@student.um.si

Associate Professor **Dominika Vrbnjak**, PhD, RN
University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
dominika.vrbnjak@um.si

Psychosocial Needs of Oncology Patients: A Pilot Study on Methodological Feasibility Using Grounded Theory

TIHANA GAŠPER, GREGOR ŠTIGLIC, DOMINIKA VRBNJAK

Introduction: Oncology patients often face significant psychosocial challenges during their journey with cancer. Understanding these needs is crucial for developing effective support strategies. This pilot study aimed to evaluate the appropriateness of the interviewing technique and guide, as well as the feasibility of using a grounded theory design.

Methods: Using a qualitative, grounded theory approach by Corbin and Strauss, data were collected through semi-structured interviews with a purposive sample of six oncology patients from five healthcare institutions. Data were analyzed using open, axial, and selective coding. Ethical approval was obtained, and participants provided informed consent.

Results: The pilot study evaluated the interviewing technique, refined the interview guide's questions, and identified potential challenges in implementing qualitative research. Preliminary findings provided insights into oncology patients' emotions, coping strategies, and support systems. The study also highlighted participant—and environment-related factors influencing qualitative research.

Discussion and Conclusion: This pilot study led to the finalization of the interview guide, ensuring clarity and relevance of questions. The pilot study holds significant value to the main qualitative study as it provides deeper insights into oncology patients' psychosocial needs, forming foundation for identifying key elements to be incorporated into targeted interventions. These findings will contribute to developing tailored support strategies to enhance patients' well-being.

Keywords: nursing, psycho-oncology, psychosocial support, cancer patients, qualitative research

About the authors

Tihana Gašpert, RN, BSc, MSc, PhD (c)

University Hospital Rijeka, Rijeka, Croatia

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia

tihana.gaspert@student.um.si

Gregor Štiglic, Professor, PhD

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia

gregor.stiglic@um.si

Dominika Vrbnjak, Professor, PhD, RN

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia

dominika.vrbnjak@um.si

Between Care and Burnout: the Perception of Personal Assistants and Parents on Caring for a Person with Cerebral Palsy

LEONA CILAR BUDLER, VANESA KOVAČ, GAŠPER ZIGMUND

Introduction: Personal assistants and parents of children with cerebral palsy face a variety of challenges daily, ranging from providing basic physical assistance to psychological support. While personal assistants report emotional strain, lack of systemic support, and infrastructural barriers, parents express concerns about access to therapies, social inclusion, and uncertainty about their children's future. Both groups are at increased risk of stress and burnout. The study aimed to analyse the experiences of personal assistants and parents and identify key factors that influence their well-being while suggesting improvements in support systems.

Methods: The study was qualitative, with focus groups consisting of personal assistants and parents of children with cerebral palsy. The data were analysed using thematic analysis, which allowed us to identify key themes.

Results: Personal assistants ($n = 7$) often experience high emotional strain, as they are directly involved in children's mood swings while facing a lack of training and psychological support. They also report limited access to institutional support. Parents of children with cerebral palsy express high levels of psychological burden due to uncertainty about their children's future, financial challenges and social stigmatisation. Key themes from the research included children's emotional state, social support, infrastructural barriers, accessibility of services and the role of psychological support.

Discussion and Conclusion: The research highlights the need for a holistic approach to supporting personal assistants and parents of children with cerebral palsy. Suggested improvements include improving access to psychological support, training, financial and social support and systemic adaptations of the work environment.

Keywords: people with special needs, nursing support, assistance; care

About the authors

Doc. dr. **Leona Cilar Budler**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
leona.cilar1@um.si

Vanesa Kovač

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
vanesa.kovac@student.um.si

Gašper Zigmund

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
gasper.zigmund@student.um.si

Probiotics as Support for Migraine: A Literature Review on the Impact on Occurrence and Pain Intensity

SABINA FIJAN, ANA PESERL, KASANDRA MUSOVIĆ

Introduction: Migraine is a prevalent neurological disorder characterized by recurrent headaches, often accompanied by sensory disturbances. Emerging evidence suggests there is an important bidirectional interaction between the gut microbiota and the central nervous system, known as the gut microbiota-brain axis. Numerous studies have confirmed the beneficial effects of probiotic supplementation which may also offer a novel therapeutic approach for impacting pain and intensity of migraines. This study aimed to evaluate the effects of probiotic consumption on migraine frequency and pain intensity in individuals with migraines.

Methods: A literature review (2014 and 2024) was conducted across the databases CINAHL Ultimate, Cochrane Library, PubMed, Science Direct, and Sage Journals using the following search terms 'migraine', 'probiotic' and 'pain'. Studies published in English were included, categorized and synthesized using content analysis.

Results: A total of five studies met the inclusion criteria. The findings in the two systematic reviews and three clinical trials that suggest that probiotics, particularly those from the *Lactobacillus* and *Bifidobacterium* genera, may contribute to a reduction in migraine frequency and intensity. The potential mechanisms include modulation of the gut-brain axis, reduction of systemic inflammation, and attenuation of oxidative stress.

Discussion and Conclusion: Probiotics exhibited neuroprotective properties, likely mediated through their role in mitigating oxidative stress and modulating inflammatory pathways. Given their potential to alleviate migraine symptoms, probiotics could be considered as an adjunctive therapeutic strategy for migraine management. Further well-designed clinical trials are necessary to establish optimal strains, dosages, and treatment duration to maximize clinical efficacy.

Keywords: beneficial microbes, symptoms, headache

About the authors

Dr. **Sabina Fijan**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
sabina.fijan@um.si

Ana Peserl, dipl. med. ses.

University Medical Centre Maribor, Maribor, Slovenia

Assist. **Kasandra Musović**

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
kasandra.musovic1@um.si

The Utilisation of Psychobiotics and Nutritionally Balanced Diets to Promote Mental Wellness: Narrative Literature Review

LANA FRIŠ, TIANA ČEH

Introduction: Microbiota is important for maintaining health through communication between the gastrointestinal tract and brain. The vagus nerve facilitates the transmission of signals, which detects imbalances and affects mental health. Several factors, including stress of daily life and side effects of mental health medications can cause imbalances. The aim was to identify psychobiotics' impact on mental health and diet.

Methods: A narrative literature review was conducted by searching bibliographic databases PubMed, CINAHL Ultimate, Medline, and the search engine Google Scholar. The inclusion criteria were English-language sources published between 2014 and 2024 that address the impact of psychobiotics on microbiota and mental health, focusing on effects in depression and anxiety.

Results: A total of 48 sources were included in the review. The findings suggest that psychobiotics contribute to the synthesis of neurotransmitters, which contributes to optimal brain function. A combination of psychobiotics bifidobacteria and lactobacilli was associated with reduced symptoms of depression and anxiety. It is recommended to be taken as a supportive therapy, found in fermented foods or supplements, containing at least 10⁷ colony-forming units per gram. For the desired effect, use psychobiotics consistently and for the long term.

Discussion and conclusion: Psychobiotics regulate mood, reduce symptoms of anxiety and depression, and support homeostasis. Dietary use is a promising mental health method because it is affordable, and side effects are uncommon. We have observed a lack of research in this area, so we recommend longitudinal research to understand the long-term effects on individuals and adapting doses to population needs.

Keywords: probiotics, mental health, nutritional supplement, depression, anxiety

About the authors

Lana Friš, dipl. m. s.

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia

lana.fris@student.um.si

Tiana Čeh, dipl. m. s.

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia

tiana.ceh@student.um.si

Interprofessional Collaboration in Pharmaceutical Care: A Path to Enhanced Safety and Treatment Efficiency

MARKO PETROVIĆ, MIRKO PROSEN

Introduction: Pharmaceutical care is a crucial part of public healthcare, aiming to improve patients' health status through effective medication management. In recent years, nurses have become formally integrated into this care model, complementing the roles of physicians and pharmacists. Effective interprofessional collaboration is essential to reducing medication-related errors and ensuring safe treatment outcomes. This study explored the role of nurses in interprofessional pharmaceutical care and identified their key responsibilities in promoting safe and effective medication use.

Methods: A secondary qualitative analysis was conducted using data from the Erasmus+ DemoPhaC project (2019–2020). The sample included 24 key informants (nurses, pharmacists, and physicians), selected through purposive quota sampling. Participants varied by profession, educational background, work setting, and healthcare level. Thematic analysis was performed using Atlas.ti software.

Results: Five key themes emerged: (1) Nurses' responsibilities in pharmaceutical care collaboration, (2) Nurses' tasks in implementing pharmaceutical care, (3) Interprofessional communication, (4) Advantages and challenges of the current nursing role, and (5) Proposals for improvement.

Discussion and conclusion: The findings highlight that strengthening the nursing role through clear guidelines, enhanced communication, and targeted education can significantly improve patient safety, medication adherence, and care outcomes. The study provides foundational insights for developing an effective interprofessional collaboration model, emphasizing the need for further large-scale quantitative research in clinical practice.

Keywords: medication safety, patient monitoring, public healthcare, professionalization, new strategies in healthcare

About the authors

Marko Petrović

Health center Izola, Ambulance services, Izola, Slovenia
University of Primorska, Faculty of Health sciences, Izola, Slovenia
Marko.5rovic@gmail.com

Mirko Prosen

University of Primorska, Faculty of Health sciences, Izola, Slovenia
mirko.prosen@fvz.upr.si

Psychosocial Support Provided by a Nurse to the Family of a Child With Autism Spectrum Disorder: A Literature Review

MAJA KLEMENC, PETRA KLANJŠEK, NATAŠA MLINAR RELJIĆ

Introduction: Autism spectrum disorder is a neurodevelopmental disorder that affects the individual and those around them. Families of children with autism spectrum disorder face many challenges, including emotional burden, lack of support and difficulty in accessing appropriate services. This paper aims to explore how psychosocial support for families of children with autism spectrum disorder affects their quality of life.

Methods: A literature review was conducted. The descriptive research method was used. A search was conducted in international databases, including CINAHL Ultimate, MEDLINE, PubMed, and the Cochrane Library, to gather relevant scientific literature. As inclusion criteria papers based on qualitative, quantitative methodology and mixed methods were included in English with no time limits. The comprehensive search and review process was presented using a PRISMA flow diagram. The content analysis method was used.

Results: A total of 35 items were retrieved from the databases, of which six articles were included in the final analysis. The main category, Psychosocial support to the family, was based on three sub-categories: (1) *Interpersonal relationships*, (2) *Psychological support*, and (3) *Quality of family life*. The findings indicate that families of children with autism spectrum disorder often experience a lower quality of life. Psychosocial support emerges as a significant factor in enhancing the well-being of these families and improving the overall quality of life within the household.

Discussion and conclusion: Caring for a child diagnosed with autism spectrum disorder presents myriad challenges that affect the entire family. Parents frequently encounter significant stress, inadequate support, and substantial responsibilities. Access to professional psychosocial support services is crucial for enhancing the quality of life for

both children with autism spectrum disorder and their families. These services can provide essential resources to alleviate burdens and foster a more supportive environment.

Keywords: child with a developmental disability, support, quality of family life

About the authors

Maja Klemenc, dipl. m. s.
Celje General Hospital, Celje, Slovenia
maja.klemenc1@student.um.si

predav. dr. **Petra Klanjšek**
University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
petra.klanjšek@um.si

doc. dr. **Nataša Mlinar Reljić**
University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
natasa.mlinar@um.si

A Qualitative Literature Review of the Role of Autonomy and Motivation in Buurtzorg's Human-Centred Care

DAVID TRAMŠEK, VERONIKA STEPANOVA

Introduction: Buurtzorg, a Dutch home healthcare organisation, has transformed the home care sector with its principle of “humanity over bureaucracy” and its emphasis on autonomy and intrinsic motivation among nursing teams. Unlike traditional hierarchical healthcare models, Buurtzorg operates through small, self-managed teams that make independent decisions about patient care, reducing administrative burdens and improving service quality. Autonomy in the Buurtzorg model fosters motivation and leads to greater job satisfaction, better team performance and better care outcomes. We will review how autonomy, competence and relatedness affect the motivation of Buurtzorg employees and analyse the factors that influence job satisfaction and reduce job dissatisfaction.

Methods: A narrative review was conducted using PubMed and identified articles published between 2010 and 2025 about Buurtzorg and role of autonomy and motivation. The keywords used included, but were not limited to, “Buurtzorg” AND “autonomy” OR “motivation”. PubMed yielded 39 articles. A literature search of articles cited in the identified publications was also conducted. The literature search was restricted to articles and studies written in English. Through qualitative analysis, themes related to autonomy and motivation in decision-making were identified, drawing on insights from self-determination theory and Herzberg's two-factor theory.

Results: The results show that human-centred care models, which empower employees' autonomy rather than impose rigid structures, allow for more compassionate, efficient and sustainable health care.

Conclusion: The Buurtzorg model is cost-effective and has evidence of a positive impact on quality of care and employee satisfaction. Buurtzorg is a leading example of an innovative care model that can potentially drive broader transformations in healthcare systems worldwide.

Keywords: Buurtzorg, healthcare, long term care, autonomy, motivation

About the authors

David Tramšek, dipl. zdrav.,

LKH-Univ. Klinikum Graz , Universitätsklinik für Innere Medizin, Kardiologische Intensivstation, Graz, Austria

david.tramsek@gmail.com

Veronika Stepanova

LKH-Univ. Klinikum Graz , Universitätsklinik für Innere Medizin, Kardiologische Intensivstation, Graz, Austria

Nekoč tabu, danes terapija: Psihedelične droge v skrbi za duševno zdravje

TAMARA TRAJBARIČ

Uvod: Veliko oseb s težavami v duševnem zdravju, kljub zdravljenju doživlja slab odziv na terapijo ali ima neželene učinke. Psihedeliki predstavljajo obetavno, a še vedno premalo raziskano možnost zdravljenja. Namen pregleda literature je preučiti terapevtski potencial psihedelikov, mehanizme delovanja, učinkovitost ter tveganja, s ciljem poglobiti razumevanje njihove vloge v sodobni skrbi za duševno zdravje in oceniti možnosti za regulirano uporabo v terapevtskem kontekstu.

Metode: Pregledali smo znanstveno literaturo, ki obravnava intervencije zdravstvene nege pri zlorabi opioidov, pri čemer smo uporabili podatkovne baze PubMed, Science Direct in PsycArticles. Iskanje smo izvedli s ključnimi besedami v angleškem jeziku: *mental health disorder, psychedelic drugs, mental health effect*. V analizo smo vključili raziskave, ki so se nanašale na raziskovalno tematiko angleškem jeziku. Pridobljene podatke smo analizirali in predstavili v obliki sintezne tabele.

Rezultati: V okviru pregleda literature smo identificirali skupno 100 raziskav, v končno analizo smo jih vključili osem, ki podrobno obravnavajo uporabo psihedeličnih drog pri zdravljenju motenj v duševnem zdravju. Najpogostejše ugotovljeni učinki vključujejo povečano klinično odzivnost, višje stopnje remisije, zmanjšanje simptomov depresije, anksioznosti, posttramatnega stresnega sindroma in obsesivno kompulzivne motnje, izboljšanje kakovosti življenja ter okrepljen občutek osebne rasti. Med pogostejšimi neželenimi učinki so bile blage do zmerne reakcije, pri uporabi dietilamid lizergične kisline pa je bilo opaženih več stranskih učinkov.

Diskusija in zaključek: Psihedeliki izkazujejo potencial za napredek pri skrbi za duševno zdravje. Kljub nizkemu tveganju resnih neželenih učinkov ostajajo izzivi pri optimizaciji odmerjanja, dolgoročnih učinkih in klinični implementaciji. Nadaljnje raziskave so ključne za standardizacijo terapevtskih protokolov, oceno varnosti in učinkovitosti ter

zagotavljanje regulativnih smernic za varno vključitev psihedelične terapije v sodobno oskrbo duševnega zdravja.

Ključne besede: psihedelične droge, skrb za duševno zdravje, zdravljenje s psihedeliki, terapevtski učinek, regulacija psihedelikov

O avtorici

Tamara Trajbarič

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
tamara.trajbaric@student.um.si

INTERNATIONAL SCIENTIFIC CONFERENCE »RESEARCH AND EDUCATION IN NURSING« BOOK OF ABSTRACTS JUNE 5TH 2025, MARIBOR, SLOVENIA

MATEJA LORBER ET AL. (ED.)

University of Maribor, Faculty of Health Sciences, Maribor, Slovenia
mateja.lorber@um.si

University of Maribor Faculty of Health Sciences is organising the International Scientific Conference "Research and Education in Nursing". It will be held on June 5th 2025 in Maribor and will include the most recent findings of domestic and foreign researchers in nursing and other healthcare fields. The purpose of the conference is to promote the exchange of knowledge, research evidence, and best practices, while fostering connections among researchers, higher education faculty, and healthcare professionals with the aim of strengthening professional collaboration and networking. At the same time, we aim to contribute to the advancement and promotion of nursing and health sciences at both local and global levels.

DOI

[https://doi.org/
10.18690/um.fzv.3.2025](https://doi.org/10.18690/um.fzv.3.2025)

ISBN

978-961-286-997-7

Keywords:

higher education,
nursing,
health sciences,
conference,
research



University of Maribor Press

DOI
[https://doi.org/
10.18690/um.fzv.3.2025](https://doi.org/10.18690/um.fzv.3.2025)

ISBN
978-961-286-997-7

Ključne besede:
visokošolsko
izobraževanje,
zdravstvena nega,
zdravstvene vede,
konferenca,
raziskovanje

MEDNARODNA ZNANSTVENA KONFERENCA »RAZISKOVANJE IN IZOBRAŽEVANJE V ZDRAVSTVENI NEGI« ZBORNİK POVZETKOV 5. JUNIJ 2025, MARIBOR, SLOVENIJA

MATEJA LORBER ET AL. (UR.)

Univerza v Mariboru, Fakulteta za zdravstvene vede, Maribor, Slovenija
mateja.lorber@um.si

Univerza v Mariboru Fakulteta za zdravstvene vede letos organizira mednarodno znanstveno konferenco »Raziskovanje in izobraževanje v zdravstveni negi«. Konferenca bo potekala 5. junija 2025 na fakulteti in bo vključevala prispevke in predavanja domačih in tujih strokovnjakov ter študentov s področja zdravstvene nege in zdravstvenih ved. Namen konference je spodbujati izmenjavo znanj, raziskovalnih dokazov in dobrih praks ter povezovati raziskovalce, visokošolske učitelje in zdravstvene delavce in z namenom krepite strokovnega sodelovanja in mreženja. Hkrati želimo z dogodkom prispevati k napredku in promociji zdravstvene nege in zdravstvenih ved na lokalni in globalni ravni.



University of Maribor

Faculty of Health Sciences