

FAMILY HEALTH DISEASE

Proceedings of the International Conference



Zlín, 2024



Family – Health – Disease

Proceedings of the International Conference

Edited by

Andrea Hoffmannová

Dagmar Pilíková

Zlín, 2024



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ABSTRACT

The proceedings of abstracts from the international conference FAMILY - HEALTH - DISEASE, held on 10 October 2024 in Zlín, is the result of the cooperation of four organizers from three countries: Tomas Bata University in Zlín, Faculty of Humanities (the Czech Republic), Catholic University in Ružomberok, Faculty of Health Sciences (the Slovak Republic), Andrzej Frycz Modrzewski Krakow University, Medical College, Faculty of Health Sciences and Faculty of Medicine (Poland) and Wroclaw Medical University, Faculty of Nursing and Obstetrics (Poland) are in English and included a total of 31 abstracts and 20 posters. The conference is included in the system for evaluating participation in professional events of the Pedagogical Section of the Czech Association of Nurses under registration number ČAS/361/2024.

Keywords: family, health, disease, patient, the client, education, quality of life, health care, innovation in healthcare, multidisciplinary team.



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ALEKSANDRA KOŁTUNIUK¹, KAROLINA NIEZGODA¹, ANNA BIZOŃ², JUSTYNA CHOJDAK – ŁUKASIEWICZ³



INTRODUCTIONS

Dear colleagues,

let me welcome and greet you on the occasion of the International Conference "Family – Health – Disease".

For the first time, an international scientific conference was held in 2010 in Ružomberok, under the title Family in Health and in Sickness / Family in Health and Disease / **Rodzina w zdrowiu i w chorobie / The Family in Health and Disease**. Cooperating organizations were Catholic University in Ružomberok, Faculty of Health Sciences (Slovakia), Tomas Bata University in Zlín, Faculty of Humanities, Department of Health Care Sciences (Czech Republic), Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Faculty Health Sciences (Poland).

In 2011, it was agreed that the conference would be so-called traveling and would be held at a different location every year. In 2016, it was invited as another co-organizer Medical University of Piastów Śląskich in Wrocław, Faculty of Health Sciences (Poland).

We have experience in organizing this conference in Zlín; this year is the fourth time it has been held here. The previous conference in 2020 was held online due to the state of emergency in the Czech Republic and the associated preventive measures against the spread of the coronavirus.

The conference is intended for health and teaching professionals in non-medical health fields (general nurses, practical nurses, children's nurses, midwives, health and social workers, physiotherapists, occupational therapists and students of these fields).

The topic of family, health and illness is practically inexhaustible, the issue is still relevant. During the past period of conferences, many stimulating announcements have already been made. Also, this year, we expect new scientific and scientific-research lectures as well as lectures and posters from medical, health social and pedagogical practice. Their abstracts are presented in the conference proceedings that we have prepared for this occasion.

The international conference "Family - health - disease" has become a place for joint meetings and sharing experiences, which are a valuable resource for improving the providing of health and health-social care to many of our clients.

The patronage of the conference was taken over by the deans of the participating faculties. The conference is also held in cooperation with the Czech Association of Nurses. We believe that we will continue to organize these interesting and necessary conferences, whether by contact or online, and I consider our meetings to be very beneficial from a professional and social point of view.

For the scientific and organizational committee

Věra Vránová



ABSTRACTS



Pro-natalis Measures – the Way to Increase the Birth Rate

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Introduction: The unfavorable demographic development of Europe's population causes the decrease of the economically active population. One of the possible ways to stop this unfavorable trend is to set the population policies of the states in such a way that work and family responsibilities are balanced as much as possible. The upbringing and care of children is the absolute responsibility of the parents. A number of factors affect education for responsible parenting. There are external factors; these are primarily the cultural traditions of society, social, political, but also ideological aspects of the country in which the individual lives. There are internal factors that can influence education for responsible parenting, mainly psychological and spiritual aspects, family environment, lifestyle and education of the individual. From society's point of view, the population policy is devoted to family planning. Especially in developed countries, where natural population growth is low and the average age of the population is increasing, the pro-population (pro-natal) policy supports birthrate growth with the help of pro-population measures. The antinatal policy supports the reduction of the birthrate and it is applied mainly in developing countries, where the increase in population is high. **Objective:** The aim of the paper is the analysis and comparison of population policy instruments in selected countries of the European Union. **Methods:** The study used an analysis of documents related to the population policy in selected countries of the European Union. **Results:** Based on the basic models of family policy used in selected countries of the European Union, the pro-population measures in individual countries differ from each other. However, each of the analyzed countries struggles with a low birthrate that does not reach the level of population renewal. **Conclusion:** Due to the declining demographic development in the European Union countries, there is the space for family policy. This policy can create a suitable environment for families with children, by using proper pro-population measures. It can subsequently lead to an increase in the birthrate.

Keywords: population, birthrate, demographic development of the population, population policy, pro-population measures, family policy.

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Caregiver Burden in Post Left Ventricular Assist Device Patients

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Introduction: Caregivers of patients with left ventricular assist devices (LVAD) experience significant strain in caring for patients after device implant, yet few studies have captured underlying caregiver burden and their psychosocial relations.

Aim: To describe caregiver burden and association between psychosocial variables.

Method: Using a cross-sectional methods design, 54 of caregivers was included into survey. Key health outcomes (measures) included caregiver burden (CBS), anxiety, depression (HADS), quality of life (SF12), level of stress (PSS), social support (BSSS).

Results: Caregivers (N=54) were 54,45 ±12,4 years old, 88,89% married, 96,30% female.

The mean Physical Component Quality of Life Score was 53,40, and the Mental Component Score was 50,28. There were no depression or anxiety symptoms among caregivers. Among caregivers, the perceived emotional support dominated. The total score for the Caregiver Burden Scale was a mean 43,54 = moderate to severe burden. When evaluating caregiver burden factors, the highest level of caregiver burden was in the factor of disappointment (Mean 2,16), then general strain (Mean 2,12), isolation (Mean 2,07), the lowest in the environment (1,70), and emotional involvement (1,49). The correlation revealed that there is a significant relationship between the scale of caregiver burden factors: general strain, isolation, disappointment, and environment, and the level of anxiety and stress factor environment was associated with the level of external anger and seeking social support. **Conclusion:** The results of caregiver burden and their association with psychosocial variables of caregiving after LVAD implantation provide essential new insights necessary for targeted interventions for LVAD caregivers. Identified targets to relieve caregiver burden and improve adjustment and should include the need for relief from anxiety and stress and social support.

Keywords: caregiver, burden, LVAD, anxiety, stress.

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Nutritional Status of Chronically Ill Children in the Home Environment

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Statistical indicators indicate an increase in children with chronic diseases in the population, which can lead to increased health and social care. The aim of the paper is to map the nutritional status of chronically ill children aged 10 to 16 years using the NRS 2002 (Nutritional Risk Screening) measurement tool. Of the entire group of children, 76% (64) had a low risk of malnutrition and 16% (13) had a medium risk of malnutrition. The relationship between the child's age and body weight was significant. Children at a younger age achieved a higher nutritional standard. An objective evaluation of the state of nutrition helps to achieve individual health care and a higher quality of life.

Keywords: child with a chronic disease, nutrition, body weight, nutritional screening.

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Project Move as an Example of a Remote Course Aimed at Improving Competencies in Movement Analysis and Intercultural Communication

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Introduction: Globalization and digitalization present both challenges and opportunities for the education and skill development of physiotherapists, particularly in terms of professional qualifications and intercultural communication. These factors are crucial for enhancing the quality of physiotherapy services provided to patients/clients. **Objective:** The aim of this study was to present an e-learning course designed for students and practicing physiotherapists who work with clients/patients and physiotherapy students. **Materials and Methods:** The assumptions and implementation stages of the Project Mov-e: Development of Intercultural Communication Skills in Physiotherapy Practice Through an E-learning Course on Movement Analysis and Therapy will be discussed. **Results:** Based on the analysis of courses conducted by academic teams from Poland, Hungary, Finland, Turkey, and Spain, and feedback from physiotherapists, educators, and physiotherapy students, 15 topics were selected. Each topic includes online lessons, specialized educational videos, self-study materials, and supplementary content (e-book). Each lesson covers both professional skills and intercultural communication aspects. Participants who successfully pass the test at the end of the course will receive a personalized certificate. **Conclusions:** Specialized and high-quality online courses can serve as an additional tool for enhancing the professional qualifications of physiotherapists and enriching the educational offerings for physiotherapy students. Courses developed by international teams provide a multifaceted perspective on the process of movement diagnosis and therapy, as well as prepare participants to work with patients while considering communication needs across different cultural contexts.

Keywords: physiotherapy, teaching, e-learning, intercultural communication.

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Dietary Habits of Adolescents Concerning

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Introduction: The effects of energy drinks differ from typical refreshing beverages. They enhance memory capacity and mental cognitive activity. However, there are potential risks associated with their consumption, particularly among young people. **Objective:** The aim of this study was to assess dietary habits related to energy drink consumption within the studied group and to determine whether gender influences these habits. **Materials and Methods:** The research was conducted using a survey method, employing a specially designed questionnaire. The study group consisted of 200 randomly selected individuals. The survey was carried out in two upper secondary schools in the city of Nysa. The study involved 50% females and 50% males. Both males and females were in the age range of 16-19 years. The assessment of the relationship between the variables was conducted by calculating the Yates-corrected Chi-square test coefficient, with values of $p \leq 0.05$ considered statistically significant. **Results:** Occasional consumption was reported by 22.5% of respondents, with females being statistically more likely to do so. 28.5% of respondents declared that the determining factor in choosing energy drinks is their composition. Statistical analysis revealed a significant relationship between expectations associated with energy drink consumption and gender. Males were statistically significantly more likely to expect "long-lasting effects" from the drink - 38.0%, while females expected immediate stimulation - 57.88%. It was also found that males were statistically more likely to consume energy drinks during physical exertion (18.18%) compared to females (9.9%). Females were significantly more likely to answer "no" (61.38%) than males (44.4%). **Conclusions:** The primary dietary error among respondents is the regular consumption of large doses of energy drinks. 20% of respondents consumed such drinks several times a week. Respondents expected immediate stimulation and long-lasting effects from energy drinks. Over half of the respondents did not experience adverse effects from energy drinks, while 29.5% occasionally experienced negative effects. Young people most frequently consumed energy drinks during intense mental activity, before physical exertion, and after physical exertion. Based on the conducted research, it can be observed that there is a statistical relationship between the dietary habits of respondents and gender.

Keywords: dietary habits, energy drinks, frequency of consumption.

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Sleep Deprivation and its Consequences

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The aim of this paper is to introduce the issue of sleep deprivation, the consequences of which are faced by the whole of Western civilization. The necessary sleep duration is not saturated either in children or in adults. Sleep duration is steadily decreasing in the population. Sleep is one of the basic needs of life, and a deficit in this area is detrimental to the individual and to society as a whole. The paper is theoretical in nature and is based on the results of review studies and professional texts. It focuses on the typology and the main causes of sleep deprivation. It also deals with sleep hygiene and unhealthy sleep habits. It presents an overview of the consequences of chronic sleep deprivation in particular in the areas of mental health, work performance and functioning in interpersonal relationships. It concludes with suggestions on how sleep can be improved, supplemented by interesting facts and experiments in the field of sleep deprivation.

Keywords: sleep, acute sleep deprivation, chronic sleep deprivation, mental health, sleep hygiene.

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Determinants Affecting the Sleep of Patients in a General Ward

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Introduction: Hospitalized patients often complain of sleep disturbances for a variety of reasons, including environmental factors and underlying medical conditions. These sleep disturbances can cause or worsen patients' health (e.g., delirium, wound healing, and pain perception). This study aimed to assess the influence of selected factors on the sleep quality of hospitalized patients in a standard ward. **Methodology:** Multicenter descriptive study (n = 397) in seven hospitals of the Czech Republic on standard wards from February 2023 to April 2023. Data were obtained on the day of discharge using a modified questionnaire to determine factors affecting sleep (questionnaire modified according to D'Souza). The questionnaire contains 23 questions divided into four domains (physical, physiological, environmental and psychological factors) with scores ranging from 0–92. Data were analysed using parametric and non-parametric tests.

The results: The total number of patients was 397 (193 men and 204 women). In the analysis of the evaluated parameters, a statistically significant difference in the type of ward and operation (yes/no) according to gender was demonstrated. Mild sleep disturbance was reported by 175 (44.1 %) patients, moderate by 217 (54.7 %) and severe disturbance by 5 (1.3%). Females had statistically significantly higher scores for physical factors, psychological factors, and overall scores than males. When analyzing the correlations of individual domains about sleep quality, they were rated as moderate to significant (ordered in descending order by R_a); the most significant were environmental influences (0.846), psychological influences (0.730), physiological influences (0.569) and physical influences (0.549). Statistically significant ($p < 0.05$) associations were confirmed between basic clinical parameters and subjectively perceived quality of sleep (represented by a questionnaire) for five variables (gender, experience with hospitalisation, ward, type of admission, surgery) here, the associations were rated as low ($R_a < 0.3$), age and pain ($0.3 \leq R_a < 0.7$) were rated as moderately strong correlations. **Conclusion:** Sleep in hospitalized patients is disturbed, and the quality of sleep is significantly affected. It is critical to recognize the importance of overall sleep quality and identify factors influencing a patient's sleep quality during hospitalisation.

Keywords: patient, general ward, disturbing factors, sleep.

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Family Friendly Nursing Unit, Specifically the Open Visit Policy in Hospitals

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This interactive paper focuses on the concept of the Family Friendly Nursing Unit, specifically the open visit policy in hospitals, and its implications for quality of care. An open visitation policy allows unrestricted access to patients by family members, thereby promoting their psychological well-being and active involvement in the treatment process. This approach can lead to better communication between healthcare staff and families, increased satisfaction with care and reduced hospitalisation time. However, it also brings challenges such as increased workload for healthcare staff, invasion of patient privacy and potential risks of infection. The paper also discusses specific aspects related to the presence of children as visitors in healthcare settings. Research and practice suggest that successful implementation of this policy requires careful planning, staff training and ongoing evaluation of its impact. The goal is to create an environment that promotes family-centered care while respecting the needs of all stakeholders-patients, families, and health professionals.

Keywords: family, patient, open visitation, unrestricted visitation.

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A Review of Quality of Life Assessment Tools for Parkinson's Disease Patients with a DBS (Deep Brain Stimulation)

Aspect

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Introduction: Parkinson's disease (PD) as a severe, progressive, neurodegenerative CNS disease significantly damages brain cells with subsequent loss of dopamine transmitter. The characteristic triad of symptoms - bradykinesia, resting tremor and muscle rigidity thus affects the quality of life of PD patients. One treatment option is deep brain stimulation (DBS). **Aim:** The aim of this review study is to present assessment tools for quality of life in patients with Parkinson's disease. Another aim is to focus on appropriate tools to use for assessing quality of life in patients with Parkinson's disease after DBS. **Methodology:** A standard search procedure was used to search the electronic databases EBSCO, Pubmed, ProQuest, Science Direct using keywords determined by PICO questions and Boolean operators. Search criteria for the period 2013-2023, English, Czech and Slovak language were determined. A total of 81 articles were retrieved. **Results:** Furthermore, scales specifically focused on the degree of dependence of the PD patient on ADL performance (SES scale), on psychological and psychosocial impact (BELA-P-k), on nonmotor symptoms (NMSS, MDS-UPDRS), on autonomic dysfunctions (SCOPA-AUT), on cognitive functions (PD-CRS, SCOPA-COG), on anxiety (PAS), on sleep (SCOPA - Sleep, PDSS), on impulsive-compulsive behavior disorders (QUIP-RS), on pain (KPPS). A satisfaction rating scale (RUSH-DBS-Q) was administered to patients after DBS implementation. **Conclusion:** A scale to assess satisfaction and effectiveness of symptom relief following DBS was seen in patients after DBS. Thus, any of the scales focusing comprehensively on quality of life in the context of PD symptoms can be used.

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Keywords: quality of life, Parkinson's disease, patient, deep brain stimulation, assessment tools.

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Nutrition of Seniors at Risk of Malnutrition from the Perspective of the Nurses

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Introduction: Malnutrition is a regular complication of diseases in old age, and on the contrary, already existing poor nutritional status prolongs treatment and convalescence, worsens the prognosis and increases the mortality of elderly patients. The nurse regularly evaluates the nutritional status of a malnourished patient using nutritional tests and scales to establish risks and nursing diagnoses and to propose individual interventions that lead to its resolution. **Aim:** The aim of the post is to point out the specifics of caring for a malnourished senior. **Methods:** As part of the methodology, a qualitative method was used - a case study of a senior with malnutrition in a hospital environment at the internal department of the Nemocnice s poliklinikou Považská Bystrica. Nutritional scales were used as methods of assessing the need and real intake of energy and nutrients in a senior from the nurse's point of view. **Results:** The result of the processed case study was the finding that the presence of the daughter for support and encouragement, as well as spiritual reinforcement, was important for the patient. Swallowing problems resulted in the introduction of a percutaneous endoscopic gastrostomy. By gradually supplementing nutritional supplements, food intake increased, the patient's nutritional status improved, and laboratory indicators gradually improved. **Conclusion:** The nutritional status of seniors is influenced by a number of factors that can intertwine and change with age. Physiological changes occur, muscle mass is lost, which can lead to a decrease in basal metabolism and the need for calories. Loneliness, depression and social isolation can affect the eating habits and appetite of seniors. Regular nutritional screening of institutionalized seniors could help early identification of malnutrition. By taking measures, it is possible to remove or to eliminate the risks associated with malnutrition, with the aim of improving the health and maintaining a good quality of life for seniors in facilities. The contribution is part of the research project KEGA 009KU-4/2022 Nutrition and physical activity as basic pillars of care for patients at risk.

Keywords: malnutrition, senior, nutritional supplements, rating scale, laboratory indicators.

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Education and Rehabilitation Treatment of Patients with Vertebrogenic Disease

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Introduction: Vertebrogenic disease is one of the most common causes of incapacity for work, so a comprehensive approach to treatment is necessary. **Aim:** Point out the possibility of rehabilitation treatment in vertebroats within the framework of conservative and operative treatment. **Methods:** Case report of two patients with vertebrogenic disease in the area of the lumbar spine. One patient was treated with rehabilitation treatment in the framework of Neural Therapy and Autoreflex prenatal and postnatal position methodology. The second patient was treated with surgical treatment in the sense of fixation of the lumbar part of the spine and subsequent rehabilitation treatment. **Results:** Both patients were treated with rehabilitation treatment with a positive effect. **Conclusion:** Rehabilitation treatment provides comprehensive care within the framework of vertebrogenic disease with an emphasis on education.

Keywords: APPP, education, spine, neural therapy, rehabilitation treatment.

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The Magnitude of External Fall-inducing Forces in Subjects Using the Dream Motion Exoskeleton Prototype in Static Body Positions

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Background: Exoskeleton robots (ER) are becoming increasingly popular due to improved robotic technologies and the positive perception of people towards interacting with robots. Out of the types of ERs, lower limb exoskeletons are the most widely used as assistive devices for people with disabilities. Since safe use of the ER is of crucial importance, the aim of the study was to determine the magnitude of forces necessary to induce the fall of a person using the Polish prototype of the ER. **Methods:** Sixteen volunteers took part in the measurements. The Dream Motion ER prototype designed to perform medical tasks was tested. Measurements of the fall-inducing forces were performed in compliance with safety standards in a measurement station where safety was provided using a ceiling suspension system. Assessed were fall-inducing forces acting in various directions (anterior, posterior, lateral) in 3 static, vertical body positions (2-leg standing, 1-leg standing, step forward). In each test position, 10 trials were completed resulting in the effective measurement of the peak value of the fall-inducing force. **Results:** In the 2-leg standing with posterior vector direction, the lowest value of fall-inducing force was recorded (mean 1.50 kG). Also in 1-leg standing position, the lowest value of the fall-inducing force was recorded with posterior vector direction (mean 1.66 kG). In the step position the highest fall-inducing forces were recorded with the posterior (mean 8.58 kG) and anterior (mean 6.37 kG) vector directions, the lowest – with the lateral vector direction towards the stepping limb (mean 3.26 kG).

Conclusion: The forces necessary to induce a fall of the person in the ER are relatively small (maximally 3.23 kG). In the 2-leg and 1-leg standing positions, the lowest values of the fall-inducing forces were recorded with the posterior vector direction. It will probably be necessary to modify the tested ER's design to improve safety in this direction.

Keywords: exoskeleton robot, fall, safety, force, physiotherapy, robotics.

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Factors Influencing the Information Support Provided by Health Care Professionals to Patients in a Dialysis Center Regarding Kidney Transplantation: A Cross-Sectional Study

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Introduction: Individuals with end-stage renal diseases are more likely to complete advanced directives when they felt dialysis staff members were comfortable discussing the decision about transplantation. The attitudes of health care professionals toward kidney transplantation also affect patients waiting to get on the transplant waiting list. This study aimed to investigate selected factors affecting the information support provided by healthcare professionals to patients in a dialysis centre regarding kidney transplantation. **Material and methods:** We surveyed 1093 health care professionals from a dialysis unit in Poland. Multiple logistic regression was carried out to assess the relationship between information support and socio-demographic factors, life satisfaction (Satisfaction with Life Scale), self-esteem (Self-Esteem Scale), perceived self-efficacy (General Self-Efficacy), attitude, and knowledge about organ transplantation. **Results:** Of the 1093 respondents aged 22–72 years, 501 respondents (45.8%) always informed patients about the possibility of treatment with a kidney transplant. Physicians vs. nurses (OR = 1.57; CI95%: 1.33 to 1.84), and those who supported legalization of unspecified living kidney donation in Poland (OR = 1.27; CI95%: 1.04 to 1.54) and believed that blood donation is safe (OR = 1.26; CI95%: 1.10 to 1.44) and agreed to donate organs after death of a family member (OR = 1.15; CI95%: 1.00 to 1.31) were more likely to provide information support. Knowledge level (OR = 1.28; CI95%: 1.16 to 1.41) and self-esteem (OR = 1.06; CI95%: 1.02 to 1.09) correlated positively with information support.

Conclusion: Our findings reveal a significant knowledge gap in kidney transplantation and patient education. This underscores the urgent need for comprehensive educational programs for both healthcare providers and patients, particularly focusing on the benefits of kidney transplant programs and unspecified living kidney donation.

Keywords: health care professionals, organ donation, kidney transplantation.

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Pain Assessment in Elderly People Diagnosed with Dementia

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Introduction: Pain assessment of geriatric patients/clients with dementia should be a regular routine in daily care due to the high prevalence of chronic pain in the elderly. The ability to verbalize pain decreases with the progression of mental status. Untreated pain or improperly detected pain leads to deficit care reducing quality of life. Specific assessment tools are available to diagnose and assess pain in patients with dementia. Inadequate pain management in this group of patients/clients is a significant nursing problem. **Aims and Methods:** The aim of this paper is to highlight the importance of pain assessment in elderly people with dementia. Another aim is to introduce and describe selected measurement tools assessing pain in people with dementia. The last aim is to present measurement scales with recommendations according to the degree of cognitive deficit. Information was obtained and summarized according to available sources and electronic databases. **Results and Conclusion:** For people with mild to moderate dementia, common standard tools for measuring pain can be used - visual, numerical or facial scales. For severe cognitive impairment, the PAINAD scale can be used, which is validated in the Czech language. There are a number of other tools to assess pain in severe dementia (Abbey; CNPI; PACSLAC; DOLOPLUS-2; PADE; MOBID-2 etc.) but it is advisable to further test these tools in a clinical setting.

Keywords: dementia, pain, assessment, measuring tools, scale, elderly.

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The Impact of Training with the Use of the Luna EMG Robot on Balance, Muscle Strength and Range of Motion of the Knee Joint in Patient after Ischemic Stroke

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Introduction: Stroke is one of the leading causes of death and the biggest factor in disability worldwide. Therefore, better and better diagnostic and therapeutic methods in neurological rehabilitation are constantly being sought. Many new concepts of post-stroke rehabilitation are observed, including robot-assisted therapy using reactive electromyography, such as Luna EMG. **Aim:** The aim of the study was to assess the effect of training with the use of the Luna EMG robot on balance, strength of the extensor and flexor muscles of the knee joint, and the range of flexion in the knee joint of the directly affected lower limb in patients after ischemic stroke. **Material and methods:** The study included 62 patients aged 65-86 years after primary ischemic stroke, staying at the Neurological Rehabilitation Ward of NZOZ "Rehstab" in Limanowa. Subjects were randomly assigned to either a control or experimental group. Both groups were rehabilitated according to a commonly used stroke rehabilitation program for a period of 4 weeks. In addition, the experimental group trained with the Luna EMG robot, 3 times a week for 20 minutes. Before and after the start of the study, balance was assessed in all subjects using the BBS scale, the strength of the flexor and extensor muscles of the knee joint using the MRC scale, and the goniometric range of knee flexion. **Results:** In both the experimental and control groups, statistically significant improvements in balance ($p < 0.001$), flexor muscle strength ($p < 0.001$) and knee extensors ($p < 0.001$) and the range of flexion of the knee joint of the directly affected lower limb ($p < 0.001$) were noted. However, no statistically significant differences were observed in the evaluated parameters between the study groups. **Conclusions:** The introduction of training using the Luna EMG robot to conventional rehabilitation after stroke allows for a significant functional improvement in patients with less physical burden on the physiotherapist.

Keywords: ischaemic stroke, Luna EMG, balance, muscle strength, range of motion.

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Evaluating the Co-occurrence of Malocclusion with Postural and Foot Pressure Disorders: An Interdisciplinary Analysis Using Advanced Diagnostic Tools

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The aim of this study was to assess the co-occurrence of various types of malocclusion (Angle's Class I, II, III) with postural disorders and differences in static foot pressure distribution.

Material and Methods: Ninety volunteers (52 women, 38 men), aged 19-35 years, were divided into three groups (n=30) based on their occlusion type. The occlusion assessment was conducted by a dentist, who evaluated the anteroposterior relationship of the mandible and maxilla through intraoral and extraoral examinations. Global posture assessment was performed using a 2D Videography system, which analyzed the posture in anterior, posterior, and lateral projections. Foot pressure distribution was analyzed using a baropodometric platform (FreeMED BASE).

Results: The study revealed significant differences in head, cervical and lumbar spine alignment in the sagittal plane among the different occlusion Classes ($p < 0.05$). Individuals with Angle's Class II (overbite) exhibited a significantly more forward head position ($p < 0.001$) and increased cervical and lumbar lordosis compared to those with Class I and III. Analysis of foot pressure distribution showed that Class II individuals had a greater pressure on the forefoot compared to the other groups ($p < 0.001$). Conversely, individuals with Class III malocclusion (underbite) exhibited greater left-right displacement, indicating a larger angle of displacement of the center of pressure between the right and left foot relative to the lower edge of the measurement platform, suggesting pelvic rotation. **Conclusions:** The study suggests a relationship between malocclusion and postural abnormalities. An integrated approach, involving collaboration between dentists and physiotherapists and employing advanced measurement tools, may be crucial for effective diagnosis and treatment of these disorders.

Keywords: malocclusion, body posture, head position, podal system.

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The Contribution of the Profession of the Health and Social Worker in the Practice of the Czech Republic

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Introduction: The contribution is focused on the introduction of the profession of a health and social worker and preparation for his qualification education in the three-year bachelor's programme of Health and Social Care at the Department of Health Sciences, Faculty of Humanities, Tomas Bata University in Zlín. By completing the programme, one can acquire the ability and professional competence both to performance the profession of social worker according to Act No. 108/2006 Coll., on social services, and to performance the profession of health and social worker according to Act No. 96/2004 Coll., on paramedical health professions. The study is designing so that its graduates acquire a comprehensive knowledge overview in the field of health and social care. Emphasis is placed especially on practical teaching.

Objective: The aim of the contribution is to demonstrate the benefit of the profession to the Czech practice of medical, social and health social facilities. Using practical examples and models, various possibilities of applying a health and social worker in practice will present.

Results: Even if it is not strictly defined by legislation, where exactly a health and social worker should work, in practice we can come across that they work in the health, social or health social field. In the case of a health focus, it can be for example state and non-state health facilities, which provide institutional health care, hospices, hospitals for the long-term sick, or psychiatric hospitals. In the social area, we are dealing with social services of various nature and target groups, in which health and social work and client care are interwoven. A suitable application in practice can also be in state administration (labour offices, social-legal child protection authorities, social guardians), but also in various non-profit organizations, charities and other organizations. From the combination of the health and social field, it is possible to mention, for example, home care agencies, mental health centres, etc.

Conclusion: The paper emphasizes the perception of the health and social worker as part of a multidisciplinary team in the providing of comprehensive health and social care. Given the constant need for people who require health, social and family care, as well as the increasing costs of care provided, targeted prevention and mitigation of negative impacts is irreplaceable. The fields of social work play a significant role in this prevention.

Keywords: health and social worker, social worker, qualification education, professional competence, health and social care, practical application, health and social institutions.

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Nursing Students' View of Practical Teaching and Mentoring

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Introduction: Mentoring has existed in society since time immemorial. It is a relationship between an older theoretically and practically more experienced individual and a less experienced individual. This relationship forms one of the most important aspects in the study of nursing students. Thanks to the mentor, the students can connect theoretical and practical knowledge and thus the mentor contributes to the easier integration of the student into the complex system.

Objective: In our research, we focused on nursing students who evaluated the conditions for the implementation of clinical exercises. We also investigated the students' opinion on the guidance of the practice by the mentor.

Methodology: To obtain the necessary information, we used existing available professional literature and a non-standardized questionnaire. The research was carried out through a self-constructed questionnaire filled out by 214 nursing students. We processed the data using the methods of descriptive and inductive statistics using the Microsoft Excel 2016 spreadsheet. Hypotheses were established to achieve the research goal. The chi-square test of agreement was used to evaluate the hypotheses. We verified individual hypotheses at a significance level of 0.05. **Results:** With the help of research, we found that students evaluate the educational process in clinical exercises under the guidance of lecturers/mentors relatively positively. Despite the positive evaluation by the students, we have suggestions for improving this cooperation in clinical exercises. **Conclusion:** Practical teaching and mentoring has a significant impact on the process of education of nursing students and it is necessary to develop and improve it. However, its effectiveness depends on the quality of organization, preparation and leadership. The form of mentorship implemented by an experienced nurse from clinical practice appears to be the optimal way of conducting practical teaching of nursing students.

Keywords: mentoring, clinical practice, student, nursing.

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The Assessment of Nursing Workload

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Introduction: The paper deals with the issue of nurses' workload and presents the theoretical basis for the KEGA project No. 011KU-4/2024. It points out that nurses' workload, or its subjective perception, represents a huge medical, economic and social problem due to its impact and emphasizes the need for its evaluation. **Aim:** The aim of the study is to point out the possibilities of assessing nurses' workload through a literature review. **Methods:** Content analysis of papers published in CINAHL and PubMed databases in the last 5 years. Through a search using the keywords "nursing workload, measurement tools, workload measurement," and their combinations, more than 5198 documents related to the subject matter were retrieved. Subsequently, through inclusive and exclusive criteria, 80 resources were selected and subjected to content analysis. **Results:** They present an overview of relevant workload assessment options, including self-assessment tools. **Conclusion:** Despite the existence of multiple options for assessing nurses' workload, validation of the different tools is necessary to obtain relevant results.

Keywords: nursing workload, measurement tools, workload measurement, burnout syndrome, labor migration.

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The Relationship between Self-esteem and Stress Perception and Coping in Nursing Students

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Introduction: Self-esteem plays a significant role in the perception of stress by nursing students as well as in its coping and affects the way nursing students react to stressful situations. At the same time, it tends to influence the motivation to study and coping with academic duties in nursing students. **Aim:** The objective is to determine the relationship of self-esteem with the perception of stress in nursing students and the preference of coping strategies. **Methods:** A cross-sectional research design was used. For data collection, the Rosenberg Self-Esteem Scale (RSES) was used to assess self-esteem, the Student Nurse Stress Index (SNSI) was used to assess stress perception, and the Brief Cope questionnaire was used to assess coping strategies. The sample consisted of 93 university nursing students. Pearson's correlation coefficient was used for data analysis. **Results:** Self-esteem showed a statistically significant relationship with the level of perceived stress in nursing students in the field of study ($r=0.279$, $p=0.007$). Self-esteem showed a relationship with several adaptive coping strategies, Planning ($r=0.244$), Emotional support ($r=0.261$, $p=0.05$), Denial ($r=0.278$, $p=0.05$) and Religion ($r=0.252$, $p=0.05$). **Conclusion:** Identifying the relationship between self-esteem and the perception and coping in nursing students appears to be a necessary element for the innovation of nursing student education. Self-esteem intervention programs in nursing students can improve coping and overall psychological well-being.

Keywords: self-esteem, study program, nursing, coping.

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Identification of Key Competencies of Midwives in the Czech Republic

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Introduction: Continuous education within the framework of non-medical health professions is a clear and indispensable condition for the provision of quality and safe care. In the Czech Republic, the qualification education system for non-medical health professions is relatively clearly established, but lifelong education is still very vaguely defined. Act No. 96/2004 stipulates the obligation of lifelong education and its control. However, the scope, frequency, content or method of evaluation of educational activities is no longer clearly defined.

Based on the identification of key competencies of midwives in accordance with real clinical practice, the authors create a proposal for a system of lifelong education of midwives.

For the needs of this project, key competencies are competencies, which are controlled in the sense of control and evaluation of their acquisition, maintenance, reacquisition or removal, including clearly defined compulsory lifelong education.

Objective: The aim of the presentation is to present the partial results of the project aimed at creating a proposal for a system of mandatory lifelong education of midwives in the Czech Republic in connection with the identified key competencies. Authors are presenting partial results of the identification of key competencies in midwifery and the creation of "birth certificates" of these key competencies.

Methodologies: To identify key competencies, the researchers used a qualitative investigation with the help of a focus group and subsequent discussions within the expert group. The actors of the focus group were midwives from various workplaces from clinical practice, midwives in management positions and educators in midwifery. The results of the focus group were processed and further discussed within the expert group - representatives of care providers, educators, representatives of professional organizations and representatives of doctors.

Results: In the 1st phase of study was identified a comprehensive set of key competencies of midwives, including their birth certificates with a description of the conditions for obtaining, maintaining and rules for possible withdrawal of key competencies. **Conclusion:** For quality in midwifery, it is necessary to clearly ensure a system of lifelong education, which will be created based on identified key competencies in close cooperation with clinical practice.

Keywords: lifelong education, midwife, midwifery, key competencies, focus group.

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Knowledge of Cardiopulmonary Resuscitation Provision in Study Programmes of the Faculty of Humanities, Tomas Bata University in Zlín

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Introduction: Cardiopulmonary resuscitation (CPR) is a method aimed at delaying clinical death and preventing irreversible damage to vital organs. CPR involves indirect cardiac massage and artificial pulmonary ventilation, which temporarily substitute the basic vital functions of heart function and breathing. The correct procedure for providing CPR is governed by the recommended practices (guidelines) issued by the European Resuscitation Council. The current recommendations are from 2021.

Aim: The aim is to determine the level of knowledge about CPR among undergraduate study programmes sponsored by the Faculty of Humanities of Tomas Bata University in Zlín. **Methods:** This test is oriented towards the objective determination of the level of mastery of a certain group of persons within a specified time limit. The performance is determined by the level of knowledge of the tested individual. The results are statistically and analytically evaluated using IBM SPSS software, version 20.0.

Results: A total of 293 respondents took part in the survey, answering 5 questions and choosing one correct answer from 4 pre-set options. In addition to the overall summarization, the population is partially divided into several distributions: by biological sex (male vs. female), by form of study (full-time vs. combined) and by study program (midwifery vs. social pedagogy vs. general nursing vs. health and social care).

Conclusion: The data collected was elaborated to provide as much information as possible about the study group of respondents, some of whom can be considered lay people and some of whom, having already graduated from nursing school, can be considered health professionals. The issue of CPR provision is constantly evolving and being regulated in guidelines. Therefore, it is important that not only students but also other people permanently update and update their knowledge. The various challenging first aid courses facilitated by many organisations can serve them well for this. Many instructional videos can also be found on the Internet nowadays.

Keywords: cardiopulmonary resuscitation, didactic test, responder, study program, form of study.

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Utilization of Nursing Students' Knowledge in Preliminary ECG Assessment in Family Care

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Just like medicine, nursing care is becoming more complex. Patients are living longer with chronic illnesses and are more seriously ill, which may increase the demands on nurses' competencies. One of these competencies is undoubtedly the interpretation of ECG rhythms (in the context of Czech nursing practice, we are then talking about the preliminary assessment of ECGs by general nurses). Rapid and accurate interpretation of ECG rhythms can save a patient's life. Available sources indicate that cardiovascular diseases are responsible for more than 50 % of deaths in economically developed countries. Electrocardiography (ECG), which is used to diagnose arrhythmias and myocardial ischemia, is a cheap and safe examination that general nurses commonly work with. General nurses are usually the first individuals to record ECGs, and therefore they should know how to interpret ECGs (at least in a basic way). Learning to recognize rhythms is even more challenging in workplaces where the identification of rhythms is not commonly encountered in usual clinical practice. **The aim** of the study is to compare the level of theoretical knowledge regarding ECG among nursing students at higher vocational schools and universities; to quantify the ability of nursing students to interpret pathological phenomena in ECG recordings. Four basic research hypotheses were established. **Methodology:** A broadly conceived action research based on a questionnaire survey method. The research was conducted at a selected university and higher vocational healthcare school. The respondent sample consisted of first and second-year students in the fields of Diploma General Nurse and General Nursing in full-time and combined forms of study. A total of 128 respondents were tested. The survey took place in the following phases: 1) Questionnaire survey (pre-test), 2) Course focusing on the issues of preliminary assessment of ECG strips by nurses, 3) Questionnaire survey (post-test). Absolute and relative frequencies, mean, standard deviation, and, using box plots, the median, upper and lower quartiles, minimum and maximum were calculated for the obtained data. The level of knowledge was measured as the number of correct answers to knowledge questions. Hypothesis testing was performed using Welch's t-test, paired t-test, and an independence test based on Spearman's correlation coefficient. The significance level for decision-making regarding the null hypothesis was 5 %. Calculations were performed using STATISTICA software.

Results: The research survey involved 128 respondents (58 from higher vocational schools and 70 from universities). Of the total number, there were 67 respondents in full-time study and 61 in combined study. The statistical analyses performed showed that the level of knowledge after the seminar depends on the type of school (the mean score for respondents from universities was 19.8 and for respondents from higher vocational schools was 22.5) – respondents from higher vocational schools had a statistically higher score than university students. A statistically significant



dependence of the score on the form of study was also demonstrated – the score for respondents in combined study was statistically significantly higher than for students studying in full-time form. Another statistical analysis confirmed that the level of knowledge before and after the seminar does not depend on the length of clinical practice. **Conclusion:** The research survey demonstrated a statistically significant higher difference in the score after the seminar (the mean score before the seminar was 14.6 with a standard deviation of 3.0, and after the seminar it was 21.0 with a standard deviation of 3.6; the P-value of the paired t test was lower than the chosen significance level of 0.05).

Keywords: ECG, interpretation, student knowledge.

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The Use of Phone Apps in Cognitive-behavioral Therapy

Introduction

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Introduction: The market offers an increasing number of apps that motivate and organize different types of activities, e.g., recording physical activity and monitoring calories. Mental health apps are also becoming increasingly popular. These include the sleep app Nightly, which helps to manage panic attacks: PanicShield, Butterfly Diary; HabitBull/Habits- supporting the acquisition of habits (Szostak, 2019). **Aim:** This study aims to demonstrate the potential use of phone apps in CBT psychotherapy. **Results:** Cognitive behavioral therapy is an interaction using empirical, scientific data. It shows the relationship between the interpretation of a situation and emotions, physiology, and behavior in a social context. It aims to change the present (near future) with respect for the values and dignity of the person (Popiel, Pragłowska). The structuring of therapy (models, protocols) seems to argue in favor of the use of apps in which psychoeducational texts and models can be presented, techniques can be demonstrated, observations can be made, and progress monitored. The question is whether the user can select and use the app independently, as is the case in other areas of life, e.g., physical activity apps. The basis for planning applied CBT psychotherapy techniques is conceptualization (Popiel, Pragłowska). Conceptualization is a than taking into account a range of data collected through observation of the person's psycho-physical state, developmental interviews, and diagnostic tests. The conceptualizer uses psychology and psychotherapy (models) knowledge to develop an individual understanding of the patient's problem. Carrying out this process requires specialized knowledge and skills. After conceptualization, the therapist works according to a specific protocol. This gives structure to the whole process, but during the process, the patient's problems may need to be updated, or a crisis may arise, which may require a change in the prioritization of therapeutic interventions. Therefore, we will consider the use of apps in CBT for the full therapeutic process as complementary tools. These tools actually facilitate observation and monitoring, which in the traditional version is done by filling in paper sheets. **Conclusion:** Apps can be used for self-education, mental health prevention, and coping with single problems. In the psychotherapeutic process, they should be considered complementary tools to facilitate observation and monitoring of a person's behavior. Reference Popiel A, Pragłowska E. (2022). Cognitive-behavioral psychotherapy. Theory and Practice. Warsaw: PWN Szostak, M. Instead of psychotherapy and telephone application? Retrieved from: <https://www.emocjepro.pl/zamiast-psychoterapii-aplikacja-telefoniczna/>

Keywords: phone apps, cognitive-behavioral therapy.

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Senior Citizen Education in the Field of Health through ICT

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Introduction: Knowledge to promote the health of older people is important. An educated patient is able to make more responsible decisions about his or her treatment, and is motivated to take care of his or her health. Digital technologies are gradually transforming life in old age. Education of seniors through ICT is effective and is important for health, healthy lifestyle and mental balance. **Aim:** Competencies of nurse education in the field of ICT aimed at the specifics of senior education. **Methods:** Quantitative research carried out in the form of a questionnaire among seniors at universities of the 3rd age (U3V). The conclusions of the questionnaire were incorporated into the methodology of education focused on the quality of life of seniors. To meet this goal, nurses' competencies in the field of ICT in integration with the education of seniors in the field of health using ICT are important. **Results:** Digital competencies are acquired by seniors mainly at U3A. According to our research, which we have repeatedly carried out in recent years at U3A in the Czech Republic, almost all of them provide ICT education. Population ageing is a global problem of an advanced society. Demographic ageing has grown into an unavoidable process that is reflected in many areas of social life. According to the Czech Statistical Office there will be 2.5 times more seniors than children in the Czech Republic throughout the second half of the 21st century. Non-medical healthcare workers should be prepared above standard in SMART technologies because they will be the ones who will ensure online communication between doctors, patients, family members, and will educate especially the population at risk, i.e. the elderly. **Conclusion:** As ICT technologies are rapidly evolving, e-health, telemedicine, artificial intelligence are entering treatment and education, non-medical healthcare professionals can prevent digital exclusion of seniors and contribute to active ageing through education.

Keywords: health, senior, U3V, nursing, education, ICT.

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Monitoring the Functional Status as a Means of Preventing Complications in Geriatric Patients

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Introduction: The geriatric patient is included in the category of patients with the highest risk of complications. The most common risk for him is malnutrition, loss of self-sufficiency, decompensation of chronic disease, emergence of geriatric syndromes. Therefore, it is necessary to identify health problems and functional limitations of seniors as soon as possible. Areas that require special attention include nutrition, physical fitness and the ability to carry out activities of daily living. **Aim:** To point out the benefit of regular monitoring of the functional status of geriatric patients in institutional treatment. To find out the current state of nutrition, physical activity and self-sufficiency in geriatric patients. To find out how the state of nutrition, physical activity and self-sufficiency changes after the implementation of the intervention by the members of the interdisciplinary team. **Research methods:** were nutritional anamnesis, standardized instruments MNA, MNA-SF, Barthel test (ADL), SARS-F, Hand-grip test, analysis of health documentation, anthropometric measurements. The research set consisted of geriatric patients in institutional health and social facilities in the SR and CR. Total number 368, of which 114 men, 254 women.

Research results: We identified risk factors (RF) for the development of malnutrition during the nutritional anamnesis. The most common were difficulties with swallowing (n 46), decreased appetite (n 30), problems with excretion. Other RFs were polypharmacy (n 105), use of risky medication (n 67), chemotherapy, radiotherapy. The average values of the screening tools were: BMI- 26.74, MNA- 23, MNA-SF- 6.3, SARS-F- 3.38, ADL- 74.5, Hand grip test 8.3. Hospitalized patients had worse nutritional status (malnutrition n 41). The average value of physical fitness was below the norm. Statistical data processing confirmed the relationship between MNA, ADL and SARS-F values. After the identification of the problem, the patients underwent interventions (diet adjustment, sipping, enteral/parenteral nutrition, rehabilitation). After repeated monitoring, the values were adjusted, except for the SARS-F values. The results are part of the KEGA project no. 009 KU-4/2022. **Conclusion:** Thanks to the screening tools, we identified patients at risk of malnutrition and sarcopenia and subsequently eliminated complications related to them.

Keywords: functional status, geriatric patient, interdisciplinary cooperation, monitoring of nutrition, physical activity and self-sufficiency, prevention of complications.

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Assessing the Dignity of the Cancer Patient

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Dignity can be described as the main characteristic of the human being, which can be perceived as an attribute of the human self. The dignity of personal identity is closely related to the identity of the individual, which may be affected by physical, psychological or emotional harm. The interference with dignity in this case is illness. Patients with a cancer diagnosis struggle with fears of deterioration or loss of their dignity, such as feelings of dependency, reduced functional capacity, loss of important roles, loss of autonomy, feeling like a burden to others, regret about the past, fear of death and an uncertain future. Understanding the factors behind existential suffering at the end of life has become the focus of a growing body of research. A number of studies have concluded that existential issues can be distressing for some patients. The aim of this study is to investigate how cancer patients perceive their dignity and which issue (PDI-CZ item) they rate as the most threatening to their dignity, to determine the influence of selected sociometric and clinical factors on patients' subjective assessment of dignity (PDI-CZ total score), and finally, to reveal whether there are differences in the influence of individual factors on dignity ratings in the PDI-CZ subscales. This longitudinal study utilizes a quantitative research approach using a battery of standardized questionnaires in the Czech version. The Patient Dignity Questionnaire (PDI-CZ) will be used to assess dignity. The Beck Anxiety Inventory (BIA) will be used to assess anxiety levels. In addition, the Self-Sufficiency Assessment (Barthel Index), a set of sociodemographic and clinical characteristics of the respondent, will also be used.

The statistical treatment of the data presented so far, shows us the results of the assessment of dignity-related problems of cancer patients using the Patient Dignity Questionnaire (PDI-CZ) and the influence of sociometric, clinical factors on the assessment of dignity of the patients in question. Patients' dignity is also strongly influenced by self-sufficiency, as offered by the results of the ADL questionnaire evaluation so far.

Keywords: dignity, evaluation of dignity, anxiety, oncological patient, diagnosis.

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The Journey from the Founding of PAHOP to the Present

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Introduction: The mobile hospice is a unique model of palliative care, which has established itself as an essential component of the healthcare system. It focuses on ensuring dignified and comfortable dying of patients at home. The history of PAHOP, z. ú. mobile hospice dates back to April 2016. The establishment was initiated by a group of experts and enthusiasts who realized the need to expand palliative care in the Czech Republic. **Objective:** To map the key milestones in the history of the mobile hospice and its development. Analyze the services provided and their contribution to improving the quality of life of patients with advanced disease. It will also deal with the awareness and education of medical and non-medical staff, which is essential for the effective functioning of this model of care, and mentions the challenges that mobile hospices face in today's healthcare environment. **Methods:** Archival materials (founding documents), statistical data of patients from the Webcarol system, memories, stories and interviews of people working in the PAHOP mobile hospice were used to obtain data and information. **Results:** They show the importance of mobile hospice for palliative care and confirm its positive impact on the quality of life of patients and their loved ones. The systematic development and emergence of new services corresponds with regard to the growing number of people requiring palliative care and the increasing demand for these services not only from patients but also from their families.

Conclusion: Historical insight and a look into the future clearly point to the necessity of mobile hospice services. PAHOP is trying to expand its activities to other regions and to establish cooperation with various medical institutions. Demographic and prognostic developments assume that care for the sick and dying will move more to the home environment. A key element in this process will be maintaining a high standard of services and supporting families who have found themselves in a difficult situation associated with the death of a loved one. PAHOP also aims to continue awareness and education regarding the importance of palliative care and mobile hospices within the Czech healthcare system.

Keywords: mobile hospice, palliative care, services, care, patients.

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Multidisciplinary Collaboration of Experts from the Tomas Bata University in Zlín in Pediatric Palliative Care

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Introduction: Faculty of Humanities Studies UTB Zlín (FHS) builds multidisciplinary cooperation of experts of the Institute of Health Sciences and the Institute of Pedagogical Sciences in connection with the clinical practice of the KNTB, a. s. neonatology department, palliative team and home care agencies. The two-year project is based on an analysis of needs and the expertise of academic staff and students in the field of child palliative care, where key areas for deepening knowledge have been identified. The basis for defining the activities of the project was also the analysis of the content of subjects with a focus on palliative care and the issue of children's palliative care of study programs. Currently, FHS 5 has study programs of General Nursing, Midwifery, Health Paramedics, Health Care and Social Pedagogy, which deal with the issue of the child population from the perspective of the given scientific field. With the increase of diseases with an incurable impact on the child's organism, the need for expertise of highly specialized palliative care increases. **Objective:** Our goal is to expand the existing portfolio of the information base on the issue of children's palliative care related to the issue in adulthood. In the field of academic (lectors, students) is on interconnection into clinical practice with related intensive cooperation with health service providers of the Zlín Region. **Methodology and results:** An important key element of the project will be the creation of a mandatory elective course with a selected issue of children's palliative care in relation to the participating study programs, the extension of existing subjects to the issue of children's palliative care, the expansion of the offer of the topics of bachelor's theses, the sharing of information with the professional and lay public in the form of workshops.

Conclusion: The project is at the same time supported by professional development by participating in lifelong learning of academic staff, which is also reflected in their scientific and research activities. The acquired knowledge will enable students to provide children's palliative care not only with inpatient care providers, but also in the child's own social environment leading to an increase in the quality of life.

Keywords: children's palliative care, foundation of care school, Vlčkovy family foundation, students, academic staff, education.

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Palliative Care at the End of Life or a Good Life until the End

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Introduction: Quality of life can understand as the degree to which a person is able to function not only physically, but also emotionally, mentally and socially. How does palliative care affect an individual's life? Is it even possible for us to talk about the quality of life or even the good life with clients in a home for the elderly who are introduced to palliative care? We think so, because palliative care aims not only to relieve pain and other physical and mental suffering, but also to preserve the client's dignity, to provide support to him and his loved ones. **Aim:** The aim of contribution is to emphasize the dignity of each client, sensitivity to their individual and changing needs until their last days, and to point out the necessity of accepting their wishes and the wishes of their loved ones. **Methods:** This is a contribution of a rather informative nature, in which we share our experience in providing care in a residential service to people at the end of life. **Text:** The basis of our approach is the providing of care according to the preferences and limits of each client. We respect his autonomy, we work with his life story, and we talk to those closest to him. Effort is to ensure that our clients live life according to their habits and ideas in their own social environment, where they feel good and safe, and that is our home. Well-designed palliative care means professional and kind care that respects a person's dignity in all circumstances and thus adds "life to the days" not only of the clients themselves, but also of their loved ones. **Conclusions:** The quality of life of our clients reflect in the level of their well-being and the well-being of their loved ones, and that is precisely where our care is directing. We are thinking about how we can influence this fact even for those who are introduced to palliative care. We believe that if there is a clear common goal within a multidisciplinary team, we will cooperate with each other, even with the family and we will use "Head hands and heart" when providing care, there is a great hope that we will accompany most of our clients with dignity to the end of the journey.

Keywords: client, good life, home for the elderly, dignity, palliative care.

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Terminal Patient in Homecare

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Palliative care is active care provided to a patient suffering from an incurable disease in its advanced or terminal stage. Its goal is to alleviate pain and other physical and mental ailments and to preserve his dignity. The objective of homecare for dying patients in the terminal phase is to minimize discomfort, not to prolong the dying process, paying maximum respect for the uniqueness of the end of each human life and respecting the wishes of the patient. All treatments and nursing procedures should aim and be adapted to this.

Mobile hospices are usually associated with homecare for palliative patients. They are adequately equipped in terms of personnel and technology to provide this type of care, and their services are unique and irreplaceable in their entirety. The care provided by a mobile hospice usually follows on from homecare, and may even overlap in many ways.

In home health care we encounter problematic situations when palliative patients in the terminal stage have no family members or close ones, and homecare services are no longer sufficient for them, but mobile hospice services are unavailable to them because there is no caring person able to ensure continuous presence in their household.

We would like to describe the situation of palliative patients in the terminal stage in homecare through several case studies. To provide insight into the situations mentioned above, their processes and our experience. These situations are very challenging for everyone involved and often bring up unsolvable dilemmas and sufferings for both patients and their families as well as homecare nurse.

Keywords: home care, nurse, patient, palliative care, case study.

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Poster session



Conference Family – Health – Disease as Tradition

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Introduction: Family – Health – Disease is an inexhaustible topic and this topic also led to the establishment of a so-called “travelling conference” which is organised by the Catholic University in Ruzomberok, Faculty of Health, Slovakia (SK); the Tomas Bata University in Zlín, Faculty of Humanities, 2013 Institute of Health Sciences, Czech Republic (CZ); and the Andrzej Fryzyc Modreowski Krakow University, Faculty of Health Sciences and Faculty of Medicine, Republic of Poland (PL). The purpose of the poster is to present the venues, times and academic guarantors of individual conference years. **Method:** This is an informative report, historical analysis of the organisation of the conference with the current name Family – Health - Disease. **Results:** This year, this international academic conference is being held for the fourteenth time, with the team of organisers having expanded in 2016 to include Wrocław Medical University, Faculty of Health Science, Department of Public Health (PL). **Discussion and conclusions:** We can conclude that this conference has become a tradition and it is not just of great academic value, but also great social value. The Family – Health – Disease conference has become a place for people who are not indifferent to the issue of families in health and disease to meet each other. It is our conviction that through its broad-ranging annual programme of expert contributions, all those taking part will find inspiration for their work, and they will transfer the experience they have acquired onwards to their students or colleagues. Only in this way can the purpose of these international conferences be fulfilled.

Keywords: conference, family – health – disease, sharing, history.

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Adherence to Hand Hygiene Principles in the Intensive Care Unit

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Hand hygiene is the most frequently performed procedure carried out by healthcare workers during the provision of medical care. According to the WHO model, it is estimated that for a patient hospitalized in an intensive care unit, 120 to 190 hand hygiene opportunities are indicated per day of care. The aim of the survey was to find out how nurses observe hand hygiene in clinical practice. The method used was observation according to INICC (International Nosocomial Infection Control Consortium). This is procedural supervision of hand hygiene, while monitoring is carried out in intensive care units. The form used during the observation is based on the WHO recommendations "5 moments for hand hygiene". The results pointed to the fact that hand hygiene was observed in 110 observations (82%) and hand hygiene was not observed in 24 (18%) observations.

Keywords: hand hygiene, nurse, INICC, WHO, nosocomial infection.

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Nurses' Interventions in Support of Health Literacy

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Introduction: Health literacy is a key factor influencing the health status and quality of life of individuals, groups and the entire population. The ability to understand health information and apply it in practice is essential for disease prevention and adherence to treatment procedures. Nurses play an important role in promoting health literacy in both healthy and ill people, and their interventions can significantly improve health literacy levels. **Core of Work:** The aim of the paper is to present nurses' interventions aimed at increasing health literacy in patients. The text specifies several methodologies that nurses use, based primarily on effective communication and educational activities, including the use of modern information and communication technologies. Cooperation with other healthcare workers and family members or support persons of the patient is also important, which can increase the success of these interventions. The contribution also provides an overview of available guidelines at the international level aimed at the support and development of health literacy, which can also be used in the nursing profession. **Conclusion:** Nurses' interventions in the promotion of health literacy are an essential part of health care. Above all, effective educational strategies not only increase patients' health literacy, but also improve their health outcomes. For the further development of these interventions, it is necessary to focus on their adaptation to the specific needs of patients and to continue their innovation through new technologies and methodologies.

Keywords: health literacy, nursing, nurse, education, guidelines.

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Homecare Nurses Activities

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Home care is a form of health care enshrined in legislation in the Czech Republic since 1990. It is provided to patients in their own social environment and designated for all age categories. It can be provided daily including weekends.

Home care is provided by qualified medical professionals with a willing and kind attitude. It focuses on finding, monitoring and meeting the needs of the patient and his family, related to the change in health status and his impaired health, regarding his community, ensuring complex care in coordination with outpatient and inpatient care, or with social services. It focuses on the development of independence, on alleviating the fears and sufferings of people with an incurable disease, as well as on dying with dignity in one's own social environment. Care is individualized. It provides continuity of the health care that is provided in other health institutions, for reducing patient's hospitalization time and the costs of care in inpatient facilities.

The indication of home care is in the competence not only of general practitioners, but also of discharging attending physicians of inpatient wards, outpatient specialists, doctors of the emergency services and emergency department, with a limitation of the scope of the duration of the home care to 14 days.

The general practitioner or attending physician, after agreement with the patient or his family, chooses a home care provider and fills out a voucher for examination/treatment for expertise 925. He provides the patient with a prescription or voucher for the appropriate medicinal products. At the same time, he determines the period of validity of the voucher and the frequency of visits.

As a part of the services provided in home care is measurement of physiological functions, administration of drugs, injections, infusions, insulin, training the patient or his family members in administration of parenteral/enteral nutrition, maintaining venous catheters, physical exercise training, wound care, cathetrization, enemas or ostomy care.

Keywords: home care, nurse, procedures, health care, patient.

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Specifics of Communication of Nurses in Oncology Patient Care

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Introduction: One of the basic human needs is to be able to share one's feelings and to be close to a person who is able to listen and understand.

For cancer patients, those suffering from a chronic disease or a life-threatening illness, the need for human closeness and support is important. **Objective:** The aim of this paper is to present the results of a questionnaire survey focused on the use of elements of therapeutic communication by nurses in cancer patient care. **Methodology:** The main method was a self-constructed questionnaire containing 26 items. The questionnaire was distributed to the nurses in printed form. The prerequisites for inclusion in the file were the profession of a nurse treating oncology patients, consent to participate in the survey. Sixty respondents participated in the survey, 57 (95.0%) were female and 3 (5.0%) were male. Most of the respondents were in the age group of 22 to 30 years (30.0%). **Results:** We found that nurses (73.3%) consider communication as part of the overall treatment and care of the cancer patient. The priority goal of nurses' communication 43 (71.3%) is to help the patient overcome feelings of uncertainty and promote hope for survival, to promote the patient's trust in the nursing team 37 (63.3%). Our survey shows that most nurses use elements of therapeutic and professional communication with oncology patients. They maintain eye Corresponding author 58 respondents (96.7%), active listening reported by 52 (86.7%), touching the patient 39 (65.0%), hold a conversation on an interesting topic 57 (61.7%), 49 respondents (81.7%) check the clarity of the information given to the patient. **Conclusion:** Conversation with the patient is an essential condition for the provision of quality treatment in oncology. Quality communication of the patient with the nurse, doctor, getting information about the disease and its treatment options are positive factors that can help to manage the disease.

Keywords: nurse, communication, oncology patient, questionnaire, supportive care.

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Patient Care at Home after Hip Endoprosthesis Surgery

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Introduction: Hip endoprosthesis is one of the most commonly performed procedures worldwide. Hip alloplasty surgery is primarily aimed at relieving pain and improving patients' functional ability. Nursing care in the patient's home environment is crucial during recovery.

Aim of the study: The aim of this study was to determine the nursing problems of a hip replacement patient residing in the home environment after hip replacement surgery.

Method, techniques and research tools: The assessment of the patient's condition in the nursing process was based on interview, observation, analysis of medical documents and was carried out using scales: Barthel, Katz, numerical pain scale, Tinetti, MNA, ACDS, MMSE, Social Support, Yesavage Depression Assessment and the 'Get up and go' test. **Results:** The patient is in good general condition. She scored 90 points on the Barthel scale and Katz scale 4 points. According to the Tinetti test, the patient is at moderate risk of falling, as she scored 17/28. A score of 26/30 on the MNA scale indicates a normal nutritional status. The patient's mood is positive. The Yesavage Geriatric Depression Rating Scale gave a score of 7/30, indicating no depression. The patient's assessment with the Stand Up and Walk Test showed a reduction in the woman's functional capacity. The patient has a high sense of support, as demonstrated by a Social Support Scale score of 79/84. The patient's score on the Adherence in Chronic Disease Scale (ACDS), designed to assess the level of pharmacotherapy, was 25, indicating average adherence. The woman, due to the presence of cerebrovascular lesions, was also assessed with the MMSE scale, with a score of 26, indicating cognitive impairment without dementia. Based on the results, a nursing process was planned and implemented in the patient. **Conclusions:** The nurse's work requires a holistic and multifaceted approach to the patient and her primary caregivers. The nurse's work with the patient at home is key to the patient's return to full function. The main problems of the patient after hip replacement surgery are:

- pain around the hip joint resulting from the recovery process
- impaired movement due to pain, stiffness and lack of total joint mobility
- complications related to endoprosthesis surgery

Keywords: endoprosthesis of the hip, nursing care at home.

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Nutritional Knowledge of Adolescents Regarding Energy Drinks

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Introduction: Energy drinks appeared relatively recently in the market, in the 1990s, and it was observed during numerous conversations that consumers had limited knowledge about their effects. **Objective:** The aim of this study was to assess the nutritional knowledge concerning energy drinks among the studied group and to determine whether gender influences this knowledge. **Materials and Methods:** The research was conducted using a survey method, employing a specially designed questionnaire. The study group consisted of 200 randomly selected individuals. The survey was carried out in two upper secondary schools in the city of Nysa. The study involved 50% females and 50% males. Both males and females were in the age range of 16-19 years. The assessment of the relationship between the variables was conducted by calculating the Yates-corrected Chi-square test coefficient, with values of $p \leq 0.05$ considered statistically significant. **Results:** It was demonstrated that statistically more females consider energy drinks as stimulating beverages (53.46%) compared to males (35.64%). Females were statistically more likely to be unable to identify the composition of energy drinks (41.58%) than males (30.0%). 45% of respondents knew the permissible daily caffeine intake. Unfortunately, 58.5% of respondents were unaware of the potential risks associated with energy drink consumption. **Conclusions:** Almost half of the respondents defined energy drinks as "ordinary beverages". 35% of the surveyed individuals could not identify the composition of such drinks. The majority of young people lacked knowledge about the risks associated with energy drink consumption, and only 13% of respondents were aware of the potential consequences of consuming "energy boosters". Based on the conducted research, it can be observed that there is a statistical relationship between the nutritional knowledge of respondents and gender.

Keywords: nutritional knowledge, energy drinks, consumption effects.

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Health Behavior and Prevalence of Risk Factors vs. Severity of Urinary Incontinence in Women According to Age

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Introduction: Urinary incontinence (NTM) is a condition characterized by involuntary leakage of urine from the urethra. This problem mainly affects women, regardless of age. Early diagnosis and identification of potential risk factors enable prompt implementation of appropriate treatment. Depending on the type of NTM, there are many treatment options, ranging from lifestyle and health behavior changes to surgery.

Objective: The purpose of this study was to analyze health behaviors and the prevalence of risk factors and severity of the problem of urinary incontinence in women according to age. **Material and method:** The study included 133 women aged 48 ± 17 years. The survey was conducted using the CAWI method in the Support Group for Women with Urinary Incontinence. The study used the standardized questionnaire ICIQ-SF (International Consultation on Incontinence Questionnaire - Short Form), IZZ (Health Behavior Inventory adapted by Z. Juczynski) and the author's questionnaire containing metric questions, the presence of risk factors, sober prevention methods and treatment. Normal distribution of quantitative variables was checked with the Shapiro-Wilk test. Mann Whitney test was used to compare the results between two different groups, and Kruskal-Wallis ANOVA test was used between more than two groups. Verification of correlations was performed using Spearman's rank correlation test. Values of $p < 0.05$ were taken as the level of significance.

Results. Urinary incontinence affects women in every age group and its severity increases with age, number of children and number of natural deliveries. The predominant risk factors were natural childbirths, urinary tract inflammation, pelvic surgery, urinary continence and constipation. The level of women's health behavior is average, the older the woman is and the more children she has, the higher the intensity of health-promoting behavior. The women surveyed place more importance on Preventive Behaviors and Positive Mental Attitude (average score above 4), while they care less about Proper Eating Habits and Health Practices (average score above 3). Sources of knowledge about incontinence prevention were the media (83%), leaflets and brochures (57%), less often a doctor (35%) or a nurse (23%). The treatment methods most often mentioned by female respondents were pharmacotherapy, Kegel muscle exercises, surgical treatment and bladder training. However, 32% of women did not seek treatment at all, citing lack of knowledge about incontinence (77%), embarrassment about disclosing the problem (77%) and lack of financial resources (48%).

Conclusions: There is a need to educate women about the prevention and treatment of urinary incontinence. Lack of knowledge causes women to feel ashamed of this condition, often treating it as a natural part of ageing and not seeking treatment.

Keywords: women, age, health behaviour, quality of life, incontinence.

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Effect of Nordic Walking with FATmax Intensity on Adipocytokines Level and Lipid Profile in Women with Metabolic Disorders and Visceral Obesity

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Metabolic syndrome (MetS) is a co-occurrence of hypertension, glucose and lipid disorders. The accumulation of adipose tissue affects disruption of adipokine profile and causes systemic inflammation, metabolic diseases and consequently MetS. Nordic walking (NW) is a walk with poles. NW is recommended for obese people as safe form of physical activity.

The aim of the study was to assess the impact of 8-week NW training with an intensity corresponding to maximum fat oxidation (FATmax) on changes in the levels of irisin, leptin, adiponectin, lipid metabolism indicators, lipid accumulation product (LAP), triglyceride glucose index (TyG), and visceral adiposity index (VAI) in women aged 20-40 with MetS and visceral obesity. The study involved 14 women (11 - with MetS, 3 - with visceral obesity) with low physical activity and a BMI of 33.85 ± 5.48 kg/m². 8-week NW training sessions supervised by an instructor were conducted 3 times a week for 60 minutes. The intensity at the FATmax level was determined individually. NW training was preceded by 8 weeks of control examinations without NW. In both stages, the diet of the subjects was not changed.

After 4 weeks of NW, an increase in adiponectin levels, a decrease in the LEPT/ADIPO ratio, a decrease in VAI values were observed. After 8 weeks of NW, a further reduction in the VAI index was observed, as well as a reduction in total cholesterol levels and an increase in irisin levels. Leptin level as well as TyG and LAP indicators did not change as a result of NW training. Nordic walking training with FATmax intensity has a positive effect on VAI and LEPT/ADIPO index reduction, as well as an increase in of adiponectin and irisin concentration, indicating an anti-inflammatory effect, but it does not significantly improve the lipid profile of the examined women.

Keywords: adipokines, exercise, metabolic syndrome, obesity, nordic walking.

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The Opinions of Individuals with Clinical Depression Regarding Social Support from their Family and Others

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Introduction: Mental disorders are often subject to negative judgments and social exclusion. Contemporary research indicates that individuals with mental disorders, including depression, still experience these phenomena, which can affect their social functioning and willingness to seek help. In such cases, social support, particularly from family, can play a crucial role in the lives of individuals suffering from depression. It is often assumed that, in such difficult circumstances, family members will provide unwavering support, encompassing emotional, physical, and psychological assistance.

Objective: The objective of this study is to examine the experiences of individuals with clinical depression regarding perception of social support, with a particular focus on support from family and significant others. **Method:** The study was conducted on a group of 183 respondents. A self-designed research questionnaire was used, which also included the „Polish Adaptation of The The Multidimensional Scale of Perceived Social Support (MSPSS)”

Results: Approximately 30% of individuals with depression do not experience benefits from current treatments. 65% of individuals with depression share information with friends, while only 45% discuss it with family. **Conclusions:** Society often blames individuals with depression for their problems. Unfortunately, a significant percentage of respondents indicated that they did not feel support from their family, even though seeking help from relatives is typically the first step for someone suffering from depression. Respondents reported that some family members even blamed them for their illness. It is essential to increase awareness, provide education, and foster a more supportive and accepting environment for people with depression to reduce isolation and improve their quality of life.

Keywords: depression, mental disorders, social support, social exclusion, social awareness.

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The Impact of Manual Diaphragm Therapy on Pelvic Floor Muscle Function in Young, Healthy Women

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Introduction: The diaphragm is the main respiratory muscle, also responsible for proper posture and body stabilization. The function of the respiratory diaphragm is closely linked to the activity of the pelvic floor muscles (PFM), constituting an element of the so-called breathing cylinder. Increased tension and restrictions in the diaphragm, along with improper breathing patterns, are among the factors contributing to increased intra-abdominal pressure, which influence on activity of the pelvic floor muscles. **Objective:** The objective of this study was to evaluate the impact of diaphragm therapy on pelvic floor muscle function in young, healthy, women.

Materials and Methods: The study included 18 young, healthy, nulliparous women aged 20-30 years. All participants underwent a palpation assessment of the PFM using the PERFECT test, which evaluates strength, endurance, repetitions, fast, and coordination of the PFM with other muscles. Measurements were taken twice: before and after a series of six diaphragm therapy sessions using four diaphragm mobilization techniques. The results were analyzed by the Student's t-test for dependent samples.

Results: Statistical analysis revealed a significant improvement in muscle strength ($p < 0.001$), endurance ($p < 0.001$), number of repetitions ($p = 0.0001$), and fast ($p = 0.0002$). Additionally, an increase in tension of the posterior vaginal wall during PFM contraction ($p < 0.01$) and a significant improvement in the cough test ($p < 0.05$) were also observed. However, the assessment of transverse abdominal muscle activity was not statistically significant ($p = 0.08$).

Conclusions: Diaphragm therapy appears to be a valuable tool in supporting PFM in young, healthy women. Significant improvements were observed in five parameters assessed by the PERFECT test, indicating the potential of this therapy in the prevention and treatment. However, further studies on larger group and longer follow-up periods are necessary to fully understand the mechanisms and long-term efficacy of this therapy.

Keywords: PFM, diaphragm, diaphragm therapy, PERFECT test, PFM assessment.

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Instruments for the Assessment of the Effectiveness of Breastfeeding

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Introduction: The optimal method for nourishing a newborn and infant during the first six months of life is through breastfeeding. Breast milk is the only food that is entirely adequate for a child's nutritional requirements. The utilisation of assessment instruments in the early postpartum period allows for the identification of potential risk factors and the enhancement of breastfeeding efficacy. **Aim:** The aim of the paper is to present the available instruments suitable for assessing the effectiveness of breastfeeding. **Methods:** On the basis of keywords determined by the PICO tool, with the use of Boolean operators, a literature search was carried out in scientific databases, with a time limit from 1990. The analytical review was created in accordance with the PRISMA protocol. **Results:** A total of 10 studies were identified that contained key information on the available tools for the assessment of breastfeeding effectiveness. **Conclusion:** The process of breastfeeding is a dynamic one, influenced by a multitude of factors that can have a significant impact on the efficacy of breastfeeding and the risk of premature termination of breastfeeding. A review of the literature revealed the existence of 10 evaluation tools suitable for assessing the effectiveness of breastfeeding, which are also suitable for use in a clinical environment.

Keywords: breastfeeding, tool, instrument, effectiveness, assessment.

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Health Behavior of Adolescents and their Parents

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Introduction: WHO defines health as total physical, mental, and social well-being. The implementation of healthy habits in childhood is crucial to the future health and well-being of the individual and society. The adolescence period is particularly important because it shapes lifelong health habits that we nurture as adults. **Aim:** The aim of this study was to analyze and compare the health behavior of pupils in grades 5-8 of elementary school and their parents. **Material and methods:** The study involved 250 pupils in grades 5-8 and 242 parents of adolescents included in the study. The standardized questionnaire “Health Behavior Inventory” was used to survey the parents. A modified version of the questionnaire was used to survey the adolescents. **Results:** The study showed that the parents’ group was characterized by a medium level of health behavior (mean score – 5.73 stena), while the adolescent group was characterized by a low level (mean score – 4.78 stena). Adolescents showed lower health behaviors than their parents. Women presented higher scores on proper eating habits and preventive behaviors compared to men. Girls showed higher scores on health practices than boys. BMI and parental education do not affect the level of health behaviors in the surveyed parents. The main source of information on health behaviors for adolescents is the family. **Conclusions:** It is necessary to expand the knowledge of children and adolescents’ positive health behavior, including modern medical applications and information in social media. It is necessary to pay attention to the special role of the family in children’s health education.

Keywords: health behavior, children, adolescents, parents, IZZ.

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The Effect of Vibration Therapy on the Thyroid Function in Female Voice Professionals

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Introduction: Heightened muscle tension, Inadequate body posture, hormonal shifts and persistent stress can negatively impact voice performance. Among the chronic diseases known to compromise voice quality, thyroid disease is the most commonly reported condition. In Poland, thyroid disease affects some 22% of the population. In 60% of patients, the first symptoms are related to changes in voice quality. **Aims:** The objective of the research was to assess the impact of vibration therapy on thyroid function among female Professional. The following research questions were used to achieve this objective: 1. Whether or not and how does the applied vibration therapy affect FSH, TSH, fT3, fT4 hormone levels and C Reactive Protein (CRP) levels in the study groups? **Material and methods:** The study was conducted at the Vibration Therapy Laboratory of the University of Physical Education, and Krakow University from September 2021 to November 2022. Actively working females from the following professional groups were recruited for the study: actresses, singers and teachers. The study material consisted of 77 Caucasian females, aged 30–50 years with diagnosed functional dysphonia. The study females were allocated to two groups: the study group and the control group. Eligible subjects received a phoniatic evaluation and in addition (FSH, TSH, fT3, fT4) hormone level and CRP measurements were performed prior to the planned vibration therapy treatments. The therapeutic process involved a number of meetings in the vibration therapy laboratory, where the Vitberg Rehabilitation Massaging Device with Neck module (Vitberg Jacek Sikora – Nowy Sącz) was used. There were three thirty-minute treatment sessions taking place three times a week for a duration of six weeks. At the end of the therapy, the study patients were re-screened for thyroid. **Results:** The study revealed a statistically significant ($p=0.000$) difference in measurements was observed for fT4 levels (ng/dl*) in the study group. In the control group, no statistically significant difference ($p=0.103$) in measurements was observed for fT4 concentration (ng/dl*). Among the subjects in the control group, half had an fT4 concentration (ng/dl*) before therapy that did not exceed 1.12 (median). This is in contrast to the non-significantly higher median concentration of 1.24 observed after therapy. **Conclusions:** The applied vibration therapy had a notable impact on fT4(ng/dl*) levels within the study group compared to the control group.

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Keywords: thyroid, vibration, voice professionals, therapy, dysphonia.

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Professionalization of Lactation Consultant Practice

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Introduction: Insufficient support for breastfeeding from healthcare workers is one of the main factors influencing mothers' decisions to breastfeed. The presence of lactation consultants with healthcare education increases breastfeeding rates, improves maternal satisfaction and trust, and enhances the prestige of the healthcare facility.

Aim: The primary goal of the project is to determine if there are differences in care provided by lactation consultants with healthcare education and those without. The aim is also to assess women's satisfaction with the form of lactation counseling and evaluate which form of counseling is most effective in supporting breastfeeding mothers. It is expected that the results will help optimize clinical practice in caring for breastfeeding women and infants.

Methods: The study involves a quantitative research survey using a self-constructed questionnaire. The questionnaires are distributed to two groups of respondents: women who received counseling from a lactation consultant with healthcare education and women who received counseling from a lactation consultant without healthcare education. The questionnaire is distributed online in the Czech Republic and Slovakia. The study sample size is 150 respondents. The research is conducted as part of the project IGA_FZV_2024_009: Professionalization of Lactation Consultant Practice. **Results:** Breastfeeding women who received counseling from a lactation consultant (LC) with healthcare education received significantly higher levels of information in all defined areas. LCs with healthcare education less frequently recommended supplemental feeding for newborns, and if supplementation was necessary, they recommended using a supplemental nursing system. In contrast, LCs without healthcare education most often recommended bottle-feeding. LCs without healthcare education also recommended other fluids such as tea, glucose, or milk from other mammals, which healthcare-educated LCs did not recommend. Additionally, the recommended number of feedings differed; non-healthcare-educated LCs recommended feeding 8-10 times in 24 hours, while healthcare-educated LCs recommended feeding on demand.

Conclusion: Based on the analysis, it can be concluded that the responses of breastfeeding women depended on whether their LC had healthcare education. Implementing professional education for lactation consultants increases inter-professional cooperation in providing consistent information about breastfeeding support. It improves collaboration with mothers and reduces the provision of conflicting information about breastfeeding.

Keywords: breastfeeding, counseling, professionalization, lactation consultant, educational programs.

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Implementation and Use of Multimedia Tools in the Subject of Anatomy for Students of Non-medical Study Programs

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Introduction: The authors present the fulfillment of the goals of the project KEGA 008TTU-4/2022 entitled Implementation and use of multimedia tools in the subject Anatomy for students of health sciences. The goal of the project is to provide students of non-medical study programs with an anatomy e-book using multimedia tools that will lead to a higher awareness process, the acquisition of anatomical knowledge and the ability to learn and master basic Slovak, Czech, Latin and English anatomical nomenclature.

Own text: The research team of authors created an e-book that contains the most up-to-date and selected anatomical notes with an image appendix, an anatomical dictionary in four languages (Slovak, Czech, Latin, English) for non-medical study programs in the teaching of anatomy. We assume that it will provide students with an effective and creative way of teaching. The advantage of the e-book will be easy accessibility, modern and creative illustrative processing, adapted to the needs of young people. As a necessary requirement from a didactic point of view, we expect a lively, creative and interactive interpretation of anatomy linked to the clinical applicability of theoretical knowledge and practical skills at the bachelor's degree level of non-medical study programs. Clear and efficient processing of the individual modules of the anatomy curriculum will be available online, free of charge and usable even when face-to-face teaching is not possible.

Conclusion: We assume that a processed e-book with the use of multimedia tools will make it easier for the student to learn and remember the subject matter due to the fact that the e-book will be available to him during the entire course of study, not only during the teaching of the subject. The online platform with ISBN will be available not only to Slovak, but also to Czech students of non-medical study programs.

Keywords: anatomy, e-book, multimedia tools, non-medical study programs, didactics.

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Sarcopenia and its Influence on the Development of Frailty Syndrome

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Introduction: The aim of the contribution is to bring closer the issue of "Frailty syndrome" - geriatric frailty. Within the framework of the KEGA 013TTU-4/2024 project entitled Implementation of educational methods for the prevention of frailty syndrome as part of nursing interventions, the team of authors is preparing an overview study that will serve as educational material for students within the subject Nursing in geriatrics. The elaborated topic is one of the key topics from the point of view of preventing the onset of geriatric frailty. **Own text:** Sarcopenia is defined as a generalized and progressive loss of muscle mass, muscle strength with a reduction in physical performance. Primary sarcopenia is age-related, unless other organ diseases are involved (Cruz-Jentoft, 2010). Secondary sarcopenia, which develops most often as a result of physical inactivity (Stefl, 2017). Frailty syndrome is caused by a physiological decline in the performance of organs in connection with old age, especially a loss of muscle mass or sarcopenia. It is caused by osteoporosis, reduced bone strength, deterioration of mobility and endurance, reduction of muscle strength and fitness. Age-related loss of muscle mass and basal tone is more pronounced in persons with "frailty" syndrome (Roubenoff, 2001). The diagnosis of sarcopenia is based on measuring the muscle strength of the hand grip with a hand dynamometer, and the assessment of physical fitness is carried out using standard performance tests (Topinková, 2018). Sarcopenia is a factor that limits the physical fitness of seniors. With a greater loss of muscle mass, the senior loses self-sufficiency, which makes him frail. **Conclusion:** By becoming familiar with the causes, diagnosis and prevention of sarcopenia, we can identify pre-frail and frail seniors and geriatric patients in time, thereby eliminating the development of geriatric frailty. The student can connect the acquired knowledge with practice.

Keywords: sarcopenia, frailty, geriatric frailty, prevention, nursing in geriatrics.

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Evaluation of Psychomotor Development in Children Treated with Therapeutic Hypothermia

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Perinatal asphyxia is a common neonatal problem. It remains a leading cause of neonatal morbidity and mortality and plays a major role in motor and intellectual developmental deficits in children. Complications of cerebral hypoxia in asphyxiated newborns can be treated with therapeutic hypothermia. The treatment involves moderate cooling of the newborn to minimize the consequences of hypoxia.

Aim: To evaluate psychomotor development and detect impairments and deficits in motor functions, perception, speech, manual functions and social contacts in children treated with therapeutic hypothermia. **Material and Methods:** The study was carried out on a group of 27 children treated with therapeutic hypothermia. The data involved an analysis of medical records and the results of psychomotor development evaluation using the Munich Functional Development Diagnostics scale. **Results:** We found no significant delay in the developmental age of the children for walking. The mean developmental age for this area was 30.56 months (SD=8.42 months), for fine motor skills, speaking, independence and social skills were similar. The mean developmental age for understanding speech was 28.76 months (SD=7.92 months). The mean developmental age for cognitive skills was 27.73 months (Me=28 months). The speech development was slightly delayed for their age (\bar{x} =3.2 months, SD=1.09 months). **Conclusions:** Children aged up to 1 year showed normal psychomotor development. Small deficits in cognitive processes and social skills were identified in children in the second and third years of life. The greatest developmental delays were identified in children in the fourth, fifth and sixth years of life.

Keywords: hypoxia, newborn, perinatal asphyxia, therapeutic hypothermia.

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Cardiac Malformation Associated with Esophageal Atresia

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Introduction: Congenital heart disease (CHD) is the commonest abnormality associated with esophageal atresia (EA). EA is a rare congenital malformation occurring in 3-4 in 10,000 births, in 87% occurs along with a distal tracheoesophageal fistula (TEF). The coexistence of a cardiac malformation and in addition, prematurity can be challenging and affects the further treatment and quality of life (QOL) of the child and family. Knowledge of the anatomical type and physiological consequences of CHD allows a well-coordinated treatment plan.

Aim: The aim of this paper is to investigate whether the presence of underlying associated malformations, disease-specific problems and prematurity would have a considerable influence on the family of a child after surgical repair of EA.

Methods: We used a crossed-sectional questionnaire study. The impact of EA was assessed using an Authors-Designed Questionnaire (ADQ) to collect medical and sociodemographic background data (gestational week (HBD), comorbidities, type of EA, according to the Gross classification) as well as standardized questionnaire: the PedsQL™ Family Impact Module (PedsQL-FIM). **Results:** Of the 76 children born with EA/TEF included in this study, 26% had a vascular malformation. Mean age was 5.3 years (SD = 3.7 years). Cardiovascular malformation associated with EA significantly ($p=0.037$) affects the functioning of the family in the emotional domain (FIM – ED). The QOL ($p < 0,034$) of children born before 37th HBD is lower than children born in term. The presence of concomitant anomalies does affect the overall generic QoL. No statistical correlation was found between the type of anomaly (with/without TEF) and patients' QoL. **Conclusion:** Cardiovascular malformation and prematurity significantly affect child's QOL and the functioning of the family with EA. Patients who have undergone EA treatment require specialist outpatient care, not only in the first years of life, but also in adolescence and adulthood.

Keywords: esophageal atresia, cardiac, prematurity, quality of life, child.

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Quality of Life among Patients with Multiple Sclerosis – Relationship to Levels of Illness Acceptance, Optimism and Health Behaviors

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Introduction: Multiple sclerosis is a chronic progressive disease of the central nervous system. It mainly affects people in early adulthood and is one of the causes leading to disability in young adults. Despite the known and presumed causes of the disease, there is currently no drug to cure it. Because of its unpredictability, its progression and the symptoms it presents, multiple sclerosis can significantly affect a patient's functioning in daily life, family, social or professional life, thus having a major impact on the sense of quality of life of patients with the disease. **Aim:** The purpose of this study was to assess the quality of life of patients with MS and its relationship to sense of coherence, acceptance of the illness and preferred health behaviors. **Design:** Descriptive and correlational study. **Methods:** The study was conducted among 101 patients with MS (mean age 40.55 years). The study was conducted using a questionnaire developed by the authors. It included questions on sociodemographic and clinical data, as well as the following standardized questionnaires: LOT-R Life Orientation Questionnaire, the Health Behavior Inventory (HBI), the Acceptance of Illness Scale (AIS) and the International Multiple Sclerosis Quality of Life Questionnaire (MusiQoL). **Results:** Data analysis showed that:

- On the MusiQoL scale, the quality of life level of multiple sclerosis patients scored a mean of 69.33 points out of a possible 100.
- The level of coherence in the respondents remained at the average level and significantly influenced the increase in the level of quality of life of multiple sclerosis patients
- The average score of the pro-health measures taken was 84.2. Positive mental attitude had the greatest relationship with the increase in the level of quality of life.
- The level of illness acceptance of MS patients remained at an average level, with a score of 29.84 out of a possible 40 points. An increase in the level of acceptance of the illness had a significant effect on increasing the level of quality of life of the respondents.

Conclusion: QoL in patients with MS is positively affected by higher levels of illness acceptance and optimism. Health-promoting activities significantly correlate with individual domains related to quality of life in patients with MS.

Keywords: multiple sclerosis, quality of life, sense of coherence, disease acceptance, health-promoting behaviors.

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