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Primary Health Care Nurses' Experienced Stress at Team Level

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Background. Stress is a complex phenomenon which results from an interaction between individuals and their work environment, local forces, pressures and culture, and this often requires customized interventions. Recent changes and increased demands in primary health care may result in highly stressed nursing teams. From viewpoint of management, it should be noticed that stressed teams may not have the potential to work and operate effectively, which undoubtedly has an impact on the delivery of nursing care.

Aim of this study is to describe experienced stress in nursing teams working in primary health care.

Methods. A descriptive study using an Expanded Nursing Stress Scale (ENSS) for data collection was undertaken. 29 teams from 18 public primary health care centers of one Lithuanian county participated. A total of 187 nurses completed the questionnaire.

Results. The stress experienced by nurses depends on the team. Study results reveal both individual and team level stress. The effect of the team size is moderate, but the background factors of the teams had little association with the sub-categories of stress. Workload tended to cause more stress in larger teams. At the nurses' team level, a strong positive correlation was found between all of the stress sub-category areas investigated, except for that of "discrimination". Different teams followed different stress profiles, but based on their common features, various clusters were identified which should be noticed by management.

Conclusions. In particular, interventions that will help build interpersonal relationships, develop conflict resolution skills, and which develop our understanding of the role that effective teamwork has in lessening work-related stress are required.

Keywords: primary health care, nurses, stress, team

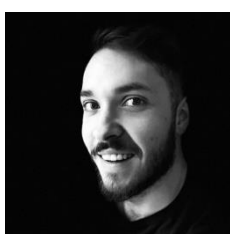
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Instruments to Return the Social Worker to the Philanthropic Mode of his Work

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Background. In current social work (in the Czech Republic), the administrative concept of the practice prevails. This is closely related, inter alia, with the social policy of the state, respectively with its requirements. This concept generates certain undesirable consequences, such as: administrative burden, loss of personal relationship between the social worker and the client, high demands on the personality specifics of a social worker, etc. Finally, we are faced with the fact that the practice of social workers gradually lacks an essential component. That is philanthropic basis. In our article, this is, in particular, the human face of a social worker, the relationship with the client as an instrument of help, love for the neighbour, spirituality.

Aims: 1. To define the current state of social work (in the Czech Republic) and the position of two concrete concepts (administrative, philanthropic). 2. Create a space to think about potential instruments, that can bring the social worker back to the philanthropic mode of his practice. 3. Introduce potential tools – Mindfulness and Spirituality, and why these tools appear to be appropriate in terms of returning the social worker to the philanthropic mode of his practice.

Methods: comparison of Czech and foreign book sources, analysis of the situation in the field of social work, reflection of potential steps to change the situation.

Results. Introducing the potential of using instruments – Mindfulness and Spirituality – to return the social worker to the philanthropic mode of his work (practice).

Conclusions. Mindfulness and Spirituality can serve as a certain inspiration. In other words, they can be a support in terms of solving the risks associated with the prevailing administrative concept of social work and its undesirable consequences. Spirituality and

Mindfulness can also be used to develop the personality of a social worker, which is a prerequisite for the quality of social work practice.

Keywords: social work, social worker, philanthropic social work, mindfulness, spirituality

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Conformity of the Competencies of Health Care Graduates with the Labour Market Needs

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Background. The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) emphasize the quality assurance of the study programmes and awards by pointing out one of the quality assurance activities – regular feedback from employers, labour market representatives, etc. Participation of employers is essential for assessment of readiness of the higher education graduates for the professional activity. The employers' survey results are used for continuous improvement of the study programmes (Standards and Guidelines for Quality Assurance in the European Higher Education Area, 2015).

Aim. To survey the opinion of employers on conformity of the competencies of health care graduates with the labour market needs.

Methods. The research was continuously, carried out in 2015, 2016, and October – December of 2017. The criterion for sampling were employers from health care (HC) institutions, in which health care graduates were employed in the institution over the period of 2-3 years. The method of quota sampling was applied by ensuring representation of employers from seven study programmes. The research was carried out by surveying the employers online. 303 employers participated from the research: 34,7 % of heads of HC institutions, 16,0 % heads of departments, 20,0 % of deputies, 29,3 % of administrators, etc. More than a half of the employers (53,3 %) represented the public sector, while smaller part (44,0 %) – the private sector, and 2,67 % represented other sectors. The research instrument reflected: general information about the institution; professional readiness of the employed graduates; assessment of generic and subject-specific competencies of graduates; cooperation among the HC institutions and the higher education institution. The questions were formed in the way that the employers could score the preparedness of graduates for professional work in 5-score scale, where one is poor readiness, and five – perfect readiness. SPSS 25.0 was used for data analysis. The following statistical methods were applied: as frequency analysis, means, mode, median, range (min, max), dichotomy analysis.

Results. 86,67 % of the employers of HC institutions scored the readiness of health care graduates as very good (average – 4,27; 5-score scale). The employers provided higher rank for development of generic competencies (communication, decision making, etc.),

and slightly lower rank for development of subject-specific (special professional) competencies. Generic competencies of health care graduates (communication, decision-making, etc.) were scored by the employers slightly better (average – 4,06; 5-score scale) than the acquired subject-specific competencies (average – 4,00; 5-score scale). The following generic competencies were given the highest score: communication (average – 4,28, 5-score scale) and learning to learn (average – 4,20). The employers were considered as appropriate for professional work the level of subject-specific (special professional) competencies, nevertheless the graduates lacking the generic competencies rather than subject-specific (special professional) competencies upon starting to work.

Conclusions. The employers of HC institutions have confirmed that the knowledge and skills of health care graduates conformed with the needs of HC organizations. While comparing the survey data of 2015, 2016, and 2017, the indicators of assessing the preparedness of graduates for work remain more or less similar. The employers stated that cooperation with higher education institution took place in the following ways: by organizing practical training for students, giving lectures for students, taking part in development of the study programmes, improving professional qualification of the HC employees which were organized at higher education institution.

Key Words: employer, health care graduate, generic competencies, subject-specific competencies, labour market needs.

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Dental Hygiene Clinic – A Decisive Contribution to the Development and Promotion of Oral Health in the Community

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Background. The Oral Health Clinic of the Portalegre Health Faculty is a laboratory dedicated to the practical activities integrated in the different curricular units of the Degree in Oral Hygiene.

Aim is to extend the coverage of dental hygiene assistance to the community, as well as to serve for academic learning purposes, with the opening of the clinic to the population, especially children, disabled people and older people.

Methods. The service provided by the Oral Hygiene Clinic, has been registered since 2016 as "health care provider", and by the Certificate issued by the Portuguese Health Regulatory Council and it is a laboratory dedicated to the practical activities integrated in the different curricular units of the Degree in Dental Hygiene and to provide dental care to the community.

Results. The Oral Hygiene Students supervised by the teachers, perform services in the Oral Hygiene Clinic, at a very low price for the community. This activity is legally constituted through licensing by the health authority.

Also, through the protocol between Portalegre Health Faculty and the Portalegre Primary Health Center, all dental checks of school-age children can also be activated in our clinic. There are also activities to promote oral health in a school setting, with students attending pre-school and school education in the city schools, as well as with specific populations, such as pregnant women, disabled people, and the elderly and other citizens with special needs.

Conclusions. The Dental Hygiene Clinic contributes decisively to the development and promotion of oral health in the community. These activities, by providing knowledge of oral hygiene practices and raising awareness of their importance to the health of the individual, contribute not only at the local level but also to a high level of coverage, in order to improve the health status of the population

Keywords: Dental Hygiene, Community, Clinic

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Inhibitory Effects of Pomegranate and Grape Seed Extracts on the Formation of Heterocyclic Aromatic Amines in Beef and Chicken Meatballs

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Background. Heat-processing favors reactions between compounds inherent in meat and fish yielding genotoxic substances. Heterocyclic aromatic amines (HCAs) are mutagens and these compounds are formed as a result of Maillard reaction of creatine, sugars, and amino acids present in meat. More than 20 HCAs have been isolated from heated protein-rich foods. Cooking temperature, time of processing, antioxidants as well as cooking methods are known to influence the formation of HCAs. Their possible formation even during ordinary cooking processes implies frequent exposure by the general public. Several studies have shown that concentrations of HCAs can be reduced by the addition of antioxidant-containing spices or extracts.

Aim was to investigate the effects of pomegranate and grape seed extracts on the formation of HCAs in beef and chicken meatballs cooked by different methods (oven roasting, pan cooking, charcoal-barbecue, and deep-fat frying).

Methods. HCA compounds studied are 2-amino-3-methylimidazo[4,5-*f*]quinoline (IQ), 2-amino-3,8-dimethylimidazo [4,5-*f*] (MeIQx), 2-amino-3, 4, 8-trimethylimidazo [4,5-*f*]quinoxaline (4,8-DiMeIQx), 2-amino-1-methyl-6-phenylimidazo[4,5-*b*]pyridine (PhIP), 1-methyl-9*H*-pyrido[3,4-*b*]indole (harman), and 9*H*-pyrido[3,4-*b*]indole (norharman).

After the extraction of HCAs from meat samples, solid phase clean-up was applied. Chromatographic analyses of HCAs were realized by HPLC equipped with diode array and fluorescence detectors.

Results. Meatballs with 0.5% pomegranate or grape seed extract were cooked by different methods and six HCAs were observed. The highest inhibitory effects of pomegranate seed extract were 68% and 75% for PhIP in beef and chicken meatballs, respectively. Total HCAs formation was reduced by 46% and 49% in beef and chicken meatballs. Grape seed extract inhibited PhIP formation by 65% and 73% and total HCAs formation by 65% and 37% for beef and chicken meatballs, respectively.

Conclusions. Results of this study suggested that application of pomegranate and grape seed extracts can be an important factor in decreasing levels of HCAs in meatballs.

Keywords: HCAs, Pomegranate seed extract, Grape seed extract

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Parasitic Helminths of Veterinary Importance of Cattle in Delta North, Delta State, Nigeria

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Background. Historically, gastrointestinal helminth infections have been associated with great economic losses to farmers throughout the world, these losses manifest through morbidity in acute cases and in chronic infection reduced weight gains, reduced food conversion, abortion, infertility, reduced meat and milk production.

Aim. This study determined the occurrence and distribution of parasitic helminthes of veterinary importance in faecal samples from cattle at various abattoirs in Delta North, Delta State.

Methods. Samples were collected from slaughter slabs at Agbor and Asaba. Identification of cattle species was carried out using physical characteristics such as body colour, ear shape, horn and other features. The simple faecal floatation, direct faecal smear and differential parasite count methods (Hansen and Perry, 1994); Edosomwan and Chinweuba, 2012) were used for identifying the helminth eggs.

Results. A total of 325 samples were examined for helminth parasites. Differential parasite count, faecal floatation and direct faecal smear techniques were used to analyse the faecal samples. The identified species revealed the presence of helminths of three classes which included the Nematodes, Trematodes and Cestodes with a total of 10 species, respectively. The occurrence of parasitic helminths in the samples at various locations showed significant ($p < 0.05$) differences between the different helminths species and location respectively. The level of prevalence of parasitic helminths encountered included *Ascaris* sp. 25 (10.5%), *Bonustomum* sp. 19 (8.0 %), *Cooperia* sp 11 (4.6 %), *Ostertagia* sp. 15 (6.3 %), *Strongyloides* sp. 23 (9.7 %), *Trichuris* 35 (14.8 %), *Trichostrongyle* sp. 13 (5.5 %), *Paraphostimum* sp. 18 (7.6 %), *Fasciola* sp. 60 (25.3 %) and *Taenia* sp. 18 (7.6%).

Conclusions. The results obtained showed high prevalence of helminth parasites which could be due to the free ranging and grazing system and poor animal husbandry practices. Proper management practices and sanitary measures at slaughter slabs should strictly be employed as this would help in checking the environmental contamination.

Keywords: Parasitic helminthes, Veterinary importance, abattoir, Delta North

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Socio-Demographic Characteristics and Blood Parasites among Donors in Two Communities in Delta State, Nigeria

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Background. Transfusion of blood and blood product has been a life saving measure and an important tool in the management and treatment of some health issues. The administration of blood to a patient is potentially a life saving procedure and the demand for blood has greatly increased over the years. However, transfusion-transmitted infections (TTIs) are the most commonly encountered complications in transfusion practice.

Aim. This study is to determine the prevalence of blood parasites among blood donors in two communities in Ethiope East Local Government Area of Delta State.

Methods. A prospective study was carried out for a period of six months from March to August 2015. Sampling was done on weekly intervals during the period of the study in order to collect samples from blood donated before they are dispatched or sold out. Two types of blood films, thin and thick films were prepared, wet preparation and thin blood smear and haematocrit concentration techniques were also used for examination blood film.

Results. The results obtained from the prevalence of parasites among blood donors from 200 subjects showed 29.5 % prevalence with respect to the parasite species. The result showed that *Plasmodium* (23.0 %) was the most prevalent followed by *Trypanosoma* (5.0 %) and microfilaria (4.0 %). The result among blood donors shows that Abraka community had the highest prevalence (36.9 %) followed by Eku community (21.6 %). However, there was no significant difference in the prevalence of parasites for both study area ($P = 0.5866$) and parasite species ($P = 0.2988$ and 0.2613) respectively. In terms of age related prevalence, the age group 45-49 years had the highest prevalence (75.0 %) while the least was observed among age group 20-24 years (17.9 %).

Conclusions. The study has revealed the presence of blood parasite among asymptomatic Nigerian blood donors in Delta State, Nigeria. The overall infection rate could be said to be high when compared to other studies.

Keywords: Socio-Demographic Characteristics, Blood Parasites, Donors, Delta State

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Food Neophobia and Vegetable Liking among Young Children: Results from an Intervention at a Kindergarten

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Background. Food neophobia is a characteristic of the child, recognized as a trace of personality, being related to the food quality and variety the children is exposed during childhood. Previous studies reported a negative association between food neophobia and consumption of certain types of foods, like fruits and vegetables. In Portugal, 68.9 % of children do not consume more than 400 g/day of fruit and vegetables, highlighting a lower consumption of vegetables compared to fruit.

Aim. The purpose of this study was to evaluate the impact of a food intervention, with exposure combined with a tangible reward, on liking and intake of different vegetables, at the kindergarten, in the South of Portugal, depending on food neophobia.

Methods. Children (n=82) aged 2 to 5 years old, from different classes, were randomly assigned by class to intervention (n=68) or control group (n=16) and the intervention lasted nine weeks. Children food neophobia and eating behaviour were evaluated by parents at the beginning of the intervention. Mother's food neophobia was also measured. In each week, children attended an educative session about the vegetable they would eat at lunch (carrot, bell-pepper, broccoli, tomato, cucumber, purple cabbage, spinach, arugula and beet), being rewarded with a sticker when eating the vegetable. Assessments of intake and liking were recorded at baseline sessions and after each exposure, using ASTM's pictorial scales for children. Children at control group were exposed at the same experiment after the intervention group during the subsequent nine weeks.

Results. Children from both groups present high levels of liking for the different vegetables, with this being modulated by the children's food neophobia and eating behaviour.

Conclusions. Exposure to the different vegetables yields high liking scores for a range of vegetables, indicating that such an approach has good potential to overcome food neophobia by young children.

Keywords: Children, Food Neophobia, Vegetables

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Dr. Roberta Frontini has an European PhD by the Inter-university PhD Program in Clinical Psychology between the University of Coimbra and the University of Lisbon and has a master in Cognitive-Behavioural Therapy in Psychological Disorders and Health from the University of Coimbra. Currently she's a researcher at the Center for Innovative Care and Health Technology (CiTechCare) of the Polytechnic Institute of Leiria, working on the TeenPower project.



Dr. Pedro Sousa has a degree in Nursing, a master in Pedagogic Psychology, a postgraduate specialization in Medical-Surgical Nursing and a PhD in Nursing. He's a Professor at the Polytechnic Institute of Leiria (Portugal), coordinator of the degree in Healthcare Information Sciences (IPLeiria) and a researcher at the Center for Innovative Care and Health Technology (CiTechCare) of the Polytechnic Institute of Leiria (Portugal). He's area of scientific activity as well as recent scientific production is in critical care nursing, obesity/overweight and e-therapy/e-health.



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Nutritional Behaviours of Portuguese Adolescents Integrated in an E-Health Intervention Program (TeenPower)

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Background. The TeenPower project aims to develop an e-health intervention program (mobile app) to promote healthy behaviours and prevent obesity in adolescents. It is an innovative transdisciplinary project with multiple components: nutritional, physical activity, and behavioural strategies; monitoring tools (e.g., planning meals, nutritional data, daily activity, weight recording); group support and self-reported characteristics (weight loss motivation, etc.). In order to better tailor the intervention program, it is important to better understand some nutritional characteristics of the future users of the app.

Aim. The main aim of this exploratory study is to characterize a sample of Portuguese adolescents regarding their eating behaviours.

Methods. The sample was recruited online and comprised adolescents from 12 to 16 years old, with easy access to internet and smartphones/tablets (inclusion criteria for the participation in the intervention program). In order to assess their eating behaviours, the Adolescent Food Choices Questionnaire (Pereira, Silva & Sá, 2015) was used.

Results. A number of factors were assessed, especially regarding body weight control/satisfaction, ethical concerns, sensory qualities, convenience and humour.

Conclusions. The assessment and understanding of the nutritional characteristics and behaviours of the future users of the mobile app is of utmost importance to better adequate the intervention program. Understanding the eating habits of adolescents may also help the creation of future prevention programs.

Keywords: Eating behaviours, Intervention, Nutrition, TeenPower

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Yeliz SERİN (M.Sc.) is a research assistant and doctorate student at Gazi University, Faculty of Health Sciences, Department of Nutrition and Dietetics. Her scientific interests focus on the research medical nutrition therapy of diseases particularly celiac disease, enteral-parantral nutrition, obesity and food technology (especially developing medical nutrition products or alternative foods for inherited metabolic diseases). During the past period of 3 years she published 1 book chapter, 2 national scientific articles, 9 international and 1 national poster presentation, 2 international oral presentations.

Evaluation of Nutritional Habits of Adult Celiac Patients

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Aim. The only treatment of celiac disease is lifelong gluten-free diet. The fact that a gluten-free diet is adequate and balanced is very important for the protection of the health of the individual. This study was conducted to evaluate the eating habits of adult celiac patients.

Methods. Nutrition habits of the participants were assessed by using the food frequency questionnaire. Foods were classified in the food frequency questionnaire as: "frequent" (consumption every day), "seldom"/ "moderately" (consumption 1-2 times a month), and "rarely/never".

Results. A total of 103 individuals (26 males, 77 females) who diagnosed with celiac disease by a physician, registered in Ankara Celiac Society, aged between 20-50, were enrolled in the study. The mean age of the patients was 37.5 ± 8.89 years and the diagnoses age was 31.0 ± 11.85 years. 32.9 % of the individuals don't consume milk, but 82.5 % of them consume cheese frequently. 58.3 %, 70.8 % and 56.3 % of the participants consume red meat, chicken meat and dry legumes moderately, 58.2 % consume fish rarely. Egg is generally consumed by 44.6 % of individuals. 68.9 % of the individuals and 45.6 % of the individuals reported that they frequently consumed fresh fruit and vegetables. The majority of individuals (77.6 %) rarely consume margarine. 66 % of individuals consume olive oil frequently. Individuals generally don't have the habit of consuming alcohol (84.5 %). The beverage which often preferred by patients is tea (89.3 %). When the grain group is evaluated, only 53.4 % of the individuals stated that they frequently consumed gluten-free bread and 80.8 % consumed rice moderately. Gluten-free pasta is moderately consumed by 42.8 % of the participants and rarely consumed by 41.7 % of participants. Individuals generally have no gluten-free ready-to-it food habits.

Conclusions. In this study, the frequency of consumption of meat and cereals in particular was found to be low. The fact that red meat is an expensive food in our country is a factor affecting the frequency of consumption. Besides, cereals are the main energy source of the body. Alternative grains are an important part of adhering to gluten free diet. Due to expensive, mostly tasteless and fewer varieties of alternative grains, the frequency of grain consumption might be influenced. Adequate and balanced nutrition is the basis of health. For this reason, new approaches, methods, and solutions should be considered.

Keywords: Celiac, Gluten free diet, Adult, Nutrition, Habits

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Yeliz SERİN (M.Sc.) is a research assistant and doctorate student at Gazi University, Faculty of Health Sciences, Department of Nutrition and Dietetics. Her scientific interests focus on the research medical nutrition therapy of diseases particularly celiac disease, enteral-parantral nutrition, obesity and food technology (especially developing medical nutrition products or alternative foods for inherited metabolic diseases). During the past period of 3 years she published 1 book chapter, 2 national scientific articles, 9 international and 1 national poster presentation, 2 international oral presentations.

Is Probiotic Sourdough an Enzymatic Strategy to Decrease Gluten in Bread?

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Gluten is the main structural protein complex of wheat with equivalent toxic proteins found in other cereals, including rye and barley. The toxic protein fractions of gluten include gliadins and glutenins and these proteins could lead to allergic reactions in some people [1]. The incidence of allergy and autoimmune disease in the US and other industrialized nations is increasing. For example, celiac disease (CD) is one of the most common disorder related to gluten and the prevalence of CD has been estimated to approximate 0.5 % - 1 % in different parts of the World [2, 3]. At this time only treatment for CD and other gluten related disorders is lifelong adherence to a gluten-free diet, which involves the elimination of grains containing gluten, wheat, rye, and barley in addition to food products and additives derived from them [4]. Gluten is not soluble in water under normal conditions. Because of insolubility and hydrophobic nature of gluten, it absorbs approximately twice its dry weight in water. So, when wheat flour mixed with water, it forms a cohesive, viscoelastic dough. Hence, gluten removal results in major problems especially for bakers in terms of quality [5-7]. Because of the constraints of a gluten-free diet, alternative therapies for CD are being developed, including agents that prevent gluten uptake into the mucosa, decrease immune activation, and reduce gluten exposure by either binding or degrading gluten in the intestinal lumen. Recently, probiotic use is common in patients with celiac disease [10]. Probiotics are live microorganisms that confer a health benefit on the host when administered in adequate amounts [11]. Recent studies focus on new probiotic strains to decrease the toxicity of wheat flour (Table 1). The main idea of these studies was to use this probiotic during food processing to produce tolerable gliadins. Sourdough fermentation decreases the disulphide bonds in gluten network which influence its digestibility and may alleviate celiac disease in people with gluten sensitivity [12].

Today, wheat remains one of the most important food sources in the world contributing 50% of calories in industrialized and developing countries and grains are an important component of human nutrition [2]. A slice of bread contains 3 to 4 gm of gluten, most CD patients react to a small fraction of this value: 50 mg of gluten, and less commonly to as little as 10 mg or even 1 mg [8]. For this reason, it is increasingly important to research on reducing gluten content of wheat.

Keywords: Celiac, Probiotic, Sourdough, Gluten free, Bread

Table 1. Probiotic strains to decrease the toxicity of wheat or improves intestinal permeability

Population	Probiotic strain	Results	References
Celiac Sprue Patients	<i>Lactobacillus alimentarius</i> 15M, <i>L. brevis</i> 14G, <i>L. sanfranciscensis</i> 7A, and <i>L. hilgardii</i> 51B	Bread biotechnology that uses selected lactobacilli, nontoxic flours, and a long fermentation time is a novel tool for decreasing the level of gluten intolerance in humans	[13]
Mice	VSL#3 probiotic product, including <i>Streptococcus thermophilus</i> , <i>L. plantarum</i> , <i>L. acidophilus</i> , <i>L. casei</i> , <i>L. delbrueckii</i> spp. <i>bulgaricus</i> , <i>Bifidobacterium breve</i> , <i>B. longum</i> and <i>B. infantis</i> strains. VSL#3 probiotic product was used in the fermentation of a mass with wheat flour in order to hydrolyze gliadin peptides.	Intestinal epithelium cells of mice were exposed to gliadin treated with VSL# 3. The probiotic product promoted almost complete hydrolysis of gliadin peptides.	[14]
Human colon epithelial cells (Caco-2)	<i>Lactobacillus fermentum</i> and <i>Bifidobacterium lactis</i>	<i>B. lactis</i> improves intestinal permeability, while <i>L. fermentum</i> did not affect this parameter	[15]
Sixty autochthonous sourdough samples	Isolation of <i>Enterococcus mundtii</i> and <i>Wickerhamomyces anomalus</i> , vs <i>Lactobacillus plantarum</i> ATCC 14917 (as control strain)	<i>E. mundtii</i> QAUSD01 and <i>W.anomalus</i> QAUWA03 had the ability to tolerate low pH, bile salt properties and hydrophobicity compared to other gluten-degrading strains. These two strains exhibited the potential to be used as probiotic for sourdough fermentation.	[16]

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Biological Value of By-Products from Fractionation of Wheat (*Triticum aestivum* L.) and the Possibility of Using them for Gluten-Free Products

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Background. There is a growing number of consumers who are intolerant to gluten and are defined as coeliac disease sufferers. Effective preventative measure and/or treatment is a gluten-free diet, which greatly limits the patients' diet. Nutrition therapy for coeliac disease has centred around food allowed/not allowed on a gluten-free diet. The diet must be not only free of gluten but also healthy in order to avoid nutrient, vitamins and minerals deficiencies or excess (Singh, 2017). For this purpose, it is necessary to select raw materials without gluten or to remove effectively gluten from the raw materials.

Aim. To distinguish biological value of by-products from fractionation of wheat into starch and gluten, to identify them and to analyze the possibilities of using them in gluten-free products.

Methods. Total protein content in wheat by-products determined by Kjeldahl method. The proteins were characterized by sodium dodecyl sulphate-polyacrylamide gel electrophoresis (SDS–PAGE). Determinations of the content of mineral components in wheat grain were conducted after dry mineralization of the samples. Measurements were carried out with Atomic Absorption Spectrometry, with excitation in acetylene-air flame in a UNICAM 939 apparatus. Gluten epitopes in wheat by-products monitored using strategies based on combined immunoassays with T cells from celiacs, G12-antibody ELISA.

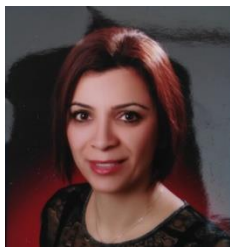
Results. The protein content of the bran was found to be 16.80%. Albumin and glutelin are the major fractions of wheat bran proteins. The molecular weights of albumins and

globulins are mostly lower than 25.000. Mineral content in bran: calcium – 74.00 mg/100g., iron – 10.57 mg, magnesium –610.00 mg, potassium – 1182.00 mg. The residues of gluten in the pentosan fraction were less than 20 mg/kg, but in the bran – higher.

Conclusions. By-products from fractionation of wheat are an excellent source of minerals such Ca, Fe, Mg, K and dietary fiber. ELISA methods allow for verifying that pentosan's fraction of wheat meets the standard of gluten-free food. Adding by-products from wheat, containing different amounts of protein, different ratios of insoluble to soluble dietary fiber, can improve the physical, nutritional and sensory quality of bread and other product. It can be applied bacterial or fungal cultures to optimize peptidase preparations suitable for detoxifying gluten-containing wheat bran.

Keywords: coeliac disease, gluten-free, fractionation, wheat bran, pentosans

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Function of NOS3 Gene in the Pathogenesis of Diabetes

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Background. Diabetes is a systemic disease that characterized with defect in methabolism of carbohydrate, lipid and lipoprotein and caused some complications like hyperglisemia, hyperlipidemia and hyperinsulinemia. Genetic factors effect predisposition and resistance to diabetes. Risk of diabetes is higher in close relatives of diabetes patients than general population. Therefore, it is very important that investigation of genetic factors which affecting disease pathogenesis. It is well known that Nitric oxide contributes regulation of insülin secretion.

Aim. In this study, our main goal is to investigate expression levels of Nitric oxide synthase 3 (NOS3) gene at the mRNA level in peripheral blood of diabetes patients.

Methods. Peripheral blood samples were collected from 50 diabetes patients and 50 healthy control individuals and than NOS3 gene expression levels were compared by quantitative real-time PCR. In this assay ACTB and GAPDH genes were used as a house keeping genes for data normalization. After calculation of patient/control ratio, statistical comparison was performed with Mann-Whitney U test.

Results. We have detected that NOS3 gene expression levels were significantly increased in diabetes patients compared to healthy controls ($p<0.001$).

Conclusions. Possible functional impairment from the ascending afferent expression of the NOS3 gene suggests that it may be related to the pathogenesis of diabetes. However the expression levels of the NOS3 gene seem statistically different between patients and controls, it is understood that studies in larger patient groups are needed to claim that diabetes is associated with divergence within each group.

Keywords: Diabetes, NOS3 Gene, RT-PCR, mRNA Expression

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Determinaton of Volatile Aroma Components of *Ferula orientalis* L. Using Gas Chromatography-Mass Spectrometry

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Background. Aromatic plants had been used since ancient times for their preservative and medicinal characters, and to impart aroma and flavor to food, the pharmaceutical properties of aromatic plants are partially attributed to their essential oils. Essential oils are aromatic oily liquids obtained from different plant parts and they have been shown to possess antibacterial, antifungal, antiviral, insecticidal and antioxidant properties.

Aim. This study was performed to determine volatile aroma compounds of *Ferula orientalis* L. collected from Turkey.

Methods. *Ferula orientalis* L. samples collected from Erzurum province of Turkey were used as material. The volatile aroma compounds in the ethanolic extract of *Ferula orientalis* L. were determined using Gas Kromotografi-Mass Spectrometry (GC/MS) technique.

Results. Among the aroma components identified, quinic acid had the highest value with 43.83%. The main components emphasized are quinic acid followed by sabinene (11,30%); eicosatrienoic acid, methyl ester (6,79%); α -pinene (4,36%) and kauran-18-al, 17-(acetyloxy), (4.beta.) (3.21%).

Conclusions. According to, GC-MS analysis of *Ferula orientalis* L. extracts identified of forty five compounds where quinic acid, sabinene, eicosatriynoic acid methyl ester, α -pinene and kauran-18-al, 17-(acetyloxy)-(4.beta.) were identified as the major compounds. Quinic acid derivatives have beneficial effects such as antioxidant, antiinflammatory, anti-HIV, anti-hepatitis B virus, hypoglycemic, hepatoprotective activity as well as inhibition of carcinogenesis and mutagenesis. Eicosatrienoic acid, a polyunsaturated fatty acid, is required for high performance of the brain and central nervous system. α -pinene has several pharmacological properties including anti-inflammatory, bronchodilator, hypoglycemic, sedative, antioxidant and broad-spectrum antibiotic activities.

Keywords: *Ferula orientalis*, Aroma compounds, Quinic acid, Sabinene, Eicosatriynoic acid, Methyl ester, α -pinene

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Role of IGF2BP2 Gene Polymorphisms in the Pathogenesis of Type 2 Diabetes Mellitus

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Background. Clinical heterogeneity of type 2 diabetes, a complex metabolic disease, is due to the diversity and interactions of environmental and genetic factors involved in the pathogenesis of the disease. This is supported by genetic epidemiologic studies such as differences in populations and ethnic groups, familial density and hereditary transition patterns, and comparison of rates in twins. Furthermore, specific genetic syndrome studies in animal models of type 2 diabetes and glucose intolerance support the role of genetic factors in etiology in the pathogenesis of T2DM. However, it has been found that Insulin Like Growth Factor 2 mRNA Binding Protein 2 (IGF2BP2) gene polymorphism was associated with T2DM in a few populations in genomic linkage studies.

Aim. In patients with type 2 diabetes, it was aimed to identify the levels of polymorphisms rs1470579 and rs4402960 in the IGF2BP2 gene and to investigate their role in the pathogenesis of diabetes.

Methods. 90 type 2 diabetic patients and 90 healthy control groups were included in the study. The QIAcube isolation robot (Qiagen, Hilden, Germany) and the kit were used to obtain DNA from the blood samples from the patient and control group. The quality and quantity of genomic DNA was measured by spectrophotometer (Qiagen, Germany). The polymorphism levels of the IGF2BP2 genes rs1470579 and rs4402960 were also determined by the PCR-RFLP method.

Results. Statistical analyzes on the results of the study revealed no association between rs1470579 polymorphism and type 2 diabetes mellitus risk, whereas rs4402960 polymorphism and type 2 diabetes mellitus association was found statistically significant ($p < 0.05$).

Conclusions. It is clear that there is a relationship between type 2 diabetes mellitus and rs4402960 polymorphism. However, further molecular studies are needed to clarify the subject.

Keywords: Type 2 Diabetes, IGF2BP2, Polymorphism, PCR-RFLP

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Biological vs Antioxidant Activity of Linden (*Tilia tomentosa* Moench)

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Background. *Tilia tomentosa* Moench is one of 45 species belonging to Tiliaceae family, and the use of flowers in traditional treatment methods is quite common. It is well known that *T. tomentosa* flowers are rich in phenolic compounds related various biological functions.

Aim. In this study, the total phenolic content, antimicrobial and antioksidan activity of leaves and flowers of linden was determined and the importance of its medicinal and aromatic characteristic was evaluated according to the obtained results.

Methods. In this study, the microdilution broth method was used to determine the minimum inhibitory concentration (MIC) of the plant extracts against microorganisms. Three gram negative bacteria, *Staphylococcus aureus*, *Enterococcus faecalis* and *Bacillus cereus*, three gram positive bacteria *Pseudomonas aeruginosa*, *Escherichia coli* and *Klebsiella pneumonia* and 2 fungal microorganisms *Candida albicans* and *Candida tropicalis*, were used. The extracts were screened for antioxidant activity using the DPPH radical scavenging capacity and metal chelating activities. Also, Folin-Ciocalteu reagent was used in order to find out the total phenolic content.

Results. The leaves and flowers linden were found to be effective antioxidants in different *in vitro* assay metal chelating, DPPH radical scavenging and total phenolic. It was also found that this plant leaves showed good antimicrobial activity against *C. albicans* and *C. tropicalis*.

Conclusions. The results of this study showed that the extracts of linden can be used as a easily accessible source of natural antioxidants and as a possible food supplement or in pharmaceutical industry due to their strong antioxidant and antimicrobial activities.

Keywords: Linden, Antioxidant activity, Antimicrobial activity, Total phenolic content

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Dental Hygiene Habits, Dental Trauma and Dental Caries in High Performance Sports

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Background. Dental hygiene care is relevant for the performance of athletes since it influences health and fitness in general. Dental trauma lesions are the most frequent

orofacial injuries related with trampoline activity, and frequently cause aesthetic, functional, psychological and economic problems.

Aim. To evaluate oral hygiene habits, oral trauma and dental caries history in a sample of Portuguese federated athletes in trampoline.

Methods. The study included 35 athletes, aged between 15 and 38, who were submitted to a survey on dental hygiene habits, followed by an intraoral observation, using the simplified Oral Hygiene Index and the DMF-T index.

Results. Dental hygiene habits show that, 62.86 % of the participants brush their teeth twice a day for only one minute, and 8.6 % use dental floss as an auxiliary method to brushing. Elite athletes, who train for longer periods of time during the day, when compared to High Performance Athletes (HPA) are the ones who do a less frequent daily tooth brushing, present a statistically significant higher OHI-S (1.91 vs. 1.50; $p=0.041$) and a higher DMF-T mean (2.41 vs 2.39; $p=0.982$). Regarding dental trauma, 22.86% of males and 2.86% of females had experienced trauma due to the sport activity. Elite athletes have more dental trauma ($n=8$) when compared to HPA ($n=3$). The consumption of energy supplements is not a relevant factor in relation to OHI-S ($p=0.093$) and to DMF-T ($p=0.417$).

Conclusions. Trampoline athletes are not aware of the need to properly brush their teeth for a period of two minutes and of the relevance of interproximal dental hygiene. Trauma in the mouth is a very incident problem and longer training periods may influence the care of dental hygiene, these two aspects reveal a field of work for dental hygienists to promote oral health and educate for dental care among professional athletes.

Keywords: Dental caries, Athletes, Trampolines, Dental Trauma, Dental Hygiene

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Pedro Roberto, Dental Hygienist from the Faculty of Dental Medicine of Lisbon, in the year of 2017. In the fascinating world of Dental Medicine he has special interest in Orthodontics, Periodontology and Implantology, with lot of love for his job.



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Need for Orthodontic Treatment in Young Adults - Comparison between DAI and PIDAQ

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Background. References to quality of life related to oral health has increased in the medical literature. Orthodontic treatment, besides improving function, which is the treatment of malocclusion, also have the aesthetic goal of improving physical appearance. The Dental Aesthetic Index (DAI) aims to link aesthetic and clinical factor to diagnose the need for orthodontic treatment. The Psychosocial Impact Questionnaire on Dental Esthetics (PIDAQ) is used to obtain information on patient's perspective on the dental aesthetic and its impact.

Aim. To adapt PIDAQ to Portuguese, applying it with the DAI, in young adults, students at the Universidade de Lisboa, to correlate the data and compare it with existing literature.

Methods. A sample of 44 individuals completed the PIDAQ and DAI. Individual analysis of both instruments was done and Pearson's Correlation between the questionnaire and the Indexes was performed.

Results. Of the 44 participants, 70.5% were female ($n = 31$) and 29.5% were male ($n = 13$), with a mean age of 21 years old. The DAI revealed that 50% of the participants required no orthodontic treatment. Others are divided into two groups, with 20.5% to which treatment is recommended, and 29.5% to which treatment is highly recommended. For PIDAQ it is relevant that 45% of the individuals are not happy with teeth appearance and 47% are afraid to receive negative comments about their teeth. Statistically significant correlations were found between DAI and PIDAQ with individuals been upset about negative comments on their teeth ($p < 0.005$) and higher values of DAI (greater needs of treatment) are correlated to dissatisfaction with teeth aesthetics ($p < 0.005$).

Conclusions. This study allowed to correlate the values of DAI and PIDAQ, leading to the conclusion that they both are valid instruments. The correlations found show that the higher values of DAI, presented bigger psychosocial impact in the individuals.

Keywords: Dental Aesthetic Index, Psychosocial Impact of Dental Aesthetic Questionnaire, Orthodontic, Quality of Life, Oral Health

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Eating Habits and Prevalence of Dental Caries among Colleges Students in Boarding School Regime and Day-Care Regime

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Background. Adolescent oral health is associated with demographic and socioeconomic factors. In the context of oral health, healthy eating relies mainly on avoiding the frequent consumption of sugary drinks and foods, and it is known that the ingestion of extrinsic sugars, more than four times a day, is associated with an increased risk of caries. It is therefore imperative and necessary to evaluate the dietary habits and dental plaque accumulation of adolescents in order to propose realistic alterations that can lead to the reestablishment of the balance between the enamel demineralization and remineralization of the tooth.

Aim was to compare the cariogenic potential of the diet of students in a boarding college with students in day-care college.

Methods. The total sample consisted of 60 male students between 15 and 18 years old. 30 students from a boarding colleges and another 30 from a day-care colleges. All students were screened, where data from DMF-T index and the Greene & Vermillon plaque index was collected. To evaluate the exposure to the dietary acids, each student filled in a 7-day food diary.

Results. After analyzing the data, it can be verified that there are no statistically significant differences between the colleges for age ($p = 0.743$) and for DMF-T ($p=0.272$). Students from the daycare college present higher values in the plaque index ($p = 0.001$) and for the risk of dental caries ($p < 0.001$).

Conclusions. Boarding-college students seem to have lower risk to dental caries, by presenting lower accumulation of plaque and less exposure to dietary acids.

Keywords: Dental caries prevalence, Eating habits, Adolescents, Risk evaluation, Sugar consumption, Dental plaque index

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Importance of Interdental Cleaning as a Component of the Patient's Attitude to Personal Dental Health

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Background. Both the patients and dental professionals should play an active role in controlling the plaque build-up by maintaining good oral hygiene. Individual approach could give the most desirable and long lasting effect on plaque control, based on building the positive attitude to dental health.

Aim. to reason the importance of cleaning in-between the teeth in order to prevent plaque-associated gum disease and study individual's attitude to personal dental health.

Methods. The study was implemented on 138 adults (69 residents of London and 69 of Klaipėda) aged 20-35 years. A two-stage cluster sampling method was conducted in this survey. Participants were sequentially recruited based on the following criteria: must be 20-35 years of age, should reside in London or Klaipėda and be willing to participate in the research. Oral hygiene practices were assessed through questions on the type and frequency use of toothbrush, other cleaning materials and tools used daily such as dental floss, interdental brush, bottle brush, toothpick, and water irrigator. Under oral health service utilization, the patients were enquired about the history of previous visits to oral health care units and reasons for those visits.

Results. 72.5 % of the patients in London brushed their teeth twice a day, 17.4 % – once daily and 10.1 % – three times a day. Among Lithuanian subjects such indicators made up 75.4 %, 14.5 % and 8.7 %, respectively. 30.4 % and 50.7 % of the study subjects in London and Klaipėda had used soft brush. 72.5 % of London's subjects reported having visited the dentist regularly while in Klaipėda they made up only 50.7 %. The driving factor for 29% (London) and 55.1 % (Klaipėda) visits was toothache. The main reason named for not seeing the hygienist was high cost – 5.8 % in London and 13.0 % in Klaipėda. Overall 60.9 % of all the participants rated the importance of their dental health as extremely important.

Conclusions. The patients in London demonstrated higher attachment to professional dental care services as compared to the patients in Klaipėda. Nevertheless, the patients of both cities had positive attitude to personal dental health.

Keywords: interdental cleaning, attitude, dental health

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Age Influence on Oral Care Habits, Attitudes and Behaviours of Adolescents in the City of Klaipėda

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Background. Adolescence is a transitional stage during which a child develops into an adult incurring dramatic physical, emotional, as well as oral health behavior changes. The 2016 Health Behaviour in School-aged Children (HBSC) study covering 41 countries has revealed that prevalence of positive life satisfaction significantly declined during the period from 11 to 15 years (Inchley, 2016).

Aim. The purpose of this research was to study age influence on oral hygiene habits, attitudes and behaviours in Klaipėda city adolescents sample.

Methods. There were 1206 questionnaires distributed (response rate 95.3 %) at the randomly selected schools (N=5, 17.85 % of all schools in Klaipėda city) in November of 2017. The study was approved by the Bioethics Committee of Klaipėda State University of Applied Sciences. In total 1150 adolescents participated in the study, 52.4% were female, mean age 13.4 years. The distribution according to age groups: 56.2 % younger than 14 years, 43.8 % of the adolescents ≥14 years old). The questionnaire consisted of 28 statements organized in five dimensions. Agreement with statement is expressed were five-item Likert scale. The questionnaire contained three additional multiple-choice questions on tooth brushing frequency, instruments used for dental hygiene and time of toothbrushing. Data was analysed using IBM SPSS.20 software. Pearson's Chi - square test was used to compare the distribution of variables and Student's t – test was used for statistical examination of two population means.

Results. The analysis of the attitudes related to oral health revealed that adolescents 14 years and older were more likely to avoid visiting a dentist (mean 3.29±1.202), as compared to younger ones (mean 3.52±1.291, p<0.05). Adolescents younger than 14

years agreed that visiting the dentist was necessary in order to avoid dental caries (mean 1.91 ± 1.020), while the older ones were less sure about it (mean 2.22 ± 0.987 $p < 0.001$).

Conclusions. The adolescents in Klaipeda city had poor oral care habits: 75.7% brushed their teeth regularly, only 53.1 % used one or more additional dental care product (not only toothbrush and toothpaste) on the daily basis. Nevertheless 75.9 % agreed that dental health was important to their overall health.

Keywords: oral care, habits, attitudes, behaviors, adolescents

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The Quality Improvement Trends of Dental Service in Klaipeda

Lijana Dvarionaitė

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Background. After assessing the quality of service organizations, it is important to identify the features that need to be improved, including tangibility, reliability, sensitivity, assurance and enthusiasm. Permanent improvement of service quality enables companies to increase their sales volumes and distinguish themselves from competitors (Chahal and Kumari, 2012).

Aim - to assess the service quality of dental offices in Klaipeda and develop the trends of improvement.

Methods. The following instruments were used: a questionnaire of assessing the importance and the quality of service (SERVQUAL) and additional questions about the frequency of respondents visiting dental clinics, the services most frequently used and the assessment of their own oral cavity. SERVQUAL question blocks consist of 22 questions that cover such features of service quality as tangibility (1 - 5), reliability (6-10), sensitivity (11-13), assurance (14-17) and empathy (18-22). 5 point Likert's scale has been used for evaluation 1 ("not at all important"), 2 ("not important"), 3 ("neither important nor irrelevant"), 4 ("important"), 5 ("very important"). The study included patients of 5 dental offices in Klaipeda. Total of 387 patients of Klaipeda were surveyed. The response rate - 85.05 %. Quantitative data was standardized. The 17 version of „SPSS” program was used. The chosen significance level of $p < 0.05$.

Results. The largest difference between anticipated and incurred quality was identified assessing assurance dimensions. The received dental service quality did not meet the expected quality assessing the available modern equipment ($m=0.09$), efforts in solving the problems ($m=0.21$), the feeling of being safe during the time of service ($m=0.32$), the willingness to help ($m=0.37$) and focus on each individual patient ($m=0.41$). The criteria of service quality was assessed better by women, people of younger age, having a higher education and unmarried/divorced/widowed men ($p<0.05$). Meanwhile, a variety of service is more important for older people, fulfilling of patients' needs and interests is important for those with different education and for those who already have their own families a more important criterion is the ability to choose a specialist doctor ($p<0.05$). The developed model can help improve the quality of dental services, when the focus is on staff and utilization of resources and capacity.

Conclusions. Having analyzed the quality of dental services in patients' opinion, specify the maximum difference between anticipated and incurred quality was identified, which may have practical implications in creating high-quality dental services. The results can be put into practice and used to improve the quality in the level of utilizing resources and the capacity. This would be beneficial not only for dental service, but also for patients.

Keywords: Dental services, service quality, the trends of improvement, SERVQUAL

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Polydatin, Natural Precursor of Resveratrol, Promotes Osteogenic Differentiation of Mesenchymal Stem Cells from Dental Tissues

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Background. Bone loss and fractures are consequences of aging, diseases or traumas. Furthermore, the increased number of aged people due to the rise of life expectancy, needs more strategies to limit the bone loss and regenerate the lost tissue, ameliorating the life quality of patients. Adult stem cells therapy can be an efficacious treatment in tissue repair and regeneration. New sources of stem cells in adult organisms are continuously emerging and dental tissues, have been identified as a source of MSCs capable of self-renewal and multipotency. Furthermore, a great interest for non-pharmacological therapies based on natural compounds is emerging and focusing on the oligostilbene Polydatin, the natural glycosilated precursor of Resveratrol, present in many kinds of fruits and vegetables. These molecules have been extensively studied due to their antioxidant and anti-inflammatory effects, showing more recently Resveratrol a pro-osteogenic role, while the role of Polydatin on osteogenic differentiation is still unexplored.

Aim and methods. We investigated how Resveratrol and Polydatin influence the osteogenic differentiation of Dental Bud Stem Cells (DBSCs). The dental bud, immature precursor of the tooth, is a good source of cells with mesenchymal stem features and osteogenic capacity, representing an optimal model of differentiation toward osteogenic lineage and a promising source for bone regeneration.

Results. Our results demonstrated for the first time that Polydatin is able to stimulate the osteogenic differentiation of DBSCs, sharing similar properties with Resveratrol.

Conclusion. These results encourage to deepen the effects of Polydatin and Resveratrol on bone health as elective molecules for non-pharmacological therapies, such as those based on the consumption of functional food wishing for the future a successful use in bone loss prevention and therapy.

Keywords: Mesenchymal Stem Cells, Dental Bud Stem Cells, osteogenic differentiation, Polydatin, Resveratrol, Bone health

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Aspects of Health and Lifestyle of Middle and Old Aged Urban Population

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Background. The United Nation Organization states that if people older than 65 years constitute 7 or more per cent then such society is ageing. Lithuanian society is also ageing; currently people older than 65 years make up about 15.3 per cent of all population. Older people as well as middle-aged people face the same risk factors only differ in intensity. Many findings prove that the disease has the close relationship with lifestyle. The study was performed on the basis of the International Project HAPIEE: Health, Alcohol, Psychosocial Factors in Eastern Europe.

Aim. To assess health indicators and peculiarities of life style among elderly (65–72 years) persons, to compare them with middle-age (45–54 years) persons and men with women.

Methods. Men and women aged 45–72 were randomly selected from the Lithuanian Population Register. Research data were collected using medical examination and standard questionnaires.

Results. The prevalence of smoking among men decreased with age: 45.6 % of men in age group 45–54 years smoked regularly, while the prevalence of regular smoking in age group of 65–72 years was 15.5 % ($p < 0.001$). The prevalence of smoking with age among women showed same tendency as among men. 76.0 % of elderly people and 51.9 % of people aged 45–54 years had arterial hypertension ($p < 0.001$). 11.0 % of men and 20.8 % of women experienced the feeling of loneliness ($p < 0.001$).

Conclusions. Women rated their health worse than men. The prevalence of smoking decreased with age both among men and women. Arterial hypertension was more frequent among elderly people as compared to middle age population.

Keywords: Health, Old age, Lifestyle, Middle age

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Lina Ejlerstsson is a PhD student in Public Health at the Department of Clinical Science, Lund University in Sweden. She has her expertise in occupational health promotion and has a passion for creating new pathways when improving the wellbeing of healthcare workers. She is exerting both quantitative and qualitative methods in her research, always using a salutogenic approach. During the course of 2018, she has published her first two scientific articles.



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Work Experience and Self-Rated Health in Employees of Primary Health Care Centres: Swedish and Lithuanian Perspective

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Background. Antonovsky's salutogenic model for health helps to understand the factors that supports and enhances the human health (Antonovsky, 1987; 1996). However, there is little known about the positive work factors that strengthen and support the health of the employees. Most of the studies and research on work is about negative work factors and their causes, i.e. work environment risk factors and health problems (Bauer, 2007). We need to look at the positive work factors that promote employee health.

The aim was to assess the relationship between work experience and self-rated health in primary health care workers in Sweden and Lithuania

Methods. The same questionnaire, which had a salutogenic perspective, was used for research in Lithuania and Sweden and included information on self-rated health, psychosocial work environment and experiences, recovery, social climate, energy, self-esteem, reflection and work-life balance. The questionnaire was based on two previously validated and psychometrically tested instruments, WEMS (Work Experience Measurement Scale) and SHIS (Salutogenic Health Indicator Scale). The respondents rated the 25 statements of the questionnaire on Likert scale. The data was standardized and SPSS, version 21, was used for the analyses. The study included 8 (n=460) primary health care (further PHC) institutions of Lithuanian and 26 (n=599) of Sweden. In total, Sweden collected 501 and Lithuanian 386 questionnaires from primary health care employees.

Results. The response rate Lithuanian was 83.9% and Sweden was 83.6%. Results of the study showed that the largest profession group in primary health care, in both countries, are nurses (Lithuania-49.5%; Sweden-46%). The main part of PHC employees in Lithuanian and Sweden are women (Lithuania-95.3%; Sweden-86%) ($p < 0,001$). Cronbach's alpha showed that the indices used in this study had high reliability (>0.73).

The Swedish and Lithuanian PHC employees had equally high self-rated health. On a scale 0–100 the respondents' mean (standardized) SHIS value was 66.3 (SD 18.6) in Sweden and 67.4 (SD 18.7) in Lithuania. There were no significant difference in SHIS scores for sex, age or professional group. Student t-test was used to verify the SHIS mean value between Sweden and Lithuanian. The result showed $p=0.8965$, which means there is no statistically significant difference between the SHIS value of the two groups. Having a positive work experience was related to high self-rated health. A positive moderate correlation (Lithuania $r = 0.48$, $p < 0.001$; Sweden $r=0.53$, $p < 0.001$) between the experience of psychosocial factors and health, assessed salutogenic health indicators. Self-esteem, optimism ($\beta=0.619$) and individual work experience ($\beta=0.210$) were assessed as the most significant factors promoting health in Lithuanian primary health care centers'. In Sweden, recovery had the highest relationship to SHIS ($\beta=0.34$), followed by experience of work-life balance ($\beta=0.25$) and work experiences ($\beta=0.20$).

Conclusions. PHC employees had high self-rated health in Sweden and Lithuania. Positive work experience was related to high self-rated health. In Sweden, recovery had the highest relationship to SHIS and in Lithuania - self-esteem and optimism.

Keywords: psychosocial work factors, salutogenic, health promotion at work, PHC employees

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Conformity of the Competences of Graduates of Dental Assistant and Oral Hygiene Study Programs with the Needs of the Labour Market: Focus Group Research of Employers and Graduates

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Background. During these times of higher education reform, the inquiry into the labour market becomes the main concern assuring the quality of higher education. The students are trained at the Klaipeda State University of Applied Sciences according to the programs of Dental Assistant and Oral Hygiene. A scientific analysis of the relationship between the labour market and the study programs would provide a direction for improvement, so that the competences of graduates would correspond to the needs of recent labour market as much as possible.

Aim – to analyze the view points of employers and graduates towards the proficiency of the Dental Assistant and Oral Hygiene study program graduates to match the needs of the labour market.

Methods: The research data collected using literature and document analysis methods. Empirical data were collected through employers and graduates round-table discussions. Focus group interview was conducted, in which 15 participants have been involved. The data were analyzed using a qualitative analytical research method.

Results: The following categories were distinguished by interviewed employers: *Improvement* of psychological competencies like in the segment of communication with clients and colleagues; The acquired basics of professional competences are improved and refined while working; Graduates motivation is of the utmost importance in improving their competencies; Communication in a multicultural environment is attributed to continuing life competencies without focusing on a particular educational institution (college); Perspective for realizing other competences; The polarity of Dental Assistant and Oral Hygiene professions both are significant and open field for future inquiry.

The following categories by interviewed graduates have been distinguished: The objective competences of graduates of Dental Assistant and Oral Hygiene Study Programs; General competencies of the Dental Assistant and Oral Hygiene study program graduates.

Both research categories are subdivided into smaller subcategories, which include confirming statements by the participants.

Conclusions: Employer research categories focused on the improvement of psychological and professional competences, the importance of graduates motivation, prospects for the realization of other competences. Graduate categories are focusing on the segments of objective and general competencies.

In the research of employers, most of the claims are applied subcategories relating to the need for communication and practical skills, flexibility and adaptation to the doctor, and motivation for improvement. In the research of graduates, most of the claims are applied to subcategories relating to the following competencies: oral health condition identification, standardized assessment, assessment of individual patient needs, job preparation, team flexibility and adaptation, work in a multicultural environment, planning skills, and other.

Keywords: graduates competences, Dental Assistant study program, Oral Hygiene study program, needs of the labour market, *focus* group research.

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Nursing Students' Perceptions of the Nursing Profession in Belarus, Lithuania, Poland and Sweden. A comparative study

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Background. Nursing is a healthcare profession that involves years of training and continued specialized education. In several European countries nurses' professional status has been debated for decades by many nursing experts, theorists, and practitioners.

Aim. To compare the differences of nursing students' perceptions of the nursing profession in Belarus, Lithuania, Poland and Sweden.

Methods. The cross-sectional study was conducted using the Professional Nursing Image Survey. The instrument includes three separate scales: "Skills and Abilities", "Functions and Duties" and "Opinions About Nursing." Only the results from the third scale including 14 statements that characterize the nursing profession were included in this presentation. The study was conducted in Belarus (n=195), Lithuania (n=64), Poland (n=66) and Sweden (n=67). All nursing students in the last year of first cycle studies were asked to participate.

Results. Students from Belarus statistically more often expressed a strong opinion that nurses are fairly paid for their work (14.4 %) than did students from Sweden (1.5 %) and Poland (0.0 %); 3.1 % students from Lithuania strongly agreed that generally, nurses are fairly paid for their work. The highest proportion of strong opinions that becoming a nurse requires a lot of scientific training was among students from Lithuania (84.4 %); it was significantly lower among students from Poland (60.6 %), Belarus (53.8 %) and Sweden (14.9 %). The highest proportion of students from Lithuania (78.7%) answered they strongly agreed that nursing is a challenging profession – significantly more often than students from Poland (53.0%) and Sweden (52.9 %).

Conclusions. Educational traditions and the current system of nursing education may play a significant role in shaping the perceptions of the nursing profession by students in different countries. Results indicate that societal factors, the organization of the health care system and the current system of education for nurses could play an important role in students' perceptions of the nursing profession.

Keywords: nursing profession, questionnaire, perceptions, cross-country comparison

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The role of parents in an attempt to prevent thermal injuries of children in family life

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Background. Each year in Lithuania around 9.5 thousand people are affected by burns, a fourth are children. Kids usually get burned because of a lack of parental supervision and dangerous behavior. Up to 75 % of burns could be prevented by improving the household environment and paying more attention to children.

Aim. The purpose of this research is to assess the role of parents in an attempt to prevent thermal injuries of children.

Methods. An anonymous questionnaire survey. The questions were provided with one or more correct answers in a closed type questionnaire. The form for the parents of children who have or have not been burned, which was made up of 36 questions, tried to determine the knowledge of thermal injury prevention, first aid, and the outlook of parents being informed about thermal injury prevention by nurses. SPSS 22.0 Statistical Package and the following statistical methods were used for the data analysis: non parametric Chi – square (X^2) and Kruskal – Wallis criteria, correlation analysis methods (Spearman and Pearson correlation coefficients).

Results. Our study results concluded, that the most common burn cause is hot liquids. Children get scalded, because the adults that are supervising them do not adequately evaluate the danger of hot liquids. The majority of parents, whose children experienced burns, assert that nurses did not give them any information about the prevention of children's burns. Only a few of them were satisfied with the quality of information they were given.

Conclusions. In the event of a burn the most effective course of action is proper first aid. To sum up, it can be said, that the two thirds of parents, whose children experienced burn injuries, did not know much about first aid, but they had enough knowledge about safe behavior at home. The majority of parents, whose children experienced burns, said that nurses did not make enough effort in attempts to prevent thermal injuries of children: they did not give them enough information about thermal injury prevention and first aid when injured. These might be the reasons why, according to the observations of parents: lack of consultation time, lack of learning material, no conditions for receiving information, lack of nurse's teaching skills.

Keywords: Burns, Scalds, Child safety

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The Challenges of Patient Safety in Portugal and in Europe: the Rancare Cost Action on Missed Nursing Care

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Despite the improvements in health interventions, the incidence of adverse events and other problems related to social and economic crises, patient safety is an important contributor to the global burden of diseases and a constant preoccupation with Public Health in Portugal.

In recent years there have been some successful institutional efforts to address patient safety issues in Portugal, although such efforts have been fragmented or focused on small specific technical or geographic areas.

It has not been possible to show long-term improvements, not only showing the effectiveness of the change, but also what has been effective in implementing this change. Clearly, patient safety issues result from various combinations of individual, team, organizational, system, and patient factors.

A systemic approach should acknowledge and strive to understand the complexity of work systems and healthcare processes, including the interactions between people and the powers that take place in health facilities.

Security errors cannot be attributed solely to the human factor.

The purpose of this presentation is to provide a brief overview of the status quo of patient safety in Portugal, highlighting key aspects that should be taken into account in designing a strategy to improve patient safety. With these key aspects in mind, policy makers and implementers can move forward and make better decisions about what changes need to be made and how the changes needed to improve patient safety need to be implemented. The contribution of colleagues who are international nursing leaders in the quality of health care and patient safety can also contribute to more innovative research methods and to create knowledge that promotes less costly and successful changes.

The overall aim of RANCARE (www.rancare.eu) supported by EU Cost Action 15208 is to facilitate discussion about rationing of nursing care based on a cross-national comparative approach with implications for practice and professional development. This will be

achieved by advancing collaboration and networking, and by integrating different disciplines and approaches including nursing, ethics and moral philosophy, health care studies in general, economics and social policy.

Keywords: public health, patient safety, adverse events, health strategy, health policy

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Hospitalization at Home – A Good Health Practice

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Background. Hospitalization at home is an alternative to conventional hospitalization, which provides medical and paramedical assistance to patients who, despite needing hospital care, meet a set of clinical, social and geographical criteria that allow them to be hospitalized at home, under the supervision of a multidisciplinary team, with the consent of the patient and his / her family.

Aim. The goal is for hospitals to release beds for other patients and save money, while still avoiding possible infections for patients who stay at home

Methods. Hospitals will be encouraged by health authorities to transfer patients in the acute phase to the home hospitalization, where they will have more comfort, being far from hospital infections.

In Portugal, this in-home hospitalization program will not be applied to all patients. Priority will be given to pathologies such as:

- COPD,
- chronic decompensated heart failure,
- acute asthma,
- cellulitis / erysipelas,
- community-acquired or hospital-acquired infections,
- MDR micro-organism infections,
- pneumonia,
- thromboembolic pathologies,
- diverticulitis,
- febrile neutropenia

This proposal is part of the terms of reference for the contracting of health care in the Portugal National Health Service (NHS) for 2018 - document that defines the guiding principles of the agreements that will be concluded between the hospitals and the Government.

Results. The payment to Portuguese hospitals will be 1,714 € for each in-home placement, which corresponds to 75 % of the base price of a scheduled hospitalization.

Conclusions. The purpose of home hospitalization is to optimize resources (with avoiding overcrowding of hospital beds, reducing costs, increasing efficiency), and the improvement of health care quality.

The quality of care is ensured by the support of a multidisciplinary medical team, 24 hours a day and 365 days a year.

Keywords: Home hospitalization, Cost containment, Health quality

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Tai Chi Exercises Versus Progressive Muscle Relaxation Technique on Symptoms of Anxiety in Patients with Anxiety and Mood Disorders

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Background. Anxiety is the most common reaction to stress, and stress itself is a huge problem affecting people of different ages all over the world. Scientific studies provide beneficial evidence of Tai Chi for mental and physical health, which includes reduced anxiety and depression symptoms, improved stress management and sleep quality. Furthermore, Tai chi improves muscular strength, balance and flexibility (Song et al, 2014, Caldwell et al, 2016, Jiang et al, 2016).

Aim was to compare the effects of Tai Chi exercises and Progressive Muscle Relaxation on symptoms of anxiety in patients with anxiety and mood disorders.

Methods. Randomized, control trial of 27 patients, mean age 37.3 (12.1), with anxiety and mood disorders. Participants were randomly assigned to either a Tai Chi group (TC) (n=13), or Progressive Muscle Relaxation group (PMR) (n=14). Participants in both groups completed a 4-week training program, 3 times per week, one session time – 35 minutes. Tai Chi exercises are a mind-body intervention, which involves sequences of flowing movements, breathing, mental focus, coordination and relaxation. PMR technique involves learning to monitor the tension in specific muscle groups and to direct attention towards the differences felt during tension and relaxation. The primary outcome of the study was total score of Hamilton Anxiety Rating Scale (HAM-A). Mann-Whitney's U test and Fisher's χ^2 test for categorical variables has been used.

Results. After 4 weeks of TC and PMR training, TC group showed significant decrease in HAM-A scores from 29 (19.5–40.0) at the baseline to 16.0 (5.5–20.0) at the end of the training. PMR group also had lower HAM-A scores: from 21.5 (15.8–34.5) to 16.0 (5.0–24.0) respectively. However, compared with PMR group, participants in the TC group had significantly improved total score of Hamilton Anxiety Rating Scale: difference of HAM-A in TC group was 13.0 (6.5–22), whereas in PMR group - 4.0 (1.5–12.0), ($p=0.033$).

Conclusions. Tai Chi training is considered to be a more effective treatment approach to reduce symptoms of anxiety in patients with anxiety and mood disorders.

Keywords: Tai Chi, Progressive Muscle Relaxation, anxiety, Mood disorders

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Influence of Drug Consumption in the Functional Capacity of Elderly Persons

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Background. The aging of the population throughout Europe is reaching unprecedented dimensions, currently ranking among the regions of the world with the highest percentage of the elderly population: in particular, people over 65 reaches 15.9 %.

Given the great interest in the repercussions of the long longevity of our society, the individual variability of the disease and the importance of the multiple factors that can lead to the simultaneous consumption of several drugs, it is necessary to evaluate aspects such as the qualitative and quantitative consumption of drugs in the non-institutionalized older population, and determine their relationship with functional capacity in the elderly.

Aim. To know the level of drug consumption of drugs in elderly population of the Autonomous Community of Extremadura (Spain) and to identify the relationship between drug consumption and the capacity to perform daily living basic activities.

Methods. Observational, descriptive and transversal study, where the sample population is constituted by persons over 65 years of age who are not institutionalized and Autonomous Community of Extremadura inhabitants. A stratified probabilistic sampling

was carried out where the distribution of the population was made based on the health areas of Extremadura.

Results. About drug consumption, the Extremadura elderly population takes an average of 2.58 a day and only 4.75 % of elderly people are exempt from taking medications.

The results obtained highlight that as drug consumption increases; disability in the functional activities of daily living is greater. Thus, those with an adequate capacity or a slight incapacity to functional activities, have an average consumption of drugs of 2.22, while those with moderate disability and those who suffer from severe disability at the time of the activities showed an average consumption of drugs greater than 3.37 and 3.5, respectively.

Conclusions. The definition of activities related to the necessary care to prevent situations of fragility and loss of autonomy will aim to prevent therapeutic disorders derived from the complexity of the treatments as well as the loss of functional capacities of the elderly person.

Therefore, drug control should be rigorously included as a safety strategy and prevention of dependence on older people, all in order to delay institutionalization.

Keywords: Elderly, Drug consumption, Functional capacity

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Mothers' opinion about nurse role while caring for premature infants

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Background. Prematurity is extremely relevant health problem of society, because the numbers of preterm births are increasing every year. Developments in the perinatal care of preterm infants made dramatic improvements in the survival rates of early preterm infants (Louise, Bendar, Durighel, Frost G, Bell J, 2017). Therefore, it is important to provide effective care for the premature newborns so that they can grow and develop without any problems in the future life. It has been found that home visits by a nurse are a key component in providing education, support and nursing care for families (Lopez, Anderson, Feutchinger, 2012).

Aim was to analyze mothers' opinion about a nurse role while caring for premature infants.

Methods. In this research written questionnaire with half closed type questions was chosen. It contained 17 questions to identify mothers' opinion about nurse practice. Research data was processed with statistical data analysis SPSS 24.0 program. Statistical methods used – average and standart deviation, Chi-square test, Kruskal-Walis, Mann-Whitney.

Results. While analyzing premature infant mothers' age and breastfeeding experience connection a tendency has emerged that the older mothers were the more they indicated the lack of experience on breastfeeding, meaning they do not know how to properly open infant's mouth or breastfeed. Examining study data, it was found that mothers who had been divorced and mothers who had not been married faced more difficulties when caring for their premature infants. Another tendency was observed that for the mothers it is really important which number in the family this infant was born: mothers, who had this infant within their first pregnancy, got the most significant help from nurses when they were observing and assessing newborn's weight, explaining about newborns sleeping cycles, teaching how to properly take care of an infant's hygiene. Difficulties that mothers face while caring for premature infant have nothing to do with the type of birth but are directly related to infant's gestational age and birth weight.

Conclusions. Premature infants' mothers often face breastfeeding difficulties due to the lack of milk, also newborn's neediness for additional oxygen and mother's lack of sleep is what causes high stress amongst these mothers. Furthermore, the most helpful nurse practice for premature newborns' mothers were infant's weight observation and

assessment, informing mothers when to report infant's breathing issues to the doctor, explanation of newborns sleep cycles and also education about appropriate premature infant's hygiene care.

Keywords: Prematurity, Premature infant, Preterm birth, Nursing needs, Nurse role

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Laws of Dignified Death in Spain

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Background. Attention to patients at the end of life should be based on the comprehensive assessment of the patient. An assessment should be made that includes not only physical signs and symptoms, but also includes aspects of the psychological, social and spiritual spheres. Therefore, care needs to be tailored to the needs of the patient.

Aim. To know the content of the different autonomous laws of dignified death that exist in Spain and to analyze the defined concepts and strategies described to follow before the situation of last days of life.

Methods. Review of the autonomous laws in force of rights and guarantees of the dignity of the person before the final process of his life.

Results. The legal system tries to specify and simultaneously protect the individual to allow the right to a dignified death, for which the different Autonomous Communities of Spain have approved different laws of rights and guarantees of the dignity of the person before the final process of his life. After their analysis, basic concepts like quality of life, palliative care or therapeutic limitation of effort are not coincident. On the other hand, the regulations of the duties of professionals who care for patients in their dying process follow different specifications depending on the region of approval.

Conclusions. Among the different laws of decent death analyzed and approved in the communities of Spain there is heterogeneity of concepts and application of procedures. This situation leads to confusion and difficulty in providing care in the final phase of life. After its analysis, basic concepts such as quality of life, declaration of anticipated vital will, rights of minor patients, limitation of therapeutic effort, among others, are not coincidental. On the other hand, the regulations of the duties of the professionals who care for patients in their dying process follow different specifications depending on the region in question.

Keywords: Law, Dignified Death, Palliative Care, Limitation of Therapeutic Effort, Quality of life

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The Activity of a Beauty Therapist in Case of Acne Vulgaris

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Background. Acne Vulgaris is one of the most common skin diseases. It affects even 70 – 95 percent of adolescents (usually 13 – 19 year-old), however, older people may suffer from this disease as well. The main factors of pathogenesis of acne vulgaris are the following: hyperactivity of sebaceous glands, follicular hyperkeratosis, *Propionibacterium acnes* (*P. acnes*) colonization, and inflammatory reaction. The practice of a beauty therapist in case of acne vulgaris is related with skin care and rehabilitation following acne treatment, drawing up the programme for cosmetic skin care at home, according to the individual needs of skin, and selection of suitable skin care products.

Aim. To determine the practice of beauty therapist in the case of acne.

Methods. Quantitative analysis was chosen to implement the research. From all the population, i.e., from all the doctors dermatologists and the beauty therapists, working in Klaipėda County, those, who represent the variable of the research most, were included in the sample: 4 doctors dermatologists and 5 beauty therapists. The criterion for selection of the persons for this research – professional experience in solving the problem of acne vulgaris. Method of the research – semi-structured individual interview providing open-ended questions. Content analysis – categories and subcategories – was used to process the data obtained during interview.

Results. The result of the research showed that the main treatments used by beauty therapists while dealing with acne vulgaris are chemical peels and mechanical removal of comedones. Additional procedural elements in case of acne might be application of masks, D'Arsonvalization, introduction of preparations with the help of galvanic current, cryotherapy, and use of seaweed. Experiential research revealed that the main functions performed by beauty therapists in the process of solution of the problem of spotty skin is evaluation of skin condition and determination of skin needs, collection of anamnesis and data analysis, application of treatments according to skin condition and formation of their plan, composition of cosmetic skin care plan to use at home and selection of skin care products.

Conclusions.. Both doctor dermatologist and the beauty therapist's roles are relevant in order to successfully solve the problem of acne. Medical treatment is primarily ordered in case of an acute case of the disease, after that the beauty therapist is involved in the process of problem solution. The activity of the beauty therapist in the solution of the problem of acne vulgaris includes skin care, improvement of skin aesthetic look after treatment, maintenance of obtained improvement of skin condition with the help of esthetic treatments. The main treatments applied in the beauty therapists' practice in the case of acne are chemical peels and mechanical removal of comedones.

Key Words: the activity of the beauty therapist, acne vulgaris, esthetic treatment.

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Preventable Adverse Reactions in Women's Body Care: Challenges and Opportunities

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Background. It is ascertained that hair care products contain components that are distinguished by adverse reactions to the health of consumers (Kaličanin, Velimirović, 2016; Kim, 2016). It is necessary for the users to pay greater attention to the selection of these products favourable for their health (Miranda-Vilela, 2014).

Aim of the study was to investigate the *correlation* between selection criteria of women's hair care products and experienced adverse reactions.

Methods. A quantitative research was performed: an anonymous questionnaire. In the study 386 women of Klaipėda town participated. Statistic data analysis was carried out using 17 version package of SPSS.

Results. Most of the respondents experienced adverse reactions while using hair care products. A statistically significant correlation was established between experienced and unexperienced adverse reactions in selecting hair care products according to price ($p < 0.01$), on the basis of odour ($p = 0.000$), according to well-known hair care producer ($p < 0.05$), according to aesthetic effect ($p = 0.01$), on the basis of favourable effect on health ($p < 0.05$), and harmless effect to the environment ($p = 0.001$).

Conclusions: Most of the respondents experienced adverse reactions related to the use of hair care products. For those who experienced adverse reactions while choosing hair care products the aesthetic appearance was less significant. For the respondents who didn't experience adverse reactions, price, odour and the name of the producer were less important.

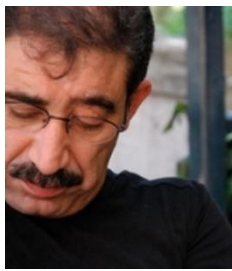
Keywords: Hair care products, Selection criteria, Adverse reactions

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Faith, Value and Violence

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Background. We have to descend to the origin of the terrible events we call violence or terror. The most important step in solving the problem is to try to understand the issues we are confront with in a basic and sincere way with scientific methods. Terrorism is a phenomenon that affects the whole world today. It is not possible to know where and how it will appear. It is very easy to link a religion with a sector or with a worldview. There are those who judge easily and inexpensively easily. This situation has negative effects on both world peace and human relations. People are faced with this issue is as follows. Those who benefit from it, those who suffer from this, those who unknowingly supported it. Sometimes supporting to this issue can be able to with misperceptions. That is why I will try to reveal the true perception of what is particularly harmful to those who do not know it. It is impossible to make the wrong decisions at the future point of humanity. Therefore, there is firstly a basic task of psychologists, sociologists, philosophers, scholars, academicians to diagnose correct facts

Aim was to get a correct view on violence.

Results. The violence does not base on human essence. Because it based on some beliefs, ideas, and values. All people have some beliefs. We can separate the beliefs three parts. Ethical beliefs, judicial beliefs, and absolute beliefs. Everybody has some beliefs absolutely. Some beliefs are harmonious with human values but others are inharmonious with human values. We must research which belief is harmonious with humanity. If it not harmonious, it can be able to hazardous to the human and human environment. The violence rises on beliefs and values. However, it is said that the values changed from public to public. However, we must say that values do not change maybe changed our judgment. The values that All judgments nutrition them. But we sometimes called judgment as for value.

Conclusions. The value that separates man from other beings. And we have to distinguish between values and value judgments. values do not change and are common to all people. value judgments can be transformed into a structure that can be removed from the value as well as fed from the values. The value must be interpreted according to the basic principle of the universe

Keywords: Violence, Violence and Faith, Faith and Worthy, Faith and Human, Disagreement and Violence, Violence and Cure (treatment) use, Violence and modern age, Violence, and religion

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Meeting Spiritual Needs of Seniors as a Part of Social Care

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Background. Caring for the spiritual development and spiritual needs of older people is usually thought to be a private matter, or an area within the domain of churches, and related to traditionally religious older people. With regard to the bio-psycho-socio-spiritual unity of the person, it is evident that spirituality belongs in the life of every age. Understanding the specifics of spirituality in old age should be an integral part of education in the helping professions.

Aim was to show the dynamics of religiosity or spirituality. To seek a possible typology of the observed fundamental spiritual needs.

Methods. The qualitative study is based on a thematic data analysis of semi-structured in-depth interviews with 20 South Bohemian seniors 75+, supplemented by observation in two residential facilities. The research group involves women and men living both in their own flat and in residential facilities. Circles of questions included a look into the past, the current situation, a look into the future, and a general attitude towards life.

Results. Personal spirituality for these seniors seems to be an important source of their identity and coping. The form of spirituality is firmly connected with the person's life history. It is apparent that increasing age also increases private spirituality, including that of traditional religious seniors. The fundamental spiritual needs of (South) Czech seniors were found to be the need for awareness of the dignity and self-worth, the need for meaning and continuity of their life story, the need for faith, hope and life goals, and the need for love –both in terms of being loved, and especially the need to give love. The research found the need for dignity and self-worth to be superior to other needs. It is evident that meeting spiritual needs is linked to a greater sense of dignity and self-worth, which in turn influences the way people meet the other spiritual needs.

Keywords: Seniors, Old age, Spirituality, Spiritual needs, Social care, Dignity

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On the Need for Spirituality in Pedagogical Activity

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Background. Human activity is a social activity that takes place in freedom and in specific temporal and spatial conditions (history). Pedagogy, integrating the knowledge of other sciences with a partial focus on the phenomenon of upbringing and education, also responds to the basic questions about the meaning of life, development opportunities, and the functioning and support of people in complex world. Pedagogy is about real people. They are active and dynamic subject.

Objective. In the spiritual dimension, the individual is looking for an answer to the question of who she/he is, what is important to her/him, where she/he finds the sense of her/his existence. Spirituality refers to what is internal and individually considered important. The spiritual experience is subjective and individual. Spirituality is revealed to man as a form of his human existence, a kind of anthropological potential. Thus, how the spiritual dimension of existence (life, activity, existence) of a child (foster child) is taken into account in pedagogical activity.

Methods. For the formulation of such a specific problem, the analytical and synthetic method was used, which allows to define the spiritual reality of a human being and to read and interpret the basic educational phenomena.

Results. Every area of human activity can be elevated to the sphere of the sacred and recognized as distinctive in the spiritual development of the individual. Pedagogy deals with one of the basic human problems that upbringing is. It is an action that aims at realizing innate predispositions and supporting in acquiring new skills. In this sense, for the educator, each moment is different such as different is every person and every moment and the situation of her/his life.

Conclusions. The spirituality of a person is a challenge for her/him of continuous self-improvement. Every life situation gives the person an opportunity to update her/his potentiality, the opportunity to enrich her/his own way of existence and action. Spiritual development takes place simultaneously in many ways. One does not exclude the other but complements it. In this context, upbringing is primarily about supporting dynamic development and preparing a child to learn throughout life.

Keywords: Spirituality, Pedagogical Activity

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The Phenomenon of Aging Society as a Challenge for the System of Academic Education

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Background. Due to progression of European societies' aging process the need for high-quality services for people in older age emerges. However, a significant proportion of specialists dealing professionally with people of advanced age do not have gerontological education and show serious deficiencies in this area. Academic education has got the potential to respond to the growing demand for training professionals competent in working with seniors at the level of scientific, didactic and vocational activities.

Aim. The aim of the study was to show the need and possibilities of including issues related to the individual and demographic aging process in the academic education system.

Methods. Critical qualitative analysis of scientific literature (articles in English available at EBSCO) was performed. The solutions implemented at Polish and foreign universities have been analyzed.

Results. Education in aging refers to educating students (planning to work with seniors) and professionals in working with older adults (actually working with seniors without gerontological background).

Education in aging can be carried out according to the adopted model: 1) an integrated model, in which gerontological information is included in the programs of various subjects, 2) a separation model in which strictly gerontological subjects focus on issues specific to older people, 3) a concentrated model in which several gerontological subjects is carried out at a given faculty, 4) interdisciplinary model, in which gerontological classes are conducted at various faculties, 5) specialization model in which gerontological contents are closed within the specialization at a given faculty, 6) a gerontology model as a field of study at a given faculty department. Gerontology and its subdisciplines can be taught at 1st, 2nd and 3rd degree studies, also at postgraduate studies. The issue of whether gerontological specializations leading to the isolation of the subject of aging from the education program are still desirable, remains unresolved. The training of specialists for working with seniors should start with raising the gerontological competence of the academic staff.

Conclusions. Growing in the aging societies the market demand for professionals competent in working with older people forces the academic centers to be interested in human life throughout their entire life cycle and their opening to education in the field of gerontology.

Keywords: Phenomenon, Aging society, Academic education

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Mg.hist., MSc Zaiga Oborenko is an associate professor at the ISMA University, She has 20 years of business background, and now she is sharing her practical experience with students. Her scientific interests focus on the research of vulnerable groups, particularly on employment of people with disabilities and integration into workplace. She has participated in several national and international research projects aiming to study employment of people with disabilities. Zaiga is currently writing a doctoral thesis at the Latvia University of Agriculture, Faculty of Economics and Social Development. She is a member of International Couch Federation and a member of Social Entrepreneurship Association of Latvia. During last five years she published 10 scientific articles.

Development Access of Disabled Persons to Labour Market/Workplace: Theory and Practice Problems in Latvia

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Background. Inequality in the workplace has become a widely talked of phenomenon in the business world. Statistics from the Central Statistical Bureau shows, that in Latvia 24% of people with disabilities are employed, compared with 62% of employed people without disabilities. The employment rate of individuals with disabilities has not shown improvement over the last decade and could continue to stagnate. It is in compliance with the EU's targets - more disabled persons need to be in paid employment on the open labour market, building a society that includes everyone full economic and social participation is essential.

Aim of this research is analyses the main barriers to access of disabled persons to labour market/workplace, evaluate some problems and discuss on a change's needs that have problem successful to promoting.

Methods. A comprehensive literature review, analyses of state institutions' documents, involves secondary sources (conference materials and publications). The collection data of access disabled people to the labour market obtain a snapshot of what some companies are currently doing with regard to employment disabled persons and have a limitation of discussion on issues.

Results. Employers are feeling that state institutions do not consider people with disability as a prospective labour force. None of state agencies mention people with disability as possible employees in their medium-terms planning documents or development strategy, they do not include special training programmes, internship programmes or other issues dealing with employment of persons with disability. According to employers survey "Labor market demand research to employ people with severe disabilities", June 2016, employment initiatives would benefit from the further involvement of disabled people in a meaningful, local way.

Conclusions: Unfortunately Latvian companies generally play a passive role in recruiting disabled people, especially those that have never hiring a disabled person. At present, employers are not interested employ people with mental disorders. Disabled people face multiple barriers to accessing and staying in employment. Theoretical and practical training for employers is seen as one of crucial elements of the employment process. Subsidized workplace program is a good initiative, which helps to integrate into the labor market persons with disabilities. The problem with subsidized workplace is so that it is terminated.

Keywords: Accessibility, Disabled workers, Government policy, Human rights, Labour market/ Workplace, Latvia

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Family Entrepreneurship in Family Businesses in Poland

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Background. Many family businesses are entrepreneurial through the use of new opportunities (Shane, Venkataraman, 2000, Stevenson, Jarillo, 1990) or the adoption of strategies and practices based on entrepreneurial attitudes and behaviors. Family entrepreneurship can be considered as the foundation of a family business (Chua et al., 2004). What's more, it can not be denied that the family influences the social and economic orientation of its members, which is why we can agree with the statement of Rogoff and Heck (2003) that the family is "oxygen that feeds the fire of entrepreneurship". In addition, as Selznick (1984) points out, family entrepreneurs are unique because they are trying to build a business that is also a family institution. The issue of family entrepreneurship is important to investigate from the point of view of the need to combine business with personal life. Family entrepreneurship is not usually treated as a separate form of entrepreneurship, but because of its specificity it seems interesting to study.

Aim of the article will be to show the importance of family entrepreneurship in the functioning of Polish family businesses.

Methods. The analysis will be carried out on the basis of data collected during questionnaire surveys carried out in 2013-2016 on 100 medium family enterprises operating in Poland.

Results. The result show the dominant and concentrated family ownership and the impact on the financial performance of researched companies.

Conclusions. The empirical observation allows a better understanding of the interdependence between family business and the functioning of family businesses, which may be useful for managers of such enterprises when formulating the growth and development of economic units accepted by the owners of the strategy.

Keywords: Family firms, Family business, Family ownership, Family entrepreneurship

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Financing Cultural Activities in Poland

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Background. Conducting cultural activities depends on the amount of funding sources. Lack of sufficient information and knowledge about the ways and forms of obtaining funds by cultural entities is a factor that constitutes a barrier to its dissemination.

Aim. The purpose of the article is to assess the directions and methods of financing cultural activities in Poland.

Methods. The article uses the method of deductive conduct, literature analysis, data analysis by observation and case studies.

Results. The article analyzes the sources of financing of cultural entities by presenting the types and possibilities of obtaining funds. Then, the expenditure on cultural activities from the state budget was analyzed in 2017-2018. It also presents changes that have taken place in recent years in the field of provisions regulating the transfer of subsidies to cultural institutions. The next part of the article presents examples of financing cultural activities from economic life, characterizing the methods of their financing.

Conclusions. At the final stage of the article, conclusions will be derived that will diagnose the financing of cultural activities in Poland.

Keywords: Cultural activity, State budget, Financing

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Construction of Strategies for the Selection of Human Resource by Managers of Social Nongovernmental Organizations

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Background. During practice placement students are developing their social work skills, abilities to base practical situations theoretically, and thus created conditions for integration of theoretical and practical knowledge. In the process of practice placement students as future social work professionals are developing ability to recognise responsibilities and roles of social work in the setting of social services. But they are future employees for social nongovernmental organizations. Human resource management in social NGOs is an important topic for social work, because those working and managing this NGO sector are often social workers. Therefore, it is important to understand how managers of social NGOs, as they construct expectations for future colleagues, understand the management of human resources.

Aim of this presentation is to discuss strategies for socialization of human resources in social non-governmental organizations.

Methodology. This presentation is based on qualitative phenomenological research methodology. The study was attended by 5 social NGO leaders, whose organizations provided social work services. Data is collected using a semi-structured interview. For data analysis, a topic analysis is applied.

Conclusions. As regards the study participants employee selection primarily distinguishes the importance of education. The professional competences available to employees are conditional on social services provided by social NGOs meeting the quality expectations of both the manager and the entity purchasing the service. The employee's motivation and values are of considerable importance when selecting employees for the research participants. It is also necessary to assess the fact that the head of the organizations living in the project funds believes that it is not always possible to provide the employee with the correct financial reward for the efforts made to implement the mission of the organization.

Keywords: NGOs, Managers, Social work, Socialization of employees

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