

International Scientific Conference
FAMILY – HEALTH – DISEAS

BOOK OF ABSTRACTS

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UNIwersYTET MEDYCZNY
IM. PIASTÓW ŚLĄSKICH WE WROCLAWIU



Tomas Bata University in Zlín
Faculty of Humanities



International Scientific Conference
FAMILY – HEALTH – DISEAS
BOOK OF ABSTRACTS

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ORAL ABSTRACTS

HOW ESOPHAGEAL ATRESIA AFFECTS THE FAMILY FUNCTIONING

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Introduction: Most of the research in the field of esophageal atresia (EA) is focused on diagnostic problems and surgery. The impact of caring for children after surgical repair of EA is poorly understood and the literature regarding this area is scarce.

Purpose of research: This study aimed to investigate that syndromic EA, feeding problems, prematurity would have significantly influence on the family of a child after surgical repair of EA.

Material and Methods: This cross-sectional study consisted of 73 participants (Mean mothers age = 28, SD = 5 years, Mean fathers age = 31, SD = 6 years) who were parents of children after surgery of EA. The impact of EA on families was assessed using an Authors-Designed Questionnaire (ADQ) to collect medical and sociodemographic background data as well as standardized questionnaire, the PedsQL™ Family Impact Scale (PedsQL-FIM).

Results: Cardiac malformations associated with EA significantly ($p = 0.037$) affects the functioning of the family in the emotional domain. Skeletal malformations have the greatest impact on the family functioning, three statistically significant correlations have been demonstrated: ($p = 0.021$) – in the social domain, ($p = 0.009$) – in the cognitive domain and ($p = 0.023$) – in the domain of communication. The families of patients with tracheoesophageal fistula (TEF) had the statistically lower ($p < 0.05$) score of functioning in the emotional domain than those without TEF. More than 52% children needed constant care due to problems with dysphagia, slow eating, coughing or choking during eating. Non-health factors frequently included changes in daily activities and deterioration of social position affected caregivers.

Conclusion: Feeding problems and the presence of associated anomalies significantly affect the functioning of the family of the child with EA.

Key words: family impact, esophageal atresia, child

ASSESSMENT OF FUNCTIONAL STATUS AND ITS SIGNIFICANCE IN SENIORS IN LONG-TERM CARE

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A specific feature of older age is the occurrence of multiple diseases at once. The symptoms of individual diseases are mixed, their intensity and specificity change. Multimorbidity and old age itself negatively modify the clinical picture, diagnosis and treatment of diseases. They make the treatment itself difficult, sometimes even impossible. Therefore, a comprehensive geriatric assessment (CGA) is very important. CGA represents an interdisciplinary diagnostic approach to the examination of a sick or at-risk senior. It is used for functional evaluation in the somatic, mental and social areas. For seniors in long-term care, especially in social care facilities, it is a suitable tool for early identification of problems (physical, psychological) and risks (malnutrition, sarcopenia, falls...).

The aim of the contribution is also to present the real benefit of the use of evaluation tools that are part of CGA. Through research in social care facilities (SCF), we assessed the functional status of seniors and recommended appropriate interventions when identifying a risk or problem.

Research methods – Mini Nutritional Assessment, Nutrition Risk Screening 2002, Activities of daily living, Karnofsky index, Handgrip test, SARC-F Questionnaire. Additional methods – nutritional anamnesis and anthropometric data.

The research group were seniors in the SCF in the Slovak and Czech Republics. The total number were 354 of seniors. 200 seniors were from the Czech Republic and 154 from the Slovak Republic. The average age was 83 years. Inclusive selection criteria – stay in a long-term care facility, age over 65 years, consent to conduct research, absence of terminal or pre-terminal stage disease or syndrome.

Research results: in the comprehensive assessment of seniors, 67% were without risk and problem in the field of nutrition. 16.6% were at risk of malnutrition and 16.4% had identified of malnutrition. The average values of the Karnofsky score were 2. SARC-F 5.4, which represents the risk of sarcopenia. When assessing self-sufficiency using ADL, the average values were 80.4 (lighter degree of dependence). The average values of the Handgrip test, using a dynamometer, were 11.7 for women and 21.2 for men. The implemented interventions were: control of laboratory parameters, treatment of malnutrition and sarcopenia. Most often, it was individual adjustment of the diet, sipping, implementation of active and passive exercises, rehabilitation.

The contribution is part of the KEGA project no. 009KU-4-2022.

Key words: comprehensive Geriatric Assessment, long-term care, nutrition assessment, assessment of physical activity, care for the elderly

THE INFLUENCE OF BIRTH WEIGHT ON THE BODY'S METABOLIC HOMEOSTASIS – CORRELATION STUDIES BASED ON WHO DATA

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Low birth weight (<2,500 g) is associated with short stature and low lean mass in adult life. Low birth weight also correlates with insulin resistance in adulthood, and increased risk of metabolic diseases such as type 2 diabetes, and the risk of obesity. It can therefore be treated as a measure of future „metabolic capacity”.

It is also known that a high metabolic load in adulthood caused by a high level of body fat, a diet with a high glycemic load and low physical activity is a risk factor for type 2 diabetes.

The aim of the study was to test whether fasting blood glucose levels depend on whether the body's „metabolic efficiency,” which refers to characteristics such as pancreatic insulin production and muscle glucose clearance, is able to buffer the metabolic load generated by high levels of body fat.

In order to achieve the aim of the study, correlation analyzes were conducted using international WHO data available online (<https://www.who.int/data/gho/data/indicators/>). The unit of the study was individual populations of countries in the world (N = 155).

The high percentage of subjects with elevated fasting blood glucose (≥ 7.0 mmol/L) (age-standardized indicator, %) was shown to be related to the prevalence of obesity in adults (BMI ≥ 30 , age-standardised indicator, %), however, this relationship was strongly influenced by the proportion of the population with low birth weight (i.e., birth weight < 2500 g) ($p = 0.01$).

Birth weight, which is a rough measure of the body's „metabolic capacity” can modify the effect of the metabolic load that is generated by high levels of body fat. The epidemiological indicators that were used in the study can therefore be interpreted in terms of the „performance – load” model of glucose homeostasis and thrifty phenotype.

Key words: birth weight, metabolism, type II diabetes, insulin resistance, thrifty phenotype

NURSING STUDENTS' REPORT ON UNFINISHED NURSING CARE AMONG NURSES: A CROSS-SECTIONAL STUDY

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Introduction: Unfinished nursing care (UNC) represents a phenomenon that directly affects the provision of safe and quality nursing care. Recent studies investigated this phenomenon mainly from the perspective of registered nurses or patients. As nursing students provide nursing care in all healthcare settings, their perspective is very important.

Purpose of research: To identify the prevalence, patterns, and reasons for UNC as perceived by nursing students.

Material and methods: This descriptive cross-sectional study was approved by the Ethics Committee of the Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava (EC No. 44/2022) and included the sample of 738 undergraduate nursing students from nine Slovak universities. Data collection was carried out between September 2022 and February 2023 using the Unfinished Nursing Care Survey Tool (UNCS). Data analysis was carried out in IBM SPSS 25.0 using descriptive and inferential statistics.

Results: Nursing students reported a mean score for UNCS of 2.48 (SD=0.68). In general, all nursing students in our study reported that nurses missed at least one or more nursing care activities during their last clinical placement. They also reported that the average number of missed nursing care activities was 11.2 per nurse. The students perceived that the most frequently omitted nursing care activity was spending time with patients and their caregivers (3.15 ± 1.11 ; 92.9%). According to the students, the activity of nursing care that was omitted the least frequently was to monitor glucose at bedside as prescribed (1.84 ± 1.22 ; 44.4%). The most frequently reported reasons for missed nursing care were an inadequate number of nurses (4.31 ± 1.01 ; 98.1%).

Conclusions: Nursing students like nurses perceive UNC prevalence, patterns, and reasons. They evaluated independent nursing activities as the most frequently omitted, probably because of the prevailing biomedical care model in the Slovak Republic. Furthermore, nursing students believed that the shortage of nurses was the most important reason why UNC was considered a global problem during the last clinical period.

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Key words: clinical placement, hospital, nursing students, unfinished nursing care

SELECTED ELEMENTS OF A BODY POSTURE OF MALE AND FEMALE

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Introduction: The body posture is characteristic mobility habit for each human. For the above reasons, considering civilization diseases, it can be successfully classified as one of the health markers. Disorders occurring within the spine related to scoliosis and shallowing of its physiological curves, as well as all kinds of asymmetries occurring within the musculo-skeletal system and irregularities in the structure and arch of the feet can result in pain and, as a consequence, lead to much larger changes in the body.

The aim of the research: The aim of the research was assessing the selected elements of a body posture of men and women.

Material and methods: The tested group included 91 students, 45 women and 46 men aged 20–21. In accordance with the objectives the measurements contained selected somatic features and body posture which was tested using FreeMed Posture and DIERS.

The results: In the test group, in the significant proportion, hollow feet, abnormal depths physiological curvatures of spine and the scoliotic posture, and to a lesser percentage laterally flat feet and a pelvis sprain.

Conclusions: Most men are characterized by normal BMI values, while in the case of the examined women almost half were underweighted and normal body weight. In the studied group of women and men there are a high percentage of hollow rates, and in a smaller percentage, transversely flat rates. In the group of students there are slight disproportions in terms of area and percentage distribution of the plantar soles of the feet to the ground. In the examined group, the incorrect depth of physiological curvatures of the spine as well as scoliotic posture and scoliosis were diagnosed, and pelvic torsion in a smaller percentage.

Key words: Body posture, faulty postures, spine, foot arch, balance distribution

HOW DO WOMEN WITH CHRONIC GASTROINTESTINAL DISEASE EXPERIENCE TRUST IN THE HEALTHCARE PROFESSIONAL? AN INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS

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Introduction: Trust is important in the context of patients with chronic diseases because of their greater dependence on healthcare professionals and higher vulnerability. Therefore, trust is identified as a core facet of effective therapeutic relationships.

Purpose of the research: The qualitative study aimed to understand how women with chronic gastrointestinal disease experience trust in healthcare professionals.

Material and methods: Data collection was carried out through semi-structured in-depth interviews with four women with chronic gastrointestinal disease (nicknames: Jane, Jessica, Charlotte, Emily). They were selected from the group of participants with chronic gastrointestinal diseases, because the interviews captured the specific woman's lived experience of trust in healthcare professionals. Interpretative phenomenological analysis using Atlas.ti software was used for qualitative analysis. The study was approved by the local ethics committee and is part of the research project VEGA 1/0276/2.

Results: Four interconnected personal experiential themes reflecting women's trust in healthcare professionals were identified: Security, Expertise of healthcare professionals, Interest and willingness to help, and Respect. The female participants reflected on trust mainly as a relationship, which is characteristic of women. All participants found security in a trusting relationship with health professionals. Interest and willingness to help were important to Jessica, Jane, and Emily. The expertise of healthcare professionals played a significant role for Emily, Jane, and Charlotte. Jane's trust was strongly influenced by respect for her as a person.

Conclusion: Understanding the specific voice of women is crucial to developing interventions to improve trust in healthcare professionals.

Key words: women's trust, healthcare professionals, chronic disease, interpretative phenomenological analysis

DIETARY SUPPLEMENTATION WITH FREEZE-DRIED ROSE HIPS DECREASE SALIVARY CORTISOL LEVELS IN STUDENTS AFTER THE EXAM STRESS

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Introduction and objective: Plant extracts rich in phenolic compounds may modify the stress level. The aim of the project was to investigate whether freeze-dried rosehips (*Rosa rugosa*), taken orally by students, affect cortisol concentration before and after a highly stressful exam.

Materials and methods: The double-blind study included healthy volunteers recruited from medical and health sciences students. Participants in the study group took capsules containing 400 mg of freeze-dried ground rosehips for 5 consecutive days preceding the exam (stressor). At that time, the control group was taking a placebo (120 mg of glucose). Participants completed a questionnaire on their gender, lifestyle, medical history, physical activity, diet, stimulants, medications and dietary supplements. Saliva samples for determining the level of cortisol in saliva were taken three times: in the morning before the beginning of the experimental phase, in the morning before the stressor, and one hour after the stressor subsided. The level of cortisol in saliva was determined with ELISA.

Results: It was found that taking freeze-dried rosehips for 5 days significantly reduced the level of cortisol in students after the exam compared to the placebo group. There were no differences in the level of cortisol before the exam, regardless of the preparation taken. No other analysed factor influenced the concentration of the stress hormone in students.

Conclusions: Freeze-dried rosehips can help reduce the effects of stress.

Key words: cortisol, rosehips, examination stress, flavonoids, *Rosa rugosa*

ATTITUDES AND KNOWLEDGE OF PEOPLE UNDERGOING DIALYSIS TOWARDS KIDNEY TRANSPLANTATION – A PREVIEW OF THE FIRST NATIONWIDE STUDY

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Introduction: About 4.2 million people suffer from chronic kidney disease in Poland. In December 2021, a total of 19,416 patients were dialyzed, of which 18,592 by hemodialysis (HD) and 824 by peritoneal dialysis (PD). Among HD patients, 55% were patients over 65 years of age, in the case of the DO method, 75% of patients were between 0–64 years of age. In 2021, kidney transplantation was performed in 2.6% of patients dialysed with the HD method and in 7.6% of patients dialysed with the DO method. According to the data of the „Poltransplant” Organization and Coordination Center for Transplantation, in 2021 there were 2,058 people registered on the national waiting list (NWL) for kidney transplantation. The mean age of the patients was 45 years and 10 months. In Poland, according to data from 2021, the waiting time for kidney transplantation was 935 days from the start of dialysis in the case of the first transplantation and 1451 in the case of highly immunized patients. The data on the number of dialysis patients and persons entered into NWL show, that only about 10% of patients undergoing renal replacement therapy are in the transplantation waiting list.

Reports on knowledge and attitudes towards transplantation of dialysis patients from individual voivodeships or centers show disturbing data. A study conducted by Bojanowska et al. in 2018 showed that dialysis patients in the Mazowieckie Voivodship did not have sufficient knowledge about kidney transplantation treatment. The results of the Baum study conducted on 80 patients showed that 68% of them did not believe in the legitimacy of kidney transplantation and the vast majority of dialysis patients (81%) were afraid of the risk associated with transplantation. It should also be emphasized that 92% of patients believed that they had too little knowledge to consider kidney transplantation. For comparison, reports by Waterman et al. from 2021 also emphasized the insufficient knowledge of dialysis patients in the field of transplantation. The authors also talked about the myths prevailing among the sick: e.g. patients believed that the recipient would take on the features of the donor or that the transplant would significantly shorten his life. In addition, recipients were afraid to talk to

their families about donations for fear of refusal. There are also scientific reports showing in dialysis patients fear of transplantation, organ rejection and death or health impairment of a living donor (e.g. fear that the donor will develop chronic kidney disease).

Objective: Assessment of knowledge and attitudes towards kidney transplantation among dialysis patients.

Material and methods: The study will cover a representative group of dialysis patients from all voivodships. The own questionnaire and standardized tools will be sent in paper version to dialysis station managers, where the patients will be able to complete the questionnaire in the center and also online (in cooperation with organizations and associations of patients with chronic kidney disease, including the “My Kidneys” National Association).

Expected results: The study will identify the level of knowledge and attitudes of dialysis patients towards transplantation.

Conclusions: The results of this study may contribute to the development and implementation of new educational and information programs that may increase the level of knowledge and influence attitudes towards transplantation, which can largely contribute to the increase in transplantation among people with chronic kidney disease.

Key words: kidney transplantation, transplantology, chronic kidney disease, knowledge

FACTORS RELATED TO SELF-ASSESSMENT OF THE LEVEL OF COMPETENCE OF FINAL-YEAR NURSING STUDENTS

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Introduction: Various factors associated with clinical learning have been explored as factors enhancing nursing students' competence development. Students' final clinical practicum experience and self-assessed competence level can influence their more effortless transition experience. Moreover, COVID-19 workplace conditions profoundly impacted the organizational changes of the final clinical practicum and, therefore, nursing students' experience of their clinical training and learning opportunities.

Aim: To investigate factors related to final-year nursing students' perception of competence, including the COVID-19 pandemic period.

Methods and materials: Data collection occurred in 2018–2021 in two phases (before and after the COVID-19 pandemic). A total of 274 final-year nursing students from four Czech Republic universities participated in the research. The Nurse Competence Scale (NCS) measured graduating nursing students' competence levels. The method of descriptive and inductive statistics was used for data analysis.

Results: The level of competence differed mainly in terms of previous work experience in healthcare and methods of supervision. Students who completed clinical placement during the COVID-19 pandemic assessed their competence level as lower than students before the pandemic. No statistically significant relationship was found between age, length of work experience, total NCS score, and NCS domains.

Conclusions: Previous work experience in healthcare and successful supervisory experience, the final clinical practicum before the COVID-19 pandemic contributed to a better level of self-assessed competence of nursing students.

Key words: Nursing education, Nurse Competence Scale, Professional competence, Self-assessment

REVIEW OF PSYCHOMETRIC PROPERTIES OF INSTRUMENTS FOR ASSESSING NURSING STUDENTS' COMPETENCE

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Introduction: The competence of final-year nursing students is fundamental to the delivery of quality and safe health care. The core competence provides a framework for planning educational content and assessment of students within each course.

Objective of the paper: The review aimed to identify instruments for assessing nursing students' competence and to analyse, evaluate and synthesise the psychometric properties of the retrieved instruments. The review was developed by the Joanna Briggs Institute recommended guidelines and the PRISMA-Scr checklist. ProQuest, Pubmed, Scopus, Ovid Nursing and CINAHL electronic databases were used for the search. The psychometric properties of the retrieved assessment tools were assessed by the COSMIN checklist.

Conclusions: A total of 845 studies were retrieved, and only eight studies that met the inclusion criteria were included in the final analysis. Most of the included assessment tools were designed to assess nursing students' competencies only; two were designed to assess nurses' competencies. The most commonly used instrument is the Nurse Competence Scale, which has been translated and validated for use in other language versions. The most frequently reported parameter regarding psychometric properties was internal consistency, as expressed by Cronbach's alpha coefficient.

Key words: nursing student, competence, assessment, instrument, psychometric properties

EDUCATIONAL KNOWLEDGE AND SKILLS OF GENERAL NURSING STUDENTS IN THE FIELD OF HEALTH LITERACY

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Introduction: We understand education as a process of deliberately influencing and acting on an individual with the aim of inducing positive changes in his knowledge, attitudes, habits and skills. The educational activity of general nurses is an integral part of their work, which is also supported by legislation (& 4 Decree No. 55/2011 as amended). The general nurse must learn the education as part of the qualification study.

Objective: To present teaching and the process of creating educational material by general nursing students within the subject of health literacy.

Method: Creation, presentation and evaluation of specific educational materials at a forum of experts from clinical practice.

Results: The teaching of health literacy will be presented as part of the Bachelor's study program of General Nursing at the FHS TUB in Zlín, the 4 best educational projects of the last 2 years (out of 30 in total) will be demonstrated.

Discussion and Conclusions: Educational materials created by students have practical use in education in the field of primary, secondary and tertiary prevention. Their creation deepens the knowledge and skills of nursing students in education to support and consolidate existing health and prevent complications. It also leads to a change in students' attitudes towards the creation of educational material as an original work.

Key words: health promotion, nursing student, knowledge, skills, educational project

HEALTH LITERACY IN PATIENTS WITH ARTERIAL HYPERTENSION

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Introduction: Arterial hypertension is the most common cardiovascular disease. In the prevention and treatment of arterial hypertension, people need to obtain relevant information primarily from health professionals. However, they are able to implement these into behavior and action aimed at promoting health only if they have a certain level of health literacy, which represents a person's ability to acquire, understand and use health information for making the right decisions in favor of their health.

Objective: The paper is aimed at presenting the results of a pilot study with a focus on the average score of the scales in individual domains of health literacy within the entire sample of respondents.

Methodology: Data collection within the pilot study was carried out using the Slovak version of the standardized measurement tool Health Literacy Questionnaire (HLQ) on a sample of 96 respondents.

Results: From the data set of the pilot study, results were extracted for each of the nine domains of the HLQ measuring instrument, and the domains with the highest and lowest mean scores in the sample of respondents were identified. The highest mean scores were obtained in the HLQ domains of health social support and understanding health information to the extent that the individual knows what to do. On the contrary, we found the lowest scores in domains focused on sufficient information for health care, active care of one's health and navigation in the health care system.

Conclusion: Health literacy of patients diagnosed with arterial hypertension is an important phenomenon that determines the compensation of the disease and the prevention of often very serious complications. The HLQ, as a complex measurement tool focused on nine domains of health literacy, allows to conceive a detailed profile of the respondent's health literacy and to identify problematic areas on which it is appropriate to focus recommendations or interventions aimed at improving health literacy.

Key words: Health literacy, arterial hypertension, patient, Health Literacy Questionnaire, pilot study

EVALUATION OF THE EFFICIENCY OF THE RESPIRATORY SYSTEM AND THE STRENGTH OF RESPIRATORY MUSCLES IN CONDITIONS OF INCREASED RESPIRATORY EFFORT IN WIND INSTRUMENTALISTS

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Introduction: Playing wind instruments is considered as a continuous training of respiratory muscles. It may have beneficial effects on respiratory muscle strength and higher respiratory performance parameters. However, there is a high risk of overstress conditions and pain associated with music performance. The aim of this study was to evaluate the efficiency of the respiratory system and the strength of respiratory muscles under conditions of excessive respiratory effort in brass instrumentalists compared to a control group and to create a physio prophylactic and educational program to prevent the negative effects of long-term playing of brass instruments.

Material and Methods: The study involved 40 professionally active musicians (34 men and 6 women) and 50 non-players of wind instruments (43 men and 7 women). All subjects were non-smokers and had no comorbidities. The mean age in the study group was 35 years and the mean instrument playing experience was 22.4 years. In the control group, the mean age was 33.8 years.

Results: Musicians scored better and had higher average percent due for parameters: FEV1%VC, FVC EX, FEV1, MEF 50 and PEF than the control group. Statistically significant differences were observed for FEV1%VC (musicians: 100.86 ± 8.0 vs control 91.56 ± 9.9 , $p < 0.001$), MEF 50 (musicians: 104.9 ± 31.0 vs control 86.14 ± 27.6 , $p = 0.003$) and PEF (musicians: 100.5 ± 20.15 vs control 85.9 ± 23.916 , $p = 0.003$). As for the VC parameter, slightly higher values were presented by the control group. However, these differences were not statistically significant ($p = 0.477$). Musicians playing brass instruments obtained better results and were characterized by a higher average percentage due for the parameters: FVC EX, FEV1, VC and PEF than musicians playing wooden instruments. Statistically significant differences were observed for the parameters FVC EX (brass: 107.82 ± 12.4 vs. wood 96.17 ± 17.5 , $p = 0.025$), FEV1 (brass: 107.35 ± 14.4 vs wooden 92.43 ± 20.3 , $p = 0.014$), VC (tin: 113.0 ± 13.9 vs wooden 95.0 ± 23.3 , $p < 0.025$) and PEF (tin: 111.24 ± 21.6 vs wooden 92.61 ± 14.9 , $p = 0.003$). The only exception was the FEV1%VC parameter, where slightly higher values were obtained by musicians playing woodwind instruments. However, the result was not statistically significant. The mean percent of MIP according to the mean gender norm was significantly higher in the musicians' group than in the control group (MIP musicians: 143.4 ± 35.9 vs. control

122.9 ± 13.1 cmH₂O, p<0.01). There were no significant differences for the MEP parameter (MEP musicians: 104.9 ± 23.6 vs control 97.7 ± 20.3 cmH₂O, p=0.072). There were no statistically significant differences in parameters determining respiratory muscle strength between woodwind and brass instrument musicians. Musculoskeletal complaints were reported by as many as 95% of the musicians studied. The most frequent pain areas were: lumbar spine, cervical spine, shoulder girdle and upper limbs, and thoracic spine. As many as 93% of instrumentalists reported that their posture had deteriorated since they began working as musicians, 80% reported pain symptoms in the temporomandibular joints, and 38% reported hearing disorders.

Conclusions: Long-term playing of wind instruments has a beneficial effect on some respiratory system performance parameters and respiratory muscle strength. Unfortunately, the forced position of the body and the long-lasting static type of work lead to chronic pain syndromes, which in turn may be the cause of degenerative changes in joints and the spine. Therefore, preventive measures and the search for effective corrective and therapeutic methods are crucial.

Key words: musicians, wind instruments, musculoskeletal disorders, respiratory system, respiratory muscle strength

INTRAVENOUS ANALGESIA VERSUS THORACIC EPIDURAL ANALGESIA AFTER THE RAVITCH PROCEDURE

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Objective: To compare the efficacy of analgesia with intravenous infusion of morphine and thoracic epidural infusion of ropivacaine with fentanyl in pediatric patients after the Ravitch procedure.

Methods: Postoperative analgesia was achieved by intravenous morphine infusion with a dose of 0.02–0.06 mg/kg per hour (intravenous group, n = 56) or thoracic epidural infusion of 0.2% ropivacaine and fentanyl 5 µg/mL with a flow rate of 0.1 mL/kg per hour (epidural group, n = 40). Furthermore, the multimodal pain management protocol included paracetamol, non-steroidal anti-inflammatory drugs, and metamizole as a rescue drug. The primary outcomes included pain intensity, while the secondary outcomes included consumption of the rescue drug and postoperative side effects. The observation period lasted from postoperative day 0 to postoperative day 3.

Results: Median average and maximal pain scores at rest, during deep breathing, and coughing were significantly lower in the intravenous group compared to the epidural group ($p < 0.05$). Patients receiving morphine required significantly lower numbers of metamizole doses than in the epidural group (median 1 vs. 3; $p = 0.003$). Postoperative side effects were similar in both groups ($p > 0.05$).

Conclusions: An intravenous infusion of morphine may offer better postoperative analgesia than a thoracic epidural infusion of ropivacaine with fentanyl. The results have been published in *Int. J. Environ. Res. Public Health* 2022, 19(18), 11291; <https://doi.org/10.3390/ijerph191811291>.

Key words: Ravitch procedure, intravenous morphine, thoracic epidural, postoperative pain assessment, anxiety

ADVANTAGES OF THE ANTERIOR OPERATIVE APPROACH FOR MUSCLE SHORTENING IN THA

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Introduction: The use of the rapid recovery concept is not common in individual European countries. It is currently only available in 16 European countries. In our research, the set of patients included in the rapid recovery concept is represented by the Republic of Austria. In the Czech Republic, we encounter incomplete implementation of rapid recovery procedures, which represents one fully accredited hospital. The majority of patients are still treated with classic procedures used for total bed joint endoprostheses. For Slovakia, this approach is not yet included among health care providers. Many factors influence the outcome of the operation, its success and the ability to return the patient to normal daily life. One of the factors is the hospitalization period itself.

Material and methods: As the method of our research, we chose a non-standardized questionnaire, which consisted of three parts. The first part for the entrance examination of the patient contained the identification of the patient according to the assigned number, followed by 19 questions conditioned by the physical examination and evaluation of the patients. The second part of our questionnaire was completed after the end of the patient's hospitalization and contained 10 questions that were conditioned by the patient's examination. Processing of the results followed the completion of quantitative data collection from all three countries. The research results were statistically processed in the MS EXCEL program. The research took place in the years 2021–2023 in three countries of Central Europe – the Slovak Republic, the Czech Republic and Austria. A condition for the inclusion of the patient in the research was the surgical intervention of THA.

Results: The aim of the study was to compare the advantages of the anterior operative approach in THA for hip muscle shortening. The set of patients $n=744$ consisted of patients from the Czech Republic ($n=246$; 33.06%, average patient age 66.48 years), Slovakia (33.74%; $n=251$, average patient age 66.48 years) and Austria ($n=247$; 33.20%, average patient age 65.90 years). The values of t_{stat} and t_{crit} clearly show that the ventral surgical approach brings significantly better results in the postoperative state and also in the subsequent rehabilitation of patients. The observed muscles – iliopsoas muscle and tensor fasciae latae muscle when using the ventral operative approach showed a significantly smaller shortening than when using the lateral operative approach. The positive impact of the approach was shown mainly in the tensor fasciae latae muscle, where the shortening of the muscle decreased from an average value of 0.76 in the case of the lateral surgical approach to a value of 0.03 in the case of the ventral surgical approach. There was not a single case of grade 2 muscle shortening, in

cases of grade 1 muscle shortening, the values significantly improved to grade 0. In two cases, grade 1 did not change. Only rarely did grade 0 change to grade 1 – slight shortening of the muscle. The results were processed at the significance level of $p=0.05$.

Conclusion: Among the main advantages of the ventral surgical approach, the authors Nakata, Nishikawa, Yamamoto, Hirota, Yoshikawa (2009) include more accurate placement of the acetabular socket, reduced blood loss, and especially less muscle dysfunction in the earlier recovery period. The direct ventral operative approach is considered by some surgeons to be the most ideal approach to rapid recovery of the patient because it utilizes the entire internal plane. This enables complete protection of the abductors (Berger, 2004). As reported by Rodriguez et. al. (2014), studies comparing the direct relation of direct ventral and lateral surgical access to the independence of the patient in the postoperative period, reduction of postoperative pain, functions of the musculoskeletal system and the return of the patient to everyday life have not yet been documented. From the abductor muscle group, the tensor fascia latae muscle was selected, which is part of the motor stereotype of abduction in the hip joint. At the same time, when this muscle is shortened, it creates an image of movement on the lower limb (when moving into abduction, the movement is also accompanied by extrarotation and slight flexion of the lower limb), thereby reducing the quality and efficiency of the patient's movement. The iliopsoas muscle was chosen as the second muscle in the comparison of the influence of the operative approach. We observed the iliopsoas muscle and the tensor fasciae latae muscle in each group of patients separately. The values of t_{stat} and t_{crit} clearly show that the direct ventral approach represents significantly better results in the postoperative condition of the patients. The monitored muscles when using the ventral surgical approach showed significantly less shortening than when using the lateral surgical approach. The positive effect of the approach was shown mainly for the tensor fasciae latae muscle. The study was developed by the project KEGA 003KU-4/2021.

Key words: THA, physiotherapy, shortening muscles, rapid recovery

INFLUENCE ON INTERPROFESSIONAL EDUCATION ON PERCEPTION OF MEDICAL PROFESSIONS

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Introduction: Collaboration in interprofessional teams is the basis of organization in health care system. A holistic approach to the patient requires the cooperation of specialists from many fields of medical sciences – doctors, nurses, paramedics, physiotherapists, dietitians and many others. The social perception of medical professionals is associated with various stereotypes. These stereotypes may also be reproduced among medical professionals and perpetuated or strengthened. So far, education programs have not made it possible to participate in compulsory classes involving education in interprofessional teams. This type of classes allow students to learn the competences of representatives of various professions, develop the ability to cooperate in the team and competences related to, e.g.: optimizing operations or taking on a leadership role. Stereotypes related to teamwork often include the issue of dependence on the doctor of other team members and hierarchy.

Aim: Assessment of the impact of interprofessional education on the mutual perception of medical professionals.

Methods: Our study was conducted between November 2022 and July 2023 on a group of 62 students from Andrzej Frycz Modrzewski Krakow University from the field of medicine, nursing and emergency medical services. Students from research group (31 students) have participated in interprofessional classes in medical simulation center during the academic year. We have also included in our study the participation of control group – 31 students who did not participate in interprofessional classes. In our study we used an original “word cloud” form and students’ opinions from focus discussions. The measurements were performed by planned time intervals. The research team has obtained the approval of the bioethics committee.

Results and conclusion: The results show the relationship between the mutual perception of medical professionals and their participation in interprofessional activities. Cooperation in mixed teams influenced the perception of representatives of other specialties among students of medicine, nursing and emergency medical services.

Key words: Interprofessional communication, medical simulation, stereotype, medical professionals

EDUCATION OF NURSES IN PALLIATIVE NURSING IN SLOVAKIA AND ABROAD

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The demographic curve of the health status of the population points to an increase in the proportion of the elderly age categories in the general population, to the increasing number of patients with chronic or an incurable disease; which creates space for the increasing need for quality palliative care and qualified staff. The purpose of the post is to provide insight into education of nurses in palliative nursing in Slovakia and abroad. Countries of the EU have joint effort to improve the conditions for palliative care. This effort the organization „The European Association of Palliative Care – EAPC” helps significantly (1988), whose key role is development, accessibility, comprehensiveness and professionalism of the palliative care. The organization, among other activities, developed standards for education in palliative nursing „A guide for the Development of Palliative Nurse Education in Europe”, in which it has divided education into three levels (A1 and A2, B, C). In the Slovakia, the implementation of palliative nursing in the thematic unit of the curriculum within lifelong education of nurses has not occurred yet. Education in palliative nursing in the Czech Republic, the conceptual framework of the basic level of education was acquired by the decree of the Ministry of Health of the Czech Republic no. 39/2005 Coll. In Austria, palliative care is currently offered in the field postgraduate three-level concept of education up to master’s level. In the United States American education in palliative nursing is covered by „The American Association of Colleges of Nursing”. The development of education in palliative care in each country is different depending on legislative, social, economic and cultural factors.

Key words: nurse education, palliative nursing

FATIGUE IN PATIENTS WITH MULTIPLE SCLEROSIS – SELECTED CHARACTERISTICS AND FATIGUE SCORE

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Introduction: Fatigue is one of the most common symptom of multiple sclerosis (MS). Fatigue has its own characteristics and it can be assessed objectively. Patients perceive fatigue as a negative problem that reduces the quality of life.

Purpose of research: To describe selected characteristics and score of fatigue in patients with MS and control group.

Material and methods: Design: quantitative cross-sectional study. Sample consisted of 147 patients (Sample A) and 158 participants of control group (Sample B). Mean age of Sample A was 41.05 ± 9.83 years and 44.0 ± 15.49 years in Sample B. The median duration of MS was 8.26 ± 5.83 (min. 1, max. 30) years. The median EDSS disease severity point score was 3.43 ± 1.73 (range 1–7). Questionnaire method was used for empirical data collection. The analysis of empirical data was carried out using univariate and bivariate statistics. The approval of the local ethical committee was obtained before data collection.

Results: The effect of perceived fatigue according to Modified Fatigue Impact Scale was an average point score of 39.93 ± 16.66 in Sample A and 25.33 ± 14.31 in Sample B (≥ 38 point score is fatigue presented). Intensity of fatigue according to Visual Analogue Scale was at the level of 5.36 ± 1.84 (moderate fatigue, min. 1, max. 10) in Sample A, and 2.96 ± 1.65 (mild fatigue, min. 0, max. 8) in Sample B. Fatigue was present 5.26 ± 2.02 days/week and 4.82 ± 4.03 hours/per day in Sample A, and 3.01 ± 1.91 days/week and 2.49 ± 1.77 hours/per day in Sample B. Fatigue was present all throughout the day in 19% of patients in Sample A, and in 1.8% of participants in Sample B. The onset of fatigue spontaneously reported 76.9% of patients in Sample A, and 21.5% of participants in Sample B.

Conclusion: Fatigue is a multidimensional symptom. An objective assessment of fatigue including its characteristics in patients with MS are the starting points for its effective management.

Key words: fatigue, multiple sclerosis, selected characteristics, fatigue score

PALLIATIVE CARE FOR PATIENTS AFTER LEFT VENTRICULAR ASSIST DEVICE

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Introduction: Left ventricular assist devices (LVADs) are an available treatment option for selected patients with advanced heart failure. Initially developed as a bridge to transplantation, LVADs are now also offered to patient's ineligible for transplantation as destination therapy (DT). Individuals with a DT-LVAD will live the remainder of their lives with the device in place. Although survival and quality of life improve with LVADs compared with medical therapy, complications persist including bleeding, infection, and stroke. There has been increased emphasis on involving palliative care specialists in LVAD programs, specifically the DT-LVAD population.

Objective of the work addresses the complexities of the LVAD population and describes key challenges in palliative care.

Conclusions: Essential to optimal care for patients with DT-LVAD is a detailed understanding of the prognostic implications, symptom burden, potential complications, and caregiving needs associated with LVAD. The majority of patients will live for months to years with LVAD. Nevertheless, the advanced illness trajectory for this population is punctuated with repeated hospitalizations, problems associated with aging-related comorbidities, increasing symptom burden, caregiver burnout, and other challenges, which require longitudinal palliative care. The need for building the closer collaboration between LVAD centre and long-term care is crucial. Also, the goals of care and end of life issues are recognized in the literature as an essential part of comprehensive patient care.

Key words: Left Ventricular Assist Device, palliative care

HEALTH LITERACY, SELF-EFFICACY, AND THEIR ASSOCIATION WITH CERVIX CANCER PREVENTIVE BEHAVIOUR IN SLOVAK ADULT WOMEN

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Introduction: Cervical cancer (CC) is common cancer in Slovakia, despite the fact that health care systems include free preventive gynaecological exams with cervical cancer screening. Preventive behaviour and check-ups participation rates are affected by a number of factors. Health literacy (HL) and self-efficacy (SE) including. The potential effect of HL and SE on CC preventive behaviour among adult women has not yet been fully studied in Slovakia.

Purpose of research: Our objectives were to determine the level of health literacy, self-efficacy, and CC prevention behaviour in adult women, and whether they are associated with CC prevention behaviour in adult women.

Material and methods: A cross-sectional study was conducted, from November 2022 to March 2023, through a multi-stage sampling design on 132 women aged between 21 and 61 years in Slovakia. Data were collected through valid and reliable questionnaires including The Newest Vital Sign, The General Self-Efficacy Questionnaire, and CPC – 28.

Results: The level of CC prevention behaviour scores in six domain of CPC was from low (1st quartile) in perceived barriers to moderate level (2nd quartile) in perception of severity of CC and susceptibility to CC. Possibility of limited HL and lower SE were observed in 39.4% and 53% of women, respectively. Preventive behaviour was significantly correlated with HL, SE, smoking and childbearing status, BMI, and education level of participants.

Conclusion: The findings revealed that the perceived barriers to CC screening uptake are related to personal perspectives and knowledge of participants. It also has been observed that health literacy and self-efficacy are correlated to CC preventive behaviour. Focusing on an intervention based on HL skills and SE may be a strategy how to promote reproductive health in women's population.

Key words: Adult women, Cervix cancer preventive behaviour, Health literacy, Self-efficacy

NUTRITION AS A NURSING PROBLEM IN ONCOLOGICAL PATIENTS

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Introduction: Oncological disease is a systemic disease associated with disorders of energy expenditure on the basis of altered metabolism. Metabolic changes are the cause of reduced food intake, together with treatment procedures, and the increased development of unwanted complications. The goal of nutritional support in an oncological patient is to prevent weight loss and limit the development of malnutrition. In practice, the key condition for success is the assessment of the nutritional status and early nutritional intervention.

Case report: The main objective of the paper is explain the procedures of nursing interventions in ensuring the nutrition of a malnourished patient.

The main method is a case study. The choice of the respondent was deliberate. These selection criteria were: a patient with an oncological diagnosis and malnutrition, willing to cooperate. We included a 68-year-old patient with esophageal cancer in the study. Based on nutritional anamnesis, anthropometric measurements and laboratory tests, the patient's nutritional status was evaluated as malnutrition. Over the course of five months, we ensured that the patient's nutritional needs were met through a percutaneous endoscopic gastrostomy (PEG) through prescribed nutritional interventions – administration of diet No. 1 enterally by mouth and 6 to 8 nutritive drinks through PEG per day. Sipping is the administration of nutritional preparations with a high proportion of proteins, fats, carbohydrates, minerals, vitamins and trace elements. This nutritional intervention is the simplest form of enteral nutrition in practice.

Conclusion: Timely planning and implementation of nutritional intervention is important for patients who have a risk of cancer cachexia. We managed to stabilize the patient's body weight during the monitored period.

Key words: Cancer disease, Nutrition, Assessment tools, Nutritional interventions

THE DEAF AS PATIENTS – ACCESS OF DEAF PEOPLE TO HEALTH CARE SERVICES

Joanna Bierówka

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It is estimated that there are from 50,000 to 100,000 deaf people in Poland who communicate in Polish Sign Language. Most of them describe themselves as „the Deaf” – written with capital letters, and see themselves as representatives of a cultural and linguistic minority. It is the community that has been emancipating and activating itself recently, among other things, thanks to the changes that have taken place in international and Polish law, guaranteeing the Deaf broadly understood accessibility and the ability to communicate in the way they choose.

In my speech I will introduce the communication specificity of the Deaf and present their culture. I will present the rights of the Deaf regarding their use of health care services, on the same terms as hearing patients. Next, I will outline the realities faced by the Deaf in health care facilities. I will base this part of my speech on the results of research among the Deaf that I have been carrying out for several years, especially the in-depth interviews conducted in 2021 with the Deaf. I will also use the statements of the Deaf during debates organized by the Małopolska PZG Branch and broadcast on the Głusi Małopolska TV24 channel in 2021–2023. My research shows that the existing regulations do not work in practice, and the level of awareness of the needs of the Deaf, the specificity of their communication and culture among health care professionals is low. Deaf patients face a lack of understanding, empathy and discrimination.

Key words: deaf patient, health care of the Deaf, accessibility, barriers, discrimination

SATISFACTION WITH PERINATAL CARE AMONG WOMEN GIVING BIRTH NATURALLY AND AFTER CAESAREAN SECTION

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Introduction: Pregnancy is one of the most important periods in a woman's life. It is important to know women's opinions on selected aspects accompanying natural childbirth and caesarean section in order to constantly improve the level of care provided.

Aim: The aim of this study was to examine the opinion of women who gave birth naturally or by caesarean section and to assess their satisfaction with the experienced perinatal care.

Method and material: The study involved 155 patients who gave birth to a child by natural means or by Caesarean section within a maximum of twelve months before filling in the questionnaire. The following questionnaires were used to conduct the study: New Mother-Quality of Care and a selfdesigned questionnaire.

Results: Assessment of perinatal care during delivery, stay in the ward and discharge was assessed as satisfactory. It is no different in the group of women giving birth naturally and by caesarean section. Satisfaction during hospital admission was higher among women with secondary and higher education. Satisfaction with childbirth and discharge, as well as with the stay in the maternity and neonatal ward was higher in respondents in a better economic situation. Women with higher education and a good economic situation after giving birth naturally had greater satisfaction with hospital admission. The stay in the ward was assessed as more satisfactory among women giving birth naturally, with secondary education.

Conclusions: Satisfaction with perinatal care was high in each group, at each stage of hospitalization and regardless of the delivery technique. Higher or secondary education and a very good economic situation were associated with a greater probability of achieving high satisfaction. Other sociodemographic variables and the number of deliveries, duration of hospitalization, preparation for childbirth in childbirth classes did not affect the level of satisfaction with care.

Key words: satisfaction, perinatalcare, natural childbirth, Caesarean section

HEALTH PROFESSIONALS' APPROACH TO CHILDREN WITH AUTISM SPECTRUM DISORDERS FROM PARENTS' PERSPECTIVES

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Introduction: Visiting a healthcare facility is challenging for children with autism spectrum disorder (ASD) as they are sensitive to new environments, new faces and changes in daily routines. Children with ASD might react negatively to the new, unfamiliar and unknown environments. Healthcare professionals can perceive encounters with children with ASD as challenging. Parents' experiences of respectful and non-respectful attitudes of health professionals to children with autism, could contribute to improving the quality of care for children with autism spectrum disorders.

Purpose of research: The purpose of the survey was to find out, how parents of children with autism spectrum disorder assess the behaviour of health professionals during paediatric examination or treatment in a healthcare facility, clinic or hospital for children with ASD.

Material and methods: The data collection method was semi-structured interviews with 18 parents of children with autism spectrum disorder. The results were categorized thematically.

Results: The results indicate, that nurses and physicians do not have enough experience with the diagnosis of autism. The parents encountered two polarities. On the one hand, there are the following: prejudice, impatience, nervousness and rejection of the child's specific needs. On the other hand, the parents perceived considerate, accommodating and calm behaviour. Parents consider it necessary to raise awareness about autism and at the same time respect it. They see the reserves in an unprofessional approach, and a lack of compassion and humanity. The parents appreciate the kind and humane approach of healthcare professionals, who respect and consider the peculiarities of the behaviour of children with ASD in the performance of their profession.

Conclusions: Healthcare for children with ASD focused on outpatient and hospital settings, is still a relatively unknown topic in Slovakia. We consider awareness of this issue to be important because we have identified gaps in the approach of health professionals to the care of children with autism spectrum disorders.

Key words: Children, Autism, Approach, Health professionals, Experiences

LINGUISTIC VALIDATION AND ADAPTATION OF THE BREASTFEEDING ATTRITION PREDICTION TOOL (BAPT)

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Breastfeeding is an optimal way of feeding infants and young children and it provides health benefits for both the child and the mother. Breast milk contains a unique cocktail of nutrients, but breastfeeding is also essential for building a mutual relationship between mother and her child. WHO recommends exclusive breastfeeding until the child is six months old, unfortunately the current global trend is lower than 40%. Breastfeeding assessment tools allow the identification of women at risk of early termination of breastfeeding. The BAPT is a self-assessment tool to identify the risk of premature termination of breastfeeding and it was developed in America in 1992. BAPT was with the consent of the author translated from English to Czech using a complex process, called backward translation, and adapted for use in a clinical environment. Before creating the final version of the BAPT questionnaire, a pre-test of the proposed Czech version of the tool is carried out in a clinical environment.

The aim of the paper is to present the BAPT tool and inform about the process of linguistic validation and adaptation to create the final version of the BAPT tool for its use in clinical practice in the Czech environment.

This post was created as part of the project Language Validation and Adaptation of the BAPT Assessment Tool for the Clinical Setting IGA_FZV_2023_010 (FZV UP in Olomouc).

Key words: breastfeeding, Breastfeeding Attrition Prediction Tool (BAPT), tool, linguistic validation

PATIENT WITH CHRONIC ADRENAL INSUFFICIENCY (ADDISON'S DISEASE) – PROBLEMS OF THE PATIENT AND HIS FAMILY

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Patient aged 41, in the history: chronic fatigue, drowsiness, extreme fatigue and palpitations with little effort, tearful, darkening of the skin, burning of the skin under the influence of sunlight, convulsions, weight loss, pain in the lower limbs after exercise, memory disorders, concentration, problems with attention, depressive disorders, anxiety, in the family badly perceived due to the lack of strength for any work at home. Excessive salting of food. Psychiatrically treated with multiple drugs without improvement. In addition, Hashimoto's disease for many years.

Test results: Na – 129 mmol/l, 137 mmol/l, K – 4.8 mmol, the highest K – 5.12 mmol/l, Ca – 2.51 mmol/l, Glucose – 3.75 mmol/l fasting, Cortisol at 8.00 – 1.02 ug/dl (N: 4.8–19.5), ACTH > 2000.0 pg/ml (N: 7.2–63), DHEAS – 5.76 ug/dl (N: 60–337), Antiadrenal antibodies; positive ++.

CT scan of the adrenal glands: 2019: adrenal glands small, narrow, without focal changes.

The patient was included in: Hydrocortisonum, Cortineff, Stymen, Letrox treatment was maintained, all psychiatric drugs were discontinued.

There was an improvement in well-being, normal RR, complete resolution of excessive tiredness, drowsiness, lightening of the skin, lack of convulsions, memory disorders, lack of dizziness.

Conclusion: Addison's disease is a rare disease, but if left undiagnosed, it can lead to a life-threatening condition. Diagnosis based on simple tests and symptoms: low Na, high K, low blood glucose, low RR, easy fatigue, tendency to fainting, excessive salting of foods. After HC use, the disappearance of the symptoms. Necessary education of the family about the nature of the disease.

Key words: Hyponatremia, hyperkalemia, adrenal insufficiency, fatigue

CLINICAL MANIFESTATIONS AND THE EFFECT OF TREATMENT ON THE PSYCHO-PHYSICAL STATUS OF PATIENTS WITH HYPERTHYROIDISM

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Introduction: Hyperthyroidism is a disorder of thyroid function that puts the body in a state of hyperthyroidism. It is an endocrine disorder in which the synthesis and secretion of thyroid gland hormones occurs. About 2% of adults in Poland are diagnosed with this disease. The causes of overproduction of thyroid hormones are autoimmune Graves' disease and multi-nodular goiter – Plummer's disease. The methods of treatment used are pharmacological treatment – thyrostatic therapy, radioactive iodine thyroid ablation and surgical treatment.

Objective: Assessment of clinical symptoms and the effect of treatment on the psycho-physical condition of patients with hyperthyroidism.

Material and method: The study included 67 patients with hyperthyroidism from 18 to 56 years old. The respondents were on average 32 + 8 years old, living in villages and cities in Poland. The examined group of patients included 58 (86.6%) women and 9 (13.4%) men with varying degrees of education. The research was conducted from January to April 2020 among patients from all over Poland. The method of diagnostic survey using the author's questionnaire was used in the work.

Results: In the examined group of patients diagnosed with hyperthyroidism the most common cause was Graves' disease (79.1% of patients). All examined patients had symptoms such as increased heart rate, irritability, agitation, attention deficit problems and weight loss. Thyostatics were the most common treatment method – 97% of respondents.

Conclusions: The most common cause of hyperthyroidism in the examined group of patients was Graves' disease. The main symptoms of hyperthyroidism are increased heart rate, palpitations, sweating, irritability and weight loss. The severity of clinical symptoms of G-B disease decreases statistically significantly under the influence of treatment. The severity of the main symptoms of hyperthyroidism depends statistically significantly on the concentration of fT4 in blood serum. The most common method was pharmacological treatment – thyroid therapy.

Key words: hyperthyroidism, psycho-physical condition, clinical symptom, thyreostatic

THE FREQUENCY OF HOSPITALIZATION OF ADOLESCENT PATIENTS FOR SUICIDE ATTEMPTS DURING THE COVID-19 PANDEMIC

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Introduction: Year after year, the number of suicide attempts among adolescents is steadily increasing, and the age threshold for suicide attempts is decreasing. In Poland, suicide is the second cause of death among children and adolescents after accidents. The COVID-19 pandemic has had a pronounced negative impact on the mental health of the population worldwide, with children and adolescents suffering the most psychosocial effects associated with the pandemic.

Objective: The aim of the study was (1) to find out the frequency of hospitalization of adolescent patients for suicide attempts in the Hospital Emergency Department (ED) of the University Children's Hospital in Krakow during the COVID-19 pandemic, (2) to determine the profile of adolescent patients making a suicide attempt.

Material and method: the retrospective analysis included, on the basis of electronic medical records in the CliniNet system, sociodemographic and clinical data of patients aged 10–18 years with a diagnosis of suicide attempt. Follow-up period: from March 20, 2020 to May 16, 2023.

Results: During the COVID-19 pandemic, there were 425 hospitalizations of patients aged 11–17 due to a suicide attempt (0.7%), with the largest number (69%) in the 15–17 age range. 80% of the study group were girls, and 75.3% were urban residents. Self-poisoning was the most common cause of suicide attempts (52.4%), followed by self-harm (41%), hanging (3.2%) and jumping from a height (2.1%). The most common toxic substances in self-poisonings were antidepressants and antipsychotics, as well as paracetamol. About 70% of hospitalizations were associated with adolescent mental disorders, of which depression was the most common. One in 19 hospitalized patients required treatment in the Anesthesiology and Intensive Care Unit. The mortality rate in the entire study group was 0.2%.

Conclusions: During the COVID-19 pandemic, suicide attempts were the cause of 0.7% of hospitalizations in the ED. Those hospitalized were mostly female, in the age range of 15–17 years, who were urban residents, receiving psychiatric treatment mainly for depression.

Key words: pandemic COVID-19, suicide attempts, children, adolescents

THE KNOWLEDGE OF MEDICAL STAFF ON THE IMPACT OF NOISE ON NEONATAL INTENSIVE CARE UNITS PATIENTS AND ITS APPLICATION IN PRACTICE

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Introduction: Noise is an undesirable environmental factor that should be controlled and limited as a standard in every Neonatal Intensive Care Unit. Its impact can have negative effects on both the mental and physical health of the body. Newborns, especially prematurely born children, who are characterized by high multi-organ immaturity, are particularly sensitive to the negative impact of noise. The negative impact of noise can be reduced by appropriate behavior of medical personnel based on a high level of knowledge about the impact of noise on newborns. Elimination of negative environmental factors provides conditions for the proper development of the child and is an integral part of holistic patient care.

Aim of the study: The aim of the study is to analyze the knowledge of medical staff on the impact of noise on newborns staying in the Neonatal Intensive Care Units and to evaluate its use in practice.

Materials and methods: 104 respondents working in neonatal wards participated in the study. The survey was conducted online using social media. The study was conducted using the diagnostic survey method with the use of a self-designed questionnaire. The first part of the questionnaire concerned the aspects of knowledge on the impact of noise on hospitalized newborns, the second: socio-demographic issues of medical staff.

Results: Training in noise exposure to the newborn is not common in the workplace. There are no recommendations regulating noise standards and control equipment. The surveyed people do not have in-depth knowledge about the acceptable noise levels in the newborn room. Only every third employee was able to indicate the correct answers in this regard. Older employees with longer experience and residents of large cities scored higher on the level of knowledge than younger people. People with a higher level of knowledge and feeling satisfied with work and earnings show the greatest care in reducing the level of noise intensity in the ward.

Conclusions:

1. In neonatal pathology wards and ITN, noise standards and recommendations are more common than in physiology wards.

2. Employees caring for a newborn need training on the sources and impact of noise on the baby.
3. It is necessary to limit the noise generated by the staff, e.g. loud conversations, slamming furniture, placing objects on the incubator or moving equipment.
4. Job satisfaction translates into care in reducing the negative impact of noise on patients.

Key words: neonatology, newborns, noise, neonatal intensive care unit

ASSESSMENT OF NUTRITIONAL STATUS IN AT-RISK PATIENTS

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Introduction: The contribution is part of a pilot study for the project 009KU-4/2022 – Nutrition and physical activity as the basic pillars of care for at-risk patients. Clinical experience points to the fact that proper nutritional assessment and subsequent targeted interventions in this area significantly affect the overall condition and prognosis of at-risk patients.

Purpose of research: The aim of the study was to determine the nutritional status of at-risk patients based on anthropometric measurements and measurement and evaluation tools. We compared the degree of correlation of nutritional status assessed by BMI, anthropometric measurements and measuring instruments.

Material and methods: The group consisted of 240 patients (seniors, oncology patients, patients after CMP). Data were collected through a non-standard questionnaire focused on nutritional anamnesis, selected anthropometric measurements (skin folds, mid-calf circumference, mid-arm circumference), BMI and measurement and evaluation tools (Mini-nutritional assessment, Nutritional Risk Screening).

Results: Of the total number of 240 monitored patients, only 4% showed a BMI value of less than 19. In a more detailed assessment of anthropometric measurements (CC, MAC), 38.75% of the monitored group had below-average values, the risk of sarcopenia was shown by 51.6%, and up to 52.9% (127) of monitored patients/clients were at risk of malnutrition (measured using the standardized tools Mini Nutritional Assessment, Nutritional Risk Screening).

Conclusions: In risk patients, a thorough nutritional screening is essential and must not be limited to BMI calculation, or a brief nutritional anamnesis, because it ignores a large number of important factors in a specific individual (e.g. body structure, muscle mass, etc.).

Key words: nutritional assessment, at-risk patients, Mini-Nutritional Assessment, Nutritional Risk Screening, anthropometric measurements

USE OF THE APPP METHOD IN PATIENTS IN THE HOME ENVIRONMENT

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Introduction: The Autoreflex Prenatal, Postnatal Therapeutic Positions (APPP) method is based on the psychomotor development of a person from prenatal, that is sperm movement, to postnatal development to bipedal locomotion. The patient is led into a therapeutic position, during which a conscious isometric activation of the skeletal muscles occurs after a certain period of time. The position and its activation sends to the brain, and a specific stimulus and innate abilities of the patient. The patient turns on the appropriate motor pattern from the given period, and when it is repeated, the activation of the disturbed motor stereotype is assumed.

Case study: We chose the case study of a 65-year-old patient after ischemic events as the research method, the first in the basin and cerebri media left and the other in the area of the cerebellum of the left hemisphere. The patient after the second ischemic attack was connected to artificial pulmonary ventilation for extensive hydrocephalus. Patient lying down after bed rest, with gradual verticalization and intensive rehabilitation in the home environment using elements of APPP prenatal position for learning reflex breathing and postnatal position with training of independent verticalization and gradual walking.

Conclusions: In APPP, isometric activity of the skeletal muscles takes place in the appropriate selected position for a certain period of time, which gradually extends to the affected body area. We are talking about physiological stimulation, which is repeated and becomes the basis of active movement and neuroplasticity. Breathing in autoreflex positions is a reflex action that gradually deepens with increasing load.

Key words: Developmental kinesiology, Neuroplasticity, Prenatal positions, Postnatal positions

MULTICULTURAL PATIENT CARE: CULTURAL DIVERSITY, ETHICAL ISSUES, LEGAL ASPECTS

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In the recent years significant population changes have been observed in Poland, making the society more multicultural. Moreover, the research shows that international migration will certainly increase during the next decades. Demographic trends and social changes affect various areas of everyday life. They also have an impact on the national healthcare systems. Population changes and cultural diversity affects everyday duties of Polish healthcare workers and make them face new challenges.

The aim of the study was to describe the most common cultural barriers and ethical issues which are noticed among healthcare professionals in Poland. Moreover, the author analysed new approaches towards multicultural patient and recommendations to provide an effective, good-quality healthcare service.

Multicultural patient care requires developing a culturally competent healthcare system, including new skills and values as cross-cultural competence, intercultural communication or cultural understanding.

Key words: cirrhosis, paracentesis, International Classification for Nursing Practice ICNP®

THE EFFECTS OF SEX, WOMEN'S BODY COMPOSITION AND MONTHLY CYCLE PHASES ON THE SENSORY THRESHOLD OF UPPER LIMB TO TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION IN HEALTHY SUBJECTS

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Introduction: Neuromuscular excitability plays an essential role in electrotherapy treatment. The vast majority of these treatments are procedures that change the sensitivity to sensory stimuli, especially pain, with the use of an electric current.

The aim of the study: The aim of this study was to assess changes in the sensory threshold in response to transcutaneous electrical nerve stimulation (TENS), taking into account certain personal factors, such as sex, body composition, and phases of the menstrual cycle.

Materials and methods: The study involved 205 women and 49 men aged 19–33 years. Sensory threshold was examined by TENS stimulation (a biphasic current waveform, 100 Hz and 100 μ s) and body composition using a TANITA analyzer.

Results: The mean sensitivity threshold in women was lower than in men (mean \pm SD, F: 8.78 ± 2.11 mA vs. M: 11.20 ± 3.29 mA, $p < 0.001$). There were no significant differences in sensory threshold during the different phases of a woman's monthly cycle. The taller the woman, the higher the sensory threshold ($B \pm SE$, 0.15 ± 0.07 , $p = 0.036$), while those with a higher percentage of body fat and a higher total water content had a lower sensory threshold (fat: $B \pm SE$, -0.25 ± 0.07 , $p < 0.001$; water: $B \pm SE$, -0.20 ± 0.07 , $p = 0.003$).

Conclusions: In conclusion, the sensory threshold in women was lower than in men. In women aged 19–33 years, the phases of the monthly cycle did not affect the sensory threshold; however, being taller and having less body fat and a lower water content increased the sensory threshold.

Key words: sensory threshold, transcutaneous electrical nerve stimulation, body composition

INFLUENCE OF SPORTS ACTIVITY ON THE LEVEL OF KINESIOPHOBIA AMONG YOUNG ADULTS AFTER ANKLE SPRAIN

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Introduction: Kinesiophobia is one of the leading clinical factors in recovery from injury. Trauma of the ankle joint can cause severe withdrawal and fear of the patient to undertake physical activity, resulting in hypokinesia.

Aim: The aim of the study was to demonstrate the relationship between physical activity before injury and a level of kinesiophobia after an ankle sprain.

Material and methods: The study group comprised 115 patients aged 18–34 (mean 23.3), who were divided into 2 groups: Group I – high active (65 people) and Group II – low active (50 people). All participants filled in 3 standardized questionnaires: Foot and Ankle Ability Measure (FAAM); Fear-Avoidance Beliefs Questionnaire (FABQ); Tampa Scale of Kinesiophobia (TSK-17) and their own personal data sheet. Multivariable logistic regression analysis was performed to identify the level of sports activity and kinesiophobia.

Results: The analyses showed no statistically significant relationship with level of kinesiophobia before and after the ankle injury in both groups ($p = 0.271$). TSK-17 scores had significant and negative correlations with FAAM-ADL, FAAM-SPORT and mean FAAM value ($p < 0.001$). There was statistically significant and positive correlation with FABQ and TSK 17 ($p < 0.001$). FABQ significantly and negatively correlated with FAAM-ADL, FAAM-SPORT and mean score of FAAM ($p < 0.001$).

Conclusions: The level of physical activity in the study groups had no influence on incidence of fear connected with activity after the injury. Studies confirmed the relationship between functional limitations and the level of kinesiophobia (TSK-17) and the level of fear and FABQ. A higher level of foot fitness determined a lower sense of fear and avoidance of physical activity. Based on the correlation between TSK-17 and FABQ scores, confirmed that increased levels of kinesiophobia associated with increased levels of anxiety and avoidance of physical activity.

Key words: Kinesiophobia, TSK-17, ankle injury

THE EFFECTS OF WHOLE-BODY CRYOSTIMULATION ON SIRT1 AND SIRT3 CONCENTRATIONS IN TRAINING AND NON-TRAINING MEN DEPENDING ON AGE

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Introduction: Sirtuins have regulatory functions. Their activity decreases with age. In young people, aerobic training and reduced ambient temperature have been shown to cause up-regulation of sirtuins expression. The aim of the study was to assess the effects of whole-body cryostimulation (WBC) on the concentrations of Sirt1 and Sirt3 in the blood serum of training and non-training men depending on age.

Materials & Methods: The study involved 20 older – GROUP-60 (58.80±6.22 years) and 20 young males – GROUP-20 (22.35±1.73 years, $p<0.05$). In each group, there were 10 non-training individuals (60NTR and 20NTR) and 10 long-distance runners (60TR, training experience 6.71±5.79 years and 20TR, training experience 3.35±1.83 years). The subjects underwent 24 WBC treatments (3 min, -130°C) every other day. The serum concentrations of Sirt1 and Sirt3 were determined before and after the 1st, 12th and 24th WBC treatment.

Results: Prior to WBC, Sirt1 and Sirt3 were similar in all of the groups ($p>0.05$). Sirt1 concentration increased significantly in the 60TR group after the 1st WBC treatment ($p=0.03$) and after 24 WBC sessions ($p=0.01$), while in the 20NTR group, this occurred after 12 ($p=0.01$) and 24 WBC treatments ($p=0.05$). Sirt3 concentration increased significantly in the 60TR group after 24 WBC applications ($p=0.01$). Additionally, after the 1st ($p=0.05$) and 24th WBC treatment ($p<0.01$), the Sirt3 concentration was higher in the 60TR group compared to 60NTR.

Conclusions: The series of 24 WBC treatments is a factor that increases the concentration of Sirt1 and Sirt3 in older aerobic-training athletes. In the group of young men, the 12 WBC series causes an increase in Sirt1 concentration. This effect applies to the young non-training individuals and becomes intensified after 24 treatments.

Research funding: National Science Centre, Poland, 2015/17/N/NZ7/01039.

Key words: aging, physical activity, sirtuin 1, sirtuin 3, whole-body cryotherapy

EVALUATION OF A SINGLE THERAPY OF THE TEMPOROMANDIBULAR JOINTS ON THE CERVICAL SPINE AND TEMPOROMANDIBULAR JOINTS MOBILITY AND PELVIC FLOOR MUSCLES ACTIVITY IN HEALTHY WOMEN AGED 20–30 YEARS

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Introduction: The pelvic floor muscles (PFM) play a significant role in the proper functioning of the organs of the lesser pelvis and abdominal cavity. The PFM are structurally connected to other areas of the body, forming part of the deep anterior muscular-fascial tape. Along these tapes, tensions and loads are transmitted. Due to its course, this tape connects the PFM with two distant areas – the sole of the foot and the temporomandibular joint (TMJ).

Research Objective: The aim of this study was to assess the effects of a single intervention within the TMJ region on PFM activity and the mobility of the cervical spine segment and TMJ.

Materials and Methods: Thirty women aged between 20 and 30 years were included in the study, taking into account inclusion and exclusion criteria. The participants were randomly divided into two groups. The first group (n=15) underwent a one-time 15-minute TMJ therapy, which included externally and intraorally performed soft tissue mobilization techniques. The second group (n=15) served as a control group without any intervention. Two measurements were taken to assess the effects of the therapy.

Transabdominal ultrasonography was used to evaluate PFM activity. Cervical range of motion was measured using the Cervical Range-of-Motion Instrument (CROM). A stainless hardened caliper was used to assess TMJ mobility.

Results: In the experimental group, the applied therapy significantly increased the range of lateral flexion to the right and left, as well as rotation to the right and left in the cervical spine segment. The range of TMJ motion significantly increased during lateral movements to the right and left, protrusion, and retrusion of the mandible. Additionally, the level of PFM activation significantly increased. No statistically significant changes were observed in the control group.

Conclusions: A single TMJ therapy session leads to an increase in the mobility of the cervical spine segment and TMJ, as well as an increase in PFM activation.

Key words: Pelvic floor muscles, temporomandibular joints, cervical spine segment

INTERVAL TRAINING AS A WAY TO HEALTH

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The motivation to take care of one's health and appearance is the growing self-awareness in society. On the Internet, you can find websites, portals and personalities promoting a healthy lifestyle at every step. The fight for the attention and time of people seeking information on this topic continues and will become more intense due to the sedentary lifestyle of society. Often, the information is supplemented with photos of people with unnaturally refined silhouettes, which only affects the imagination and builds motivation to act.

In response to the growing demand, accompanied by lack of time, HIIT (High Intensity Interval Training). An aerobic exercise method aimed at quickly and effectively getting rid of excess fat tissue and unnecessary body weight.

The aim of the study is to assess the impact of interval training on the level of body fat in an adult. During the experiment, the influence of diet, smoking and drinking alcohol and water on training effects was also analyzed.

The participants of the study were 30 adult women who performed their own interval running for 3 months. The age range of the respondents is 25–39 years, the average age is 32 years. The training took place three times a week on stationary electric treadmills owned by the participants or outside their homes. A TANITA BC-730 scale was used to measure body fat.

There was a significant reduction in body fat percentage by $4.68 \pm 0.84\%$ ($p < 0.001$). There was also a significant decrease in body weight – 4.13 ± 0.4 kg and BMI – 1.57 ± 0.53 kg/m².

Interval training is an effective way to reduce body fat and body weight. Thanks to it, you can achieve your body goals by spending a maximum of 2.5 hours a week on sessions. However, this training will not bring the intended results if it is not combined with a diet that involves consuming nutritious products in a limited amount of calories.

Key words: Interval training, Fat mass, Health, Physical effort

CROSS CULTURAL ADAPTATION, RELIABILITY AND VALIDITY OF THE POLISH VERSION OF THE CUMBERLAND ANKLE INSTABILITY TOOL

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Purpose: The aim of this study was to develop a Polish version of the Cumberland Ankle Instability Tool (CAIT-PL) questionnaire and perform CAIT-PL cultural adaptation with assessment of its psychometric properties.

Methods: The original CAIT was translated into the Polish language using standard guidelines. The CAIT-PL was completed on 2 occasions by 105 participants both with and without a history of ankle sprains. Psychometric evaluation of CAIT-PL included an assessment of internal consistency, test-retest reliability, standard error of measurement, convergent and construct validity.

Results: The CAIT-PL was successfully translated and adapted into Polish culture with satisfactory internal consistency (Cronbach's $\alpha = 0.83$) and adequate test-retest reliability resulting in $ICC_{2,1} = 0.89$ (95% CI: 0.84–0.92). Measurement error was low (SEM = 0.76 and MDC = 2.10). Convergent validity of the CAIT-PL ranged from weak to strong using Spearman's correlation coefficient between CAIT-PL and FAOS subscales ($r = 0.39$ – 0.67 ; $p < 0.05$). Construct validity was confirmed.

Conclusion: The Polish version of the Cumberland Ankle Instability Tool is a valid and reliable questionnaire for assessment of functional ankle instability among the Polish population.

Key words: CAIT, ankle instability, polish version, cultural adaptation, validity and reliability

EFFECT OF VIBRATION THERAPY ON THE PHONATORY FUNCTION OF THE LARYNX, POSTURAL STABILITY AND THYROID FUNCTION IN FEMALE VOICE PROFESSIONALS

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The human voice is used for verbal communication with other people. Research reports that the voice contains an extensive amount of information, such as age, gender, body build, physical strength and social status. Today's lifestyle and pace of life promote the development of voice-related habits that are functionally poor. Excessive muscle tension, poor posture, harmful habits (e.g., cigarette smoking, retching), gastro – oesophageal reflux, thyroid disease, hormonal fluctuations and chronic stress can all have an adverse effect on voice function.

Purpose of the Study: The aim of the study was to evaluate the effects of vibration therapy on voice emission, postural stability and thyroid function in female voice professionals. 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?
2. Whether or not and how does the applied vibration therapy affect mean phonation time (MPT) in the study groups?
3. Whether or not and how does the applied vibration therapy affect range of motion of the cervical spine in the study groups?
4. Whether or not and how does the applied vibration therapy affect postural stability in the study groups?
5. Whether or not and how does the applied vibration therapy affect the respiratory tract in the study groups?

Study Material and Research Methodology: 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 from the Lesser Poland and Subcarpathian Provinces, 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 phoniatric evaluation. In addition, aerodynamic voice tests, postural stability and (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 and vocal function.

Results: A statistically significant ($p=0.000$) difference in measurements was observed for fT4 levels (ng/ml*) in the study group. Analysis of results for MTP measurement in the study group showed a statistically significant ($p=0.000$) difference in MTP between the results obtained before and after therapy. The average MPT in the study group before therapy was 15.01 [s.] as compared to the significantly higher mean of 18,02 [s.] after therapy. The study showed the occurrence of female voice professional. The applied vibration therapy significantly affected the respiratory tract in the study groups ($p=0,000$).

No statistically significant difference in changes (after vs before therapy) in the load distribution and the location of foot center of pressure (COP) during static standing.

Conclusions:

1. The applied vibration therapy significantly affected fT4 levels in the study group.
2. It extended mean phonation time (MPT) in the study group as compared to the control group.
3. The applied vibration therapy not significantly affected range of motion of the cervical spine in the study group.
4. The applied vibration therapy significantly affected postural stability in the study group.
5. The applied vibration therapy significantly affected the respiratory tract in the study groups.

Key words: Voice Professionals, Vibration Therapy, Phonatory Function

CHANGES IN BODY COMPOSITION AMONG POSTMENOPAUSAL WOMEN WITH TYPE 2 DIABETES AS A RESULT OF WHOLE-BODY CRYOTHERAPY

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Introduction: Type 2 diabetes (T2DM) is a global problem. People with T2DM are often characterised by increased body fat, especially in the abdominal area. There are indications that whole-body cryotherapy (WBC) has a beneficial effect on metabolism and body composition in humans. The aim of the study was to determine the impact of WBC on changes in body composition among postmenopausal women with T2DM compared to healthy women.

Material and methods: The study comprised 19 women with T2DM (65.89±3.67 years, BMI 31.18±4.51 kg/m²) and 18 healthy females (61.56±4.71 years, BMI 28.96±5.31 kg/m²). All women underwent 30 WBC treatments (30 sec., temp. -60°C, then 3 min., temp. -120°C), which were applied daily in 6 series of 5 treatments with a break for Saturday and Sunday. During the study, the women did not change their diet or physical activity. Before and after the WBC treatments, the body composition of the participants was determined using dual-energy X-ray absorptiometry (DXA). Total body mass (BM), lean body mass (LBM), body fat mass (BF) and percentage of body fat in BM (%FAT), and also in the abdominal (%FAT_{android}) and hip (%FAT_{gynoid}) areas, were determined.

Results: After 30 WBC procedures, BM ($p=0.04$), BF ($p<0.01$), %FAT ($p=0.02$) and %FAT_{android} ($p=0.02$) significantly decreased in the T2DM group, while BM ($p=0.03$) and BF ($p<0.01$) experienced a significant reduction in the group of healthy women.

Conclusions: It has been shown that the use of 30 WBC treatments has a positive effect on body composition among postmenopausal women. It can be a therapy supporting the treatment of abdominal obesity in people with T2DM, in the prevention of insulin resistance as well as other metabolic disorders associated with excess body fat.

Financing: The programme of the Ministry of Science and Higher Education under the name “Regional Initiative for Perfection” within the years 2019–2022, project No. 022/RID/2018/19 in the total of 11,919,908 (22/PB/RID/2021).

Key words: whole-body cryotherapy, postmenopausal women, type 2 diabetes, abdominal obesity, body composition

PHYSICAL THERAPY EXERCISE PROGRAM AND QUALITY OF LIFE OF PATIENTS WITH CHRONIC LOW BACK PAIN

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Objektive: To compare the effectiveness of supervised physical therapy program versus non-supervised on the quality of life and pain of patients with non-specific chronic low back pain.

Design: Quantitative questionnaire and experimental method.

Subjects: A total of 60 participants with non-specific chronic low back pain who received treatment at the Algeziological Clinic of the SZU FNsP F.D. Roosevelt in Banská Bystrica. Participants were deliberately divided into supervised exercise group (n=32) or non-supervised exercise group (n=28).

Intervention: The supervised group was treated with therapy exercises, while the non-supervised received an informative session of the exercises according to the instructional video, which were performed un-supervised at home. Both groups received the physical program 2 times a week for 12 weeks.

Main Measures: Pain and quality of life (SF36v2) were assessed at baseline and 12 weeks of follow-up.

Results: Statistical analysis showed statistically significant differences between the groups for pain ($p < 0.001$) and quality of life in the physical functioning (PF) domain ($p < 0.001$) in favor of supervised group. There are statistically significant differences between baseline and outcome in the supervised group in all domains of quality of life. In non-supervised group were achieved statistically significant results in the physical functioning, vitality, social functioning, bodily pain, and mental component summary.

Conclusion: Patients with chronic low back pain who received supervised exercise showed more improvement in all of domains of quality of life and pain. Supervised physical therapy exercises are statistically superior to non-supervised home program for improving pain and quality of life of patients with non-specific chronic low back pain.

Key words: Exercise physical therapy, supervision, chronic low back pain, quality of life, pain

KNOWLEDGE AND AWARENESS OF PARENTS ABOUT THE DEVELOPMENT, CARE AND POSTURAL DEFECTS IN CHILDREN

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Introduction: The proper development process of a child is highly significant for their later functioning. Inadequate care of children can have a negative impact on their development and contribute to disruptions in the functioning of the motor system. Conscious parental behavior can ensure the correct development of the child, and early detection of irregularities allows avoiding later problems.

Research objective: The study aimed to assess parents' level of knowledge regarding childcare, development, and postural defects in children. It helped identify and understand how different factors, such as education level, place of residence, parents' age, and participation in childbirth classes, influence this knowledge.

Materials and methods: To conduct the research, an author-designed questionnaire survey was used, consisting of questions verifying knowledge and practices related to childcare employed by parents. The study involved 190 participants.

Results: The conducted research indicates that parents' knowledge about child development and care is insufficient. Only 25.3% of surveyed parents demonstrated a high level of knowledge about child development, while 30% of respondents showed the lowest level of knowledge in this area. Regarding knowledge about childcare, the highest level was demonstrated by 44.7% of participants, whereas 33.2% had the lowest level of knowledge. However, the level of knowledge and awareness among parents concerning the causes of postural defects and the consequences of neglecting them is satisfactory. As many as 81.6% of parents identified adopting improper posture as the most common cause of postural defects.

Conclusions: Continuing education and promoting childbirth classes are essential to prepare parents for their role consciously and safely for the proper development of the child from the first days of their life.

Key words: postural defects, development, childcare, awareness

POSTER ABSTRACT

MOBILE APPS THE FUTURE OF TELEMEDICINE IN CHRONIC DISEASES INCLUDING DIABETES

Edyta Laska

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Introduction: Mobile medical apps are now widespread and widely used in patients with chronic diseases. These tools are increasingly being used in healthcare for diagnostic and treatment purposes, in the remote collection of patient health history and in health promotion education. Due to their global availability, these tools can be helpful in the prevention of many diseases. On the other hand, easy access to such tools should be an opportunity for health-promoting education on this topic, which will contribute to raising the level of knowledge in the community on the principles of using appropriate medical applications.

Material and methods: The study was conducted in two diabetes clinics in Krakow confirm that the mobile application can be a new way of providing information about the state of health and can help regulate blood sugar levels. The app relayed direct data transfer from glucometers to mobile devices, where other lifestyle data was collected. The study lasted from January to April 2023, and involved 65 patients being treated for type 2 diabetes.

Results: The mobile app was able to collect and transmit patient data on blood glucose, planned and consumed meals including snacks during the day, and physical activity (calories burned, number of steps), amount of fluids drunk, and adverse mood, e.g., drop in blood sugar, which the app recorded in half of the patients studied at different times of the day. The app transmitted the data quickly – without delay and relatively efficiently to the nurse, dietician and internal medicine doctor for consultation.

Conclusions: The proposed app made it easier to monitor patients' blood glucose levels a minimum of four times a day, while emphasizing activities related to healthy eating and physical activity. Patients evaluated the app positively, although not all patients agreed to participate in the study, given the technical considerations they feared. All patients surveyed said it was definitely easier for them to record and control their blood sugar levels and aspects of lifestyle and health-seeking behavior.

Key words: mobile apps, chronic diseases, health promotion education

NURSING PROBLEMS IN THE CARE OF A PATIENT WITH MALIGNANT PROSTATE CANCER

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Entry: Prostate cancer is the second most commonly diagnosed cancer in men worldwide, after lung cancer. It usually develops on the outer part of the prostate, away from the urethra, which makes the clinical symptoms appear in a more advanced form. Growing, it can infiltrate the urethra, bladder and seminal vesicles, causing problems with the lower urinary tract. At an early stage of advancement in Poland, it is usually detected accidentally, despite many information campaigns and prevention programs conducted among men. Early detection is crucial for successful treatment and gives a chance for a full recovery. Still, a large group of men with symptoms of a disseminated cancer process becomes palliative care patients.

A case report: An 89-year-old man staying in an inpatient hospice with a diagnosis of advanced prostate cancer (Gealson scale 5+3=8), previously treated with hormone therapy. Subsequent examinations confirmed the dissemination of the neoplastic process with bone metastases of stage IV. At the time of nursing care, the patient was dependent (Barthel scale 10 points), was constantly in bed, reported pain in the thoracolumbar spine and ribs (NRS 7). He was reluctant to eat meals and showed signs of malnutrition (BMI = 20.76, MNA nutritional scale – 19 points). There was swelling around the ankles and lower legs. Due to difficulty urinating, he had a Foley catheter inserted. The man did not fully accept the disease (20 points on the AIS scale) and showed signs of mild depression (Beck's Depression Scale – 17 points).

Conclusions: The main care problems are: pain, swelling, difficulty urinating, constipation, weakness and malnutrition. Prostate cancer in the final stage has a strong impact on the ability to perform daily activities and limits independence. The patient's attitude to cancer can be very complex and individual for each of them. This is influenced by factors such as: age, gender, personality, life experiences, support from family and friends, as well as the stage of the disease and the prognosis of treatment. Caring for cancer patients requires high qualifications and skills from nurses, as well as the ability to understand and be compassionate. Due to the nature of care, it becomes an integral part of the life of the patient and his family.

Key words: prostate cancer, generalized neoplastic process, nursing care, palliative care

EVALUATION OF THE QUALITY OF LIFE OF CHILDREN WITH DOWN SYNDROME AND THE IMPACT OF A GENETIC DEFECT ON THE FUNCTIONING OF THE FAMILY

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Introduction: Down syndrome is a genetic defect in which abnormalities in the 21st pair of autosomal chromosomes are observed. A characteristic feature of the syndrome is the presence of intellectual disability of various degrees, as well as dysmorphic features, including the face and the whole body. Mutations also result in developmental disorders within the internal organs, including congenital defects of the heart, digestive system, genitourinary system or defects within the skeletal system. Assessment of the functioning of children and their families and the quality of life allows for improvement of the care provided so far.

Aim of the study: The aim of the study was to assess the quality of life of children with Down's syndrome and the effects of a genetic defect on family life.

Materials and methods: 53 parents of children with Down syndrome, aged between 2 and 18 years participated in the study. The entire study was conducted on the basis of a diagnostic interview, using the interview technique. The research instruments were a self-survey with metric questions, a general questionnaire to assess the quality of life of children (PedsQL 4.0) for different age groups (2–4, 5–7, 8–12, 13–18, 19–25, 25 years and older) and a questionnaire on the effects of the disease on the family (Impact Module PedsQL 2.0).

Results: The group of children studied with Down syndrome performs best in the physical and emotional domains, but worst in school. Female children are better at school than male children. The quality of life of a child with Down's syndrome is better if the family's economic status is described as "very good". Factors such as the age of the child, siblings or the education of the parents do not have a significant influence on the areas studied. Parents of children with Down syndrome are characterized by low function in the area of worries and everyday activities. Concomitant diseases such as muscle hypotension, thyroid dysfunction or gastrointestinal deficits destabilize family life.

Conclusions:

1. The quality of life of children with Down syndrome is impaired.

2. The children studied perform best in the area of physical and emotional function, but worst in the area of school operation.
3. Variables such as: age, siblings or parents' education do not have a significant impact on the quality of life of the surveyed children.
4. The factors significantly affecting the quality of life are: the sex of the child and the economic status of the family.
5. The overall quality of life of a child is influenced by the coexistence of hypothyroidism, muscular hypotonia and gastrointestinal defects.
6. The functioning of the family of children with Down syndrome is reduced.
7. The quality of life of a child with Down syndrome correlates positively with the quality of life of the parents and the functioning of the family.

Key words: Down syndrome, quality of life, functioning of the family

MODEL OF NURSING CARE OVER THE PATIENT WITH LIVER CIRRHOSIS AFTER PARACENTESIS TAKING INTO ACCOUNT THE INTERNATIONAL CLASSIFICATION FOR NURSING PRACTICE ICNP®

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Cirrhosis of the liver is the twelfth most common cause of death. Its most common complication is ascites, the treatment of which is done by puncturing the peritoneal cavity to drop fluid. This treatment is called paracentesis. Although the formation of characteristic abnormal regenerative nodules can occur through nonalcoholic fatty liver, alcohol abuse is considered the main cause of cirrhosis. In the advanced stage of the disease, the only practicable treatment is a liver transplant, however, many people are not eligible for surgery due to alcohol addiction. Therefore, a palliative approach should often be used, i.e., a holistic view of the human being focused on maintaining a high quality of life subjectively assessed by the ill person.

Key words: cirrhosis, paracentesis, International Classification for Nursing Practice ICNP®

SENSE OF COHERENCE AMONG CAREGIVERS OF PEOPLE WITH MULTIPLE SCLEROSIS

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Introduction: A key role in the salutogenetic concept of health is the concept of coherence, introduced by A. Antonovsky. A sense of coherence consists of three components: a sense of intelligibility, a sense of resourcefulness and a sense of meaningfulness. Caring for a chronic patient can be related to the sense of life orientation.

Objective: The purpose of this study was to determine the level of coherence and the relationship between life orientation and sociodemographic variables of caregivers of people with multiple sclerosis.

Material and Methods: The study group consisted of 107 caregivers. The study was conducted in the Department of Neurology with Cerebral Stroke Subdivision of the John Paul II Subcarpathian Regional Hospital in Krosno, the Department of Neurology and Cerebral Stroke and the Department of Neurological Rehabilitation with General Rehabilitation Subdivision of the L. Rydygier Specialist Hospital in Krakow and the Helpful Hand Foundation in Krakow. The diagnostic survey method using Antonovsky's SOC – 29 Life Orientation Questionnaire and the Author's Survey Questionnaire was used.

Results: Based on the results obtained from the Life Orientation Questionnaire (SOC), the meanscore was 95.23 points (Me=83; Min.=36; Max.=191). Caregiver showed low levels of life orientation in all components. There was a statistically significant difference between place of residence and meaningfulness $p=0.0204$ ($p<0.05$). Rural residents were distinguished by a high sense of meaningfulness.

Conclusions: The sense of coherence of caregivers of people with multiple sclerosis was low. Age, gender, marital status, education and income did not statistically significantly differentiate the sense of coherence of caregivers of people with multiple sclerosis. Such a relationship was shown only between place of living, rural residents were distinguished by a high sense of meaningfulness.

Key word: sense of coherence, caregiver, multiple sclerosis

THE LEVEL OF ACCEPTANCE OF THE DISEASE AND THE QUALITY OF LIFE OF PATIENTS WITH PARKINSON'S DISEASE

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Introduction: The progressive aging of the population means Parkinsonism is diagnosed more and more every year. Currently, nearly 6 million people suffer from it, where 10% of cases are people over 70 years of age. People affected by disease are forced to change on many levels of life. The comfort of life depends on acceptance of disease- the greater the acceptance of the state of health, the better quality of life.

Aim: The aim of the study was to indicate the relationship between the assessment of the level of acceptance of the disease and the quality of life of patients with Parkinson's disease.

Material and methods: The study involved 108 people with Parkinson's disease residing permanently in the Nursing Home Helcels in Krakow. The study used the diagnostic survey method. The research tool was a self-created questionnaire and standardized questionnaires: WHOQOL BREF used to assess the quality of life and AIS used to measure the level of acceptance of the disease.

Results: Most of respondents experienced problems in functioning in society, such as: communication problems (58.33%), decreasing number of friends (37.95%), reluctance to participate in social life (48.15%). A large percentage of respondents (75%) have problems in mental sphere related to sleep disorders, mood swings and depressive disorders. More than 60% of respondents are dissatisfied or very dissatisfied with their quality of life and their health. The average AIS score was 16.81 points, and SD 2.1 points per question, which shows the level of acceptance of disease was low.

Conclusions: Parkinson's disease has a negative impact on every sphere of life, causing many problems in the physical, mental, social and social spheres. The level of acceptance of disease and quality of life were assessed by the respondents as low and independent of its duration. Despite the low level of acceptance of disease, no significant relationship was found between the quality of life of the respondents and the degree of acceptance of the disease.

Key words: Parkinson's disease, quality of life, acceptance of the disease

FACTORS AFFECTING ADHERENCE TO DISEASE-MODIFYING THERAPIES IN MULTIPLE SCLEROSIS

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Background: Multiple sclerosis (MS) is a chronic, autoimmune, demyelinating disease of the central nervous system. The goal of disease-modifying therapies (DMT) is to slow the progression of the disease, prevent relapses and increase the patient's overall quality of life. Accurate adherence is necessary for efficient treatment.

Aim: Assessment of adherence to therapeutic recommendations among MS patients.

Material and methods: The study involved 121 MS patients who are treated by DMT, including 108 women and 13 men. In order to carry out the study, a diagnostic survey was used using selected research tools: adherence scale in chronic diseases – ACDS, patient health questionnaire – PHQ-9, acceptance of illness scale – AIS, perceived stress scale – PSS-10, fatigue scale – MFIS and a self-authored survey.

Results: Analysis of the material showed that:

- the average ACDS score was 23.92 points, which can be interpreted as an average level of adherence;
- on the PSS – 10 scale, the respondents scored an average of 21.83 points, which can be interpreted as a high level of stress;
- the AIS score averaged 28.25, indicating moderate acceptance of the disease;
- the PHQ-9 scale score averaged 12.84 points, which indicates the similarity of moderate level of depression;
- was a relationship between the time of diagnosis and acceptance of the disease, and the impact of relapse frequency on fatigue and its impact on psychosocial functioning;
- the greater was the impact of fatigue on: physical functioning, cognitive functions, psychosocial functioning and overall functioning, the lower was the level of adherence.

Conclusions:

1. Respondents moderately follow the therapeutic recommendations.
2. Socio-demographic variables and clinical variables such as time since disease diagnosis and number of relapses have no significant impact on adherence to therapeutic recommendations in MS patients.
3. The level of adherence in MS patients is significantly influenced by the level of fatigue, which affects physical functioning.

Key words: adherence, stress, fatigue, multiple sclerosis, AIS

MODEL OF CARE FOR A PATIENT WITH AMYOTROPHIC LATERAL SCLEROSIS (ALS) ACCORDING TO THE INTERNATIONAL CLASSIFICATION FOR NURSING PRACTICE ICNP®

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Andrzej Frycz Modrzewski Krakow University

Introduction: Amyotrophic lateral sclerosis is one of the most serious neurodegenerative diseases. It is a primary degenerative disease of the nervous system with a progressive course. ALS is a disease of unknown etiology. For patients and families, the greatest cruelty of this disease is the fact that as it progresses, muscle atrophy and paresis occur. In the advanced stage, the sufferer is completely immobilized, unable to move despite full mental capacity and awareness. Although the disease is incurable, many of its symptoms can be alleviated, and the goal of therapy should be to improve the quality of life and maintain the patient's independence for as long as possible.

Case description: Patient 65 years old with amyotrophic lateral sclerosis diagnosed since June 2021, currently under home long-term care. Patient on home mechanical ventilation program. Invasive mechanical ventilation was included because of increased dyspnea. Research techniques used: interview with the patient and her family, observation of the patient, analysis of medical records (patient's medical history, patient's individual order sheet), results of laboratory tests, assessment with scales (ALSFRS-R scale, Barthel scale, Norton scale), as well as measurements (blood pressure, pulse, temperature and saturation).

Results and conclusions: According to the model of individual nursing care, nursing diagnoses were made in accordance with the assumptions of the International Classification for Nursing Practice (ICNP®), nursing goals, planned nursing interventions and assessment of nursing care. Aimed at recognizing the main problems faced by the patient and her family. The nursing actions taken facilitated the care of the patient and improved the quality of life of the patient and her family.

Key words: amyotrophic lateral sclerosis, ALS, mechanical ventilation, model of care, ICNP®

THE MODEL OF CARE FOR A PATIENT WITH COLORECTAL CANCER ACCORDING TO THE INTERNATIONAL CLASSIFICATION FOR NURSING PRACTICE ICN

Aleksandra Bartnik, Renata Bakalarz

Andrzej Frycz Modrzewski Krakow University

Introduction: The following study focuses on colorectal cancer, which is the third most common malignant tumor in men and the second most common in women. This disease is not typically hereditary. Over 60% of cases are diagnosed incidentally, with age being the greatest risk factor. Colonoscopy is the primary diagnostic tool for colorectal cancer. Treatment options include surgery, chemotherapy, radiotherapy, and immunotherapy. The prognosis from the National Cancer Registry indicates a rising trend in the incidence of this disease. Comprehensive care should be provided to the patient and their family throughout the therapeutic process. Education about the disease is an important aspect of therapy for both the patient and their family. Nursing care plays a crucial role in the treatment process for patients with colorectal cancer. Care is vital for the patient and their family, providing emotional, informational, instrumental, and rehabilitative support, addressing all the patient's caregiving deficits.

Case study: A 58-year-old patient with metastatic colorectal cancer. With the presence of cancer dissemination to the liver, lungs, pelvis and peritoneal cavity. Condition after double laparotomy (2017, 2018) and Miles operation ended with colostomy (2020). In addition, the state after the HIPEC operation (2021) and radiotherapy of liver and pelvis. Remaining in palliative treatment with chemotherapy since 2021 which results in complications in the form of digestive system ailments.

Conclusions: Through appropriately selected diagnoses, all intended goals have been achieved. The patient and their family have been educated about the condition. The patient continues to be in the treatment process.

Key words: Colorectal cancer, holistic care, palliative nursing

MODEL OF NURSING CARE FOR PATIENTS AFTER THYROID CANCER DISSEMINATION AND METASTASIS OF PAPILLARY, FOLLICULAR CARCINOMA ACCORDING TO THE INTERNATIONAL CLASSIFICATION FOR NURSING PRACTICE ICNP[®]

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Background: The last 30 years have seen a sharp increase in the incidence of thyroid cancer. Only 38% of thyroid cancers produce clinical symptoms, such as a feeling of discomfort in the throat, a lump on the neck, difficulty swallowing, not very often a cough, change in voice, dyspnoea or symptoms associated with metastatic disease, which speak for further diagnosis. The appearance of cancer completely changes the functioning and life of the patient as well as his family and relatives. Often, such a diagnosis is perceived as a judgment that is beyond one's control. Like any chronic disease, cancer brings with it long-term effects that reduce quality of life. It affects all dimensions of the patient's functioning, including the psychological dimension.

Case report: Patient 77 years old after thyroid cancer dissemination and papillary and follicular carcinoma metastasis, following which a right parietaloccipital craniectomy and Grunenwald incision was necessary, excision of the lesion with tracheal resection, with excision of the left internal jugular vein, plasty of the left venous angle and plasty of the outlet of the inferior thyroid vein into the left brachiocephalic vein and drainage of the left pleural cavity. The knowledge deficits as well as the physical capabilities of the patient after the procedures were determined. Research techniques used: observation of the patient, measurement of vital signs, analysis of medical records provided by a family member, interview with the patient, interview with the patient's family, assessment using scales: VAS, life satisfaction scale.

Conclusions: The above study demonstrates the holistic care of a patient after right parietal-occipital craniectomy and Grunenwald incision surgery using the International Classification for Nursing Practice ICNP method. The patient's main problems were a deficit of knowledge about postoperative wound care and healthy nutrition, anxiety, lowered mood, and lack of trust in the medical staff. By applying comprehensive and holistic care to the patient, it was possible to achieve the goals and concepts set in the study.

Key words: thyroid cancer, papillary, follicular carcinoma

HEALTH BEHAVIORS OF NURSES WORKING IN A HOSPITAL

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Health is one of the basic individual and social values. One of the most important health-promoting activities is the development of appropriate health behaviors, which should be accompanied by the dissemination of knowledge about health and the popularization of pro-health behaviors. In turn, the postulated lifestyle changes concern overcoming anti-health behaviors, considered to be risk factors for many lifestyle diseases. First, it is necessary to know what patterns of behavior in the sphere of health in a selected group are socially accepted and what their implementation depends on. The analysis of selected opinions, views and attitudes towards health is aimed at taking action to change health awareness and promote a healthy lifestyle. The aim of the study was to assess health behaviors undertaken by nurses working in a hospital. The study was conducted in 2022 among 120 nurses working in various departments in a district hospital. The study used the diagnostic survey method. The research technique used to conduct the study was a questionnaire. The research tool was a self-designed questionnaire. Verification of the obtained results was carried out based on statistical methods using a non-parametric Chi-square significance test with the adopted significance level of $p < 0.05$ and Pearson's rxy correlation coefficient. As a result of the analysis, it was found that nurses take care of their own health and lead a healthy active lifestyle, and regularly perform preventive examinations. k. After analyzing the data, it can be concluded that nurses are aware of their own health and broaden their knowledge on health issues.

Key words: lifestyle, health behaviors, nurse

APPROACH TO HEALTH, NUTRITION, AND PHYSICAL ACTIVITY FROM AN INTERDISCIPLINARY PERSPECTIVE – ASSESSMENT OF LIFESTYLE

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Andrzej Frycz Modrzewski Krakow University

Introduction: Chronic Non-Communicable Diseases (NCDs), often referred to as lifestyle diseases, are the leading cause of death and disability, accounting for nearly 70% of all deaths worldwide. Lifestyle interventions, which usually encompass areas such as nutrition, physical activity, exposure to risky substances (such as alcohol or tobacco), stress management, sleep habits, as well as social support and relationships, should play a significant role in preventing these diseases and in health education provided by practitioners in modern healthcare.

Objective: The aim of the research was to analyze the daily health behaviors and habits of students studying in medical fields at Andrzej Frycz Modrzewski Krakow University.

Material and Methods: The study involved 105 students from various departments of the Faculty of Medicine and Health Sciences at Andrzej Frycz Modrzewski Krakow University. The research was conducted using the KAWI method, employing the Google Questionnaire sent to students through year representatives of respective courses at the faculty. The research tool utilized was the standardized Healthy Lifestyle and Personal Control Questionnaire (HLPCQ) in the adaptation by Czaplą, M. et al., consisting of five subscales: A. Healthy dietary choices, B. Dietary harm avoidance, C. Daily routine, D. Organized physical exercise, E. Social and mental balance.

Results and Conclusions: The study revealed that nursing students aged 17–47 have some imperfections in their lifestyle, which may negatively impact their health and well-being. The research results show that respondents pay attention to the quantity of consumed food but seldom eat at regular intervals or count their calorie intake. Additionally, a significant portion of the participants reported irregular sleep patterns and a lack of balance between work, leisure time, and personal life. It is also worth noting that nearly half of the students do not engage in sufficient and regular aerobic exercises.

The study's findings suggest a need to encourage students to adopt a healthy lifestyle, including regular exercise and adequate sleep. Improving these aspects may contribute to enhancing their health and well-being.

Key words: dietary habits, lifestyle, lifestyle diseases

HAS THE COVID-19 PANDEMIC AFFECTED THE PATIENTS' PERCEPTION OF THE FIELD OF HEALTHCARE WORKERS' HAND HYGIENE PRACTICES WHILE PROVIDING MEDICAL SERVICES?

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Introduction: Hand hygiene is crucial in preventing the transmission of pathogenic microorganisms in any healthcare facility. The need to educate the public in the field of hygiene practices has been taken on the current epidemiological situation around the world, which was mainly the occurrence of the COVID-19 pandemic.

Aim: The aim was to compare the healthcare workers (HCWs) hand hygiene providing medical services assessed by patients before and during the COVID-19 pandemic.

Materials and methods: The study was conducted on a population of 97 patients during the COVID-19 pandemic (January–February 2022) and compared with the results of a survey conducted before the pandemic (September–October 2019) on 95 patients. Studied groups used medical services with varying frequency, including the largest group of patients who used the medical services several times yearly, before and during the pandemic, respectively.

The study used the diagnostic survey method and the questionnaire technique. The research tool was the author's questionnaire.

No sensitive data was collected in the study (The Bioethics Committee Consent No. 61/2021).

Results: According to 84.9% of respondents, HCWs' hand hygiene is significant for the patient's health. Such a belief accompanied the largest group of respondents before and during the COVID-19 pandemic ($p=0.018$).

The vast majority of respondents (74.5%) believed that the observance of hand hygiene by HCWs prevents infections among patients. Patients' awareness in this regard has remained the same under the influence of the pandemic ($p=0.322$).

The pandemic also did not affect the view that hand hygiene protects the HCWs themselves ($p=0.197$) and is critical in preventing the spread of pathogens ($p=0.772$). On the other hand,

significantly more often during the pandemic (45.4% vs. 63.2%), the respondents considered that the hand hygiene of the HCWs proves their professionalism ($p=0.014$).

Nurses were more likely to perform hand hygiene than other HCWs before and during the COVID-19 pandemic ($p=0.034$). In addition, during the pandemic, nurses were even more often identified as performing hand hygiene than before the pandemic.

Conclusions:

1. In patients' opinion, the Health care workers' hand hygiene proves the professionalism of this occupational group.
2. The COVID-19 pandemic did not significantly affect the patients' awareness of hand hygiene in terms of infection prevention.
3. In patients' opinion, nurses perform hand hygiene much more often than other health care workers.

Key words: hand hygiene, COVID-19 pandemic, patients' safety, healthcare worker's hand hygiene, health care workers (HCWs)

ORAL HYGIENE STATUS OF THE PATIENTS DURING COVID-19 PANDEMIC – A PILOT STUDY

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Introduction: Oral diseases, especially periodontitis and related poor oral hygiene, are associated with the release of pro-inflammatory cytokines and mediators of tissue destruction, which may contribute to systemic inflammation, exacerbating SARS-CoV-2 infection. The aim of our study was to evaluate the oral hygiene of 60 participants hospitalized due to SARS-CoV-2 during the COVID-19 pandemic.

Materials and methods: The study involved 60 patients divided into: group I – COVID-19 convalescents who received antibiotics during hospitalization (n = 17), group II – COVID-19 convalescents without antibiotic therapy (n = 23), group III – non-COVID-19 healthy people (n = 20). The study groups in terms of age were equivalent ($p = 0.580$). The dental inclusion criterion was to have at least 6 teeth, not perform oral hygiene activities and not eat for 12 hours prior to sample collection. For the control group, as for group II, an additional inclusion criterion was not taking antibiotics for at least 3 months before the study. Additionally, each of the participants declared that in the period preceding the study (at least 3 months) they did not take probiotics.

The patients underwent an intraoral examination, on the basis of which the status of oral cavity was determined, using selected dental indices: DMFT (*caries index, missing and filled teeth*), D number (*number of carious teeth*), PI (*simplified plaque index*), BOP (*bleeding on probing*) and tongue hygiene index (*Winkel Tongue Coating Index*).

Results: For dental indices: statistically significant differences were observed in all study groups D ($p < 0.001$), DMFT ($p < 0.001$), PI ($p = 0.011$), and BOP ($p = 0.008$). Groups I and II were statistically significantly different from group III in terms of DMFT ($p < 0.001$ and $p < 0.001$, respectively), D number ($p < 0.001$ and $p < 0.001$, respectively) and BOP ($p < 0.001$ and $p < 0.001$, respectively). In groups I and II these indices were higher than in group III. In the case of PI, only groups I and III were statistically significantly different

($p = 0.008$). The PI was the highest in group I. The tongue hygiene index did not show statistical significance between the study groups.

Conclusions:

1. Based on the analysis of three groups of patients, it was shown that the DMFT index, D number, PI and BOP indexes are good prognostic parameters in the assessment of oral health, while the tongue hygiene index is not.
2. An increase in bleeding on probing, which is the first sign of gingival inflammation, was a characteristic symptom in hospitalized for COVID-19. This suggests that these patients suffer from periodontal disease more than the healthy control group.
3. In patients hospitalized due to COVID-19, it is necessary to improve oral hygiene to prevent additional mobilization of immune system.

Fundation: This publication was supported by the National Center for Research and Development CRACoV-HHS project (Model of multi-specialist hospital and non-hospital care for patients with SARS-CoV-2 infection) through the initiative “Support for specialist hospitals in fighting the spread of SARS-CoV-2 infection and in treating COVID-19” (contract number – SZPITALE-JEDNOIMIENNE/18/2020).

Key words: COVID-19; oral health; Decayed, Missing and Filled Teeth Index (DMFT); Decayed Teeth number (D number); Plaque Index simplified index (PI)

THE RELATIONSHIP BETWEEN SELF-EFFICACY AND HEALTH BEHAVIORS AND THE LEVEL OF KNOWLEDGE ABOUT BREAST CANCER PREVENTION IN THE PROFESSIONAL GROUP OF NURSES

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Introduction: Breast cancer is the most frequently diagnosed cancer in Poland. It develops slowly, very often without any symptoms for a long time. The key element in the prevention of breast cancer, that affects the rate of incidence is women's knowledge about the disease and participation in screening tests.

Aim: The purpose of the study was to assess the relationship between the prevalence and intensity of health behaviors and self-efficacy and the level of knowledge about breast cancer prevention in a professional group of nurses.

Material and methods: The study involved 125 nurses employed at the John Paul II Hospital in Krakow. Standardized tools were used in the study: Generalized Self-Efficacy Scale (SWLS), Health Behavior Inventory (IZZ) and a self-designed questionnaire assessing knowledge about breast cancer prevention.

Results: Nurses with higher education presented a higher level of knowledge regarding breast cancer prevention. Women with a high intensity of health behaviors in the preventive domain showed a better knowledge of breast cancer topics. Similarly, nurses characterized by strong sense of self-efficacy presented a higher level of knowledge in this area.

Conclusions: Almost half of the surveyed nurses presented a good level of knowledge about breast cancer prevention. The severity of health behaviors was rated as average, slightly higher in preventive behaviors and lower in terms of health practices. The stronger the sense of self-efficacy, the higher the level of knowledge and the higher the intensity of health behaviors.

Key words: breast cancer, prevention, health behaviors, self-efficacy, nurses

MODEL OF NURSING CARE FOR A TRANSGENDER PATIENT UNDERGOING BILATERAL MASTECTOMY CONSIDERING THE INTERNATIONAL CLASSIFICATION FOR NURSING PRACTICE (ICNP®)

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Bilateral mastectomy in transgender people from female to male (F/M) is one of the primary procedures performed during the transition process. The patient chooses to have the procedure performed to match her appearance with her gender identification. The paper elaborates on the care of a patient after a bilateral mastectomy. Diagnoses and a plan of care appropriate to the patient's needs after the procedure are presented.

Key words: mastectomy, dysphoria, transgender, International Classification for Nursing Practice ICNP®

POSTOPERATIVE PAIN IN PATIENTS UNDERGOING LARYNGOLOGICAL SURGERY

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Introduction: Postoperative pain affects every patient who has had a surgical intervention. Its severity is conditioned by many demographic and clinical factors, as well as by nursing care. Every patient has an inalienable right to effective pain relief.

Purpose of the work: The aim of this study was to assess the severity of postoperative pain in patients undergoing laryngological surgery.

Method and material: The study conducted among 110 patients of the Department of Otolaryngology and Oncological Surgery of the Head and Neck of the 5th Military Teaching Hospital with a Polyclinic. Subjects of both sexes, aged 18 to 80, undergoing surgical procedures such as: septoplasty, functional endoscopic sinus surgery, tonsillectomy, parotidectomy, laryngectomy. Preoperative anxiety level (HADS scale), postoperative pain intensity (NRS scale; 0–10), satisfaction with nursing care and your treatment with analgesic treatment (Postoperative Pain Management Clinical Quality Index Scale) were assessed.

Results: The greatest intensity of pain was observed in patients undergoing laryngectomy, and the lowest after septoplasty. The intensity of postoperative pain decreased with the time of observation – half of the patients felt pain level 4 or more in the 1st and 4th hour after surgery, and pain level 2 or more in the 24th hour of observation. The intensity of postoperative pain increased with the age of the patient. The greater the level of preoperative anxiety and the longer the duration of the operation, the greater the intensity of postoperative pain. The procedure under general anesthesia predisposed to the occurrence of more intense pain than the procedure under local anesthesia. The patients were satisfied with the nursing care and the applied pain therapy.

Conclusions: The intensity of postoperative pain was conditioned by age, level of preoperative anxiety, type and duration of surgery, and type of anesthesia.

Key words: pain, surgery, laryngology, analgesia

THE USE OF THE ICNP CLASSIFICATION IN PLANNING CARE FOR A PATIENT WITH MULTIPLE SCLEROSIS BASED ON A CASE STUDY

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The need for inpatient treatment for a patient with multiple sclerosis (MS-Sclerosis Multiplex) is often associated with its remitting course and relapse period. The paper presents a case study of a 39-year-old man suffering from MS for 17 years. Despite the 2-years immunomodulatory therapy, the patient's neurological condition deteriorated, which required hospitalization. The aim of the study was to develop selected elements of patient care during relapse based on the ICNP classification. Results: The ICNP catalog allowed for the emergence of typical nursing diagnoses in the described situation (i.e., e.g. self-care deficit, risk of falling, musculoskeletal pain, dysphagia, urinary incontinence). Emotional problems made it more difficult to use ICNP terminology.

Key words: Case study, Sclerosis Multiplex, ICNP classification

ATTITUDES OF NURSES TOWARDS PATIENTS WITH INTELLECTUAL DISABILITIES

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Introduction: Almost all of us have met disabled people in our lives. Regardless of the severity of their disability, they have the right to participate in social life. A special type of disability is intellectual disability. Very often, these people are fully physically efficient, but their ability to communicate, take care of their own health, cope with everyday life is disturbed. In the situations of hospitalization, the nurse is one of the people with whom the patient has the most frequent contact. It plays a large role in the process of the entire treatment, which is why it is so important to prepare her substantively and practically to work with people with intellectual disabilities.

Aim: The aim of the study was to identify and evaluate nurses' attitudes towards patients with intellectual disabilities.

Research method and material: The study used the diagnostic survey method, including the survey technique. The author's questionnaire consisted of 20 questions, where 19 were closed questions with the possibility of single choice, and 1 was a closed question with the possibility of multiple choice.

Results: The results show that more than half of the respondents are unable to define what emotions accompany them when they meet a disabled person. Over 62% of nurses believe that people with disabilities require more attention and special care from the nursing staff. Almost half of the respondents said that a patient with intellectual disabilities who breaks the rules adopted in the ward and violates the norms of public life should be treated more leniently than a non-disabled person.

Conclusions: The experience of working with people with intellectual disabilities affects the attitudes towards such patients. Greater experience in working with people with intellectual disabilities increases the willingness to help them. Research indicates a deficit in preparation for work with disabled people.

Key words: intellectual disability, attitude towards disability, nurse

SELECTED LIFESTYLE FACTORS OF CANDIDATE SPERM DONORS FROM THE REPRODUCTION CENTRE OF THE ZLÍN REGION IN THE CZECH REPUBLIC AND THEIR EFFECT ON SPERMIOGRAM VALUES

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Introduction: Male infertility affects almost 14% of all men in Europe, with about 44% of them do not know the cause of their infertility. Thanks to a lot of research, we are now able to clearly define the risk factors that negatively affect semen quality.

Aim: The aim of the research was to find out whether these risk factors are present in potential sperm donors in the reproductive centre of the Zlín region and what influence they have on their spermiogram (SPG) values.

Methods: Lifestyle of sperm donors candidate was monitored by means of a self-assessment questionnaire asking about dietary habits, physical activity, sedentary lifestyle, abusive behaviour, etc. Furthermore, the SPG values were evaluated according to the current WHO manual from 2010. The collection of these data was carried out from 2015 to 2021, during which time the clinic registered 64 new candidates for sperm donation.

Results: Although these were young and healthy men aged 18–35 years, not everyone has been classified as the normozoospermic to be accepted into the donor program.

Conclusion: The research shows that it is necessary to put more emphasis on prevention in the field of reproductive health and to educate young men in their reproductive period more about possible risk factors that negatively affect the quality of semen and thus their future fertility.

Key words: lifestyle, sperm donor, spermiogram, semen quality

DOES PALLIATIVE CARE ALSO HAVE ITS PLACE IN RESIDENTIAL FACILITIES?

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Contribution: Palliative care is an approach aimed at improving the quality of life of patients/clients and their families in a situation where they suffer from an incurable disease and all options leading to recovery have failed. The goal is not to cure, but pain reduction and other unpleasant symptoms of the disease, such as nausea, loss of appetite, etc.

Quite often, we encounter the providing of palliative care for clients in hospital and at home, but in residential facilities, when providing palliative care, for example in homes for the elderly, we are at the beginning of the journey.

Objective: The aim of the communication is to introduce acquaint the audience with the process of introducing palliative care in the Burešov Zlín Home for the Elderly within the framework of the Abakus project.

Summary of the work with description of the case: According to the law, our own social environment means not only the client's household, but also homes for the elderly, homes with a special regime, etc. It is appropriate to allow clients to experience the end of life where they know environment and among those, they trust. In the contribution, we describe our experience in implementing palliative care in mentioned facility. With our clients, we emphasize a human approach, respect for life and human dignity. This cannot be doing without adequate preparation and cooperation of all caregivers.

Conclusions: We believe that palliative care has its place in homes for the elderly. The most important thing is respect and reverence for life, following the needs and wishes of the client and his family.

Key words: Residential facilities, Palliative care, Cooperation, Multidisciplinary team, Family

IMPACT OF COVID-19 ON INCIDENCE OF CENTRAL LINE ASSOCIATED BLOODSTREAM INFECTIONS

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Objectives: The aim of this study was to assess the incidence rate of Central Line-Associated Bloodstream Infections (CLABSI) among critically ill patients, comparing those with and without COVID-19.

Materials and Methods: The prospective surveillance study encompassed all patients admitted to both COVID-19 and non-COVID-19 respiratory intensive care units at Central Military Hospital SNP Ružomberok – Faculty Hospital from January 1, 2021, to February 28, 2022. The CLABSI definitions were based on the criteria provided by the National Healthcare Safety Network (NHSN) of the Centers for Disease Control and Prevention (CDC). Data collection and analysis were carried out using the International Nosocomial Infection Control Consortium (INICC) Surveillance Online System. Data analyses were conducted using SPSS for Windows Version 16.0.

Results: We analyzed the data of 312 ICU patients hospitalized for 3,671 bed days, with 7,483 central line (CL) days. 177 patients were given a diagnosis of COVID-19. The incidence rate of CLABSI was 5.65 per 1,000 CL days (11.89 per 1,000 bed days) in patients with COVID-19 infection and 3.29 per 1,000 CL days (5.98 per 1,000 bed days) in patients without COVID-19 infection. CLABSI rate per 1,000 CL days increased by 63.11% in patients with COVID-19 infection. Central line utilization ratio in patients with COVID-19 increased by 18.68% compared to patients without COVID-19. The main CLABSI pathogens were *Acinetobacter sp.* (26%), *Pseudomonas aeruginosa* (26%), *KLebsiella pneumoniae* (18%), *Enterococci sp.* (12%), *Streptococcus sp.* (6%), coagulase-negative *Staphylococci epidermidis* (8%) and others (4%). Increased length of stay and mortality were also observed in patients with CLABSI.

Conclusions: Significant increases in CLABSI rate were observed in patients with COVID-19. These findings underscore the necessity for CLABSI surveillance and a renewed commitment to infection prevention protocols.

Key words: central line-associated infection, COVID-19, health care-associated infection, surveillance

THE IMPACT OF TRAINING WITH THE LUNA EMG USAGE ON MUSCLE TONE AND GAIT SPEED OF PATIENTS AFTER ISCHEMIC STROKE

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Introduction: Stroke is a global problem affecting the health, social and economics areas. The effects of stroke often lead to chronic disability, significantly reducing the quality of life. Due to the increasing number of patients in need of continuous physiotherapy, effective, innovative forms of therapy are constantly being sought.

Aim: The aim of the study was to assess the impact of affected lower limb training using the Luna EMG on muscle tone and gait speed of patients after ischemic stroke.

Material and methods: The study involved 62 patients after ischemic stroke, aged 65–86 years. The subjects were randomly assigned to an experimental or control group. Patients of both groups underwent a commonly used post-stroke physiotherapy program, 2 hours a day, 6 times a week, for a period of 4 weeks. Subjects from the experimental group additionally underwent affected lower limb training using the Luna EMG, 20 minutes a day, 3 times a week, for a period of 4 weeks. In all subjects, the tone of the rectus femoris and the biceps femoris during active flexion and extension movement in the knee joint and gait speed were assessed. The Luna EMG was used to assess muscle tension, while gait speed was assessed using the Timed up and Go test and Ten meter walk test.

Results: The combination of training of the affected lower limb using the Luna EMG and the commonly used post-stroke physiotherapy has a significant positive effect on reducing the tension of the rectus femoris during active extension movement in the knee joint and on improving the gait speed of patients after ischemic stroke.

Conclusions: The use of training using the Luna EMG may have a positive effect on patients with increased muscle tone after ischemic stroke. The combining of innovative technology with the conventional post-stroke physiotherapy can bring positive effects of therapy, with less physical burden of the physiotherapist.

Key words: ischemic stroke, post-stroke physiotherapy, Luna EMG

PLANETARY SYMBOLISM AND METAPHYSICAL ASPECTS IN PRESCRIPTIONS FOR ANTITUBERCULAR MEDICATIONS IN THE 17TH CENTURY

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The earliest written mentions of tuberculosis (TB) come from Antiquity. In ancient Greece it was also known as phthisis, in Rome as tábēs.

In the 17th century, pulmonary TB was considered the deadliest infectious disease of its time. Despite this, many medical indications and therapies were available, helping doctors to stabilize and even completely cure TB patients. This process was demanding and treatment procedures were often of diverse origin as the 17th century medicine was a combination of the traditional medical practices, astrology and alchemy.

Alchemists believed that the human body is composed of the same elements as the universe, and by understanding the laws of the universe, they would find the key to eternal life and human health.

Similarly, astrology, which dealt with the relationship between the position of the planets and human health, also enriched modern medicine and astrology. Astrology was used to identify the best medicines and therapies for individual diseases, as well as determine the optimal time to harvest and process herbs for medicine preparation. As a result, the first pharmacists and doctors were often also alchemists or astrologists.

A Slovak Hungarian scholar Matthaeus Palumbini in his dissertation thesis *De phthisi* (1679) brought a summary of the knowledge on pulmonary TB and synthesized the then scientific and mystical knowledge about human body and treatment methods. The entire work is interspersed with astrological and alchemical symbols and can be considered as a kind of 17th century compendium on phthisiology.

Key words: 17th century, tuberculosis, prescriptions, astrology, alchemy

EXPECTATIONS OF SLOVAK WOMEN REGARDING GYNAECOLOGICAL EXAMINATION IN THE CONTEXT OF PREVENTION

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Introduction: A gynaecological examination, often a part of a preventive gynaecological examination (PGE), has legislatively determined content. Despite all efforts, the participation of women in gynaecological examinations is insufficient. The aim was to identify expectations regarding the gynaecological examination of women in Slovakia (from a doctor, nurse / midwife, description of feelings in connection with the examination).

Methodology: A cross-sectional quantitative study design was chosen. A non-standardized self-constructed questionnaire was used, with Cronbach's alpha coefficient of -0.936 . The sample consisted of 937 women with an average age of 35.94 (± 11.16). Descriptive statistics, Chi square (χ^2) and Mann-Whitney U test ($p < 0.05$) were used to analyse the data collected.

Results: It was shown that the majority of women expected understandable communication during a gynaecological examination (96.47%), discretion and trust (95.41%), a sensitive approach of the gynaecologist/midwife (95.73%), while the expertise and experience of the gynaecologist was demonstrated only in fourth place (95.51%). Women especially expected a thorough explanation of examination results from gynaecologists (95.83%), understanding, gentle and considerate behaviour from nurses / midwives (94.66%). Statistically significant differences were confirmed in the regularity of attending preventive gynaecological examinations in terms of *education* ($p = 0.006$), in the preference for choosing a gynaecologist in terms of *age* ($p = 0.002$) and *geographical division* ($p = 0.001$). In the group of women, regularly visiting a gynaecologist once a year, a lower average level of fear of a gynaecological examination was found (average 30.04 ± 6.65).

Conclusion: The results suggest possibilities for increasing women's participation in preventive gynaecological examinations. Communication skills of doctors and nurses / midwives, creating a safe and intimate environment, thorough education about the course of the examination can be considered key factors for increasing women's participation in preventive gynaecological examinations. Examining the given issue in a broader context can help understand some changing aspects such as women's motivations to participate, but especially the approach of health professionals during a gynaecological examination.

Key words: gynaecological examination, preventive gynaecological examination, women's expectations, prevention

KANGAROO MOTHER CARE FOR THE PRETERM INFANTS

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Introduction: Trust is important in the context of patients with chronic diseases because of their greater dependence on healthcare professionals and higher vulnerability. Therefore, trust is identified as a core facet of effective therapeutic relationships.

Purpose of the research: The qualitative study aimed to understand how women with chronic gastrointestinal disease experience trust in healthcare professionals.

Material and methods: Data collection was carried out through semi-structured in-depth interviews with four women with chronic gastrointestinal disease (nicknames: Jane, Jessica, Charlotte, Emily). They were selected from the group of participants with chronic gastrointestinal diseases, because the interviews captured the specific woman's lived experience of trust in healthcare professionals. Interpretative phenomenological analysis using Atlas.ti software was used for qualitative analysis. The study was approved by the local ethics committee and is part of the research project VEGA 1/0276/2.

Results: Four interconnected personal experiential themes reflecting women's trust in healthcare professionals were identified: Security, Expertise of healthcare professionals, Interest and willingness to help, and Respect. The female participants reflected on trust mainly as a relationship, which is characteristic of women. All participants found security in a trusting relationship with health professionals. Interest and willingness to help were important to Jessica, Jane, and Emily. The expertise of healthcare professionals played a significant role for Emily, Jane, and Charlotte. Jane's trust was strongly influenced by respect for her as a person.

Conclusion: Understanding the specific voice of women is crucial to developing interventions to improve trust in healthcare professionals.

Key words: women's trust, healthcare professionals, chronic disease, interpretative phenomenological analysis

NURSING CARE OF A PATIENT WITH HORMONALLY INACTIVE PITUITARY MACROADENOMA

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Introduction: Pituitary tumours are slow-growing benign neoplasms accounting for approximately 15% of all intracranial tumours. A distinction is made between hormonally active tumours and hormonally inactive tumours. Clinical manifestations depend on endocrine function and tumour mass. The diagnosis of pituitary tumours includes clinical signs, hormonal signs and neuroimaging studies. Treatment is cyclical investigations, surgery via the transsphenoidal route and radiotherapy.

Case report: A woman, now 71 years old, was first hospitalised for increasing headaches and worsening vomiting at the age of 38. A diagnosis of meningeal syndrome and destruction of the saddle of Turkey was made. During hospitalisation, the meningeal symptoms withdrew, at which time the patient did not consent to the proposed surgical treatment. The first operation to remove the pituitary macroadenoma via the transsphenoid route took place 15 years after diagnosis and, due to regrowth of the inactive pituitary adenoma, reoperation was performed twice after a further 5 years. The last surgery was complicated by paralysis of the right peroneal nerve and paralysis of the adductor nerve on the left side. The patient continued to complain of severe headaches. Follow-up CT and MR imaging of the pituitary showed fresh postoperative lesions and swelling of the residual parts of the tumour in the cavernous sinuses. Conservative treatment was implemented, which is still continued today.

Conclusions: The implementation of nursing care for a patient with a pituitary macroadenoma is based on the application of measures aimed at reducing discomfort, eliminating possible complications, increasing the patient's level of independence, and providing education and counselling on lifestyle changes and coping with the limitations imposed by the disease. As a person with a pituitary tumour struggles with numerous changes in his or her appearance and requires a change in lifestyle, education on care activities is extremely important. Psychological support of the patient is also a particularly important element in order to provide a sense of security, increase quality of life and improve personal and social functioning.

Key words: pituitary macroadenoma, hypopituitarism, nursing care

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