

INTERNATIONAL CONFERENCE

**"EMPOWERMENT OF PUBLIC HEALTH,  
HEALTH CARE AND WELLBEING -  
EDUCATION, RESEARCH AND PRACTICE"**

November 6-7, 2024  
Tallinn, Estonia



## Conference Proceedings

### Editors

Jekaterina Šteinmiller  
Kadri Kööp  
Maarja Randväli  
Kateriina Rannula

Tallinna Tervishoiu Kõrgkooli väljaanded; seeria B: Konverentsiteeside kogumik

**“Empowerment of Public Health, Health Care and Wellbeing - Education, Research, and Practice”**

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## **Welcome from the Rector of Tallinn Health Care College**

*Dear Reader,*

*As science advances, it becomes increasingly clear that the health of people depends not so much on treatment as on prevention. While treatment is the domain of the healthcare system, prevention requires the collaboration of many different organizations. For quality work, we need evidence-based guidelines and agreements.*

*Digital skills will determine the development of nations and everyone's ability to succeed in society and in working life. Healthy years lived and increased life expectancy are challenges that the healthcare system must respond to. Furthermore, ensuring a dignified end of life, with its significant ethical considerations, remains a key priority.*

*Health education is rooted in evidence, and throughout the learning process, individuals acquire foundational knowledge and research skills. Healthcare professionals must remain continually informed of the latest scientific findings and engage in the evaluation of their own practices. Only by adopting this approach can we deliver the highest standard of healthcare. Additionally, there is an ongoing need to educate the public, ensuring that self-care is both effective and informed by the most reliable information available.*

*Here we stand — educators, professionals, and researchers — sharing our knowledge and expertise to learn from one another and put our insights into practice.*

*I thank everyone who shared their work with us. Be successful and take pride in your achievements. We are grateful for your willingness to share your knowledge and skills.*

**Ülle Ernits, PhD**



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## **Keynote Speakers' Biographies**

**Luca Bertocchi** is an oncohematology nurse at the Maggiore Hospital of Trieste (Italy). He worked for two years at St George's University Hospital in London (UK) and completed a six-month mobility program at Boston College in the Connell School of Nursing (the United States) under the mentorship of Professor Dorothy Jones, former president of NANDA International and current Director of the Gordon Program. He is working on research topics regarding Standardized Nursing Terminologies, Nursing Information Systems, Simulation, and Nutrition.



**Kay Sundberg**, RN, PhD, is an Associate Professor in Nursing at Karolinska Institutet (KI) in Stockholm, Sweden. She is also the director of the research school of health science at KI. Her nursing background is in oncology nursing, and she is currently a senior lecturer in the nursing programs at KI. Her early research focused on quality of life and sense of coherence (SOC) among survivors of childhood cancer, and her current research focuses on patient-reported outcomes (PRO) and support through digital technology during and after cancer treatment. In all her research, the concept of SOC forms the basis for a person-centred approach.



Professor **Natalja Istomina** is the Director of the Institute of Health Sciences at the Faculty of Medicine, Vilnius University, Lithuania. She graduated from an international nursing doctoral school in Finland and defended her doctoral thesis at the University of Turku. Natalja Istomina has extensive research experience in international projects since 2001. She has also led successful projects in Lithuania. In 2010, Natalja was involved as an expert for the EU in TAIEX activities. Natalja has 23 years of experience teaching healthcare students in Bachelor's, Master's, and Doctoral programs in Lithuania, as well as in European and Asian countries. She has rich experience at the highest levels of management and leadership. From 2011 to 2016, she was an elected member of Klaipeda City Council. From 2014 to 2016, she served as Vice-Minister of the Ministry of Education and Science of the Lithuanian Republic, responsible for health education. Her main research interests are healthcare providers' competence, quality of healthcare, health education, and health policy.





**Alena Lochmannová**, Ph.D. et Ph.D. is an ethnologist working on medical anthropology, especially on perinatal health, patients' emic perspectives, culturally sensitive care, body modifications and rituals related to psychosocial health, and an industrial engineer working on the education of non-medical health professionals using virtual reality, as well as the use of virtual reality in rehabilitation. She works at the Faculty of Health Care Studies of the University of West Bohemia in Pilsen, Czech Republic and at the Faculty of Engineering of the University of West Bohemia in Pilsen, Czech Republic. There she works as an assistant professor, researcher and at the Faculty of Health Care Studies as a vice-dean for internal and external relations. She has extensive experience in research projects within international multidisciplinary teams.



## Day I November 6, 2024

Swissotel, Tornimäe street 3, Tallinn

Chairs: Jekaterina Šteinmiller and Kurt Cassar

9:30 Registration

10:00 Conference opening

10:05	<b>Anniki Lai</b> , Vice Chancellor for Health Affairs, Estonia
10:10	<b>Ülle Ernits</b> RN, PhD, Rector, Tallinn Health Care College, Estonia
10:15-10:40	<b>Invited speaker: Kaire Innos</b> PhD, National Institute for Health Development, Estonia
10:40-11:00	“Barriers to Adapting to Type 2 Diabetes, Adaptation Profiles, and Their Relationship to Complications” Maarja Randväli RN, MSc et al. (Estonia)
11:00-11:20	“The Importance of Informing about the Preventive Programme for Early Detection of Prostate Cancer” Prof. Dr. Željko Jovanović PhD et al. (Croatia)
11:20-11:40	“Understanding of Professional Guidelines by Lay Public – Results of RCT Pilot Study in the Czech Republic” Mgr. Dana Dolanová PhD. et al (Czech Republic)
11:40-12:30	POSTERS` SESSION
<b>12:30-13:30</b>	<b>Lunch break</b>
13:35-14:00	“Transforming Nursing Care Using Clinical Decision Support Systems” <b>Invited speaker: Luca Bertocchi</b> RN, PhD (Italy)
14:00-14:20	“The Effect of Video-Assisted Training on the Ability to Inject Intramuscular Injection into the Ventrogluteal Area” Assoc. Prof. Nuray Turan PhD (Turkey)
14:20-14:40	“Digital Solutions for the Optimization of Processes in Operating Theatre” Diana Ptašinskienė (Lithuania) and Anu Ool (Estonia)
14:40-15:00	“Quality of E-learning Infection Material Using the Learning Object Review Instrument: An Interrater Reliability Study” Assoc. Prof. Nuray Turan PhD (Turkey)
<b>15:00-15:20</b>	<b>Coffee break</b>
15:20-15:45	Quality of care <b>Invited speaker: Prof. Dr. Natalja Istomina</b> RN, PhD (Lithuania)
15:45-16:05	“Methods and Approaches for Developing Plain Language Recommendations of Medical Guidelines: Main Highlights of a Scoping Review” Mgr. Bc. Alena Langafova Ph.D. et al. (Czech Republic)
16:05-16:25	“End-of-Life Care Preferences of the Elderly” Prof. Dr. Željko Jovanović PhD et al. (Croatia)
<b>16:25-17:00</b>	<b>PANEL DISCUSSION: Ulvi Kõrgemaa, Kristi Puusepp, Siiri Maasen, Nursing student</b>
17:30-21:00	Social event and networking “The contemporary museum of photography, art & culture Fotografiska” Address: Telliskivi 60a-8, Tallinn

## **POSTERS`SESSION\***

1. “Overcoming Dispositional Learning Barriers Based on the Experience of Adults Entering Higher Education Based on the Experience of Nursing Students in a Healthcare College” Sirk, G. (Estonia)
2. “First- and fourth Year Nursing Students' Assessment of the Clinical Learning Environment, Supervision and the Role of the Nursing Teacher” Nool, I., Parm, L., Tupits, M., Prits, I., Kuhi, M., Männiksaar, L., Eensalu-Lind, A., Raudsepp, V. (Estonia)
3. “Nursing Students´ Physical Health, Health Behaviour and Attitudes Towards Being Role Models to Their Patients” Zeel, O., Steinmiller, J. (Estonia)
4. “Digital Health Education and Nursing Students' Perceptions of Technology’” Sule, J. (Estonia).
5. “Assessing Aftereffects of Daily Visual Tasks Across Different Realities” Räppo, D. (Estonia)
6. “The Experiences and Needs of Parents of Children with Inflammatory Bowel Disease in Coping with the Child's disease” Tupits, M., Kööp, K. (Estonia)
7. “The Experiences and Needs of Parents of Children with Cerebral Palsy in Coping with the Child's Disease” Kööp, K., Tupits, M. (Estonia)
8. “Phrasing Sensory Integration Theory Terminology into Estonian Based on Adaptations of Evaluation in Ayres Sensory Integration, Sensory Profile 2, and Adolescent/Adult Sensory Profile” Põldma, H-M., Eiche, G., Savolainen, J., Tähtla, Õ., Puura, K. (Estonia)

## Day 2 November 7, 2024

Swissotel, Tornimäe street 3, Tallinn

Chairs: Maarja Randväli and Kurt Cassar

9:30 Registration

10:00 Conference opening

10:05-10:30	“Sense of coherence as an underpinning concept in nursing education and research” <b>Invited Speaker: Docent Kay Sundberg PhD (Sweden)</b>
10:30-10:50	“Lecturers' Experiences of Teaching Standardised Nursing Language to Nursing Students: An Ethnographic Research Study” Prof. Kristi Rannus RN, PhD (Estonia)
10:50-11:10	“Nurses' Experiences of Completing the Training "Nurses Back to Healthcare" and Returning to Professional Work 2020–2024” Kadri Kööp RN, MSc (Estonia)
11:10-11:30	“The Role of Healthcare Specialized Libraries in Supporting Adult Development in Promoting Health and Well-Being: Future Directions” Siret Piirsalu MA (Estonia)
11:30-12:30	POSTERS` SESSION and BEST POSTER AWARD
<b>12:30-13:30</b>	<b>Lunch break</b>
13:30-13:50	“Reflecting on the Health Advice Legacy of Estonian Family Magazines (1930–1940): Towards a Healthy Lifestyle” Assoc. Prof. Merle Talvik PhD et al. (Estonia)
13:50-14:10	“Validity and Reliability of the Turkish version of the Infection Prevention Appraisal Scale” Assoc. Prof. Nuray Turan PhD (Turkey)
14:10-14:35	“Health Profession Education Virtual and Real: from Tradition to the Challenges of Today” <b>Invited Speaker: Mgr. Ing. Alena Lochmannová, Ph.D. et Ph.D., MBA (Czech Republic)</b>
14:35-15:00	“Lecturers’ Perceptions and Conveyance of Academic Ethics to Students in Distance Learning” Maigi Lepik MSc et al. (Estonia)
15:00-15:20	“Transforming Intercultural sensitivity Midwifery students through an inclusive mobility model” Anneli Kärema MSc et al. (Estonia)
<b>15:20-15:40</b>	<b>Coffee break</b>
15:40-16:05	“Take Up and Feedback of the Leading an Empowered Organisation (LEO) programme”? Prof. Dickon Weir-Hughes (Estonia)
16:05-16:25	“Learning Challenges and Expectations of Teaching Among Neurotypical Students and Students with ADHD: A Comparative Analysis” Doc. Dr. Viktorija Piščalkienė et al. (Lithuania)
16:25-16:45	“The Impact of Blended Learning on Improving Nurses' Hand Hygiene Knowledge in Developing Occupational Safety Culture” Ljudmila Linnik RN, MSc (Estonia)
16:45-17:05	“International Experience Benefits in Teaching Skills of Breastfeeding Education” Marge Pöldma (Estonia)
17:05	<b>Summary of the conference, closing</b> Ulvi Kõrgemaa RN, MSc Vice Rector of Academic Affairs, Tallinn Health Care College (Estonia)

## POSTERS`SESSION\*

1. "Tactical Life-Saving Aid at the Police and Border Guard Board" Porval, H., Steinmiller, J. (Estonia)
2. "Specialist nurses' (endocrinology) interventions and their influencing factors in patient" Sider, A. (Estonia)
3. "Opportunities for Improving the Quality of Life of Nursing Home Residents through Enhanced Medication Use" Valner, C., Sepp, K., Kiloman, M., Ruuben, L. (Estonia)
4. "Relactation Counselling Combined with Domperidone helps a mother to Achieve Breastfeeding Relationship" Põldma, M. (Estonia)
5. "The Experiences and Needs of Family Nurses when Counselling Climacteric Female Patients" Grünthal-Drell, M., Lelle, D., Frischer, J., Fomitšev, L. (Estonia)
6. "The Development of a Sustainable Quality Management System aligned with the Baby Friendly Hospital Initiative Principles in the East Tallinn Central Hospital Women's Clinic" Põldma, M. (Estonia)
7. "Pregnancy and its Outcomes in Women with Obesity and Underweight" Shelestova, L. (Estonia)
8. "Attitudes Towards Violence Against Women of Students of the First-Year Nursing Curriculum of Tallinn Health Care College" Merits, M., Tupits, M., Nool, I. (Estonia)
9. "The Activities of The Patient Education Programm to Promote The Well-Being of Cancer Patients" Ferrarin, E., Mis, C.C. (Italy)

## **Barriers to Adapting to Type 2 Diabetes, Adaptation Profiles, and their Relationship to Complications**

**Maarja Randväli<sup>1,2</sup>, Irma Nool<sup>1</sup>, Jekaterina Šteinmiller<sup>1</sup>, Toomas Toomsoo<sup>2</sup>, Anna-Liisa Jõgi<sup>3</sup>**

<sup>1</sup> Tallinn Health Care College, Tallinn, Estonia

<sup>2</sup> School of Natural Sciences and Health, Tallinn University, Tallinn, Estonia

<sup>3</sup> School of Educational Sciences, Tallinn University, Tallinn, Estonia

**Objective:** Insufficient understanding of the disease, its management, comorbidities, complications, and associated mental health challenges impede effective coping with type 2 diabetes and exacerbates its progression; this study aims to identify these barriers and explore their connection to complications in type 2 diabetes.

**Methods:** The cross-sectional sample for the study included outpatients (n = 151) diagnosed with type 2 diabetes. The data was collected using The Diabetes Obstacles Questionnaire 30.

**Results:** The average age at disease onset was 50.39 years (SD = 11.02), with a mean BMI of 32.90 (SD = 6.64) and an average HbA1c level of 7.6% (SD = 1.30). The most common complications were hypertension (78.1%), retinopathy (33.1%), and neuropathy (22.5%). Respondents expressed fear of diagnosis (M = 2.99, SD = 1.28), high blood sugar readings (M = 3.19, SD = 1.23), insulin therapy (M = 3.38, SD = 1.30), and showed low motivation to increase physical activity (M = 3.04, SD = 1.30). Adaptation profiles are influenced by the need for information, social support, and disease complications.

**Conclusion:** Patients with type 2 diabetes are heterogenic in their adaptation to the disease. It is essential to identify and screen the factors influencing this adaptation, while also highlighting the associated complications of diabetes.

# Learning Challenges and Expectations of Teaching Among Neurotypical Students and Students with ADHD: A Comparative Analysis

Viktorija Piščalkienė<sup>1</sup>, Evelina Lamsodienė<sup>1</sup>

<sup>1</sup> Kauno kolegija/Higher Education Institution, Faculty of Medicine

**Introduction:** Students with ADHD (Attention Deficit Hyperactivity Disorder) are more likely to drop out than neurotypical students. The main reason is the study process's lack of didactic and organizational conditions. Incomplete studies can reduce students' motivation, cause psychological problems, and be pointless because studying and dropping out of studies increase social costs for the state. All these reasons point to the importance of the lecturer's role as a leader in helping students with ADHD to achieve good academic performance, social inclusion and graduation.

**Aim:** The purpose of this research was to compare learning challenges and expectations of teaching among neurotypical students and students with ADHD.

**Method:** A quantitative research approach was used. The survey was conducted among students of Kauno Kolegija/Higher Education Institution (N=512). Statistical analysis of the data was performed using SPSS 21 and Windows Microsoft Office software. A high Cronbach's alpha coefficient of 0.846 was found.

**Findings:** Students with ADHD have more learning challenges, prefer learning methods that include more visualization, clearer instructions on course requirements, more time for discussion and group work, assignments, and additional consultation with a psychologist or special educator ( $p \leq 0,05$ ).

**Conclusion:** The findings show the differences in teaching between neurotypical students and students with ADHD. This shows that lecturers need to be flexible and responsive to the learning styles and approaches of students with different learning needs.

**Originality and value:** The survey instrument is comprehensive and of high psychometric quality. The study is original because it analyses a little-explored problem in Higher Education.

## **Digital Solution for the Optimisation of Processes in Operating Theatre**

**Diana Ptašinskienė<sup>1</sup>, Anu Ool<sup>2</sup>**

<sup>1</sup> Surgical Department, Republic Siauliai Hospital, Siauliai, Lithuania

<sup>2</sup> AmberCell Solutions, Lithuania

**Background:** In most healthcare organisations supply chain costs are the second biggest part of expenses in the hospital and takes 40-45 percent. A lot of healthcare medical items are still managed on manual supply chain management processes with many challenges such as staff burnout, product expiration, inaccurate documentation, and insufficient inventory. Effective supply chain management helps save health institutions finances, improves the quality of healthcare, and ensures patient safety.

**Objective:** To develop solution for efficient management of operating theatre: innovative Supply chain management system for automatisisation and digitalisation of supply processes in Operating Theatre.

**Results:** Digitisation of the supply chain, the use of RFID technology, other smart warehouse management solutions create better conditions for the supply of necessary medical equipment at the right time, provide opportunities for monitoring the consumption of medical devices and their traceability, reducing errors and storage space, increasing productivity of medical staff and safety for the patients.

**Conclusions:** Automation of routine unskilled activities allows more time to be spent on patient care, which increases the availability of services, the quality of patient care and their satisfaction.



## **Specialist Nurses' (Endocrinology) Interventions and Their Influencing Factors in Patient Education for Adults with Type 2 Diabetes: A Qualitative Study**

**Albina Sider<sup>1 2</sup>, Merle Seera-Erstu<sup>2</sup>, Maarja Randväli<sup>1</sup>**

<sup>1</sup> Tallinn Health Care College, Nursing department

<sup>2</sup> University of Tartu, Faculty of Medicine, Institute of Family Medicine and Public Health

**Background:** The role of specialist nurses in teaching patients with type 2 diabetes is critical. Effective interventions require an individualized approach that considers patient needs and environmental factors to increase patients' coping skills and improve quality of life. **Objective:** Interventions in patient education and their implementation are influenced by patient and specialist factors, the work environment and organisational aspects of healthcare. To describe the interventions used by specialist nurses (endocrinology) and the factors influencing their use in adult patients with type 2 diabetes.

**Methods:** Data were collected through semi-structured individual interviews between May and December 2023. Thematic content analysis was used as a data analysis method. The study included 10 speciality nurses (endocrinology) who had completed speciality nurse training at Tallinn or Tartu Healthcare College or a master's degree programme in health sciences (clinical speciality nursing). Specialist nurses who have received on-the-job training, have at least two years' experience of working with adults with type 2 diabetes, are willing to volunteer for the study and are able to communicate in Estonian were eligible to participate.

**Results:** Patient education uses interventions that develop patient skills and awareness of the specificities of the disease, individuality and patient-centredness. Patient-centred interventions are influenced by patient-related factors, such as goal-setting skills, motivation, cognitive ability, availability of family support, financial resources, and psychosocial problems. The implementation of interventions is influenced by specialist nurse factors (ethical behaviour, responsibility for self-improvement and work fatigue resulting from a trusting relationship) and organisational factors (limited rights of specialist nurses, specialist education difficulties, lack of uniform information materials, lack of necessary specialists in the interdisciplinary team).

**Conclusions:** The use of interventions is based on targeting and the individual patient. Interventions are influenced by human and work environment factors. Shortage of specialist nurses (endocrinology) and insufficient interdisciplinary collaboration. There is a need to review the responsibilities of specialised nurses and to review the codes of practice for

specialised nurses (endocrinology) to meet the needs of day-to-day practice and the requirements of quality service provision.

## **The Development of a Sustainable Quality Management System aligned with the Baby Friendly Hospital Initiative Principles in the East Tallinn Central Hospital Women's Clinic**

**Aet Maarja Leberecht <sup>1 2</sup>, Kärt Maalinn <sup>1</sup>, Grethel Tarmas <sup>1</sup>, Vivian Arusaar <sup>1</sup>, Kristel Taevere <sup>1</sup>, Agris Koppel <sup>1</sup>, Marge Põldma <sup>1 2</sup>**

<sup>1</sup> East Tallinn Central Hospital, Tallinn, Estonia

<sup>2</sup> Tallinn Health Care College, Tallinn, Estonia

**Background:** The Baby Friendly Hospital Initiative (BFHI) is an internationally recognized program aimed at promoting and supporting breastfeeding in maternity facilities. Baby Friendly Certified hospitals in Estonia achieve about 12% better outcome in exclusive breastfeeding at discharge.

**Objective:** In response to the need for a comprehensive quality assessment framework, East Tallinn Central Hospital (ETCH) is developing a sustainable quality management system (QMS). ETCH aims to strengthen its commitment to maternal and child health while contributing to broader efforts to improve breastfeeding outcomes in healthcare settings. The ultimate goal of this project is to develop a sustainable QMS in order to enhance the quality of care provided to mothers and infants at ETCH by promoting evidence-based practices that support breastfeeding initiation and continuation.

**Methods:** Implementation involves training of staff, updating protocols, and establishing monitoring mechanisms to track adherence to BFHI standards. Continuous evaluation and feedback loops are built into the system to enable ongoing improvement and adaptation to the changing needs. Sustainability is a central focus, with efforts made to embed the evaluation system within existing hospital routines and culture.

**Conclusions:** The project encompasses several key phases, including research, design, implementation, and evaluation. Through extensive research and stakeholder consultations, a framework has been developed that integrates BFHI standards with the hospital's existing QMS. This framework considers factors such as staff training, breastfeeding support practices, and facility infrastructure to ensure comprehensive coverage of BFHI criteria.

## **The Experiences and Needs of Family Nurses when Counselling Climacteric Female Patients**

**Grünthal-Drell, Marelle <sup>1</sup>, Lelle, Dagmar <sup>2</sup>, Frischer, Jelena <sup>2</sup>, Fomitšev, Liisa <sup>2</sup>**

<sup>1</sup> Tallinn Health Care College, Tallinn, Estonia

<sup>2</sup> SA Pärnu Hospital, Pärnu, Estonia *Hospital, RN*

**Background:** Healthcare services focus primarily on educating young girls during puberty, and on teaching pregnant women, but little attention is paid to raising awareness of women's peri- and menopausal changes.

**Objective:** A nurse should be able to recognise signs of the climacteric phase and be prepared to advise women. The purpose of this qualitative study is to describe the experiences and needs of family nurses when counselling climacteric female patients.

**Methods:** A qualitative study was conducted in 2023 in one Family Medical Centre, data were collected through semi-structured interviews.

**Results:** Family nurses realised that the patient comes to the reception with several health problems that she usually does not associate with climacteric symptoms. Counselling the female patients on their movement and nutrition was deemed highly important to manage climacteric symptoms effectively, also as to osteoporosis prevention, or the functional preservation of the musculoskeletal system. It also highlighted the importance of counselling both preoperative and postoperative gynaecological patients. Nurses felt insecure in regard to counselling, they wanted to improve their knowledge in terms of anamnesis in order to recognise climacteric symptoms, not enough training was being carried out in relation to this topic.

**Conclusions:** The needs of family nurses were, above all, related to professional development which would help them to become more confident when counselling climacteric patients, but also a need for a thematic website as a tool for healthcare workers, which covers women's health and welfare, for better understand the subject.

## **Take Up and Feedback of the Leading an Empowered Organisation (LEO) programme**

**Dickon Weir-Hughes <sup>1</sup>, Kristi Rannus <sup>1</sup>**

<sup>1</sup> Tallinn Health Care College, Tallinn, Estonia

**Background:** Leadership development is well recognised as an essential component of safe and effective clinical care, improved staff satisfaction, succession planning, and staff retention.

**Methods:** The LEO programme was designed by clinical leadership guru, Dr. Marie Manthey, President of Creative Healthcare Management (CHCM) in the USA in the late 1970's. It is an intense three-day programme with a one-day follow-up about 3 months after completion of the course. Over 400,000 healthcare professionals, alone, have completed the course worldwide.

**Objective:** The objectives are to describe implementation of LEO programme, the feedback from trainers and participants; and to design an applied study to pilot the programme in Estonia.

**Results:** The program has been evaluated many times over the years and has been found to be an effective way of empowering health care professionals to be more positive transformational leaders and helps them to tackle some of their less enabling personal and leadership behaviours that can develop over time. Direct feedback from participants is typically excellent and it is not unusual participants to describe course as 'life changing'. LEO is a tried and tested, evidence-based way of developing clinical leadership. It is also highly cost effective. It is hoped that this presentation excites and inspires.

**Conclusions:** The outcomes achieved confirm the need for testing and evaluating a model for delivering the internationally recognised, tried and tested LEO programme, for the first time in Estonia (and the Baltic States), for nurses and midwives. LEO has been effective worldwide so there is no reason it would not also be a success in Estonia.

## **Opportunities for Improving the Quality of Life of Nursing Home Residents through Enhanced Medication Use**

**Lilian Ruuben <sup>1</sup>, Kristiina Sepp <sup>1</sup>, Merle Kiloman <sup>1</sup>, Catri Valner <sup>1</sup>**

<sup>1</sup> Tallinn Health Care College, Tallinn, Estonia

**Background:** Long-term care residents are often characterised by polypharmacy. Factors contributing to this include age, cognitive status, the number of prescription providers, medication dependency, and the duration of stay in the nursing home. These factors, in turn, bring several risks associated with medication use, such as medication errors and drug interactions and side effects. Deficiencies in the medication use process can appear at various stages: prescribing, ordering, storing, administering, and monitoring medication use.

**Objective:** Describe the situation in the field of medication use in nursing homes, the skills and attitudes of staff regarding medication use. Describe and evaluate the functioning of the medication handling system and medication use in terms of the suitability of dosage forms, potential interactions and side effects, the risk of falls due to medications.

**Methods:** A quantitative study with nursing home staff. The questionnaire is based on scientific literature and previous research. Complete anonymity is ensured, with no IP addresses collected. Participants have consented and understand the study's purpose, data use, and their right to withdraw at any time.

**Results:** The research will create opportunities to improve the quality of life for nursing home residents through the optimisation of medication use. Additionally, it will lay the foundation for increasing cost-effectiveness in medication use, improving quality of life, and mitigating potential additional health risks.

**Conclusions:** Medication use in nursing homes can be most effectively improved on a micro level through the implementation of medication use review services, enhancing cross-disciplinary collaboration and applying person-centred care principles in practice.

## **Nursing Students' Physical Health, Health Behaviour and Attitudes Towards Being Role Models to Their Patients**

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**Background:** Physical activity is important for healthy behaviour and general wellbeing, which decreases risk for several diseases. Nurses serve as health promoters and role models for patients, including adopting and maintaining a healthy lifestyle. Starting nursing professional studies at the university may impact healthy habits of the students, since adoption with the intensity of the studies could be challenging. In order to ensure the preparedness of nursing students to achieve the healthy role models and transfer professional education to their own health behaviours there is a need for systematic assessment of their physical activity, health behaviours and attitudes towards being role models to their patients.

**Objective:** The aim of the study was to describe the level of physical activity of the nursing students and to find the best interventions to increase the level of activity.

**Methods:** Current study is the first stage of the two-stage applied research. A descriptive and quantitative study design used. Physical activity of the students (N=27) was evaluated by calculation of the steps and distance taken for one week by the 'Health' application **in September-October 2020. Data were analysed by using descriptive statistics. After the intervention students were asked to share their opinions if** 10,000 steps a day is an achievable goal.

**Results:** The results revealed that during one week before the intervention the level of students' physical activity in one day was rather inactive or low (M=4289). Based on the results of the study, two seminars were developed for students, which addressed the following. On average, the number of steps students took per week after the intervention increased by 2,186 steps. According to students, 10,000 steps a day is an achievable goal, and after the intervention their physical activity improved. Risked physical health has a negative impact on nursing students. There are different interventions to improve the physical health of students, which prevents burnout and development of diseases. In the second stage of the study, students are asked to share their experiences of how they understand the health behaviours and attitudes of health promoting role of nurses towards their patients.

**Conclusions:** A strategy to support physical health should be developed.

## **Relactation Counselling Combined with Domperidone Helps a Mother to Achieve a Breastfeeding Relationship**

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**Background:** Many breastfeeding mothers face difficulties in achieving and maintaining exclusive breastfeeding through 6 months of babies' age. Inadequate breastfeeding support and early introduction of supplementation with breastmilk substitutes often leads to infants temporarily or terminally weaning from breastfeeding however lactation and breastfeeding can be restarted even after longer period of not breastfeeding. Breastfeeding has multiple benefits for both mother and infant. According to WHO babies should be exclusively breastfed up to 6 months of age and breastfeeding should continue simultaneously with age-appropriate solid foods for 2 to 3 years. Domperidone has been successfully used as a galactagogue for several decades in multiple countries.

**Objective:** Objective is to describe a breastfeeding counselling and pharmacological management related to relactation.

**Methods:** This is a retrospective descriptive single case study of a 29-year-old primiparous mother who had stopped breastfeeding in baby's age of 2 months. Mother wished to breastfeed/feed with her milk again at baby's age of 7 months. Data about relactation counselling was gathered from patient's clinical history and interviews during visits. Counselling of pharmacological galactagogue domperidone was performed according to ABM Clinical Protocol #9: Use of Galactagogues in Initiating or Augmenting Maternal Milk Production. Infant's weight gain was monitored routinely.

**Results:** With regular usage of breast pump and administering of domperidone 10-90mg daily a mother managed to achieve feeding the infant straight from the breast. Supplementation with formula reduced from 900ml to 130ml daily.

**Conclusions:** Relactation is often possible with adequate consistent support of a health care worker. Domperidone as a galactagogue can be an effective method in improving breast milk production and should be considered if suitable.



## **The Effect of Video-Assisted Training on the Ability to Inject Intramuscular Injection into the Ventrogluteal Area**

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**Background:** Innovative teaching methods, such as video-assisted training, are crucial for nursing students to acquire theoretical knowledge and practical skills in administering intramuscular injections in the ventrogluteal area.

**Objective:** This study aims to determine the effect of video-assisted training on nursing students' ability to perform intramuscular injections in the ventrogluteal area.

**Methods:** Conducted semi-experimentally and in a single-blind manner, the study included nursing students from a public and a private university in Istanbul between September 2022 and July 2023. The sample consisted of 106 first-year students who volunteered to participate and met the inclusion criteria. The skill video and scenario were evaluated using the Discern Inquiry Form and Global Quality Scoring scales. Participants were assessed with the Student Information Form and the Ventrogluteal Area Intramuscular Injection Application Checklist. Necessary permissions were obtained for the study.

**Results:** Expert evaluation of the intramuscular injection training video scenario resulted in a content validity index above 0.80, confirming its suitability for the study. The skill training video scored an average of  $4.56 \pm 0.60$  on the Discern Inquiry Form, indicating high quality, and  $4.70 \pm 0.39$  on the Global Quality Scoring, indicating usefulness. Cronbach's alpha values were above 0.70, showing consistency and reliability, and intraclass correlation (ICC) values were above 0.750, indicating a good level of agreement ( $p < 0.01$ ). Post-test results from the Ventrogluteal Area Intramuscular Injection Application Checklist showed improvement compared to pre-test results.

**Conclusions:** Video-assisted training significantly enhanced the students' ability to perform intramuscular injections in the ventrolateral area. It is effective in teaching intramuscular injection skills to nursing students.

# **Lecturers' Experiences of Teaching Standardised Nursing Language to Nursing Students: An Ethnographic Research Study**

**Kristi Rannus**

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**Background:** Standardized Nursing Language (SNL) is a structured terminology that is the nursing gold standard for transforming care worldwide, requiring effective strategies for teaching nursing diagnoses (Nanda - I), interventions (NIC) and outcomes (NOC) classifications in nursing curricula.

**Objective:** To describe the scope, teaching, and assessment methods for incorporating NANDA-I, NIC, and NOC into the undergraduate nursing curriculum, to explore the significance of the standardised nursing language (SNL) learning process for lecturers, and to utilise this information to inform educators and researchers responsible for preparing nurses to implement SNL and related classifications within the electronic health information system.

**Methods:** The qualitative research conducted between March and October 2023. A qualitative document analysis of the General Nurse Curriculum, and ethnographic interviews with 13 lecturers were conducted at the Tallinn Health Care College. The content analysis comprised a total of 212 pages of the written text material.

**Results:** It revealed that SNL is usually taught by means of oral and/or written situational tasks, either alone or often in groups. The Estonian version of the NANDA-I classifications is used to support the teaching of nursing-related subjects across the curriculum. However, NIC and NOC are not systematically taught, but rather rely on manuals where they are already linked to specific nursing diagnoses.

**Conclusions:** In order to improve nurses' clinical reasoning and decision-making skills, the teaching of SNL needs to be developed as a learner-centred training programme where all three classifications are integrated into the learning of advanced nursing practice.

## **Overcoming Dispositional Learning Barriers Based on the Experience of Adults Entering Higher Education Based on the Experience of Nursing Students in a Healthcare College**

**Gerli Sirk**

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**Background:** Entering higher education is not always easy, especially when it has been a while since the last time, and there may be hindrances known as learning barriers – institutional, situational and dispositional. Institutional and situational barriers are often the focus of research, but it is equally important to study dispositional barriers and how to overcome them.

**Objective:** The purpose of the thesis is to give explain how adults reached the decision to enter nursing studies, what kind of the dispositional barriers they experienced and how they overcame them.

**Methods:** The methodology was phenomenological qualitative research, and thematic analysis was used for the data analysis. The sample consisted of 1st year students at a health care college.

**Results:** The results show that adults experience dispositional barriers despite their previous level of education or work experience. Coping with stress is related to finding balance between daily life, work and study. Having formerly been focused on results was also mentioned in the experiences of the participants of the study as a factor contributing to stress in relation to studies. Studying is strongly related to the desire to find employment in an area that do not run out of jobs and is also interesting and fulfilling. The opportunity to choose from a variety of jobs and develop further, should one desire it, are additional motivational factors.

**Conclusions:** The most common factor contributing to overcoming dispositional learning barriers among the participants of the study is conviction that upon completion of studies one may find a job that is also fulfilling and interesting.

## **Lecturers' Perceptions and Conveyance of Academic Ethics to Students in Distance Learning**

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**Background:** Emphasising academic ethics throughout the educational process is crucial for all learners. The applied research project at Tallinn Health Care College, titled "Academic Ethics as Lecturer's Toolkit in Teaching Process – Adapting to the Changing Environment," explores how lecturers communicate ethical values and their perceptions of these values during distance learning.

**Objective:** To describe how lecturers interpret academic ethics in their daily activities and how distance learning has influenced the conveyance of academic ethics.

**Methods:** An inductive thematic analysis was employed to analyse the data from the twenty semi-structured interviews conducted with faculty members of Tallinn Health Care College.

**Results:** The analysis revealed four main categories that describe faculty perceptions regarding the nature and dissemination of academic ethics to students during distance learning. The interview data indicated that lecturers primarily rely on peer support and prior experiences when navigating ethical issues. The interviews consistently reflected four key themes: academic integrity, ethical communication, peer collaboration in maintaining academic discourse, and the promotion and adherence to established guidelines. Lecturers also highlighted ethical dilemmas in distance learning, such as academic dishonesty during examinations and the challenges of monitoring student activities online.

**Conclusions:** The study identified key phenomena including faculty awareness of academic ethics, support from colleagues and staff, and ethical challenges in distance learning. The findings indicate that faculty not only understand but actively foster academic ethics, enhancing students' comprehension of its various dimensions.

# The Impact of Blended Learning on Improving Nurses' Hand Hygiene Knowledge in Developing Occupational Safety Culture

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**Background:** Hand hygiene forms the foundation of hospital safety culture. Several studies have indicated that the effectiveness of training programs in improving hand hygiene knowledge is inadequate.

**Objective:** Assessing the Impact of Blended Learning on Nurses' Hand Hygiene Knowledge. A before-after evaluation study.

**Methods:** The study was conducted at the Tallinn Health Care College before and after the implementation of blended learning among nurses who participated in a training program consisting of an e-learning course and an eight-hour practical simulation program. Data was collected from March 10, 2023, to May 24, 2023, using the "Hand Hygiene Knowledge Questionnaire for Health Care Workers" developed by the World Health Organization. The questionnaires were distributed to all participating nurses, of which 50 were analysed, constituting 91% of respondents. Data analysis was performed using IBM SPSS Statistics 29.0 software, employing descriptive statistics. To compare the percentage indicators of hand hygiene knowledge before and after blended learning, the chi-square test was used.

**Results:** A significant improvement in knowledge was observed in the selection of hand hygiene methods after exposure to blood (52% vs 80%;  $\chi^2=8.369$ ;  $p=0.004$ ), the need for hand cream application (74% vs 90%;  $\chi^2=6.342$ ;  $p=0.042$ ), and the consecutive need for hand rub and washing (78% vs 92%;  $\chi^2=3.843$ ;  $p=0.050$ ). However, the study revealed that nurses' knowledge did not improve when selecting hand hygiene methods after emptying bedpans. Additionally, nurses lacked understanding that contaminated hands of healthcare workers are a primary source of microbial transmission in healthcare facilities. The study did not identify a correlation between nurses' knowledge and gender, age, or department.

**Conclusions:** Based on the results of this study, it can be concluded that blended learning is an effective means of improving nurses' overall knowledge of hand hygiene, but additional focus on certain important aspects of hand hygiene may be necessary. Hand hygiene is crucial for both the occupational safety of nurses and the well-being of patients. Therefore, further

research is needed to expand understanding of knowledge gaps. For instance, consideration could be given to the use of qualitative research methods to better comprehend knowledge deficits and identify ways to address them. Such an approach would allow for the collection of more in-depth information and clarification of specific areas where additional training or resource allocation may be beneficial.

## **International Experience Benefits in Teaching Skills of Breastfeeding Education**

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**Background:** Breastfeeding has many benefits for the health of breastfeeding mother as well as breastfed child however the rate of exclusive breastfeeding in infants 6 months of age is dropping in many countries.

**Objective** is to describe a teaching experience of an international blended intensive program. Feedback from participating teachers and students was collected using a semi structured online self-evaluation form after the contact week of the course. Teachers and students feedback on the pedagogy of the course was compared.

**Methods:** An Erasmus blended intensive course, Breastfeeding and Early Interaction, was developed in collaboration with 4 universities from 4 countries to teach breastfeeding counselling skills to Estonian, Belgian, Austrian, and Finnish midwifery students. A flipped learning methodology was used to deepen the understanding of protecting, promoting, and supporting breastfeeding. 5 ECTS course consisted of self-learning online module in Tallinn Health Care College Moodle and a contact week hosted by Artevelde University in spring 2024.

**Results:** Midwives play a key role in breastfeeding support in all 4 countries. Teaching Breastfeeding counselling skills is approached in somewhat different ways in all participating universities. The international course enabled to bring in the best teaching practices of every teacher, learn from each other and to gain culturally sensitive understanding of breastfeeding support in health care.

**Conclusions:** International teaching experience enriches teachers' pedagogical skills in developing blended intensive programs.

## **Validity and Reliability of the Turkish version of the Infection Prevention Appraisal Scale**

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**Background:** Self-efficacy beliefs about infection prevention are important to improve adherence to infection prevention guidelines. Reliable, situation-specific measures are needed to quantify the phenomenon of self-efficacy. However, there is no valid and reliable Turkish scale to measure a nurse's belief in self-efficacy regarding infection prevention measures.

**Objective:** This methodological study was conducted to determine the Turkish equivalence, reliability, and validity of the Infection Prevention Appraisal Scale (IPAS).

**Methods:** The methodological study included 158 nurses. The IPAS consists of 14 items. The back-translation method was used to check the linguistic equivalence of the methodological scale. Experts' opinions were asked to test its content validity. To determine the time invariance, the scale was applied twice to 53 nurses with a 2-week interval, the test-retest method was used, and intraclass correlations were calculated. The Content Validity Index and Confirmatory Factor Analysis were used to test its validity.

**Results:** One hundred fifty-eight nurses (117 females; mean age, 29.38±5.48 years) participated in the study. The scale was highly reliable, with a content validity index value of 0.976 and an overall internal consistency coefficient of 0.801. Confirmatory Factor Analysis showed that the goodness-of-fit index values were good and that the model was suitable for this situation.

**Conclusions:** The Turkish version of the IPAS is a valid and reliable scale for assessing nurses' self-efficacy in infection prevention. Therefore, it can be used in studies conducted in Turkey.



## Quality of E-learning Infection Material Using the Learning Object Review Instrument: An Interrater Reliability Study

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**Background:** Developments in web-based education and technology-mediated learning environments offer significant opportunities to increase access to knowledge. In this context, ensuring the quality and reliability of existing e-learning materials on infection control measures is crucial, as infection control is a significant public health issue.

**Objective:** This study aimed to evaluate the quality and reliability of electronic learning objects used in infection control materials.

**Methods:** The research was conducted between September-December 2023. The quality and suitability of e-learning materials on hand hygiene, personal protective equipment, isolation measures, and standard precautions were evaluated in Estonia, Finland, Portugal, Spain, and Turkey. The materials were assessed by ten experts for each country using the Learning Object Review Instrument (LORI). One-way ANOVA analysis was utilised to compare the mean LORI scores between countries, and the Intraclass Correlation Coefficient was used for inter-observer agreement analysis. Cronbach's alpha coefficient for e-learning materials ranged from 0.736-0.932.

**Results:** Looking at the mean LORI total scores, the highest mean score was for personal protective equipment at  $3.983 \pm 0.619$ , while the lowest mean score was for standard precautions at  $3.850 \pm 0.550$ . The highest quality of the materials related to infection control measures belonged to Spain. Interobserver agreement coefficients were calculated between 0.516-0.938.

**Conclusions:** The results indicate that the quality of materials and reliability related to infection control measures is good. As the first study examining the quality and reliability of infection

control materials, this study is believed to significantly contribute to the literature and shed light on future research.

## **Adapting Evaluation in Ayres Sensory Integration (EASI), Sensory Profile 2 (SP2), and Adolescent/Adult Sensory Profile (AASP), within the Context of Estonian Culture and Phrasing Sensory Integration Theory Terminology into Estonian**

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**Background:** Sensory integration (SI) theory explains the connection between a human nervous system and their behaviour. To provide evidence-based SI interventions, reliable assessment tools and terminology need to be adapted into the Estonian context.

**Objective:** The research goal was to adapt Evaluation in Ayres Sensory Integration (EASI), Sensory Profile 2 (SP2), and Adolescent/Adult Sensory Profile (AASP), within Estonian culture, and to phrase Estonian terminology to receive reliable results.

**Methods:** The International Test Commission guidelines and seven stages of the eight-step standardized translation and cross-cultural adaptation procedure model were used for AASP and SP2 adaptation. The translation process was led by a group of experts. The linguistic comprehensibility of translations was piloted with potential users. The research version of EASI was translated into Estonian and normative data were collected from 10 Estonian children. Key terms from all tests were selected for adaptation. The focus of translation was on functional outcomes rather than literal equivalence.

**Results:** The Estonian version of SP2 and AASP remained the same as the original. However, parts that did not fit into the Estonian context, were modified without changing the original idea. The greatest challenge was adjusting to different language use, such as several repetitions in English, which is not typical in Estonian. Data from 10 Estonian children was included as part of the global sample for EASI. 48 prevalent terms of SI theory were adapted.

**Conclusions:** The adaptation of the tests provided the foundation of a functional and professional SI theory term framework in Estonian.

## **Methods and Approaches for Developing Plain Language Recommendations of Medical Guidelines: Main Highlights of a Scoping Review**

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**Background:** There is a gap in translating research findings into clinical practice, policy, and to patients. Plain language recommendations (PLRs) of medical guidelines are one of the useful knowledge translation tools. It supports facilitating shared decision-making between patients and clinicians based on increasing patient's health literacy. Thus, mapping methods and approaches for developing PLR of medical guidelines were performed.

**Objective:** We aim to present the results of a scoping review on synthesised methodological evidence for developing plain language recommendations of medical guidelines.

**Methods:** Following the Preferred Reporting Items for Scoping Reviews guidelines (PRISMA-ScR)<sup>1</sup>, we conducted a scoping review. The evidence was collected after an exhaustive search in the following databases: MEDLINE (Ovid) and Embase (Ovid). The repositories of guidelines developers were screened as well. Two independent reviewers conducted the process of screening and extraction and discussed it with the team afterwards. In total, 2512 citations and 66 web pages of guideline developers were screened. We collected and analysed evidence from eight documents from guideline developers and nine articles describing methods for PLRs development.

**Results:** The results indicate heterogeneity of approaches. However, valuable tools and methodological consequences for PLRs development were identified. Due to the lack of standardised methodologies guidelines developers use, it is possible to recommend using standardised available tools and methods such as the GIN Public Toolkit<sup>2</sup> or RIGHT-PVG checklist<sup>3</sup>.

**Conclusions:** This study's results will support the Czech national project, "Methodology of creating plain language recommendations for knowledge translation to support evidence-based decision-making in healthcare in the Czech Republic."

## **Understanding of Professional Guidelines by Lay Public – Results of RCT Pilot Study in the Czech Republic**

**Dana Dolanová <sup>1</sup>, Alena Langaufová <sup>1</sup>, Andrea Pokorná <sup>1</sup>, Tereza Friessová <sup>1</sup>, Natália Beharková <sup>1</sup>, Petra Bůřilová <sup>1</sup>, Tereza Vrbová <sup>1</sup>**

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**Background:** There is much evidence in the healthcare industry available. However, its reliability is not always consistent. Guideline developers usually adapt recommendations primarily for professionals (in Standard Language Version – SLV), which could be an issue in understanding their content by the public. The purpose of creating Plain Language Recommendations (PLRs) is to simplify expert recommendations for the lay population.

**Objective:** We aim to present the randomised control trial pilot study of testing simplified versions of important public recommendations for the wide lay population.

**Methods:** Randomised controlled trial (RCT) uses survey forms in three arms: adults (19+ years of age), parents (19+ with a child under 18 years of age), and youths (15-18 years of age). The intervention group received PLR, while the control group received the SLV. The pilot study involved 35 participants (13 adults, 10 parents, and 12 youths). Nine forms had to be excluded due to incompleteness (4 adults, 2 parents, and 3 youths).

**Results:** After reading the original guideline, the overall success rate of the respondent's comprehension of the text was 49.35 %, while after reading the recommendation written in PLR format, the success rate increased to 74.28% (SLV vs. PLR: 66.6 % vs. 76.19 % by adults; 76.19 % vs. 82.85 % by parents and 28.57 % vs. 60,71 % by youth).

**Conclusions:** Based on the pilot study, all groups of respondents understood the information from the PLR version better. For the generalisation of the results, a comprehensive RCT study is ready to be initiated.

## **First- and Fourth Year Nursing Students' Assessment of the Clinical Learning Environment, Supervision and the Role of the Nursing Teacher**

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**Background:** The learning environment can have both positive and negative effects on the nursing student. The student can be influenced by the attitudes of the internship team and the relationship between the nursing student and the internship mentor.

**Objective:** To compare first and fourth year nursing students' evaluations of the clinical learning environment, supervision, and the role of the nursing teacher.

**Methods:** Quantitative. 242 nursing students at Tallinn Health Care College took part in the survey. The Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) Evaluation Scale was used to collect data. There are a total of 34 statements in the questionnaire, which are answered on a 5-point Likert scale. Descriptive statistics were used for data analysis. The Mann Whitney U test was used to analyse the differences between the assessments of the first- and fourth year students.

**Results:** 145 (59.9%) were first year and 97 (40.1%) fourth year students. The learning environment ( $4.26 \pm 0.523$ ) and practice supervision ( $4.43 \pm 0.726$ ) were rated the highest, and the nursing teacher's role was rated the lowest ( $0.38 \pm 0.722$ ). There was a statistically significant difference between the first- and fourth year students in all dimensions. The learning environment was rated higher by fourth year students ( $4.37 \pm 0.474$ ) than by first year students ( $4.17 \pm 0.541$ ) ( $U=5598.000$ ;  $p=0.007$ ). Fourth-year students also rated practical guidance higher ( $4.59 \pm 0.544$ ) compared to first year students ( $4.34 \pm 0.813$ ) ( $U=5945.000$ ;  $p=0.036$ ). Fourth year students also rated the role of the nursing teacher higher ( $0.399 \pm 0.735$ ) compared to first year students ( $0.377 \pm 0.703$ ) ( $U=5914.000$ ;  $p=0.036$ ).

**Conclusions:** Fourth year nursing students rate the learning environment, supervision, and the role of the nursing teacher somewhat higher. The results show that fourth year students have had more experience with internships, and therefore the assessment may be higher.

## **Transforming Intercultural Sensitivity Midwifery Students Through an Inclusive Mobility Model**

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**Background:** The Erasmus student exchange program aims to modernise education, enhance flexibility in learning, and provide opportunities for internationalisation. Midwifery curricula require that student midwives have insight and understanding of global health practice and intercultural sensitivity. Mobility experiences help students develop intercultural competence, defined as “the ability to communicate effectively and appropriately in intercultural situations based on one's own intercultural knowledge, skills and attitudes.”

**Objective:** To investigate if the combination of virtual and physical mobility activities supported development of intercultural sensitivity and soft skills.

**Methods:** A multi-center mixed-methods study was carried out in four European Higher Education Institutions located in England, Italy, Estonia and The Netherlands. The study was reviewed and approved by the University of Nottingham Faculty of Medicine and Health Sciences Research Ethics Committee (Ethics Approval Number: FMHS 303-0621). Fifty-four midwifery students studying in one of the four partner institutions selected as study sites and who participated in the TOTEMM blended mobility scheme took part in the evaluation. Face-to-face focus groups and learning analytics. Focus group discussions were subjected to thematic analysis.

**Results:** A statistically significant increase in the mean of the Total Intercultural Sensitivity Scale score was seen between the pre- and post-mobility surveys, indicating participation in the TOTEMM mobility model was associated with enhanced intercultural sensitivity. Positive

effects on confidence, open-mindedness, empathy, interaction and non-judgment were shared by participants.

**Conclusions:** This innovative inclusive approach of learning enables student group to benefit from transnational learning, including the development of intercultural sensitivity. The blended mobility model has potential for integration into future midwifery curricula and programmes and utility for the wider European context.



## **The Role of Healthcare Specialized Libraries in Supporting Adult Development in Promoting Health and Well-Being: Future Directions**

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**Background:** The library serves as a support system for its visitors, with a mission to promote lifelong learning. The Tallinn Health Care College Library is a specialized library that collects, preserves, and provides access to healthcare-related resources and databases. It is tasked with serving a specific target audience and tailoring its activities to meet the organisation's needs. Therefore, it is crucial to review the library's resources and align them with both organisational and stakeholder needs.

**Objective:** To identify opportunities available for supporting adult development at the Tallinn Health Care College Library.

**Methods:** This study employed a design research approach in three stages: preliminary research, prototyping, and evaluation. In the evaluation phase, two experts assessed the prototypes. Problem definition involved conducting eight semi-structured interviews and three observations. Qualitative data analysis methods were utilised.

**Results:** The study led to the development of five strategic principles: the library's contribution to supporting research; utilisation of the library as an open space; dissemination of research outcomes within the library; the library's engagement in publishing activities; and the library organising activities aimed at the public, which will enhance societal awareness of health issues. The principles include 13 sub-objectives, activities to achieve these sub-objectives, metrics to be established in collaboration with the internal team, and human resources required for activity implementation.

**Conclusions:** With its diverse possibilities, the library facilitates opportunities for both direct and indirect target groups to progress. The five strategic principles developed guide the institution in planning how the specialized library can support adult development.

## **The Importance of Informing About the Preventive Program for Early Detection of Prostate Cancer**

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**Objective:** The aim of the study was to determine the knowledge of men about prostate cancer and screening methods, and the influence of these factors on participation in prostate cancer screening.

**Methods:** Participants in this observational and cross-sectional study were men aged 40 to 79 years. Participation in the study was voluntary. Data were collected in May 2023 via an anonymous online survey.

**Results:** There is a lack of knowledge about prostate cancer among men in Istria and Croatia. Most receive information from the media, while a smaller number receive information from physicians. Most have heard that there is a PSA test, but few know that it is a method for early detection. Subjects have different perceptions of digital rectal examination and other screening methods. Some men are afraid of discomfort and pain during the examination, while others do not consider this a problem. Most indicate that they intend to participate in screening in the future and that early detection of prostate cancer is important and a positive attitude towards it influences the decision to participate in the screening program. The lack of knowledge about prostate cancer among men in Croatia is evident. Although most of the respondents do not consider themselves as a risk group, a positive attitude towards early detection affects the participation in prevention programs.

**Conclusions:** Raising awareness and educating men about prostate cancer and available screening methods are key to increasing the number of participants in prevention programs and reducing the incidence of this disease.

## **End-of-Life Care Preferences of the Elderly**

**Željko Jovanović<sup>1</sup>, Nataša Gašparini Milanović<sup>1</sup>, Bojan Miletic<sup>1</sup>, Marija Spevan<sup>1</sup>**

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**Background:** Aging is a process during which various changes occur. Given that aging is somehow becoming a "trend" in the world, as well as in our country, we should think about the quality health care we want to provide to older people so that their last moments of life, as well as death itself, can be dignified.

**Objective:** The main goal of the research was to examine the preferred way of care in the last days of life of the elderly. Additional objectives resulting from this are to examine whether there are statistically significant differences in the preferred way of care in the last days of life (in hospital or at home) with regard to gender, marital status, parentage, fear of death, caregivers in old age and subjective sense of health, and to examine the attitudes of older people about the quality of outpatient health care services and care by the community.

**Methods:** For the purposes of the research, a survey questionnaire was created, which the respondents filled out in their own homes with the help of the author of this paper. Before starting the questionnaire, all respondents were informed about the anonymity and voluntary participation, as well as the possibility of withdrawing from the research at any time.

**Results:** The research included 106 elderly subjects, of which 72 (67,9%) were women and 34 were men (32,1%), aged 60 to 98 (M=79,46, SD=8,73). The respondents are users of outpatient health care in the County of Istria, Croatia. The results of this research show that elderly people around Istria County prefer to spend the last days of their lives in their own homes compared to hospitals. Respondents who want to spend their last days in their own home believe that they would be calmer and happier because a person should remain in the environment where he spent most of his life with his loved ones. On the other hand, the results of preferences for hospital care at the end-of-life stem from the fear of being alone while dying or the feeling of burden that they think it would put on the family, and not from the attitude that hospitals have better service than in their homes.

**Conclusions:** With the comprehensive and continuous improvement of the quality of life of the elderly, they should would like to devote more time to a dignified ending of life, that is, to work on that the last moments of a person's life, as well as death itself, be exactly where the individual wants it to be each individual is approached holistically in meeting his/her needs.

## **Nurses' Experiences of Completing the Training "Nurses Back to Healthcare" and Returning to Professional Work 2020–2024**

**Kadri Kööp<sup>1</sup>, Mare Tupits<sup>1</sup>, Siret Piirsalu<sup>1</sup>**

<sup>1</sup> Tallinn Health Care College, Tallinn, Estonia

**Background:** The main reasons for nurses to leave work are high workload, emotional stress, and lack of support. The competence of nurses who have been away from professional work for more than five years has decreased, and their knowledge and skills need to be enhanced. Examining the experiences of those who have completed the return to practice programme makes it possible to make the necessary changes in the curriculum and to support returning to work.

**Objective:** To describe nurses' experiences of completing the training "Nurses back to healthcare" and returning to professional work 2020–2024.

**Methods:** In this research both qualitative and quantitative methods were used. In the first stage, May–August 2023, semi-structured interviews were conducted with eight participants who completed the training in 2020–2021. In the second stage, in April 2024, an online survey was conducted among all those who completed the training in 2020–2024 (n=70), 43 (61.4%) subjects answered.

**Results:** The subjects wanted more contact learning, which would facilitate the achievement of learning outcomes and strengthen social contacts. The theoretical learning was sometimes considered too thorough, and more practice was desired. The participants were satisfied with the organisation of the training, although the studies were sometimes intensive, and the practice could be shared between different healthcare institutions.

**Conclusions:** The college could have direct contacts with employers who would forward specific job offers. Nurses who have been away from professional work for a long time need more opportunities to practice manual activities and more support when they return to work.

## **The Experiences and Needs of Parents of Children with Cerebral Palsy in Coping with the Child's Disease**

**Kadri Kööp <sup>1</sup>, Mare Tupits <sup>1</sup>**

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**Background:** Cerebral palsy, which occurs in two to three out of 1,000 live births, has multiple aetiologies resulting in brain injury that affects movement, posture, and balance. Family's adjustment to a child's cerebral palsy is difficult process and parents feel that they have not been explained about how to care for their child. To ensure the best possible quality of life for the child, the whole family must be taken care of. Supporting family members and understanding their needs makes it possible to provide high-quality and patient-centred nursing care.

**Objective:** The aim of the research was to describe the experiences and needs of parents of children with cerebral palsy in coping with the child's disease.

**Methods:** The research is qualitative, empirical, and descriptive. The data was collected by semi-structured interviews and analysed using inductive content analysis method. The interviews were conducted from August to October 2022, eight parents participated in the research.

**Results:** Parents' experiences in coping with the child's disease included life management, economical aspects, social relationships and attitudes, health and healthcare, availability of information and experiences with various specialists and support systems. Parents' needs were related to their own health, private life and financial coping, supporting the child and the need for support services and supportive social relationships.

**Conclusions:** Parents need information and guidance regarding various therapies and support services, as well as material support. They need time for themselves and socialisation with other parents. Support groups for parents of children with a similar diagnosis would be helpful.

## **Pregnancy and its Outcomes in Women with Obesity and Underweight**

**Larysa Shelestova**<sup>1</sup>

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**Background:** Body weight is one of the most important indicators of a woman's somatic and reproductive health. According to the recommendations of the WHO, the most informative indicator for detecting pathological body weight is the body mass index (BMI), calculated by the formula:  $BMI = \text{body weight (kg)} \div \text{height (m}^2\text{)}$

**Objective:** The purpose of this study was to determine the clinical features of the course of pregnancy and its outcomes in women with obesity and underweight on the case of Mariupol Territorial Medical Association for Child and Woman Health (Ukraine).

**Methods:** A retrospective analysis of the medical records of 1360 women who gave birth in the Mariupol Territorial Medical Association for Child and Woman Health (Ukraine) for the period 2020-2021 was carried out. The frequency of women with abnormal body weight was determined and pregnancy and childbirth were assessed in 194 obese women, 127 underweight women and 150 women with normal body weight.

**Results:** The study showed that almost half of the pregnant women had abnormal body weight - 44.9% (611/1360), including 9.3% (127/1360) of pregnant women were underweight, 21.3% were overweight (290/1360), obesity - 14.3% (194/1360).

**Conclusions:** In women, both with obesity and underweight, compared with women with normal body weight, the chance of obstetric and perinatal complications increases, which must be taken into account during pregnancy and delivery. Obstetricians and gynaecologists need to inform pregnant women about proper nutrition and weight gain in pregnant women.

## **Attitudes Towards Violence Against Women of Students of the First-Year Nursing Curriculum of Tallinn Health Care College**

**Marika Merits <sup>1</sup>, Mare Tupits <sup>1</sup>, Irma Nool <sup>1</sup>**

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**Background:** Several studies show that healthcare workers often have a disapproving attitude towards victims of violence. The topic has not been studied before in the context of Estonian higher education institutions of health care, and the attitudes of first-year nursing students towards violence against women (VAW) are not known, so there is no effective input for changing the content quality of the nursing curriculum.

**Objective:** To investigate the attitudes of first-year students at the Tallinn Health Care College's nursing curriculum towards VAW.

**Methods:** Methods is a parallel mixed method, which involves the collection, analysis, and interpretation of both qualitative and quantitative data. Data for the study were collected through an online survey in the connect.ee survey environment. The sample consists of first-year students from three different study groups in the nursing curriculum at Tallinn Health Care College during the academic year 2022–2023.

**Results:** Subjects are aware of different types of violence and 90% of them have an attitude against VAW. There are some sociocultural misattitudes among the subjects. Subjects' knowledge of the impact of violence on women's health and victim assistance is limited. The subjects found that in nursing curriculum must be comprehensive theoretical and practical training to ensure competent help and network cooperation for victims of violence.

**Conclusions:** The study provided the first valuable input for improving the content quality of the nursing curriculum when dealing with the topics of violence.

## Assessing Aftereffects of Daily Visual Tasks Across Different Realities

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**Background:** In the area of immersive technologies, near-eye display-based extended reality is at the forefront, raising questions about its impact on the human visual system. Unlike extensively researched virtual reality, less is known about optical see-through near-eye display systems.

**Objective:** This study aimed to explore the changes in visual functions and comfort after working with different displays.

**Methods:** Participants were engaged in two 30-minute sessions, performing identical tasks (reading and visual search) using a mixed reality headset and a computer monitor. Objective assessment of eye refraction and accommodative microfluctuations were done using an eccentric infrared photorefractor (PowerRef 3; PlusOptix) before and after each session and following a 10-minute rest period. Additionally, participants completed a subjective symptom questionnaire.

**Results:** As a result, in comparison to computer monitor session, a decrease in accommodation lag was more pronounced after mixed reality. Moreover, more pronounced discomfort was reported. Nevertheless, no display-specific changes were elucidated in eye refraction and accommodative microfluctuations at far.

**Conclusions:** These findings indicate that using near-eye displays may lead to increased visual stress, with changes in accommodative microfluctuations at near potentially serving as an objective indicator in the assessment of the effects of immersive technologies on the human visual system.



## **Creation and Implementation of the Tactical Lifesaving First Aid Standards at the Estonian Police and Border Guard Board**

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**Background:** Due to the increased number of terrorist attacks in Europe and based on Estonian legislation, it can be assumed that during police operations, officers are more likely to encounter severely injured individuals or be injured themselves. As a result, managing injuries and caring for the wounded must become the primary focus of tactical first aid, since police officers serve as the first life-saving resource in these situations. Creating a systematic approach of training of a tactical first aid in the Estonian Police and Border Guard Board is the strategic goal of first response and special operations capabilities.

**Objective:** The aim of the study was to develop and implement the tactical first aid training program among law enforcement officers of the Police and Border Guard board. Current study is a part of a larger nationwide Tactical Medical Conception.

**Methods:** A two-phase study, where the first phase involved developing a training program, and the second phase involved implementation of the training program among law enforcement officers. The developments in the first phase of the study were based on Kotter's 8-step theory of quality management "Leading Change" and "Systems Approach to Training model."

**Results:** Through a review of literature, it became clear that tactical first aid is an essential skill for police officers. However, the current format and frequency of training do not sufficiently address the potential needs that may arise during the execution of their duties. Under heightened threat conditions, the police must provide life-saving assistance to the best of their ability, as ambulance access to the scene may be restricted depending on the nature of the event. To ensure maximum life-saving capability, there is a need for a systematic training program that equips first responders, namely police officers, with the skills to deliver life-saving assistance during high-risk incidents. A total of over 70 individuals were trained to become EMT during the period from 2022 to 2024. Over 800 police officers are trained in primary trauma care principles.

***Conclusions:*** The implementation of a standardised training program enhance police officers' knowledge and skills in performing the life-saving techniques outlined in the tactical first aid program.

## **Reflecting on the Health Advice Legacy of Estonian Family Magazines (1930–1940): Towards a Healthy Lifestyle**

**Merle Talvik<sup>1</sup>, Taimi Tulva<sup>1, 2</sup>, Kristi Puusepp<sup>1</sup>, Ülle Ernits<sup>1</sup>**

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**Background:** In the 1930s the population of Estonia was 1,126,000. Estonia faced several challenges in healthcare: infectious diseases, alcoholism, prostitution, and child mortality had to be dealt with. Availability of healthcare services was uneven. Despite that the urban way of life gained popularity. People's free time increased, which needed to be filled with activities. Therefore, the number of popular family magazines increased, more than 200 magazines were published in 1934. Advice published in magazines provided help in solving, understanding and preventing health problems and promoting a healthy lifestyle. This legacy of health advice needs to be explored and interpreted.

**Objective:** The aim of the study is to reflect and interpret the health advice legacy in family magazines during the Republic of Estonia (1930-1940).

**Methods:** 420 magazine issues were analysed. A textual analysis was carried out, as well as an interpretation of the photographs and illustrations from the aspect of health counselling.

**Results and conclusions:** The advice contributed to changes in the lifestyle of Estonian citizens. There was advice in various areas: prevention of infectious and non-infectious diseases and their treatment, first aid, combating sexually transmitted diseases, women's and children's health, mental health, folk medicine techniques, abstinence, healthy eating, hygiene. Advice was offered in both written and visual form. Folk legacy and health knowledge of the time were relied upon, and a scientific point of view was popularised. Analysing the legacy of the past helps to create new opportunities for introducing and deepening healthy lifestyles.

## **The Experiences and Needs of Parents of Children with Inflammatory Bowel Disease in Coping with the Child's Disease**

**Mare Tupits<sup>1</sup>, Kadri Kööp<sup>1</sup>**

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**Background:** The term inflammatory bowel disease includes two diseases: ulcerative colitis and Crohn's disease. Approximately 2,5-3 million people in Europe suffer from inflammatory bowel disease. Parents of children with inflammatory bowel disease do not have enough information about factors associated with exacerbation of the disease. Parents need support from health professionals, but they focus more on the child and parents feel often left out and less prepared to cope with their child's disease.

**Objective:** The aim of the research was to describe the experiences and needs of the parents of a child suffering from inflammatory bowel disease in coping with the child's disease.

**Methods:** The research is empirical, qualitative, and descriptive. Structured interviews were used for data collection and inductive content analysis was used for data analysis. The interviews were conducted from January to October 2022, eight parents participated in the research.

**Results:** Parents' experiences of coping with the child's disease were related to health problems and personal problems, support, life organisation and adaptation, family relationships and the treatment process. Parents' needs in coping with the child's disease were related to supporting the child and the parent, support from their loved ones, different support systems and services.

**Conclusions:** Parents need material help, psychological support, and the service of a support person. Parents felt a shortage of support from the local and national government. They also wished that there was an association dedicated to working with and sharing the experiences of parents with children suffering from inflammatory bowel disease.

## **Digital Health Education and Nursing Students' Perceptions of Technology**

**Jandra Sule**

Tallinn Health Care College, Tallinn, Estonia

**Background:** Digital health education and understanding of technology application are essential for the clinical environment of the future. It requires understanding of nursing students' attitudes and behaviour in health education.

**Objective:** Investigate nursing students' perceptions and attitudes towards digital health technologies.

**Methods:** This study used a qualitative research method. The evaluation was based on an analysis of the independent work of 2023/2024 students in the subject Digital Technologies in Health. Qualitative data was collected from the common electronic e-learning environment Moodle of Tallinn Health Care College. The document analysis database consisted of 185 student documents containing student self-reflections and student self-assessments.

**Results:** Trust in technology and software use is the key element in studying. The students consider quality health data important. Many students trust using electronic records even without having previous experience. Despite the positive attitude to digital technology there remain many shortcomings in the application of basic digital skills. The greatest problem is digital literacy, digital innovation and the students see using digital tools as the danger and the cause of distancing from patients. It raises certain ethical issues when choosing the profession.

**Conclusions:** Trainers should focus more on the topic of nursing identity, focusing more on the positive impact of digital health technologies in practice.

## **The practical activities of the patient education program to promote the well-being of cancer patients**

**Emanuela Ferrarin<sup>1</sup>, Chiara Cipolat Mis<sup>1</sup>**

<sup>1</sup> CRO Aviano National Cancer Institute IRCCS, Aviano, Italy

**Background:** Cancer patients need care and support beyond narrow medical practice to support their well-being. The literature underlines that Patient Education & Empowerment programs can be a valuable tool for this purpose. At the Aviano CRO, the Patient Education & Empowerment program, coordinated by the Scientific and Patient Library and in which volunteer associations participate as well, has been active since 2010.

**Objective:** To evaluate practical activities aimed at patients, gathering experience and evidence about well-being, to strengthen and improve them.

**Methods:** The proposed activities are physical activity adapted for cancer patients, plantar reflexology, and forest bathing. Administration of structured questionnaires to measure perceived well-being and exploration by spontaneous narrative restitution of lived experience. Where applicable, objective detection of indicators documenting specific benefits. Data will be collected and analysed using qualitative and quantitative methods.

**Results:** The data collected will provide a helpful overview for improving the structure of activities, which are now carried out rather spontaneously and lack systematic data and patient feedback.

**Conclusions:** Synergistic work between the institute and volunteers fulfils the mandate of co-design, realizing a focus on the needs for well-being and improvement of the quality of life of cancer patients.

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