

RĪGA STRADIŅŠ UNIVERSITY

**7th International Interdisciplinary
Scientific Conference**

SOCIETY HEALTH WELFARE

**Contemporary Social Dynamics
and Welfare: Urban and Rural
Development Perspectives**

ABSTRACTS

RĪGA
10–12 October 2018



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RĪGA STRADIŅŠ UNIVERSITY



Dear Conference Participants!

It is my great pleasure to welcome you all to the international conference “Society. Health. Welfare.” hosted by Rīga Stradiņš University. Every two years, the conference, which is a significant academic event, brings together experts, scientists and researchers from different fields of study from all over the world. This year’s conference will gather a diverse panel of experts from almost 20 countries.

The 7th international interdisciplinary scientific conference “Society. Health. Welfare.” will be devoted to urban and rural studies from various perspectives. Life in the city and countryside is traditionally associated not only with differences in lifestyle but also with differences in opportunities, highlighting the gap between centres and peripheries. Therefore, the international conference “Society. Health. Welfare” stands for the importance of international interdisciplinarity in finding solutions for complex contemporary problems.

I wish all the attendees of the conference creative discussions, new professional contacts and an active exchange of knowledge and ideas!

RSU Rector, Professor
AIGARS PĒTERSONS

A handwritten signature in black ink, consisting of a stylized, cursive script that appears to read 'A. Pētersons'.

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Specifics of an Event and Evaluation as Parameters of Life Trajectories of Individuals with Disabilities

Tatiana Adeeva, Inna Tikhonova
Kostroma State University, Russian Federation

Keywords: *life trajectories, life event, adults with disabilities.*

Introduction. Integration trends are intensifying in the modern world; therefore, it is important to study the issues related to socialisation, quality of life, social adaptation of people with disabilities

Aim. The aim of the research is to study life trajectories of persons with disabilities.

Material and Methods. The empirical research involved 50 people with disabilities. The respondents' ages ranged from 17 to 63 ($M = 37.04$; $SD = 12.43$). 18 respondents were women (36% of the sample) and 32 were men (64%). Methodology of the study of life trajectories, a combination of clinical and psychological interview method of collecting history and technique "life Line" modification D. T. Vasilenko.

Results. At the first stage of the study several variants of life trajectories are identified: hyperthymic, negative, bipolar, "traumatised". Respondents demonstrate high indicators of quality of life and subjective well-being. However, many respondents have no goals in life, find it difficult to formulate them, in difficult situations focus on social support. At the second stage of the research, a cluster analysis is carried out as a result of which the sample split into two clusters. The life line of the respondents of the first subgroup is characterised by a large number of positively evaluated events. At each age stage, there are also negative, tragic events (death of relatives, leaving mom, abandonment by parents). However, the advantage remains for positive life situations (buying a bike, possessing a special toy car, receiving a dog, meeting a girl). Most events have a high positive rating (+ 4; + 5). Negative events have a very negative rating (-5 for death of loved ones, abandonment by parents), and a moderately negative assessment (-2 - being suspected of a crime). Growing up (at each subsequent stage of life), the average score of events in this subgroup is higher than in the second cluster. Differences at the level of average grades are most clearly seen at the stage of youth (4.25 points and -0.14 points), adulthood (3.83 and 2.73), as well as in the assessment of the future (3.812 and 0.375). Respondents of the second group assess the events of their lives pessimistically. By them, positive events are estimated low, the highest indicators are seldom met; negative events are estimated by the lowest estimates. Respondents perceive youthful age especially negatively (average mark = -0.14).

Conclusions. Many respondents have experienced loss or find themselves in extreme situations (death of loved ones, wrongful misconduct, separation from family). The adult period is estimated to be low. For many respondents, this is the current period. Respondents also noted multiple losses that are not balanced by positive events. The results obtained require more in-depth study and will be updated at the consecutive stages of the study.

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Control Function Mechanism of Capital Company

Sergey Alekseev

Rīga Stradiņš University, Latvia

Keywords: *capital company, share, rights of participants, Limited Liability Company, Joint Stock Company.*

Introduction. A member of the capital company is a person entered in the company register. A share gives the right to the company member to take part in corporate governance. In practice, there is often a controversy between a member and the executive body of the merchant – the Board.

Aim. The aim of the study is to learn and assess the realisation of the aspects of the rights of participants and its limiting mechanisms; to find out the possible obstacles for realisation of the rights and to find ways for their prevention.

Material and Methods. In the study the analytical and comparative methods have been used. The innovative base for the research is the national legislation, court practice and legislation of some of the European Union member states.

Results. In Latvia, there exist two forms of capital companies – limited liability companies and joint stock companies. Members of a limited liability company exercise their rights at the meetings of the members, besides, the member has the right to make decisions without convening the meeting. Members of a joint stock company, in their turn, exercise their rights only at the meetings of the members. The member has the right to receive the information from the Board as to the company activities, and to get acquainted with all its documentation. Only the Board has the right to convene the meeting of the members. Only the Board is the legal representative of the capital company, authorised to act on its behalf in relation to a third party. Since only a particular institution can be the representative of the capital company – the Board, then neither the meeting of the members, nor the Council, can establish an alternative institution, which could substitute, or duplicate the representation of the Board. Dismissal of a separate member of the Board does not mean that the rest of the Board members have been deprived of the powers of the Board.

Conclusions. The present mechanism does not provide majority rights of members for rapid response measures, if the executive body – the Board – acts contrary to the law and public interests. It is necessary to widen the members' rights by assigning rights to convene the meeting of the members, involving the company Register. Deciding without convening a meeting of the members, it is necessary to assign the right to the member himself/ herself to develop and hand in the draft decision, involving the company Register or a sworn notary. The rights of the executive body – the Board – to appeal to the decision of the participants at the meeting, as well as decisions taken without convening the meeting have to be limited. Commercial law should strengthen a more detailed description as to what information, how much and how often a member can receive from the Board, at the same time keeping balance between the members' rights and commercial secret.

Dependence between Cardiopulmonary Resuscitation Delivery Time and Its Quality

Imrich Andradi, Milan Minarik, Marian Santa, Oto Masar
Catholic University in Ruzomberok, Slovakia

Keywords: *cardiopulmonary resuscitation, quality, time of delivery, chest compression, frequency.*

Introduction. Timely, high-quality chest compression and early defibrillation are especially important for the outcome of survival after a sudden shutdown. The latest European Resuscitation Council recommendations highlight the importance of chest compression quality and time minimisation without any compression of the chest during cardiopulmonary resuscitation. However, studies have shown that compression performed by healthcare professionals does not meet the recommendations of compression ratios, depth and continuity, resulting in a considerably longer time between compressions as is needed and desirable.

Aim. The aims of the study are to compare the interdependence between CPR delivery time and its quality, and to identify and assess the relationship between the quality of cardiopulmonary resuscitation and the length of their implementation in the cardiopulmonary resuscitation performed by resuscitation teams on models. The following hypothesis (H) was determined based on the goal: it is assumed that there is a mutual dependence between the elapsed time of CPR implementation and the depth, frequency, overall chest compression efficiency and ventilation.

Material and Methods. 40 resuscitation teams were involved in the research that had been variously composed. The research sample comprised a total of 80 respondents – 51 men (63.75%) and 29 women (36.25%). The experiment took place under simulated conditions on Laerdal ResusciAnne®/QCPR® models, according to a precisely defined protocol. We used one-way analysis of variance as a One-Way ANOVA with $p < 0.05$.

Results. After averaging the summation rates in 15 minutes, the resulting value was 84.74%, representing an average frequency of 93 compressions. Frequencies were different in each segment and tended to decrease, but by no more than 3.95%. Similarly, the compression depth dropped by 3.95%, the chest release by 3.07%, the hand position showed the lowest deviation of 0.71%, the single inspired volume recorded a 2.63% drop, and effective ventilation dropped 2.08% over a 15-minute cardiopulmonary resuscitation on models.

Conclusions. Paramedics are interested and want to keep a high quality of CPR, but time of performance is influencing all results such as depth, frequency, overall chest compression efficiency and ventilation.

Acknowledgement. The aim of the contribution is to present partial results of KEGA project No 0015KU-4/2018 focused on Procedures for paramedics' multimedia DVD and textbook.

Institutions of Roman Law for Challenges of Rural Logistics: Contract for Work (*Locatio Conductio Operis*) of Transportation and Rustic Praedial Servitude of Way (*Servitus Viae*)

Allars Apsitis, Dace Tarasova, Jolanta Dinsberga
Rīga Stradiņš University, Latvia

Keywords: *Roman law, rural logistics, contract for work of transportation, servitude of way.*

Introduction. Both agricultural production and residence itself in rural areas have always been associated with various types of logistics challenges, i.e., the need to supply various production-related cargo, to deliver workforce, to guarantee acquisition of products and services intended for satisfaction of household needs under the conditions of rural areas, etc. The aforementioned, inter alia, causes demand for the appropriately regulated conditions of usage of transportation services and respective infrastructure. The highly developed Roman civilisation rather successfully tried to find answers to the said challenges; thus, legal solutions included in the institutes of Roman law are undoubtedly worth the attention of modern researchers.

Aim. The aim of the study is to improve the in-depth knowledge of contemporary legal norm makers, enforcers and implementers about the legal framework for a stable and efficient system of state administration by studying information found in the primary sources of Roman law.

Material and Methods. Within the framework of the research, there were performed studies and analysis of the primary sources of Roman Law (Codex Iustinianus (C3.34.tit.), Digesta (D8.1-6.tit., D19.2.tit.), Iustiniani Institutiones (I 2.3.tit.)) mostly by applying the inductive, deductive and comparative methods.

Results. Provision of transportation services was regulated by means of a contract for work (*locatio conductio operis* – Latin). A contract for work (*locatio conductio operis (faciendi)*) was an agreement according to which a contractor / employee as a lessee (*conductor, redemptor operis*) had obligations to fulfil services or certain work on or from the material supplied by the commissioning party / employer / lessor (*locator*). An agreement on the transportation (carriage) of goods or passengers was also considered to be a contract for work (e.g., see D19.2.11.3, D19.2.25.7, D19.2.60.8 etc). A smart answer to infrastructure challenges was the so-called rustic praedial servitudes (*servitutes praediorum rusticorum*) (see I2.3.pr., D8.1.1, D8.3.1.pr., etc), including a servitude of way (*via*) (e.g., see D8.1.19., D8.1.20, C3.34.3., C3.34.13., D8.1.16, D8.3.23.2, D8.6.3, D8.6.24, I2.3.4, D8.1.5.pr, D8.1.14.pr., D8.3.8, D8.3.23.pr., D8.1.13, D8.1.4.1, D8.1.4.2, D8.1.5.1, D8.5.4.5 etc.), which granted the owner of a parcel of land non-adjacent to a public road (*via publica*) the right to use the road over a parcel of land belonging to another owner (“rights in a thing of another” – “*iuria in re aliena*”), thus gaining access to the public road, the right of usage of which could not be denied to anyone (C3.34.11).

Conclusions. The legal framework of a Roman contract for work of transportation and the rustic praedial servitude of way must be recognised as a rather effective solution for challenges of rural logistics at the time.

Importance of Strengthening Deep Stabilisation System for Athletes

Ivana Astaryova, Miroslava Sutvajova, Zuzana Hudakova
Catholic University in Ruzomberok, Slovakia

Keywords: *exercise unit, body posture, rehabilitation, muscle unbalancing.*

Introduction. Deep stabilisation system is the most important part of a human body in every single movement. It represents the core system, which consists of pelvic bottom muscles, abdominal muscles, short back muscles and Thoracic diaphragm. Athletes, as a result of physics and stress factors, often have problems with unbalanced muscle. As a result, an incorrectly transferred movement is created, resulting in a greater likelihood of injuries.

Aim. The objective of this work is to refer to the importance of strengthening deep stabilisation system not only to athlete's performance, but to muscle coordination itself and to overall body posture.

Material and Methods. Method of the survey was chosen carefully considering the respective athlete, where exercise unit based on rehabilitation examinations has been compiled. Manual Muscle Testing (MMT) was used, examining movement stereotypes and overall body hold before and after rehabilitation treatment.

Results. Throughout rehabilitation it was focused on kinesiotherapy-motion therapy. Exercise with tools as well as exercise on an unstable platform were performed. The total body hold of the athlete was corrected. Progress in muscle unbalancing in deep stabilisation system, improvement in movement pattern and overall body posture was achieved after the compiled exercise unit. The athlete has learned to appropriately correct and engage each muscle group in motion.

Conclusions. Strengthening deep stabilisation system is an unthinkable part of athletes, which has an impact not only on their performance, but also as injury prevention. They achieve proper body hold and corrected final motion to ensure the stability of entire body.

Differences in Selected Areas of Social Capital Regarding Residence

Angela Almasiova, Katarina Kohutova, Zuzana Gejdosova
Catholic University in Ruzomberok, Slovakia

Keywords: *social capital, participation, social involvement.*

Introduction. In addition to a massive increase in interest in the concept of social capital in social sciences, the research has shown its considerable impact on various areas of human life. OECD points at the correlation between social capital and health, and indicates that social isolation is associated with misery and disease.

Aim. The aim of the contribution is to identify differences in selected indicators of social capital, focusing on participation and social involvement of the respondents regarding their place of residence.

Material and Methods. Quantitative research was conducted using a questionnaire, which was compiled from the Social Capital Question Bank database, covered by the UK Statistical Office.

Results. Result Cluster analysis divided respondents into those with higher and lower social capital; and comparative analysis showed significant differences in the selected indicators of social capital between urban and rural respondents.

Conclusions. Respondents from cities and rural areas differ in the level of social capital according to the interest of the study: participation or involvement in local groups, political activity or voting, taking positive action about a local issue, participation in religious activity, completion or receipt of a practical favour, familiarity with neighborhood, provision of regular service, help or care for others.

Modern Youth's Value Orientations and Activity in a Cross-Cultural Context

Inna Atamanova, Sergey Bogomaz

National Research Tomsk State University, Russian Federation

Tatyana Filippova

Karaganda State Technical University, Kazakhstan

Keywords: *modern youth, value orientations, cross-cultural study, socio-economic and cultural environment.*

Introduction. Addressing the issue of youth's personal and professional development, taking into account their value orientations and psychological characteristics of activity, seem to be relevant to the modern world challenges. Cultural dimensions are believed to be the very factors that can contribute to a better understanding of the interplay between personal and environmental aspects when analysing the problem of high quality human resource development.

Aim. The paper presents a cross-cultural study on cultural values characterising socio-economic and cultural settings of two countries and university students' basic values and parameters of their personal potential in the context of their activity.

Material and Methods. 307 university students from Tomsk (Russia) and 295 university students from Karaganda (Kazakhstan) participated in the study. The research tools involved a number of questionnaires aimed at exploring cultural dimensions (G. Hofstede), subjective evaluation of basic value realisability (S. Bogomaz) in the urban environment, and parameters of personal potential as factors of one's psychological system of activity.

Results. The study results revealed a number of statistically significant ($p < 0.05$) differences among the study participants. First, there was a difference in some cultural values, namely individualism, uncertainty avoidance and long-term orientation. Second, university students from Kazakhstan evaluated their urban environment higher in the context of their basic value realizability. Third, the study participants from Kazakhstan showed higher scores in parameters of their psychological system of activity such as purposefulness, satisfaction with life, need for autonomy as well as achievement and affiliation scales. Russian university students had higher scores in reflection which is a significant factor of one's self-determination.

Conclusions. The results obtained are discussed in the context of modern youth's personal and professional development in a specific socio-economic and cultural environment. The relationship between their value orientations (at the individual level and that of culture) and personal characteristics is of particular importance for creating psychological support programmes in higher educational settings to enhance university youth's personal readiness for activity.

Acknowledgement. The paper has been prepared within the research project (18-013-00781) supported by the Russian Foundation for Basic Research.

Tuberculosis Treatment Outcome in Relation to Patient's HIV Status in Latvia from 2010 to 2015

Margarita Avercenko, Girts Brigis
Rīga Stradiņš University, Latvia

Keywords: *tuberculosis, HIV, coinfection, unsuccessful outcome, risk factors.*

Introduction. Latvia is one of the 18 high priority countries for tuberculosis control in the WHO European Region. There are several factors that have an adverse effect on tuberculosis treatment outcomes. Additional researches about tuberculosis and HIV coinfection are necessary to analyse tuberculosis treatment outcomes and determine unsuccessful treatment outcome risk factors.

Aim. The aim of the study is to describe tuberculosis treatment outcomes among new tuberculosis patients in relation to the HIV status.

Material and Methods. A cross-sectional study of 1676 tuberculosis patients with known HIV status (positive / negative) registered during 2010–2015 in the Latvian Tuberculosis Registry. Exclusion criterion was patient's incompletely filled information or unknown HIV status.

Results. Tuberculosis treatment outcome is classified as successful (cured or treatment completed) and unsuccessful (interrupted or died). Bi-variable logistic regression model and multiple factor analysis was fitted to identify factors associated with unsuccessful tuberculosis treatment outcome. Of all new tuberculosis patients registered in Latvia between 2010 and 2015, successful tuberculosis treatment outcome was 84.2%. Successful tuberculosis treatment outcome rate among HIV infected patients was 67.5% ($p < 0.001$). HIV infected tuberculosis patients were 5.2 times more likely to have unsuccessful tuberculosis treatment outcome (95% CI = 3.93–6.83; $p < 0.001$). After adjusting to patients' living area, city citizens are 1.6 times more likely to have unsuccessful tuberculosis treatment outcome (95% CI = 1.2–2.1; $p = 0.001$). After adjusting to other variables (sex, age, occupation, drug use, imprisonment, malnutrition, multidrug-resistant tuberculosis), HIV infected patients odds to unsuccessful treatment outcome increased to 5.5 (95% CI = 3.75–8.09; $p < 0.001$). Factors such as being male (OR = 1.95; 95% CI = 1.36–2.79; $p < 0.001$), age ≥ 60 (OR = 3.7; 95% CI = 1.98–6.89; $p < 0.001$), unemployed patients (OR = 1.42; 95% CI = 1.03–1.95; $p = 0.032$), being in prison (OR = 1.45; 95% CI = 1.09–2.12; $p = 0.045$) and multidrug-resistant tuberculosis (OR = 3.83; 95% CI = 2.6–5.65; $p < 0.001$) were strongly associated with unsuccessful treatment outcome.

Conclusions. Treatment success rate of tuberculosis (84.2%) has almost reached the WHO recommendations for tuberculosis control. Treatment success rate in HIV co-infected tuberculosis patients is lower than in non-HIV infected patients. It is necessary to provide pulmonologist and HIV / AIDS specialist collaboration, and further studies about tuberculosis and HIV infection are needed.

Shift Work as a Risk Factor for Metabolic Syndrome

Marija Avota, Anna Leiko
Rīga Stradiņš University, Latvia

Keywords: *shift work, human health, metabolic syndrome (MetS).*

Introduction. Shift work is associated with negative effect on human health, including metabolic disorders. Metabolic syndrome (MetS) is a variety of metabolic and health disorders that include obesity, impaired glucose tolerance, high levels of lipid in blood, high blood pressure. Rotating shift work can influence glucose tolerance, cause obesity and systemic arterial hypertension, which in turn are closely related to metabolic syndrome.

Aim. The aim of the study is to evaluate health status of day and night shift workers in relation to metabolic syndrome, compare the data with literature, and determine the effect of shift work on metabolic syndrome development.

Material and Methods. 125 respondents took part in the survey that was conducted during the study; 101 of them were women and 24 were men. Data from questionnaires were compiled and processed in MS Word, Excel. Data analysis was performed with the IBM SPSS Statistics 22.0 programme.

Results. 125 respondents participated in the study (32% day shift workers and 68% rotating shift ones). The biggest age group in both shifts was 20–29 year-olds (40% day shift and 64.7% rotating), the age distribution in the day shift was 92.5% for women and 7.5% for men, and in the rotating shift – 75.3% for women, for men – 24.7%. Of all respondents, 36.8% had no MetS risk factors and 63.2% had MetS risk, 40.8% of the cohort had at least one MetS risk factor, and only 3.2% had all risk factors.

Conclusions. The study concluded that rotating shift workers had an increased risk of 1.3 on MetS, which was calculated with the Chi-squared test and CI 95%, but not statistically significant ($p = 0.464$), but according to literature data, night shift increases the risk of developing MS (OR = 5.10; 95% CI = 2.15–12.11). The study found no statistically reliable relationship between sex and MetS risk ($p = 0.590$). According to literature, age is associated with the risk of MetS. Workers in the night shift group (40–59 year-olds) had a 4.4-fold higher risk for MetS, which is statistically significant ($p < 0.005$). Having heredity diabetes, hypertension and obesity in family, the test showed increased 1.4-fold risk associated with MetS. The results of the study showed that rotating shift workers had an average BMI (25.3) versus day shift (2.8), which was statistically not significant ($p = 0.557$).

Mapping Method in Research of Drug Crime Regional Criminological Features (Ukrainian sample)

Andriy Babenko, Ruslan Tarasenko

Odessa State University of Internal Affairs, Ukraine

Oleksandr Ostroliadov

Ministry of Internal Affairs of Ukraine, Ukraine

Keywords: *drug crime, mapping method, regional criminological features.*

Introduction. General national average drug crime rates, which the contemporary criminological theory and practice is based on, do not adequately reflect regional peculiarities in the field of illicit drug trafficking as they level high quality / quantity parameters in some areas and their lower values in others. Still, consideration of only national totals in organisation of crime counteraction leads to incomplete information, neglecting its negative trends in certain areas, thus, aberrating the actual drug crime situation and using improper countermeasures. Under such circumstances, the state law enforcement agencies do not operate preemptively against the illicit drug trafficking, do not contain in due time outbreaks of drug crime in certain areas – crime donors, and, as a result, the efficiency of steps aimed at drug addiction prevention as well as crime limitation in total becomes substantively deteriorated.

Aim. The aim of this research is to reveal opportunities and determine effectiveness of criminological mapping method helping to prepare drug crime affection maps of various Ukrainian regions.

Results. It is established that criminological mapping method enables territorial police divisions to monitor and analyse the existing criminological situation, duly inform the public and other law enforcement agencies on trends and locations of drug crime expansion, and reveal the most affected areas to be able to react promptly to crime pattern changes in regions. Simultaneously, the mapping information permits to reveal connections between different criminogenic factors, follow systemic character of criminal activities, record the duration of existence on map of this or that “drug point”. Whereas the average national drug crime intensity is of 68 per 100,000 population, it makes as much as 91 in Kherson Region, 119 in Dnepropetrovsk Region, 141 in Luhansk Region, 100 in Sumy Region; whereas for the Western border areas, this value is as low as 29 in Lviv Region, 31 in Transcarpathian Region, 27 per 100,000 population in Volyn Region.

Conclusions. Thus, the application of criminological mapping method enabled the evident demonstration of the fact that in Ukraine the Eastern and Southern areas were most affected by drug crime, wherein the affection factor in this part is twice higher than general national value.

Subjective Perceptions of Motherhood among Adolescents

Lubica Banovcinova, Maria Lusconova
Comenius University in Bratislava, Slovakia

Keywords: *motherhood, women, subjective perceptions, adolescents.*

Introduction. Women's social identity remains strongly linked to the status of motherhood, with most cultures situating women as mothers, a factor central to their own identity formation and the way they are defined by others. The group that is particularly critical in terms of attitudes to maternity and important issues of reproductive behaviour are adolescents who have just entered reproductive age and face competing concerns between their educational and career goals, marriage, and fertility.

Aim. The aim of this study is to examine subjective perceptions of several aspects of motherhood among adolescent girls (control of reproduction, abortion, adoption, single motherhood, male-female relationships, and punitive attitudes toward mothers).

Material and Methods. The study sample consisted of 141 female students of secondary school. The age of the respondents ranged from 17 to 20; the mean age was 18 ± 0.79 years. For data processing simple descriptive statistics was used. The Motherhood Inventory (MI), a 40-item questionnaire, was used. The MI includes items relating to control of reproduction, abortion, adoption, single motherhood, male-female relationships, and idealised and punitive attitudes toward mothers.

Results. In the women's control over reproduction, respondents expressed the view that every woman has the right to have a baby and information and services on birth control should be accessible to all women. Mostly negative attitude was expressed by the respondents towards the question of abortion, even in case of foetal deformity. At the same time, however, they admit the woman the right to regulate the number of children. They also take a traditional approach to the issue of adoption when it is considered more acceptable than abortion, but they agree with the view that a woman who is faithful to her instincts would not give up her child. Also, a woman was attributed an important role in caring for man and their welfare, and it was agreed with the statement that the identity of a woman depends on her mothering functions.

Conclusions. Respondents in our research have taken mostly traditional attitude towards individual aspects of reproductive behaviour and motherhood. Attitudes towards motherhood and its aspects are closely related to childbearing behaviour. Even though reproductive plans created during adolescence may not correspond to their actual realisation, this result may be considered positive.

Human Trafficking from Ukrainian Cities and Villages: Current Trends

Vladislava Batyrgareieva, Alina Kalinina
National Academy of Law Sciences of Ukraine, Ukraine

Andriy Babenko
Odessa State University of Internal Affairs, Ukraine

Keywords: *human trafficking, slavery, exploitation, victims, residents of cities and villages.*

Introduction. The official statistics of the Prosecutor General's Office of Ukraine has recorded that in 2017 the number of cases of human trafficking from Ukraine increased threefold (342 cases versus 115 in 2016). Such a sharp growth of the crime was last observed in 2005 to 2006. Today, there are no administrative and territorial districts in Ukraine from which future victims of human traffickers would not be recruited. According to criminal proceedings, about 70 % of human trafficking victims are residents of large Ukrainian cities.

Aim. The aim of this research is, on the basis of studying the official statistics of the Prosecutor General's Office, the Ministry of Internal Affairs and the State Judicial Administration of Ukraine as well as selective investigation of criminal cases considered by courts of Ukraine under Article 149 of the Criminal Code of Ukraine for the period of 2013 to 2015, to investigate current trends of human trafficking phenomenon from Ukrainian cities and villages and to present the ways how the victims fall into slavery.

Material and Methods. Analysis of official statistics of the Prosecutor General's Office, the Ministry of Internal Affairs, the State Judicial Administration of Ukraine and courts of Ukraine for the period of 2013 to 2015.

Results. The investigation discovered that before the victims fall into slavery, they try to find a job in large cities on their own, for some time becoming the residents of these cities. When they fail or are not satisfied with their earnings, they accept offers of criminals to go abroad for work, sometimes deliberately looking for any, including illegal, ways to get to one or another country for earnings. The following scheme is typical for residents of rural areas: the internal migration of victims to large Ukrainian cities comes first; then they go abroad and finally get into slavery. According to the findings of the analysis of current trends in the human trafficking phenomenon in different administrative and territorial regions (oblasts) of Ukraine, it was established that the risk group, the same as 15 to 20 years ago, consists of girls and women aged 16 to 35 who are looking for employment abroad in services, household or agricultural sectors of the economy. However, men aged 25 to 35 become victims too. Victims are distinguished by a low educational qualification (77.9%); altogether only 16.7% were officially employed before leaving abroad; 25.0% have families and children. Victim behaviour of victims is manifested by their thoughtlessness (52.2%), inadequate assessment of possible implications that may occur from their acceptance of a doubtful recruits' offer (40.1%), immoral lifestyles (33.1%), greed and the desire to earn big money (26.8%). At the same time, crimes committed in a group have a significant percentage (66.7%) in the total number of human trafficking cases. It is detected that the new thing for human trafficking is a negative trend in Ukraine; Ukraine is becoming more and more transformed from the country, human trafficking victims are originated from, into the destination country for human trafficking, since more and more citizens of other states become the victims of different forms of exploitation in Ukraine.

Conclusions. The revealed trends of human trafficking from Ukraine allow to affirm any similarities of social and demographic, and moral and physiological characteristics of urban and rural residents; the second ones have a higher level of risk to become a victim of human trafficking. The results obtained affirm the development of evidence-based recommendations for human trafficking from Ukraine.

Presence and Distribution of Human Parvovirus B19 Proteins in Skin Biopsy Samples in Case of Contact Dermatitis

Iveta Beinarovica, Sandra Skuja

Rīga Stradiņš University, Latvia

Anna Lepisto

University of Helsinki, Finland

Maria Soderlund-Venermo

University of Helsinki, Finland

Valerija Groma

Rīga Stradiņš University, Latvia

Keywords: *Human Parvovirus B19, skin biopsy, contact dermatitis.*

Introduction. Skin health can be affected by various environmental factors, including viruses. Human Parvovirus B19 (B19) has been implicated in about 40 dermatological conditions, as well as in many different organ system disorders. The ability of B19 to cause a certain disease depends on its binding to target cell receptors. Contact dermatitis (CD) is an inflammatory response reaction caused by skin exposure to the noxious agents, and it represents 90–95 % of all occupational skin diseases and 10 % of all dermatology office visits.

Aim. The aim of this study is to investigate the presence and distribution of B19 proteins in the skin of patients with contact dermatitis.

Material and Methods. Sixteen cutaneous punch biopsies were obtained from the patients with diagnosed CD. All patients also had undergone patch test for the deterioration of initiating agent. The presence of B19 genome sequence was detected by nested PCR in the skin samples DNA. Immunohistochemistry was performed conventionally using monoclonal mouse anti-human B19 antibody (1:100), which labels B19 VP1 and VP2 proteins.

Results. Relying on the patch testing, most common initiators of CD might be sodium lauryl sulphate, chloromethylisothiazolinone / methylisothiazolinone, nickel, and paraphenylenediamine. These agents appeared in the following sequence: the body care products, hair dyes, jewellery, and stationeries. Histopathological analysis showed spongiotic dermatitis characterised by impairment of cohesion of epidermal keratinocytes resulting in epidermal edema and intraepidermal micro- and macro-vacuolisation. Histopathological findings corresponded to clinical manifestation of the acute CD, which are erythema, swelling, and papules. The presence of B19 genomic sequence was found in 50 % of skin tissue biopsy samples. Immunohistochemically, expression of B19 proteins was restricted to vascular endothelium, sebaceous and sweat glands.

Conclusions. The study showed the presence and distribution of B19 proteins in patients with CD. Vascular endothelial distribution of B19 can be explained by the presence of B19 specific receptor in endothelial cells – P blood group antigen. Many cell types express at their surface specific receptor for B19, and these cells are erythroid progenitor cells, megakaryocytes, foetal myocytes and placental trophoblast cells. This claims B19 possible involvement in wide spectrum of diseases, such as aplastic anaemia, arthritis, foetal hydrops, and many other conditions. Presence of B19 proteins in cutaneous vascular endothelium may be associated with deterioration of the course of the disease. Strong B19 proteins labelling of sebaceous and sweat glands allows hypothesising that skin glands can serve as a reservoir for the virus. Preventive measures need to be followed to avoid exposure of the skin to irritants and allergens.

How Will Future Health Policy Impact Regional Disparities and Healthcare in Latvia?

Ieva Bikava, Ilga Kreituse
Rīga Stradiņš University, Latvia

Keywords: *health policy, regional disparities, political party ideology.*

Introduction. Latvia is a country with a high level of regional disparities – the middle salary in Latgale is only 61 % of the salary in Riga, the rate of unemployed population in Pierīga is 4.8 %, while in Latgale – 10.5 %. The researches have approved that income, education, and environment significantly impact the status of human health. There are two mainstream regional development theories – the one that believes that investments should be made in Metropolis, and by the prosperity overflow the surrounding regions will benefit. The other, based on welfare state approach, determines that only mitigation of income disparities providing equity and justice, will lead to prosperity of entire region. The reforms in healthcare have been made under the flags of efficiency, effectiveness, and quality since 1991. Some support the idea that the state should take over almost all services, the others advance that more responsibilities should be transferred to private sector, as well as dispute on service provider network and financing system. To understand which way the country will go and how the chosen strategy will impact regional disparities, analysis of mid-term development strategy should be made. In accordance with coalition theory and legislation of Latvia, the initiators and designers of structural reforms are politicians, elected by citizens. In theory, every politician represents a political party with its ideology and vision that is expressed in the programme of the party.

Aim. The aim of the research is to identify ideology of political parties, to understand what the leading values on which strategic development will be based are, and how it will impact regional disparities and healthcare services.

Results. In 2018, there are 58 registered and 51 active political parties and party unions in Latvia. Only 24 of them have the programme. In recent elections for municipalities, 47 parties took part from which only 23 had their party programme. In the previous election of the Parliament, 12 parties participated, 7 with a programme. The winners of the Parliament elections where 6 political parties, from which only 2 had the programme.

Conclusions. Political parties in Latvia are not based on ideology and strategic development vision of the State, so the development and changes made in legislation are mainly ad-hoc decisions or the result of lobbying activities of influential groups. Lack of mid-term objectives and goals are observed also in the executive branch, as mentioned in the interview with the Minister of Health. Due to lack of mid-term vision, as a gap between long-term development strategy and short-term decisions, unfortunately, the prognosis of future health politics leads to the conclusion that regional disparities and the problem with accessibility will only rise.

How Strong Is the Voice of Society in Healthcare Politics in Latvia?

Ieva Bikava, Ilga Kreituse
Rīga Stradiņš University, Latvia

Keywords: *health policy, governance, public participation, contemporary democracy.*

Introduction. Contemporary democracy can be even imagined without society participation in the process of developing regulations and implementing transitions, which has a significant impact on society. Nowadays, the opinion of the society is represented by social communities, interest groups, and other non-governmental organisations, which unites people with similar views and ideas and serves as a representative of common opinion to the government and the rest of society. The principles of good governance, as expressed in the law as well as referenced in homepages of state institutions, demands cooperation and collaboration with society in all phases of developing, implementing and assessing reforms. In healthcare policy field, since healthcare is the subject that affects any inhabitant – hearing and understanding of the voice of society is particularly essential. In Latvia, the society voice is expressed by several professional organisations – well known are Latvian Medical Association, Association of General Practitioners of Latvia, Association of Rural General Practitioners of Latvia as well as several associations of private and state medical service providers, several trade unions that unite medical workers, employees, and employers. And there are also several patient organisations. Unfortunately, in accordance with the opinion that is dominating in media and society, there is a huge gap and lack of collaboration between state institutions and society that leads to incomprehension of the reforms means and goals, and increases the accessibility to healthcare especially in rural areas.

Aim. The aim of the research is to explore and analyse the cooperation process between state institutions, especially the Ministry of Health and most active NGOs, that express and argue their position to the planned regulations or on the implementation process, based on approaches described in Interest Group and Lobbying theory.

Results. According to research results, NGOs are active partners that cooperate and collaborate with government institutions, but their position and expressed fears and identified potential risks mostly are not considered and serve only as the fact that there were some discussions with NGOs.

Conclusions. In accordance with the obtained information and analysis of NGO experience working together with state institutions, cooperation and collaboration with society have realised in practice but mostly is just written on the paper. Lack of hearing society's voice leads to the development of new gaps and bottlenecks in healthcare accessibility, especially in rural areas. Unfortunately, in some cases, political pressure and demand dominate over society's needs and voice.

Healthcare Accessibility and Disparities in Medical Staff Availability in Regions of Latvia

Ieva Bikava, Andris Skride
Rīga Stradiņš University, Latvia

Keywords: *health policy, regional disparities, medical specialist availability.*

Introduction. Healthcare accessibility for inhabitants, especially in rural regions, is related to the problem of medical staff availability in state and municipal hospitals as well as for General Practitioners and has been a topical issue in Latvia for quite a long time. Even though there are two state universities – University of Latvia and Rīga Stradiņš University, as well as colleges that educate medical staff – there is a lack of medical specialist healthcare institutions in Latvia. The Ministry of Health, as well as municipalities, have had several initiatives to solve this problem – special programmes and change in regulations with the aim to attract residents of medicine to work in regional hospitals after completion of Residency studies. To solve the problem of specialist and General Practitioner availability in regions, the programme with funding of 10 million euros from the European Funds has been provided by the Ministry of Health. The municipalities also have different special programmes to attract medical staff. There are not only initiatives to support working outside the capital, but also proposals to forbid the possibility of specialists to work in more than one workplace, paid by the state.

Aim. The aim of the research is to analyse the current situation of medical staff – specialist and nurse – availability in different regions in Latvia and the current solution strategy on this problem by the state and municipalities, and to evaluate the possible solutions.

Results. Research results identified several obstacles, which are the main reasons to problems of medical specialist and other medical staff availability in regions. One is the low salaries of medical staff that is common in all regions; another is the smaller capacity to further professional growth available in regions in comparison to working in the capital – Riga.

Conclusions. The available programmes to encourage new specialists by providing contracts with regional hospitals and special conditions in distribution of state-funded Residency, as well as the programme provided by the Ministry of Health with material incentives provided by the EU Funds or specialists who decided to move from Riga to regions could only partly solve the problem. But according to specialist opinions, there is another burdening factor that delays the desire to move to regions; lack of career growth that is better provided in the capital – Riga. Specialists, especially the ones that practice in university clinical hospitals, RAKUS, PSKUS or BKUS, have the possibility to practice more to improve their skills and competencies, as well as to take part in clinical and scientific research projects.

Relational Place-Making in Latvian Countryside (Straupe and Kaldabruņa Case)

Dina Bite

Rīga Stradiņš University, Latvia

Zenija Kruzmetra

Latvia University of Life Sciences and Technologies, Latvia

Keywords: *rural development, relational networks, nexogenous development, rural and urban space.*

Introduction. The idea of the paper is adopted from recent scientific publications in rural sociology that emphasise neoendogenous and nexogenous rural development. Nexogenous development has not been widely used in public sphere yet; however, the concept sheds light on the importance of reconnecting and binding together forces across space, on flexible social networks in rural territories. The main argument of current rural development is that horizontal networks are crucial not only for re-establishing and traditional economic and social structures but also for creating new ones. Therefore, an open initial research question was asked whether there are any signs in Latvian countryside that confirm and contribute to this theoretical statement.

Aim. The aim of the paper is to analyse relational networks in Straupe and Kaldabruņa in the context of place-based rural development.

Material and Methods. The case study strategy of social research methods was used during the National Research programme ECOSOC 2014–2017. Document analysis and semi-structured individual and group interviews (n = 12) were carried out with representatives of Kaldabruņa and Straupe local municipalities, NGOs, entrepreneurs, farmers, etc.

Results. The exploration of Kaldabruņa and Straupe cases reveals wide and well-developed relational network that is set around the core institution – slow food local market in Straupe and the old school and “Meadow Museum” in Kaldabruņa. It is proved that in both cases the involved agents have looked for rational ways and have used both formal and informal contacts to survive and develop. Although the developmental path of both networks is different, strong signs of established community, specific created values and social norms are obvious. Built relational networks merge borders between rural and urban spaces, different economic and social spheres and statuses, between ethnicities and even social classes. Straupe and Kaldabruņa confirm the relatively high internal and external connectivity that brings forth certain potential for rural development. Heated discussions in rural development are about the role of the state in a place-based development. It is recognised by several scientists that structures built by local communities are fragile and need more support. Also Straupe and Kaldabruņa cases raise questions about sustainability. They have overcome institutional barriers and have made original relational networks that have been running pretty well lately; however, it raises a question about resources and capacity of the involved social agents in rural territories.

Conclusions. To conclude, there are persuasive and clear signs that explored rural communities have made strong place-based relational networks that also point to nexogenous development in the countryside of Latvia. For a moment, they serve for local economic development, community building and, accordingly, for rural development. Future studies call for analysing sustainability issues and dynamics of existing relational networks.

Legal Regulation of the Strike and Its Problem in Latvia

Kitija Bite

Rīga Stradiņš University, Latvia

Keywords: *the right to work, strike, legal regulation.*

Introduction. The international legal regulation determines human rights and freedoms. One of the rights is the right to work. Considering that employment relationship conflicts are not often being resolved by negotiation, the international legal regulation offers a strike which is the utmost mean of solving the dispute.

Aim. The aim of the study is to analyse the international and Latvian legal regulation for employees' right to strike and to recommend necessary amendments in laws to solve detected problems.

Material and Methods. Used materials include the international and Latvian legal acts, publications and literature. Methods used in the article are descriptive, analytical, synthetic, dogmatic, inductive and deductive; as well as legal interpretation methods: grammatical, systemic, historical and teleological.

Results. Both, the law on international level – the International Covenant on Economic, Social and Cultural Rights – as well as the law on European level – the European Social Charter and the Charter of Fundamental Rights of the European Union determine the right to strike allowing this basic principle to be adapted to each member state's local laws. The main legal act in Latvia providing employed persons with the right to strike is paragraph 108th of Satversme (the Constitution of Latvia). Systemically, the norms of the Constitution are regulated by the Labour Dispute Law and the Strike Law. According to Satversme, it might seem that every worker has the right to strike in Latvia. However, the strike of General Practitioner (GP) doctors in summer 2017 highlighted a problem about the implementation of legal regulation of strike in the level of national law. Firstly, the Labour Dispute Law and the Strike Law is applied only to one type of employment – employment relationship. As the legal form of employment for GP doctors is a public law contract between the National Health Service and GP themselves regardless of the basis of the type of employment – labour agreement, self-employed person or commercial company – regarding to national strike regulations only GP doctors employed with an employment agreement are allowed to protect their collective interests. Secondly, according to the Labour Dispute Law, a strike is the utmost mean which only allows protecting the collective interests (within the framework of a collective agreement) but is not allowed in case of failure to comply with a public law contract or its partial execution.

Conclusions. The strike of GP doctors showed that Latvia has only partially complied with international standards because a strike is applicable only to persons employed on the basis of an employment agreement and only in the case of collective agreement. In order to solve the problem of having any employee the unlimited rights to strike, it is necessary to amend the Labour Dispute Law and the Strike Law.

Proportionality of Monetary Policy as a Macro-Juristic Theory

Lauris Bocs

Rīga Stradiņš University, Latvia

Keywords: *monetary policy, macroeconomic, property protection, macro-juristic theory.*

Introduction. The year 2018 marks the passing of ten years for attempts of systemic financial instability prevention and conferring to legal regulation reforms in the European Union (EU). The role of monetary policy has increased up to the point that the European Central Bank (ECB) has established the so-called unconventional monetary policies, including unprecedented asset purchase programmes within the public and private debt sector of the EU. Accordingly, the paper evaluates the macroeconomic context for the field of law and afterwards the mechanisms are described within a comprehensive theoretical framework.

Aim. The aim of the research is to determine the normative regulations and associated problems for the enforcement of the EU law within the EU's financial sector for unified unconventional monetary policies and to give an assessment of possible solutions, especially in relation to property value protection capabilities within the EU.

Results. Implementing the aim with descriptive, logical and deductive methodology within a doctrinal and legal anthropology analysis, the normative supervision of the EU property protection is evaluated for its legal merits with relation to justification of a macro level hypothesis. Namely, such monetary policy is a direct legislative act without the usual constitutional legislative ex ante evaluation, especially for proportionality. Therefore, recommendations are made for the resolution of the possible problems. According to the thought experiment deductions and scenario modelling within the research, the unified monetary policy results can be achieved within a comprehensive framework according to member state judicial constitutional mechanisms.

Conclusions. The Treaty on the Functioning of the European Union has created a central, but legally unsophisticated monetary policy mechanism for unconventional decisions as it has no attachment to the protection of property value, including purchasing power of money. Property protection within unconventional monetary policies can be achieved by effective use of member state legal practice and experience, i.e., analysis of regional economic conditions was performed before the ECB had the exclusive competence for unconventional policies, so assurances can be continued or increased. Unconventional monetary decisions create a need for improved legal trust for effectiveness, yet the conventional evaluation methods must be improved accordingly for practical effectiveness. The author points out that property protection generally involves proportional considerations; thus, a macro-juristic theory is described to limit the unconventional monetary policy outlines for a unified code of conduct related to property protection within every EU member state.

Comparative Legal Analysis of the Proposal for a Directive of the European Parliament and of the Council on Transparent and Predictable Working Conditions in the European Union with the Current Labour Law of All Its Member States

Volodymyr Bozhko

Poltava Law Institute of Yaroslav Mudryi National Law University, Ukraine

Inna Kulchii, Volodymyr Zadorozhnyy

Poltava National Technical Yuri Kondratyuk University, Ukraine

Keywords: *employee, employer, working conditions, employment contract.*

Introduction. The present article deals with the comparative legal research of the current labour legislation of each of the 28 EU member states with the proposal for a Directive of the European Parliament and of the Council on Transparent and Predictable Working Conditions in the European Union, approved by the European Commission on December 21, 2017, that is planned to be adopted instead of the Council Directive 91/533 EEC of 14 October, 1991. Timeliness of the research topic is because after the adoption in the EU of Council Directive 91/533/EEC, a number of acts of primary and secondary legislation have been adopted that significantly change the content and scope of employees' labour rights. These are, in particular, the founding treaties, such as the Treaty on European Union – the Maastricht Treaty, the Treaty of Amsterdam, the Treaty of Nice and the Treaty of Lisbon. Furthermore, on December 7, 2000, the Charter of Fundamental Rights of the European Union was signed, and on December 17, 2017, the European Parliament, the Council and the Commission solemnly proclaimed the European Pillar of Social Rights. Collisions between these Acts lead to the emergence of numerous problems in the law enforcement activities of public authorities.

Aim. The aim of the study is to provide a comparative analysis of current labour legislation of all EU member states with the proposal for a Directive approved by the European Commission on December 21, 2017.

Material and Methods. The article is based on legal acts of the European Union, as well as on national labour legislations of the 28 EU member states, considering the materials of their application. Various methods of scientific research have been applied in compilation of the study. Particularly the historical and legal method was applied while comparing the content of acts of primary and secondary EU legislation, regarding the evolution of the content of employees' rights on information on employment conditions. The comparative legal method was applied to compare the content of the above-mentioned right in accordance with national laws in each of the EU member states between by itself.

Results. Due to the research, the classification was made of all EU Member States into two groups depending on whether their national labour legislation complies with the draft European Parliament and Council Directive "On Transparent and Predictable Working Conditions in the European Union" that was approved by the European Commission on December 21, 2017.

Conclusions. The conclusion focused on the timely initiative of the European Commission to amend Directive 91/533/EEC of October 14, 1991. In favour of this conclusion, five arguments have been given. Additionally the authors formulate a series of proposals aimed at correcting the content of the proposal for a Directive of the European Parliament and of the Council on Transparent and Predictable Working Conditions in the European Union for the purpose to increase the scope of employees' rights on information about their working conditions.

Comparison of Risks in Road Safety Behaviour in Urban and Rural Areas in Latvia in 2016

Aija Bukova-Zideluna, Anita Villerusa
Rīga Stradiņš University, Latvia

Iveta Pudule, Daiga Grinberga, Biruta Velika
The Centre for Disease Prevention and Control, Latvia

Keywords: *differences between urban and rural areas, road safety, use of seat-belt, alcohol, smoking.*

Introduction. The prevailing risk of traffic fatalities and casualties differs between urban and rural areas. Several reasons have been suggested to explain this including road design, the proximity of emergency medical services and human factors. This study examined the differences between those respondents in urban and rural areas in respect of their self-reported attitudes and behaviour regarding taking risks in road traffic.

Aim. The aim of the study is to show the attitude towards road safety of urban and rural respondents (aged 15–74 years).

Material and Methods. Data of Health Behaviour among Latvian Adult Population 2016 survey has been selected for analysis. T-test and logistic regression analyses were conducted to compare the unsafe behaviour of road users with others in terms of sociodemographic, health-related and behavioural outcomes.

Results. 84.9% (n = 1625) of urban respondents and 84.2% (n = 1416) of rural respondents always use seatbelts in the front seat. Only 47.2% (n = 903) of urban respondents and 44.0% (n = 740) of rural respondents always use seatbelts in the back seat ($p < 0.05$). Odds not to use seat-belts in back seat were 1.14 times higher for rural population (OR = 1.14; 95% CI = 1.01–1.30). Rural residents more frequently agreed with suggestions that it is not necessary to fasten the seatbelt on short journeys (OR = 1.64; 95% CI = 1.33–2.02) and that it is not necessary to fasten the seatbelt travelling by speed less than 40 km/h (OR = 1.56; CI = 1.22–2.01). Rural respondents more often than urban respondents agreed that alcohol in small amounts improves reaction (OR = 1.58; CI = 1.08–2.33). Gender and health risk factors such as smoking, and alcohol intake did not affect differences in use of seatbelt between urban and rural respondents. The age group of 15–34 and education level were identified as independent risk factors. The results suggested that risky behaviour in road traffic has several risk factors. Living in rural area is the independent factor that does not change after matching.

Conclusion. This research can be used to help educational programmes and campaigns targeted at groups at risk to transform road safety culture from one that is risk receptive to one that is risk protective.

Relationship between Cognitive Processes, Physical Activity and Cognitive Reserve in Seniors

*Aiva Bundzena-Ervika, Viktorija Perepjolkina, Kristine Sneidere,
Zane Ulmane, Jelena Harlamova, Ainars Stepens
Rīga Stradiņš University, Latvia*

Keywords: *cognitive processes, physical activity, cognitive reserve, seniors.*

Introduction. Population is aging rapidly, opportunities and contributions of longer life depends on health; healthy ageing can help to preserve cognitive function (WHO, 2018). Age-related cognitive decline is normal; however, the process of deterioration is not unequivocal (Blondell, Hammersley-Mather & Veerman, 2014). Individual differences within such different factors as physical activity and education, occupation, and leisure time activities may contribute to varied decline, but research results are still ambiguous (e.g. de Asteasu, et. al, 2017; Opdebeeck, Martyr & Clare, 2016).

Aim. The aim of this research is to examine relationship between engagement in physical activity (PA), cognitive processes (CP) and cognitive reserve (CR) in seniors

Material and Methods. Latvian-speaking healthy seniors aged 65–85 ($M = 71.92$; $SD = 4.89$) were included in the data analysis. Short and long-term memory were assessed with the Ten Word Memory test (Luria, 1976), associative and working memory, processing speed and verbal ability were obtained with Woodcock-Johnson Tests of Cognitive Abilities subtests (Woodcock, McGrew & Mather, 2001). Simple and choice reaction times – Handball Reaction Control test (Molotanovs, 2010), CR data were obtained with Cognitive Reserve Index questionnaire (Nucci, Mapelli & Mondini, 2012), data on PA – with the International Physical Activity Questionnaire Elderly (Wennlof, Hagstromer & Olsson, 2010). The data were analysed with Spearman's rank correlation and partial correlation coefficients.

Results. Results showed significant relationship between high levels of PA for last seven days and working memory ($r_s = 0.30$, $p < 0.05$) and choice reaction time ($r_s = 0.33$, $p < 0.05$); but after controlling for CR, they became insignificant. Statistically significant relationships were also found between CP and CR and its proxies, e.g. simple reaction time ($r_s = -0.38$, $p < 0.01$), verbal abilities ($r_s = 0.36$, $p < 0.05$); short-term memory ($r_s = 0.34$, $p < 0.05$), and long-term memory ($r_s = -0.29$, $p < 0.05$).

Conclusions. There were no significant relationships between PA and CR. The relationship between the PA in the past seven days and the CP appeared specific only in the high intensity PA measurement and working memory and choice reaction time. Despite PA being one of the activities that contributes to building CR, results indicated no relationship between these measures. There were several statistically significant correlations between the CP and CR, signifying the possible contribution of CR to CP, especially those vulnerable to old age. Findings suggest a relationship between CR and CP, as well as relationship between PA and CP. Results did not show association between recent PA such CR proxies as education, occupation and leisure activity. The reliability of the data is limited because the measurement of PA took into account an individual's PA in the last seven days, considering long-term PA habits.

Issue of Divided Property and Consequent Problems of Urban-Rural Development

Jolanta Dinsberga

Rīga Stradiņš University, Latvia

Keywords: *restriction, voluntary divided property, compulsory divided property, Land Reform.*

Introduction. Latvia is one of the countries where the legal system was formed in extremely difficult circumstances. Recovering from the Soviet occupation, during which the real estate was nationalised and declared to be public property, and implementing the Land Reform, launched in 1990, the ownership rights of the former owners or their heirs were restored. Besides, it was possible to obtain state or municipality-owned property by way of privatisation. As a result, dual situation was created in Latvia: divided property, where the land is owned by one person, but the buildings (constructions) – by another. A legal situation which complicates the efficient management of property impedes investments and creates problems for the optimal development of urban-rural areas.

Aim. The aim of the study is to demonstrate major trends in modernisation of relevant legislation of Latvia, and to assess their effectiveness analysing the historical development of the divided property, the related problems and currently developed solutions.

Material and Methods. During the research, there were performed studies and analysis of the relevant legislation, judicial practice, opinions of various authors, etc. by applying the descriptive, analytical, inductive, deductive, formal-dogmatic, graphic general scientific methods. Methods applied in interpretation of laws – grammatical, systemic, and teleological.

Results. In Latvia after 1990, two types of divided property can be established – compulsory and voluntary. Unlike voluntarily established divided property, where on the basis of a lease agreement the landowner has provided the right to construct a building (construction) as an independent property object, and this relationship is often mutually beneficial and desirable, in the compulsorily divided property the owner of the land and the owner of the building (construction) usually are in mutually inconvenient lawful relations and often come into conflict, as this relationship has developed due to historical conditions rather than their own will. Currently (19.04.2018) there are 3677 residential houses in Latvia with 110,970 apartments, located on 7354 land units owned by other persons. Abolition of divided property is necessary for the principle of unity of the land and buildings determined in Section 968 of the Civil Law, and for prevention of conflicts between owners of the buildings (constructions) and the land.

Conclusions. Although the Draft Law on the Termination of a Mandatory Divided Property in Privatised Multi-Apartment Houses adopted by the Saeima in the 1st reading (19.04.2018) is often criticised, the author is of the opinion that development of this law and the related laws and regulations are necessary. In order to make strategically correct decisions for abolition of divided property, civic participation in decision-making processes must be ensured.

Legal and Practical Aspects of Establishing Servitude of Right of Way within the Framework of Rural and Urban Development and in Circumstances of Global Change

Jolanta Dinsberga, Valdis Savickis

Rīga Stradiņš University, Latvia

Keywords: *right of way, to establish a servitude of right of way, will, contract.*

Introduction. Due to rural and urban development, new areas of land are developed whereas the lands already developed change their owners. Many landowners are confronted with inability to access their immovable properties, as they are not located next to a public road. This problem not only concerns the creation of new servitudes of right of way and construction of new roads, but also the existing roads and servitudes of right of way established during the land reform which do not fulfil the intended function due to formal shortcoming of legal nature.

Aim. The aim of the research is to study the legal framework governing the establishment of a servitude of right of way and the specifics of its practical application, to identify the problems associated therewith, draw conclusions and present the possible solutions of the problem.

Material and Methods. Descriptive, analytical, deductive and inductive methodology.

Results. The inability to access one's immovable property not only deprives the landowner of the possibility to make full use and manage the land in their property, but, in many cases, it also hinders development of operating activity, therewith causing significant damages to the landowner and also to the State. The legislation of the Republic of Latvia contains legal norms that ensure access to immovable property by means of establishing a servitude of right of way. However, the assessment of practical application of the legal regulation reveals that it is incomplete and inconsistent with the needs of contemporary society. A servitude of right of way may be established in several ways. Problems occur in case the servitude of right of way is established by a court judgment or a will. Litigation is a lengthy and cost effective process and may deprive a landlord whose property is not located next to a public road, of the possibility to access the property for several years. Even in case of a favourable court judgment, the issue on the terms of use of the established servitude of right of way remains unsolved. In case the servitude of right of way is established by a will, the practical use of the right of way is still an issue.

Conclusions. The responsible state authorities have to continue working on the conceptual report "Regarding problems of the servitudes of right of way established during the land reform and the possible solutions thereof", by selecting one of the solutions and starting its implementation. Laws should award courts the right to decide on the application of interim measures prior to awarding the judgment on the establishment of a servitude of right of way. It is necessary to supplement the Civil Law with legal norms that would impose on the testator the obligation to provide in the will not only the width, length and the location of the servitude of right of way, but also enclose thereto a graphical illustration and set the main restrictions for the use of the servitude of right of way.

Criminal Liability for Breach of Copyrights and Related Rights within the Territory of the Republic of Latvia

Sintija Drake

LLC "SQUALIO GROUP", Latvia

Rīga Stradiņš University, Latvia

Keywords: *significant harm, threat of interests, commercial scope, individual guarantee, evaluation concept.*

Introduction. Protection of copyrights and related rights is important since it ensures protection of the work created and income to the owner of these rights not only within Latvia or the European Union, but also worldwide. In case such protection did not exist, copyright closely related professions such as IT software developer, composer, writer and other could disappear, mainly due to the decrease in income. Thesis work includes research on when one is criminally liable in case of breach of copyrights and related rights or in other words, the criminalisation conditions are defined. In-depth analysis is applied to criminalisation conditions, and under what conditions these breaches qualify as criminal offenses and not administrative violations. Nowadays the technological progress allows to easily download electronic software, images, songs, movies, games, programmes and other works of art, science and audio-visuals. People often use these opportunities for commercial purposes. The mentioned reasons, there must be a system in place for protecting such property and criminal liability must be applied if such rights are breached.

Aim. The goal of the thesis is to develop criteria that would evaluate the main harms of copyright and related rights' breaches and differentiate penalties for specific offenses within the legal system of the Republic of Latvia.

Results. The thesis sets out if Latvia needs more regulation in order to provide self-contained protection level of copyrights and related rights. Reviewing the appropriate punishment for copyright or related rights' breach, it must be of correctional nature that would deter the offender from further similar offenses.

Conclusions. It has been determined under which conditions one is held criminally liable about breaching copyrights or related rights within the legal system of the Republic of Latvia. When reviewing an appropriate punishment for the offender, one must develop certain criteria or methods that would help to determine the extent of a significant harm and extent of punishment. To identify a criminal offense, one must identify a significant harm that is an evaluation concept. In addition to protection of copyrights, the research also focuses on criminalisation conditions and what constitutes offense as a criminal rather administrative one. In order to differentiate between the two, it is important to distinguish whether there has been a significant harm in place.

Alcohol, Tobacco and Hangover. Behaviours and Symptoms in Short Term According to the Society of the XXI Century

Janis Dundurs, C. A. Mora Simon

Rīga Stradiņš University

Keywords: *alcohol, tobacco, hangover, behaviours, short-term symptoms.*

Introduction. Nowadays, alcohol and tobacco are two of the most commonly consumed drugs in all populations of every region, country and culture. Alcohol appeared in our society more than 4000 years ago with Egypt producing wine and beer. Tobacco was planted more than 2000 years ago in America, and after 1492 tobacco was brought to Europe. Since then, the use of these drugs has been increasing, developing new kinds of alcohol and tobacco. Alcohol presents one of the largest drug intake along with tobacco, belonging to legal drug allowed by countries.

Aim. The aim of the research is to explain what behaviours and short-term symptoms are presented by the people of current society of the century.

Material and Methods. An observational, descriptive and cross-sectional study is performed in total of 422 participants aged 18 years and older. Participants are from Latvia and Spain. An online questionnaire was applied with the aim of collecting data about gender, age, smoking habits, places of drinking, types of drinking, quantity, mixed alcohol hangover time and symptoms, behaviour, withdrawal and self-medication.

Results. Results show that 96.2% are drinkers. Heavy Episodic Drinking (HED) frequency in participants below 40 years old has been identified in 58% of the cases and in participants over 40 years old – 6%. The probability of HED each time is 54%, the frequency of alcohol intake one time per week is 36%, the most consumed drink is beer – 68%, with the people who mix it (63.7%) with spirit drink 80%. People tend to choose bars or clubs to drink (79%). This research explains the connection between smoking and alcohol, the two most common drugs consumed. Alcohol promotes smoking by 13% in people who are not smokers, and increases the quantity of cigarettes in 80% of common smokers. There is an important data: people who smoke more than ten cigarettes per drinking time is 53% of the smokers, which is a high rate. Otherwise, the withdrawal symptom of smoke is 21.9%, where it can be a problem in a short future. People use the social platform WhatsApp to socialise in 80% of the cases, but lack of dependence on a phone has been observed in 86%. People admit working or studying with hangover (57%). Hangover is present in 87%. The most common hangover symptom is headache (68%) and the typical duration is half a day (31%). Ibuprofen as the first drug for self-medication is used in 66% of the cases; one out of every three persons who assume such solution. Alcohol withdrawal symptoms are present in 9.3%.

Conclusions. According to these results, alcohol consumption is frequent in young population. The findings of the research do not lead to the claim that alcohol has to be forbidden, yet the consumption of it must be responsible to profit of the good cardio protective and pancreatic symptoms of the 10–15 grams of ethanol per day. The best way to prevent this situation is to educate the young population and teach other ways to have fun without drinking alcohol.

Survival after Breast Cancer Surgery in Relation to Socio-Economic, Reproductive Health-Related and Lifestyle Factors

Dace Ennite, Girts Brigis, Gita Reitere, Liene Livmane
Rīga Stradiņš University, Latvia

Keywords: *breast cancer, survival.*

Introduction. Breast cancer is the most common cancer in women and second leading cause of cancer-related deaths worldwide. There are quite large differences in the five-year survival rate of breast cancer; it can vary between 60% and 85%, depending on various factors. Main differences observed are associated with the tumour stage and woman's age, but literature considers also some socio-economic, lifestyle-related and other factors.

Aim. The aim of the study is to present the analysis of survival in breast cancer patients after surgery in relation to socio-economic, reproductive health-related and lifestyle factors, taking into account tumour stage, histology and the age of a woman.

Material and Methods. In the study, data on 1059 breast cancer patients were used. All patients were interviewed at P. Stradiņš Clinical University Hospital by specialists of the Institute of Oncology at Rīga Stradiņš University during the time period 2010–2018. For data commitment testing, Kaplan-Meier analysis was used and factors showing $p < 0.25$ were later included in Cox proportional hazard model. In Cox regression, three models were made showing unadjusted and adjusted hazard ratios (HR) and corresponding 95% confidence intervals. For inspection of statistical significance of survival rates log-rank tests were used. For data processing, IBM SPSS Statistics 21.0 and MS Excel 2013 were used.

Results. From 1050 patients eligible for the study, 164 had died by the end of the follow-up. Cox proportional hazards model showed significantly higher hazard of dying for older patients. For those at the age 65 years and more, comparing to patients 25–49 years old, HR = 2.71 when adjusted for tumour stage. Patients with tumour in later stage (III, IV) had more than three times worse survival prognosis with HR = 3.15 when adjusted to age and HR = 3.36 after additional adjustment to socio-economic and lifestyle-related factors. When adjusted to age and stage, also a lower level of education and less physical activity, it showed a significantly worse survival prognosis. Patients with primary education had twice the hazard of dying than patients with higher education (HR = 1.95) and patients who were active once a week or less often had HR = 1.66 if compared to patients being active at least two times a week.

Conclusions. Main factors influencing overall survival of breast cancer patients are tumor stage, age of a woman, education and the level of physical activity. Better survival is seen in women with early cancer stages and those of younger age. Physically more active women have significantly better breast cancer survival prognosis.

Motivation of Ambulatory Care Nurses to Work in the Gained Profession and Its Contributing Factors

Olga Fokina, Maria Alminovicha
Rīga Stradiņš University, Latvia

Keywords: *primary health care, ambulatory care nurses, working motivation, profession.*

Introduction. Working motivation of nurses is of great importance in the process of patient care. A motivated outpatient care nurse reaches the goal in practice, effectively and productively carries out health education among patients and in the society, improving, recovering it, carries out health precaution, makes interactions at different levels. Nowadays in Latvia, there is a situation when nurses gain their education in Latvia, but successfully use the gained knowledge somewhere abroad. In Latvia the problem of motivation of outpatient care nurses to work in the gained profession has been explored, but not sufficiently. It is important to make clear what the principles of involving the ambulatory care nurses into the labour market are: financial basis, patriotism, fears in front of radical changes or a challenge to help people.

Aim. The aim of the study is to define the contributing factors in the motivation of ambulatory care nurses to work in the gained profession.

Material and Methods. 100 ambulatory care nurses, aged 20–67, took part in the survey.

Results. Analysing the influence of education on motivation factors, it was discovered that the average rate of “working environment” factor statistically highly differs from the other factors. Speaking about the financial factors which motivate nurses, it was found out that such things as “vacation payment”, “supplement for work quality”, “overtime payment”, “possibility of professional study” are just at the same level. (According to Lickert scale, the average rate of each factor is over four.) The other material factors “learning payment bonus”, “social guarantees”, “health insurance policy”, “financial payment (birth of baby, wedding, death of relatives, payment for expenses caused by illness, etc.)” motivate nurses; that is why, according to Lickert scale, the average rate is over three. Such non-financial bonuses as “garanty for vacation”, “additional vacation and days-off (for example, the 1st of September)”, “possibilities of self-development at work”, “safety about the future”, “direct estimation by administration”, “bonus” also motivate nurses. Analysing the influence of nurses’ working experience and education on non-financial factors, it was found out that those do not have a considerable influence judging by disperanalysis results.

Conclusions. Analysing the rates of the survey among the participated nurses (n = 100), it was found out that the respondents have the dominating inner motivation 87% (n = 87); external motivation has been observed in 13% (n = 13) of the participated nurses. Nurses’ working experience and education do not have much influence on the inner or external scale rates of motivation. The education of respondents, professional bachelors of health care, considerably influences the motivation factor “working environment” (p < 0.05). As for financial factors, nurses are motivated by “vacation payment”, “supplement for work quality”, “overtime payment”, “possibility of professional study”. Such non-material factors as “garanty for vacation”, “additional vacation and days-off”, “possibilities of self-development at work”, “safety about the future”, “direct estimation by administration”, “bonus” motivate nurses most of all.

Indicators of Life Quality of Ambulatory Care Nurses and Their Connection with Work Experience at Primary Healthcare System Level

Olga Fokina, Laine Mulere, Maria Alminovicha
Rīga Stradiņš University, Latvia

Keywords: *professional life quality, primary health care, ambulatory care nurse, work experience.*

Introduction. Work of nurses is becoming more intense and more complicated; that is why nowadays the life quality of nurses working in medical institutions is very topical. It depends on many factors which leave a negative influence on the quality of professional occupation and medical person's mental life. After a certain time, an emotional burn-out is caused by, for example, long intense psycho emotional activity, high responsibility for duties or work as it is, negative psychological atmosphere in the institution, psychologically difficult patient care, as well as several other social factors. Thus, important psycho-social problems for working nurses are a burn-out syndrome and sympathy fatigue.

Aim. The aim of the study is to define the indicators of professional life quality of ambulatory care nurses and their connection with work experience at primary health care system level.

Material and Methods. For obtaining the data, Beta Stamma professional quality of life scale is used (Professional Quality of Life Scale), 5th Version (2009). In the survey, 100 nurses working at primary health care system level participated.

Results. There was found no low sympathy satisfaction level, at the same time 44% of the respondents have a high sympathy satisfaction level and the bigger part of the respondents (56%) have the average sympathy satisfaction level. There is noted a weak relative correlation between work experience and sympathy satisfaction ($r = -0,234$, $p = 0.016$). There is a direct correlation between work experience at the primary health care system level and burn-out: low ($r = 0.292$, $p = 0.003$), the same correlation can be seen between work in the primary health care and secondary traumatic stress ($r = 0.256$, $p = 0.010$). The significant part of the respondents (70%) have a low level of traumatic stress. Statistically sufficient differences were found between education level and burn-out ($p = 0.006$), secondary traumatic stress and education level ($p = 0.005$), burn-out and work experience of the respondents ($p = 0.005$), secondary traumatic stress and work experience ($p = 0.014$). The research partially confirms the existing idea in scientific theory about work experience's influence on burn-out and development of secondary traumatic stress.

Conclusions. Possible solutions of the problem include: to avoid negative changes of professional life indicators, it is necessary for nurses to take care of their own life quality; it is important to differentiate personal and professional lives; work should be performed according to their individual capabilities; it is important to solve personal difficulties; one should maintain a positive attitude towards others and stick to a healthy lifestyle. All this can be reached by promoting the importance of professional life quality of nurses working at health care institutions.

Functional Status Assessment Tool Content Comparison for Brain Tumour Patients (Systemic Literature Review)

Lelde Giga, Guna Berzina
Rīga Stradiņš University, Latvia

Keywords: *brain tumour, functional status assessment tool, oncological patient.*

Introduction. In 2015 in Latvia, 188 patients with newly diagnosed primary brain tumours were registered, as well as 331 patients with newly diagnosed brain metastases. In that year, a total of 11,123 new cases of oncological diseases were identified, from which it was estimated that patients with brain tumours compose 5% of the total oncological patient number. The localisation and mass effect of the tumour are determining factors of the pre- and postoperative clinical status. Both before and after the operation, the patient may present with local or generalised seizures, headaches, mental status alteration, ataxia, diarrhea, nausea, visual disturbances and other symptoms, but in 75% of the cases it is a neurological deficit. This significantly affects a patient's quality of life, and, taking into account that the symptoms may be combined, specific rehabilitation focused specifically on this patient group is required. In order to assess rehabilitation requirements for patients with brain tumours, a specific functional status assessment tool is needed, corresponding to this patient group's needs. At present, there is no unified protocol to assess such patients.

Aim. The aim of the study is to determine the most frequently utilized functional status assessment tools for patients with brain tumours, compare their contents, using the International Classification of Functioning, Disability and Health (ICF).

Material and Methods. Systemic literature review, identification of the frequently used functional status assessment tools in clinical trials, and their meaningful element links to ICF categories were selected as materials for the conduct of the research.

Results. In the studies included in the systematic literature review, 86 functional status assessment tools were identified, from which nine most frequently utilized were further analysed (KPS, MMSE, EORTC QLQ-C30, EORTC QLQ-BN20, FIM, TMT, BI, FACT-Br and SF-36). These tools' identified concepts are linked to 161 ICF categories. The predominance of body function categories was noted in MMSE, TNT, EORTC QLQ-BN20, EORTC QLQ-C30, the activities and participation categories – FIM, BI, KPS, whereas FACT-Br examined both domains equally. The environmental factors were assessed in EORTC QLQ-C30, FACT-Br, FIM, BI, KPS.

Conclusions. No unique conjunct functional status assessment tool was found for brain tumour patients, since the choice of tool depends on the clinical question posed, as well as the aim of the study. In this work, the contents of the nine most frequently used functional status assessment tools in clinical studies were compared using ICF.

State-Funded Rehabilitation Service and Continuity of Service in Latvia for Patients with Unilateral Lower Limb Amputation Statistical Data and Patients View

Alisa Glotova, Daina Smite
Rīga Stradiņš University, Latvia

Keywords: *Latvian healthcare system, continuity of rehabilitation service, lower extremity amputation.*

Introduction. Amputation is much more common than people realise. The main reasons for amputation are diabetes complications, vascular diseases and trauma (*Chalya et al., 2012*). In 2014, 2.1 million people were living with limb loss in the United States. By 2050, that rate is expected to double (*Department of VA*). It is estimated that 25–27 in 100,000 of German population will have undergone an amputation (*Moysidis et al., 2011*). In cases of no clinical contraindication, rehabilitation should begin before amputation surgery and continue after discharge from hospital (*NICE guidelines*).

Aim. The aim of the study is to analyse state-funded rehabilitation services and their continuity in Latvia for patients with unilateral lower limb amputation based on statistical data and patient's view.

Material and Methods. Research design is a case study. As a real-life context, Latvian healthcare system was identified and as a phenomenon – state-funded rehabilitation service and continuity of service for patients with unilateral lower limb amputation. Phenomenon was divided into two parts – (1) state-funded rehabilitation service and continuity of it – statistical data and patient's opinion; (2) state-funded rehabilitation service in Latvian healthcare system – statistical analysis.

Results. The results have shown that in four months 234 people (33 died in hospital) have undergone lower limb amputation (56.23% transfemoral amputation). In 94.5% cases of amputation (mostly due to vascular disease) after being discharged from an acute hospital, patients do not receive state-funded rehabilitation services in the next 17 to 20 months. According to the continuity of services, rehabilitation services were not ensured successively – delayed commencement of structured rehabilitation measures after discharge from an acute hospital (85 days to outpatient service (in case of Rehabilitation doctor's in-patient consultation) until the following Rehabilitation doctor's consultation for 130 days), 175–up to stationary. As the main barrier at all stages of treatment, patients emphasise the lack of information from hospital staff and the General Practitioner. All interviewed patients have mentioned that information was searched on the Internet, or it was provided by their relatives.

Conclusions. State-funded medical rehabilitation service, including outpatient and inpatient, received by patients (5.5%) during the 17 to 20 months after discharge from the acute hospital post unilateral lower limb amputation, were provided not continuously because the service was initiated late, and did not continue after post-prosthetic rehabilitation.

Experience of Implementing Health Promotion Interventions at Health Promoting Schools and Municipalities in Latvia

*Inese Gobina, Santa Pildava, Margarita Apine,
Dita Heiberga, Elina Millere, Aigars Miezītis*
Public Health Institute, Rīga Stradiņš University, Latvia

Ilze Straume

Centre of Disease Prevention and Control, Latvia

Keywords: *health promotion, municipalities, schools, the BaltCityPrevention project.*

Introduction. The Interreg BaltCityPrevention project “Innovative Lifestyle-Related Disease Prevention Model in the Baltic Sea Region” aims to develop an innovative health-related lifestyle intervention model for public health authorities (PHAs). At the local level, schools and municipalities play an important role in health promotion for individuals, groups, or communities.

Aim. The Public Health Institute at Rīga Stradiņš University in collaboration with the Centre of Disease Prevention and Control (CDPC, Riga) carried out an online survey for studying the experience and needs of health promoting schools and municipalities in Latvia for implementing health promotion interventions in order to explore the context for developing the new intervention model.

Material and Methods. Data were collected from December, 2017 to January, 2018 by using online questionnaire, which was developed by the International partners’ group of the BaltCityPrevention project. A total of 112 municipalities and 100 schools were targeted. The online questionnaire was anonymous, and the link for accessing the questionnaire was sent out by the CDPC using the database of the National Health Promoting Networks. The response rate was 82% (n = 82) for schools and 38% (n = 42) for municipalities.

Results. 76.8% schools and 92.9% of municipalities have had experience in health promotion interventions. Of those having past experience in health promotion interventions, the main target groups for health interventions for schools were school-aged children (79.4%) and parents (58.7%), but for municipalities – school-aged children (76.9%) and seniors (74.4%). On average, 78.4% of respondents had applied e-tools for health interventions with no significant difference between schools and municipalities. Social networking tools were frequently reported by both (\approx 47%), but for schools the use of e-games (58.7%) and mobile apps (23.8%) was significantly more prevalent than that for municipalities (respectively, 15.4% and 5.1%). Interventions on nutrition and physical activity were the most frequently specified by both schools and municipalities. Health professionals (58.7%), and local municipalities (54.0%) were the key collaborative partners for health interventions among schools, but the municipalities reported the collaboration with educational institutions (89.7%) and NGOs (76.9%) the most. The schools reported lack of funding (64.6%), expertise (32.9%) and lack of knowledge on innovative methods aiming to approach different target groups (28.0%) as the main barriers for effective health promotion. Among the studied municipalities, the most prevalent obstacles for implementing health interventions were lack of knowledge aiming to reach the target groups (52.4%) and lack of expertise (45.2%) followed by lack of funding and cooperation between the PHAs (38.1%) in the field.

Conclusions. Previous experience and needs of the key authorities implementing health promotion should be considered, when planning and selecting specific health intervention model.

Right to Private Communication Using Telecommunication Means: National and International Legal Aspects of Protection

Larysa Grynko, Anna Prokhazka, Olexandr Panasiuk
Poltava Law Institute of Yaroslav Mudryi National Law University, Ukraine

Keywords: *privacy, the secret of communication, telecommunications, international law, criminal proceedings.*

Introduction. Protection of personal data in information and telecommunication networks / systems (telecommunication means), including using the Internet, today is one of the main tasks of the states, private institutions and international community. Legal protection of personal data and privacy rights include the following aspects: constitutional law; international law; administrative law; criminal and criminal procedural law.

Aim. The main objective of the research is to identify issues related with the legal regulation of the protection of personal data and the right to private communication, and to put forward suggestions for their solution, which are set out in the results of the study.

Material and Methods. In conduct of this research, a complex of general and special scientific methods of legal science were used (dialectical, comparative legal, systemic-structural, generalisations, etc.).

Results. Consequently, these rights at the national level are guaranteed by constitutions or special legislation. Also, current challenges dictated the need to strengthen the international legal mechanisms for the protection of personal data and the right to private communication. However, considered rights are not absolute. Legitimate restriction of guaranteed rights is possible, since these means of communication are a powerful tool in the investigation and disclosure of hard / very hard crimes, including transnational ones, especially considering terrorist threats to Ukraine and other European countries. For example, Art. 8 The Convention for the Protection of Human Rights and Fundamental Freedoms (Rome, 1950), along with the fact that it enshrines the right to respect for the right to private and family life, to own home and correspondence, also provides for the possibility of restricting it to clearly defined cases. It follows from the practice of the European Court of Human Rights that interference by public authorities is possible not only when it is carried out “in accordance with the law”, but also when it has a “legitimate purpose” and is “proportional” (Case of Benedik vs. Slovenia, April 24, 2018). Among other issues, it is seriously worrying that there are ongoing discussions in the EU countries on finding legitimate reasons for preventing the transmission of information spread over the Internet via Skype and Viber beyond the scope of criminal proceedings (as is already the case in the United States), which poses a threat to human rights.

Conclusions. On the basis of the research, the shortcomings of the legal regulation of the protection of personal data and the right to private communication at the national level were revealed, also inconsistency with international legal requirements and recommendations. This requires improvement of the legislative consolidation (in accordance with the requirements of the current level of development of telecommunication facilities), the bases, conditions and procedure for legal intervention of the state in the sphere of private life and communication; also bringing national legislation in line with international requirements and practices of international judicial institutions.

Shadow Economy in Cities and Rural Areas: the Common and Different

Gatis Gudermanis

Rīga Stradiņš University, Latvia

Keywords: *shadow economy, economic development, national security, entrepreneurship.*

Introduction. A successful overall development of our country also includes mutually balanced growth both in cities and in the countryside. One of the preconditions for economic development and stability of the country is the effective restraint and reduction of the underground economy. In terms of strengthening human security, reducing shadow economy is important so that citizens are free from fear of their material situation in the present and future. From the point of view of national security, the more stable and predictable the material situation and economic security of its inhabitants is, the less offenses are committed in the context of these fears. Although in recent years much attention has been paid to the problems of shadow economy and many studies regarding this matter have been carried out, the author's point of view is that little attention is paid to the fact that the underground economy in urban and rural areas can vary considerably in its manifestations and scope. Majority of studies cover statistics that refer to the country as a whole, but they do not provide enough material to objectively assess, firstly, whether the underground economy manifestations in cities and rural areas are different, and secondly, what actions from the state should be followed up.

Aim. The aims of the study are to evaluate the differences in shadow economy in rural and urban areas, to distinguish the most important features of these differences, to identify possible areas of action and to find solutions for the reduction of shadow economy.

Results. In nowadays Latvia, where economic and sociopolitical activities are largely concentrated in cities, especially in Riga, and development is based on concentration of resources, regions, especially rural areas, become places where negations are felt in the hardest way – capital, resources, and labour force is being lost, thus slowing down economic growth and giving way to shadow economy. It is essential to understand the heterogeneous nature of shadow economy, taking into account territorial specificities, to decide on the direction in which efforts should be made to achieve the goal, whether it is the most effective use of existing resources, or a different approach to tax policy, or concentration of law enforcement agencies towards a specific direction or whether it is the use of resources to support entrepreneurship, from which not only the entrepreneur, but also the inhabitants of the whole region will benefit.

Conclusions. In Latvia's situation, the manifestations of underground economy in the city and in the countryside differ noticeably. This is determined by the following conditions: differences in population (density), geographical location of each separate rural area also in relation to regional centers and neighbouring countries, comparatively lower (different) economic activity, differences in living standards and material conditions, peculiarities in contacts with the state.

Preventive Role of Criminal Law for Traffic Safety

Nataliya Gutorova

Yaroslav Mudry National Law University, Ukraine

Oleksandra Rudnyeva

International Legal Council Legiteam, Ukraine

Keywords: *traffic safety, society, criminal law, prevention.*

Introduction. In modern society, traffic safety is a necessary component of ensuring the right to life and health. The mortality and traumatism on the roads become a significant problem for society if the state does not pay proper attention to this sphere. This problem is especially urgent in large cities, where the number of victims is increased due to pedestrians, who along with passengers and drivers of vehicles become victims of road accidents. Thus, in Ukraine, the number of dead and wounded as a result of traffic violations over the past four years has exceeded the number of victims of military conflict (military personnel and civilians) in the East of the country. To a large extent, this situation is a consequence of insufficient effectiveness of measures to ensure road safety, including the use of criminal law. On the one hand, there is an actual impunity for many types of serious offenses; on the other, an unjustified restriction of police rights while ensuring road safety.

Aim. The purpose of the article is to improve the preventive role of criminal law in the field of traffic safety by optimising criminal liability for offenses in this area, as well as determining the limits of the lawfulness of causing damage by the police in order to stop the vehicle and detain the offender.

Material and Methods. This study is based on regulation acts, European Convention for the Protection of Human Rights and Fundamental Freedoms, case law of the European Court of Human Rights, criminal legislation of Ukraine, Latvia, Poland and the Russian Federation, judicial statistics and practice of Ukraine. The study is grounded in dialectical, comparative, analytic, synthetic and comprehensive research methods.

Results. Based on the conducted research, the basis and limits of criminalisation of traffic safety violations have been determined. Measures have been proposed to optimise criminal punishment and other measures of a criminal-legal nature for the commission of these crimes, which depend on the severity of the harm.

Conclusions. It is concluded that for offenses that did not entail grave consequences, it is advisable to apply restriction of freedom, as a basic punishment, which should include public works and the prohibition of leaving a permanent place of residence without the permission of penitentiary service. For such delinquents, in addition to a basic punishment there should be a fine and deprivation of the right to drive a vehicle. For crimes resulting in death or serious harm to health, deprivation of liberty should be used as the basic punishment, as well as a fine and deprivation of the right to drive a vehicle in addition. At the same time, long periods of imprisonment for these crimes are recognised as groundless. It is proved that the lawful use of weapons by a policeman to stop a vehicle by damaging it is a circumstance excluding criminal liability. The basis and limits of the lawful commission of such an act are determined.

Antioxidant Activity of Japanese Quince (*Chaenomeles Japonica*) Fruits Grown in Latvia and Their Products – Purée, Candied Fruits

Svetlana Aleksejeva, Lolita-Vija Neimane, Alise Silova
Rīga Stradiņš University, Latvia

Keywords: Japanese quince, *Chaenomeles Japonica*, antioxidant activity, phenolic content, oxidative stress.

Introduction. Japanese quince fruits contain significant amounts of biologically active substances: organic acids, polyphenols, triterpenes and other compounds. Recent developments suggest that the fruit of Japanese quince have hepatoprotective, anti-inflammatory, antibacterial and neuroprotective effects, which is due to high level of antioxidants in the fruits. Fresh fruits are very hard and sour; hence they are not eaten raw but are used in the production of juices, syrups, candied fruits and purées. Chemical composition of the fruits depends on processing technologies and various external factors (Bieniasz *et al.*, 2017; Habauzit *et al.*, 2011; Chow *et al.*, 2011).

Aim. The aim of the study is to determine antioxidant activity of Japanese quince (*Chaenomeles japonica*) fruits grown in Latvia and their products *in vitro*.

Material and Methods. Antioxidant activity was determined using an instrumental analysis method – spectrophotometry. The research was carried out at the Laboratory of Biochemistry of Rīga Stradiņš University. The object of the research was Japanese quince fruits (harvested in August and September) grown in Latvia and their products – purée and candied fruits.

Results. The total phenolic content of the samples was from 383.18 to 467.45 mg GSE/dL in water extracts and from 562.22 to 763.95 mg GSE/dL in ethanol extracts. Free radical scavenging efficiency of extracts from purée against DPPH was the highest from all the samples – 2.06 ± 0.02 mmol TE/100 g (water extract) and 2.24 ± 0.03 mmol TE/100 g (ethanol extract). FRAP results have shown that ethanol extracts and water exhibited the highest antiradical activity in purée form compared to the other analysed samples – 2.95 ± 0.04 mmol TE/100 g (water extract) and 3.58 ± 0.02 mmol TE/100 g (ethanol extract). In the studied samples, the variation in ABTS^{••} binding ability was in the range of 3.32–5.03 mmol TE/L in water extracts, but ethanol extracts ranged between 3.98 and 5.20 mmol TE/L. The antiradical activity of water extract of fresh fruit (harvested in September), was higher by 17.44% than in fruit harvested in August.

Conclusions. Fruits of Japanese quince grown in Latvia and products thereof have been proven to have high antioxidant properties. Purée has the highest antioxidant activity compared to fresh fruits and candied fruits. Fruits of Japanese quince and products thereof are recommended for inclusion in different products as a functional food ingredient. Nutritionists should promote consumption of Latvia-grown Japanese quince products as local, natural and powerful source of antioxidants.

Legal Status of the Honorary Consular Officers: Theory and Practice in Latvia

Janis Grasis

Rīga Stradiņš University, Latvia

Keywords: *honorary consuls, Vienna Convention, protection of consular premises.*

Introduction. Honorary consuls are not professional diplomats, it means, they do not make a living as diplomats. They usually live and work, as well as pay taxes, in the country where they operate while they represent their native country on voluntary / not-salaried basis until their appointments are revoked. Honorary consuls have limited authorisation to act and conduct on behalf of their native country; they have the honour to serve their respected country and they are usually selected / appointed by their merits. Legal regime relating to honorary consular officers and consular posts headed by such officers is regulated by the Vienna Convention on Consular Relations from 1963. According to the Article 59 of the mentioned convention, the receiving State shall take such steps as may be necessary to protect the consular premises of a consular post headed by an honorary consular officer against any intrusion or damage, and to prevent any disturbance of the peace of the consular post or impairment of its dignity. Similarly, the receiving State is under a duty to accord to an honorary consular officer such protection as may be required by reason of his official position. If criminal proceedings are instituted against an honorary consular officer, he must appear before the competent authorities.

Aim. The aim of the article is to analyse legal norms from the Vienna Convention and its practical application in the Republic of Latvia, especially concerning functional immunity of honorary consular officer. Comparative and analytical research methods have been used for this paper.

Results. Several case-studies were performed in the research. Information has been collected from 25 Honorary Consulates situated in the Republic of Latvia. The case-study shows that not always representatives of the Republic of Latvia follow regulation of the Vienna Convention towards honorary consular officers.

Conclusions. In comparison to diplomats, the privileges and immunities provided in the Vienna Convention shall not apply to members of the family of an honorary consular officer or of a consular employee employed at a consular post headed by an honorary consular officer. The research indicates that honorary consular officers face practical problems in interaction with state institutions **of Latvia.**

Social and Philosophical Background and Legal Mechanism of Assisted Reproductive Technologies Regulation (Example of Surrogate Maternity)

Yevhen Hrekov, Maryna Hrekova, Roman Kabalskyi

Poltava Law Institute of Yaroslav the Wise National Law University, Ukraine

Keywords: *assisted reproductive technologies, human reproductive rights.*

Introduction. In many countries of the world, the practice of using assisted reproductive technologies faces a number of legal obstacles, from the introduction of restrictions to their complete prohibition. In most cases, these restrictions are due to public rejection of these methods and procedures for social, psychological and religious reasons. Indeed, these technologies address issues of assessing a role of women in society, its functions, problems of relationships with a surrogate mother or an egg donor, emergence and distribution of a surrogate mother or donor's rights, as well as persons' who are beneficiaries of the results of these technologies. However, a solution of these problems cannot be achieved only by improving legal mechanisms regulating the use of these technologies. In this situation, the solution is at the junction of the interests of the society (state) and personal interests of persons who need their use, while normative consolidation and enforcement is only a form of consolidating of the achieved balance.

Aim. The purpose of this study is to identify and analyse the main reasons for resistance to distribution of assisted reproductive technologies from a social and philosophical point of view, description of the types of legal mechanisms for securing the right to use these technologies, as well as study of law enforcement practice, primarily judicial practice, in solving problems of their application.

Material and Methods. This study is based on international acts in the field of human rights, legislation of various countries of the world (China, the United States, Israel, a number of European countries), judgments, scientific works and opinions of progressively-minded people in the sphere of sociology, philosophy and law. Such methods as dialectical, comparative, analytic, synthetic and comprehensive are used in the article.

Results. The result of the research is a theoretical and philosophical substantiation of the essence of human reproductive rights and identification of key social factors that should be considered by the state when creating / improving mechanisms for legal regulation of the right to use assisted reproductive technologies.

Conclusions. Peculiarities of law enforcement practice by courts of different countries are also singled out and recommendations on improvement of legal regulation mechanisms of this sphere depending on differences in prerequisites for its regulation are justified. In particular, it is substantiated in the work that in many countries, even despite de jure recognition of human reproductive rights, there are formal barriers to their implementation. This is a consequence of the conflict of the law and social attitudes of the society. Simultaneously, in some countries, there is also a reverse trend when these rights are granted an absolute status at the level of judicial practice, which results in a violation of the principle of equality of human rights.

Social Services for Life Balance for Families with Disabled Children

Linda Gregersone

Riga social service, Latvia

Ilvija Razgale

Rīga Stradiņš University, Latvia

Keywords: *live balance, invalidity, needs, social services.*

Introduction. Children with disabilities and their families is one of the most vulnerable social groups. The total number of children with disabilities in the world was 93 million in 2015, while according to the Health and Work Expert Physicians Commission data of 05.01.2016, there are 8260 children with disabilities living in Latvia. Due to the increase in the number of disabled children, social adaptation of these children and balance of parents' lives are becoming increasingly more important, which can be interpreted as a result of the interaction between families with disabled children on the one hand and social, cultural and physical environment on the other. Thinking about the needs of families with children with disabilities and provision of these needs on the functioning of the family, a number of issues are urgently raised, among which there are questions about a family's own resources, the resources available in the municipality as social services, and whether the available resources contribute to the balance of life of the families with disabled children.

Aim. The aim of the study is to analyse social services for balancing life of families with disabled children.

Results. Range of social services offered for families with disabled children in Riga municipality is wide and varied. The results of the survey show how social services provided help to balance lives of families with disabled children in several aspects. First, by ensuring a balance in parenting partnerships; second, by allowing parents to organise their private and working life; third, by ensuring a certain balance of life for children with disabilities themselves; and, fourth, by ensuring a balance between parents and other family members in relation to children with disabilities.

Conclusions. Most of services that families can receive are financed from state and local government budgets, which also provide substantial support for a family budget.

Outpatient Physiotherapy Services in Regional Hospitals of Latvia: Characteristics of Receivers, Volume of Services, and Source of Funding

Ilze Heize, Daina Smite
Rīga Stradiņš University, Latvia

Keywords: *outpatient physiotherapy, regional hospitals, characteristics of patients and services.*

Introduction: Physiotherapists in Latvia provide their services in different environments, providing outpatient, inpatient and home care physiotherapy services¹. Understanding a patient profile is important not only for decision-making in the therapeutic process², but also for adapting healthcare services to the patient's changing needs³. In Latvia, there are no statistics available about outpatient physiotherapy services provided or the receiver's characteristics. Thus, preventing a general view that would allow purposeful organisational activities for most commonly provided mono-professional outpatient rehabilitation service.

Aim. The aim of the study is to analyse outpatient physiotherapy services provided in regional hospitals of Latvia in 2017, and the profile of their receivers.

Material and Methods. Seven regional hospitals of Latvia participated in the research, in which the analysis of statistical documentation of 2017 were carried out. Data were collected about the receivers of outpatient physiotherapy services: age, gender, clinical diagnosis and place of residence; about the volume of service provided (the number of visits per patient); about the source of funding (state budget, private resources, insurance). Descriptive data were analysed on the whole, by hospitals, as well as the volume of service depending on the patient's clinical diagnosis, age, place of residence in the total sample and in every hospital.

Results. In 2017, in the regional hospitals of Latvia, outpatient physiotherapy services were received by 6957 patients, most commonly adults of working age with basic clinical diagnosis of musculoskeletal system and connective tissue diseases, and children up to the age of one year with diagnosis of certain conditions originating in the perinatal period

Conclusions. Seniors remain outside the range of receivers of services, because the age structure of the population, the increase chronic diseases and functional limitations with aging justifies the need of rehabilitation services but, in turn, limited financial resources for retired people in regions of Latvia are unlikely to allow access to paid services. Among regional hospitals of Latvia, there are significant differences in the volume of outpatient physiotherapy services provided to one patient with a similar clinical diagnosis and age. Given that there is no reason for argument that there are significantly different functional limitations for patients from different regions, it can be concluded that there is a difference in the content of the service, in planning, and in cooperation model with other specialists. Latvian regional hospitals still do not have electronic records of all outpatient physiotherapy services, which does not allow to judge the provided services and their receivers, which are financed by patients' private resources.

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Patients' with Coronary Heart Disease Therapeutic Behaviour in Terms of Their Social Characteristics

Maria Iakovleva

Saint Petersburg State University, Russian Federation

Keywords: *coronary heart disease, therapeutic behaviour, social characteristics.*

Introduction. The highest rates of mortality among cardiovascular diseases are for the coronary heart disease (CHD), which presents a fundamental problem for the population worldwide. Although the advanced methods of therapy of CHD, especially cardiac surgery, are very effective in treating this chronic disease and lead to improvement in the long-term prognosis and quality of life of patients, their use does not result in a complete cure. Thus, patients' behaviour in the therapeutic process, especially their adherence to treatment, has a major impact on treatment outcomes and patients' life expectancy. The research of the factors that contribute to favourable ways of conduct in patients with CHD is strongly required and will help improve the efficiency of patients' treatment and rehabilitation.

Aim. The abovementioned problem determines the aim of this study: to reveal the social factors that may be related to patients with CHD favourable behaviour in the therapeutic process; in other words, their adherence to treatment.

Material and Methods. Currently, 100 patients have undergone the study. All the patients were diagnosed with CHD and were submitted to surgical treatment. They were divided in two groups: those who followed medical recommendations and actively contributed to therapy, and those who did not follow the recommendations and proved to be non-adherent to treatment at all stages of therapy. Several patients' characteristics were studied, their clinical indicators, psychological features and social status among them.

Results. Several social factors associated with patients' favourable therapeutic behaviour were identified. It was found that patients' strong motivation to continue working related to self-realization ($\chi^2 = 4.719$; $p < 0.05$), and the presence of a great interest in their job ($\chi^2 = 6.359$; $p < 0.05$) which is a factor significantly differing two groups of patients. Among other factors that were studied, patients' good relationship with their family, friends and colleagues was found to be a factor preventing them from violating the therapeutic regimen ($\chi^2 = 8.617$; $p < 0.05$). At the same time, patients' sex, marital status, wealth and type of job were not found to be significantly associated to their favorable therapeutic behaviour.

Conclusion. An entire complex of social factors have to be taken into account by doctors, psychologists and social workers when identifying patients' reaction to a life-threatening disease and their behaviour in the therapeutic process, including cardiac surgery. The abovementioned social aspects are factors that can be used to predict patients' favourable therapeutic behaviour. It is essential to study the complex of diverse factors which influence patients' therapeutic behaviour and their adaptation to it, and the attitude towards healthcare professionals.

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Social Normativity in Neoliberal State

Roman Kabalskyi, Anatoliy Kozachenko, Maryna Hrekova

Poltava Law Institute of Yaroslav the Wise National Law University, Ukraine

Keywords: *norm, value, due, duress, neoliberal state.*

Introduction. Normativity lies at the heart of exercising social regulation. However, such regulation of social relations should be of organised nature. In this regard, it is important to clarify the essence and content of social normativity, which will promote awareness of the mechanism of social regulation.

Aim. The aim of this research is to explore the phenomena of normativity, as a defining feature of regulatory space, which, being based on the reflexive ability of the man, is a way of objectivation of the due and oriented to emergence of social subjects' attitude of oughtness.

Material and Methods. The main methods used in this research are libertarians' theories (Locke J., Hayek F., Nozick R. etc).

Results. From a phenomenological methodology, a social norm is a result of social objectivation, one of the means that maintain functioning of a social system. Owing to constant changes of values-based orientations, transition to a neoliberal model of the state, ways of law's normativity justification is characterised by volatility and instability to the effect that regulation of social relations is not always carried out as a result of mutual adjustment of social actors' rights and responsibilities. The medical reform in Ukraine, which has begun in 2018, is an example of this idea, as its main principle is the thesis "money follows a patient". For public, it will mean the right to find and choose a physician and conclude an agreement with him / her. In case of poor satisfaction with quality of medical services, a person will be able to enter into an agreement with another physician. Under such conditions, there is a social contract, because, on the one hand, the basic principle of neo-liberalism, the right to liberty and possibility of choosing quality services, is asserted; on the other hand, remuneration for a physician's work is based on competition and prompts one to provide high-quality medical services. This minimises state interference in regulation of the society. In this case, administration of prices for medical services is permissible under conditions that (i) the competitive relationship does not collapse, (ii) the physician has an economic subjectivity, and (iii) this does not create a social conflict. Normally, prices for medical services should be determined by the market, not by officials.

Conclusions. In consequence of inertia of human self-consciousness, new standards of individual freedom may not be immediately approved at the micro level, which causes structural contradictions at the macro level, at the system level. Therefore, under the conditions of social transformation, direction of social behaviour is accompanied with the increasing role of the state, which is subsidiary and protective in nature.

Problem Aspects of Mandatory Nature of Criminal Proceedings

Sandra Kaija

Rīga Stradiņš University, Latvia

Keywords: *criminal proceedings, mandatory, principle.*

Introduction. The Criminal Procedure Law (section 6), as one of the basic principles of the criminal procedure, provides for the mandatory nature of criminal proceedings. It determines that the official who is authorised to perform criminal proceedings has an obligation within their competence to initiate criminal proceedings and lead such proceedings to the fair regulation of criminal legal relations provided for in the Criminal Law in each case where the reason and grounds for initiating criminal proceedings have become known. This research focuses on issues that relate to the legal aspects of the mandatory nature of criminal proceedings, including the competence of the officials in initiating criminal proceedings; the role of the victim; the purpose of this basic principle.

Aim. The aim of the paper is to research legal aspects of mandatory nature of criminal proceedings, to identify problem issues, and to propose solutions to them.

Material and Methods. The research uses grammatical, systemic and teleological (meaning and purpose) methods of interpretation of legal norms. As well as descriptive, analytical and deduction-induction research methods. By applying these methods, legal acts and opinions of law scientists were analysed, which was followed by drawing conclusions and drafting recommendations.

Results. The following findings were discovered: 1) the Criminal Procedure Law gives the authority to perform criminal proceedings to more than ten officials; however, only a few of them can initiate in criminal proceedings. In addition, there are certain contradictions in the legal framework, for example, regarding the competence of the direct supervisor of an investigator; 2) when initiating criminal proceedings must always remember that there are cases where criminal proceedings are initiated only if a request has been received from the person to whom harm has been inflicted; 3) contrary to the principle, there are exceptions to the law when it is possible to refuse to initiate criminal proceedings; 4) only when the person who committed the criminal offence is determined, it is possible to lead such proceedings to the fair regulation of criminal legal relations provided for in the Criminal Law.

Conclusions. It is necessary to amend the Criminal Procedure Law by resolving contradictions in the legal regulations of the direct supervisor of an investigator. What promotes discussion is the purpose of the principle of mandatory nature of criminal proceedings, and how to achieve a fair regulation of criminal legal relations in all cases when criminal proceedings are initiated. In Article 6 of the Criminal Procedure Law it needs to be defined that there are exceptions to the mandatory nature of criminal proceedings.

Patients' Physical Activity in Stroke Units: Behavioral Mapping in Latvia and Sweden

Agnese Karklina

Riga East University Hospital, Latvia

Guna Berzina, Illa Mihejeva

*Riga East University Hospital, Latvia,
Riga Stradiņš University, Latvia*

Katrina Stibrant Sunnerhagen

University of Gothenburg, Sweden

Keywords: *stroke, Stroke unit, physical activity, behavioral mapping.*

Introduction. During the acute phase after the stroke, patients spend their time inactively and alone. Being inactive can lead to several medical complications such as pressure ulcers, bladder and bowel dysfunction, aspiration pneumonia, deep venous thrombosis, pulmonary embolus and falls. By identification of types of care and rehabilitation it would be possible to identify relevant problems as well as provide foundation for improvement of care and rehabilitation in Stroke units in Latvia and Sweden.

Aim. The aim of the study is to compare levels of patients' physical activities as well as social interaction within Stroke units in university clinical hospitals in Latvia and Sweden.

Material and Methods. Design – prospective, observational, comparative study using behavioral mapping. Patients admitted at two Stroke units in Latvia and at one Stroke unit in Sweden at least one day post-stroke were observed on week-days at 10 min intervals between 09.00 h and 15.00 h. At each time-point observer recorded a patient's activity, the person attending the patient and their location on mapping forms (each form had 14 physical activities, 6 locations and 10 social interaction categories). Physical activities were grouped into five pre-specified activity categories (ACs); to reflect the level of physical work during these activities.

Results. A total of 51 observations were performed on 27 patients from Latvia and 39 observations were performed on 25 patients from Sweden. The physical, social and institutional environment in Stroke units analysed in the study differs. Most of the time patients were inactive lying in bed (83.9%, 71.7% and 32%). Patients spent alone 55.6%; 64.3% and 44.4% of the observed day-time in Latvian and Swedish study population. Time spent outside the bedroom and interacting with multidisciplinary team (medical and nursing staff, therapists) (35.4%; 26.2% and 27.5%) were different.

Conclusions. In Latvian Stroke units, patients spend most of their day-time inactively and alone. Patients in the Swedish Stroke unit were more active compared to Latvian population; however, they spent most of the time in bed. This emphasises the opportunity to improve early physical activities after a stroke in both countries.

Legal Guarantees of Access to Education for Persons with Intellectual Disabilities

Eva Kaulina

Rīga Stradiņš University, Latvia

Keywords: *access to education, education, legal guarantees, intellectual disabilities, disorders.*

Introduction. Access to education for individuals means providing opportunities for obtaining quality education and improving the quality of their life. Among the wide range of subjects of the right to education are individuals with special legal status – persons with intellectual disabilities. The peculiarities of the legal regulation of their status in the field of education raise the need to consolidate the guarantees of the right to education to prevent the fact that they are excluded from the education system and public life in general. Legal guarantees of access to education for this category of persons are not fully regulated, and the rights that have been already developed have to be improved.

Aim. The aim of the study is to evaluate the most important legal guarantees of access to education for people with intellectual disabilities, including several national and international studies analysed.

Results. Research shows that adopted environment is a vital factor for ensuring access to education for individuals with intellectual disabilities. One of the more prominent obstacles limiting access to education is lack of information about the educational institution, its offered access to adapted materials and classrooms. International institutions emphasise that to promote change in educational institutions a more effective report system must be enforced. Many countries do not have a defined reporting concept, and abuses of rights to education for the intellectually disabled are a common occurrence. Even though the right to education for the disabled is present in national constitutions, laws and policies, problems are created by the lack of a fixed definition of the term *disabled person*. Also, the term *environmental accessibility* is not unified, thus limiting its legal use. Ensuring that educational institutions offer regular quality reports on how they ensure adopted environment promotes integration of the intellectually disabled in the shared environment, as well as encourages the government, teachers and staff to work towards higher educational standards.

Conclusions. Provisions of legal guarantees of access to education for persons with intellectual disabilities are more an exception than a widespread practice.

3D Dissection Tools in Anatomage Supported Interactive Human Anatomy Teaching and Learning

Dzintra Kazoka, Mara Pilmane
Rīga Stradiņš University, Latvia

Keywords: *human anatomy, teaching and learning, 3D dissection tools, Anatomage Table, virtual visualisation.*

Introduction. Teaching and learning of human body take time and may involve the use of different books, cadavers' dissections, plastic models and special interactive 3D images in practical labs. These things help students to form a creative and productive approach, which can give them a lot of benefits for learning or self-educational process. Advantages of the technologies can also be very helpful for teachers to maximise their efforts in teaching. Anatomage Table is a segmented real human anatomy 3D system.

Aim. The main aim of this study is to present the usage and importance of 3D dissection tools in teaching and learning of Anatomy, and to describe and explain the experience with Anatomage table in Human Anatomy studies at Rīga Stradiņš University.

Material and Methods. In the academic year 2017–2018, two 3D dissection tools (scalpels) were used every week in work with Anatomage Table during the practical classes. Discussions between students and teachers were used as methods for collecting data. Students were divided in two groups. The first group consisted of 100 students of the Faculty of Dentistry, and the second – 100 students of the Faculty of Medicine. At the end of each practical class, the tutors performed discussion sessions with students about usage of 3D dissection tools.

Results. Majority of students agree that with just a click of a button there are given several options to study various parts and structures of human body. It is possible to cut the body surface to the inner body using a scalpel, as well as to watch images of 3D sections in three planes. Various types of visualisation can be used to look into the body. It is possible to create incisions and cuts to remove and uncover different layers of organic tissues to move deep inside step by step to know which structures it is necessary to look for. Afterwards, students are shown that it is possible to place the organs back and reattach the bones, muscles and blood vessels in the body, and put the skin back on. Students enjoy having virtual tools in practical classes, and, thus, they learn the material better.

Conclusions. The most significant challenge for students while learning Human Anatomy is direct understanding of body in dimensions and how different structures fit together. There are many ways to improve the field of education with Anatomage Table using 3D dissection tools. These new virtual things promise to make broad Anatomage supported training experiences available for students and tutors. Virtual tools help students and tutors easily understand and memorise different anatomy structures. 3D dissection scalpels are useful for different teaching and learning activities. Nevertheless, the learning experience may be further enhanced by providing opportunity for the study of real materials.

Criminological Aspects of Criminal Profiling of Cybercriminal

Aldona Kipane

Rīga Stradiņš University, Latvia

Keywords: *cybercrime, criminality, cybercriminal, criminal profiling, profiling cybercriminal.*

Introduction. Cybercrime is a specific, complex set of criminal offences, which, like crime phenomenon, can be assessed not only by its type, methods of committing them, harmfulness, social danger, harmful consequences, but also by the personality of a criminal. Criminological research of a criminal personality is carried out in order to identify and evaluate individual peculiarities, which lead to the commitment of a criminal offence. Cybercrime is being committed because of the excessive increase of a cybercriminal's need for expression in an unacceptable way for the public.

Aim. The aim of the study is to describe criminological aspects of the criminal profile of a cybercriminal. Profiling of a cybercriminal is a relatively new cross-disciplinary field that is in continuous development and its practical meaning is rising rapidly within criminology.

Material and Methods. Analysis of scientific literature and researches made prior to this study serve the basis of the research. Mainly the following scientific methods were used: analytical, comparative; historical, systemic, publications and analysis of resources

Results. Unlike majority of society, criminals are not able adequately to adopt norms because of diversions in the process of their socialisation or they accept "the special forms" of criminal environment. It is affected by various factors: heredity, education, culture, lifestyle and socio-economic factors. A cybercriminal denies the values developed by society. In addition, it should be considered that in different situations a cybercriminal has more or less possibilities to commit a crime and that there are circumstances that present a low or high risk. Criminal profiling has multidisciplinary nature. Criminal profiling involves identification of an unknown criminal by using several techniques: analysis of the crime scene; determination of the peculiarities of criminal offence; characterisation of the personality of a criminal (*Kocsis, 2009*). Criminal profiling is the identification process of traits, behavioural tendencies and demographic data based on characteristics of a criminal offence (*Strika, 2015*).

Conclusions. Profiling of a cybercriminal is legal (criminal procedural, forensic, criminological) psychological method, which determines behavioural tendencies of a criminal, personal traits and demographic peculiarities, as well as predicts the criminal's further activities. Inductive profile of a cybercriminal combines: collection of statistical data related to certain behavioural patterns – the demographic characteristics of a criminal. Deductive profile of a cybercriminal includes the following range of data – a set of the evidence obtained; evidence found on the crime scene and traces; victimological aspects; description of a criminal's personality.

Quest for a Son: Women Reproductive Health Strategies in Montenegro

Diana Kiscenko

Rīga Stradiņš University, Latvia

Keywords: *women reproductive health, medical technologies, alternative medicine, reproductive duty.*

Introduction. Historically, women in Montenegro gave birth to several children and were expected to have at least one son to comply with a custom to maintain the family name and lineage. Nowadays, in some parts of society women are still expected to give birth to a son. Especially this phenomenon is present in the northern part of Montenegro, which is perceived as the most traditional, patriarchal and economically underdeveloped region in the country.

Aim. The aim of the study is to clarify reasons and strategies of women, and ethnographic fieldwork; therefore, the research was conducted in Podgorica, the capital, and northern part of Montenegro in the period from June 2017 till March 2018.

Material and Methods. Over the period of eight months semi-structured (50), unstructured interviews and informal conversations (50) were carried out. Additionally, participant observations and observations were conducted throughout the fieldwork.

Results. To have at least one son, women in Montenegro, employ different strategies. Women rely both on conventional medicine and complementary and alternative medicine. Due to the rapid development of biomedicine and new technologies such as ultrasound, amniocentesis, chorionic villus sampling and cell free foetal DNA test, women can find out the sex of the foetus starting from the week 10 or even earlier. This has resulted in a situation where the number and sex of new-born can be regulated, choosing to abort the foetus or not. Along newest medical technologies, women also use complementary and alternative medicine such as tea drinking and stomach massage before the pregnancy in order to have a son.

Conclusions. These strategies could be seen as the effort to gain status and social belonging to family and community in general. By fulfilling the reproductive duty, women especially in the northern part of Montenegro, where there is a high rate of unemployment and access to resources, gain also economic security.

Cost-Benefit Analysis of Smoking in Latvia

Anita Kokarevica

Rīga Stradiņš University, Latvia

Anastasija Ludzeniece

SIA Cetera, Latvia

Keywords: *smoking, costs, benefits, CBA.*

Introduction. Smoking as a habit of citizens makes a sound impact on Gross Domestic Product in two polar ways: state budget income and expense. While regulating cigarette consumption with excise tax, the income budget grows. Simultaneously, state compensates a notable part of healthcare costs to its citizens who experience smoking affected diseases. Is smoking the cost or the benefit? To address the question, a cost-benefit analysis (CBA) should be performed. Historically, CBA carried out analysis of investment projects and programmes in infrastructure. Increasing social investment portfolio of the European Union, the cost-benefit analysis methodology was enhanced to be applicable to specifics of healthcare, education and social care sectors. Both, in infrastructure and social domain, CBA implies discounting of the cash flow and comparing intervene investments and operating costs with the benefits of achieved intervention goals.

Aim. The aim of the research encompasses analysis of Latvian state costs and benefits of cigarette smoking to evaluate the needs for further state policy course.

Results. In 2014, excise tax income for tobacco reached 166.2 mln euros. Rise in the following years made 7% annually. Assuming the dynamics of income, the rise will drop to 3% annually; within next 15 years state will collect about 2.5 bln euros (discounted value) from the restrictions in tobacco production and trade. Smoking initiated disease costs compound Direct costs. These are out- and inpatient service expenses and medicines, other non-healthcare expenses. Consumption of outpatient and inpatient services in Riga and rural areas is very similar. Indirect costs include productivity loss in case of work ability loss and years lost in case of mortality. In 2014, state budget expenses of 79.3 mln euros were assigned to healthcare services for smokers in Latvia. Applying SAF rate of 14.85%, indirect costs related to productivity loss due to work ability loss comprised 3.5 mln euros in 2014. Mortality of smokers reflects the number of years they could have worked if they had not smoked. Based on statistic data of 2014, smokers trigger 9.8 mln euros in indirect costs. Net present value of state costs and benefits within 15-year-period comprises 1.88 bln euros. The cost-benefit ratio reaches 3.84, i.e. benefits significantly exceed the related costs.

Conclusions. The analysis of state costs and benefits demonstrates substantial excess of state benefits resulting from tobacco smoking, although state regulation, control activities are in force, and state healthcare system provides outpatient and inpatient services to active and passive smokers. There is a wide opportunity to tighten the state regulation and review state funding to compensate smoking consequences.

Effect of Healthy Exercises on Body Posture in Pre-Schoolers

*Marina Kolarova, Robert Rusnak, Peter Kutis,
Ivana Astaryova, Zuzana Hudakova
Catholic University in Ruzomberok, Slovakia*

Keywords: *healthy exercises, body posture, kindergarten, pre-schoolers.*

Introduction. Postural disorders are serious problem in preschool children. They can cause vertebral deformities and vertebral pain in the future. An important role, to prevent postural disorders in children, is implementation of healthy exercises in kindergarten. Health exercises are one of the organisational forms of daily activities of children in kindergarten. They are scheduled to be done every morning. Healthy exercises represent the controlled movement activity of children aimed to stimulate their physical and motor development. They contain corrective exercises to support the development of proper body posture.

Aim. The effect of health exercises on body posture in preschool children is monitored in this study.

Material and Methods. The effect of healthy exercises on pre-schoolers body posture was monitored in the school year 2017–2018. The sample consisted of 50 pre-schoolers (22 boys and 28 girls). The pre-schoolers were without any neurological, orthopaedic, vestibular and other congenital or acquired disorders. At the beginning of the school year, in September 2017, pre-schoolers were examined. In the examination, the respondents were barefoot and in underwear and at a distance of one meter. Nine body segments were observed: position of head, position shoulder and shoulder blades, chest shape, cervical curvature, thoracic curvature, lumbar curvature, pelvis position and arch of the foot. To evaluate body segments and overall posture, modified Napoleon Wolanski method was used. The position of segments was evaluated by number 0 to 3. Physiological position of body segment was numbered by 0, slight incorrect position was numbered by 1 and number 2 meant major deviations from the norm. The points were added up and the overall score was calculated. Based on the total, the respondents were divided into three postural categories: A – physiologic posture, B – initial postural disorders, C – serious postural disorders. After the examination, every morning healthy exercises were applied in the kindergarten. Daily exercise lasted for 20 minutes and it consisted of: dynamic booster, healthy exercises and relaxation. In the end of school year, June, 2018, the final body posture examination was performed. The initial and conclusive results were compared.

Results. The first examination: out of the 50 pre-schoolers, 22 preschool children (44%) qualified for category A (physiological posture), 19 preschool children (38%) qualified for category B and 9 preschool children (18%) qualified for category C. In the final examination, out of 50 pre-schoolers 37 preschool children (74%) qualified for category A, 11 preschool children (22%) qualified for category B and 2 preschool children (4%) qualified for category C.

Conclusions. The healthy exercises had a positive effect on the body posture in training children. It is recommended to apply them in regular practice in kindergartens to support the proper development of body posture in children.

Perceived Needs of Low Back Pain Patients and Their Implications for Health-Related Quality of Life

Kristine Komule, Daina Smite
Rīga Stradiņš University, Latvia

Keywords: *lower back pain, perceived needs, health-related quality of life.*

Introduction. The growing number of low back pain patient and functional limitations caused by pain, as well as disability and economic burden, emphasises the importance of effective pain management (Stubbs et al., 2016; WHO, 2013). Yearly, in Latvia approximately one third of people are affected by this disorder (The Centre of Disease Prevention and Control of Latvia, 2015). The lower back pain reduces health-related quality of life, affecting both physical and emotional well-being (Snelgrove et al., 2013) Back pain affects not only every individual who comes into contact with it, but the entire society, as well as national economies, so it is important to look for optimal solutions and treatments. Developing a patient-centered practice model is essential to understand the needs and aspirations of the patient as a personality. Each patient's pain experience is unique; however, there are common trends in both pain management strategies and expectations from healthcare professionals and the outcome of the treatment. To improve the healthcare model for a particular group of patients, patients' health needs studies (e.g. oncological patients) have been relatively widely undertaken in recent years. (O'Brien et al., 2012; Fletcher et al., 2017; Akechi et al., 2012; Lee et al., 2016) The needs of patients with back pain have been poorly studied, and so far, no such research has been carried out in Latvia.

Aim. The aim of this study is to investigate the perceived needs of the low back pain patients and their implications for health-related quality of life.

Material and Methods. Design of study is sequential exploratory research. A semi-constructed interview about the needs of low back pain patient was used for the first part of the study. The second part of the study employed a questionnaire which is based on the needs identified in the first part of the study.

Results. The need to understand the cause of pain through comprehensive explanation and encouragement from a healthcare professional is essential. Incomplete comprehension of the cause of pain has direct negative effect on the health-related quality of life (BP, PF, RP, RE, $p < 0.05$). Among the patients, the belief in the need for external help and need for regular pain management is well-founded and has adverse effects on health-related quality of life (PF, RP, $p < 0.05$). That points to the need to promote patient involvement in the treatment process, training self-help activities, promoting individual-level treatment and healthcare efficiency. It is essential for patients to receive a timely and adequate health service, which improves the quality of life (RP, MH, $p < 0.05$).

Conclusions. Changing the healthcare approach, along with education at society and individual levels, and reducing stigmas can be an important step in addressing the problem of back pain.

Impact of Diagnosis on Psychosocial and Spiritual Needs of a Patient

Anna Kralova

*Palacky University Olomouc, Czech Republic
Central Military Hospital Ruzomberok, Slovakia*

Helena Kisvetrova

Palacky University Olomouc, Czech Republic

Keywords: *psychosocial needs, spiritual needs, deadly diagnosis, satisfaction, coping.*

Introduction. The behaviour of patient acceptance of diagnosis and coping with reality are important factors in the treatment process. One of the greatest challenges for nursing is to provide the greatest possible comfort for every patient. In recent years, scientific advances in healthcare have evolved to the detriment of the importance of human spirituality, particularly in terms of health and disease. Holistic care focuses on the relationship between body, mind, and spirit. Solutions to emotional, social and existential concerns can be realised through a team of interdisciplinary professionals.

Aim. The contribution was elaborated as a pilot study in the project KEGA No 007KU-4/2018 focusing on professionals' applied ethics in the teaching process. The main aim of the contribution is to identify the psychosocial, spiritual and religious needs of patients through a survey carried out in designated healthcare facilities in Slovakia.

Material and Methods. The research aims to identify the components that affect patients' needs the most; especially how severity of diagnosis is influencing patient's needs. To conduct the survey, the standardised questionnaire The Spiritual Needs Assessment for Patient - SNAP was used, constructed by Sharma Rashmi, filled on the basis of Likert scale. The research sample consisted of 113 respondents: 44.2% men and 55.8% women. 69 respondents belong to Christian faith, 13 to another faith, 7 did not provide any religious belief and 24 identified themselves as unbelievers. A fatal (deadly) diagnosis was determined in 49.6% of the respondents and 50.4% of the respondents suffered from not life-threatening diagnosis. Responses were analysed by ANOVA statistics with $p < 0.01$ and $p < 0.05$ using SPSS statistical programme. Reliability of the questionnaire is given by Cronbach's Alpha 0.945 for the total SNAP.

Results. A statistically significant difference at the level $p < 0.01$ has been confirmed in all questions between respondents with fatal diagnosis and respondents with no life-threatening diagnosis. In the domain of psychosocial needs, significant difference regarding to gender, age, education, income, religion and residency was not confirmed. In the domain of spiritual needs significant difference regarding religion in four questions from 13 was partially confirmed.

Conclusions. Patients often have a problem addressing their needs for related psychosocial and physical problems such as physical disability, fatigue, sleep disorders, side effects of treatment, etc. Importance of satisfaction of psychosocial and spiritual needs is increased in time of threat, fatal diagnosis.

Legislative Framework of In-house Procurement

Anatolijs Krivins

Daugavpils University, Latvia

Keywords: *in-house Procurement, free competition.*

Introduction. Directive 2014/24/EU does not affect the freedom of Member States to define, in conformity with the Union law, what they consider to be services of general economic interest, how those services should be organised and financed, in compliance with the State aid rules, and what specific obligations they should be subjected to. This research examines the importance of the concept of the in-house transactions in Public Procurement.

Aim. The aim of this research is to analyse the Legislative Framework from the perspective of the principle of free competition, to investigate the data of the In-house Procurement in the *European Union*, to explore the advantages and disadvantages of “pure” in-house and “institutionalised” in-house procurement.

Material and Methods. The study of free competition is based on works and the main ideas of the following authors: Adam Smith, Jean-Baptiste Say, David Ricardo, Thomas Robert Malthus, John Stuart Mill, John Maynard Keynes, Friedrich August von Hayek and Milton Friedman.

Results. Having done the analysis of the EU directives and regulations concerning in-house Procurement (Directive 2014/24/EU; Directive 2014/25/EU; Directive 2013/34/EU; CJEU Case C-107/98, *Teckal Srl vs. Comune di Viano and Azienda Gas-Acqua Consorziale (AGAC) di Reggio Emilia*; CJEU Case C-26/03, *Stadt Halle and RPL Recyclingpark Lochau GmbH vs. Arbeitsgemeinschaft Thermische Restabfall und Energieverwertungsanlage TREA Leuna*; CJEU Case C-84/03 *Commission vs. Spain*; CJEU Case C-340/04, *Carbotermo SpA and Consorzio Alisei vs. Comune di Busto Arsizio and AGESP SpA, pa*; CJEU Case C-295/05, *Asociacion Nacional de Empresas Forestales (Asemfo) vs. Transformacion Agraria SA (Tragsa) and Administracion del Estado*; CJEU Case C-480/06, *Commission vs. Germany*; CJEU Case C-324/07, *Coditel Brabant SA vs. Commune d’Uccle and Region de Bruxelles-Capitale*; CJEU Case C-573/07, *Sea Srl vs. Comune di Ponte Nossa*; CJEU Case C-196/08 *Acoset*; CJEU Case C 182/11 and C 183/11, *Econord SpA vs. Comune di Cagno and Comune di Varese (C-182/11) and Comune di Solbiate and Comune di Varese (C-183/11)*), as well as normative regulation of several countries. The research provides a theoretical framework for understanding the concept of the in-house transactions in Public Procurement.

Conclusions. In-house Procurement contains considerable threats to the principle of free competition in Public Procurement, the data obtained confirm this hypothesis. The results obtained allow to develop recommendations for the Legislative Framework of in-house Procurement. The results of the research can be used by procurement theoreticians and practitioners.

Brain Injury after Acute Carbon Monoxide Poisoning: Advanced Neuroimaging, Correlation with Carboxyhaemoglobin Level in Blood and Clinical State

Gaida Krumina, Laura Liepina, Martins Peterfelds, Agate Luse
Rīga Stradiņš University, Latvia

Roberts Stasinskis
Riga East University Hospital, Latvia

Keywords: *carbon monoxide, CO poisoning, COHb level, brain damage.*

Introduction. Carbon monoxide (CO) external inhalation is currently the most common cause of fatal poisoning worldwide. CO binds to haemoglobin 230–270 times more intensive than oxygen, leading to formation of carboxyhaemoglobin with subsequent tissue hypoxia and hypotension. Brain is primary affected due to its highest oxygen demand. Early detection of affected areas is crucial for optimal treatment decisions and prognosis of possible neuropsychiatric syndrome development in a later stage of the disease.

Aim. The aim of the study is to assess neuro radiological signs and their combinations in acute CO poisoning depending on carboxyhaemoglobin (COHb) level and clinical state as well as compare CT and MRI sensitivity in the acute stage of CO poisoning.

Material and Methods. The study included 60 consecutive patients, 31 men, 29 women, mean age 53.0 (\pm 23.0) admitted to Riga East University Hospital, Toxicology Clinic with acute CO poisoning. COHb level in blood was determined and clinical state was evaluated according to Glasgow Coma Scale (GCS) score. 49 CT and 19 MRI brain investigations were performed using standardised protocols in acute stage, described independently by two radiologists, systematised and analysed in relation to low, medium and high COHb level in blood and GCS score.

Results. MRI was positive in 73.7%. Typical location of lesions were unilateral and bilateral globus pallidus, caudate nucleus, hypothalamus, thalamus, hippocampi, selective zones in cortex: 78.6%, priority fronto-, temporo-parietal cortex, followed by insular cortex and hippocampi; basal ganglia 50%, most frequently of them globus pallidus 85%, white matter changes 42.9%, micro haemorrhage in basal ganglia 21.4%. The most sensitive sequences were DWI and SWI for haemorrhagic inclusions. Also, direct correlation between COHb level and MRI was not found, combination of several vitally important locations including basal ganglia, cerebral and cerebellar cortex, substantia nigra, hippocampi, mesencephalon and generalised brain oedema were found in medium but mostly in high level of COHb. Comparatively, CT sensitivity was significantly lower. CT was positive in 16.7% including basal ganglia hypodensity 8.2%, brain oedema 6.1%, haemorrhage in basal ganglia 4.1%.

Conclusions. MRI is highly susceptible to early diagnosis of specific CO-induced brain damage, which allows judging on pathophysiology of brain damage and predicting the development of disease in each individual poisoning case. In early stage specific zones of grey matter could be predicted to be more vulnerable to hypoxia from CO poisoning than white matter. CT sensitivity and specificity is very low, it is not suitable for the detection of brain damage in an acute phase of poisoning with CO and it can only act as an exclusion method for detection of other brain pathologies in unconscious patients.

Problems Associated with the Right of Access in Context of the Rights of the Child

Inga Kudeikina

Rīga Stradiņš University, Latvia

Keywords: *the right of access, the rights of the child, custodians.*

Introduction. The child is a special right-holder. In the legal system, the status of the child is characterised by substantive rights that are typical only for children and by different means of exercising and safeguarding rights, i.e. the rights of a child are exercised by custodians acting on behalf of the child. It should be noted that the state, which uses the levers of public power, is also involved in the protection and safeguarding of the rights of the child in the most direct way. The right of access should be mentioned as a special right of the child. This comprises the right of a child to direct contacts with the child's parents and siblings. Communication forms an integral part of daily lives of people as social beings. Communication with parents is essential for a child undergoing the process of personality development. The right of access is an absolute right, which may be restricted only in cases specified in laws, provided that access is harmful to a child. Although the right of access is provided for by law, the existing legal framework is still deficient, which is confirmed by frequent disputes arising over the exercise of this right. The case-law shows a trend that, in certain cases, the right of access may be used by parents to settle their mutual relationships. This is evidence that the right of access does not always serve its main goal, which is to ensure the best interests of the child.

Aim. The objective of the thesis is to research the legal framework dealing with the right of access in the context of the rights of the child by finding a way to make the exercise of the right of access solely in the interests of the child more effective.

Material and Methods. The research has employed descriptive and analytical, inductive and deductive methods. Laws, the opinions of legal scholars and case-law have been analysed using these methods; conclusions and suggestions have been formulated.

Results. As a result of the research, the following factors have been identified: 1) the right of access should be exercised solely in the interests of the child; 2) the right of access is an absolute right, which should be used regardless of whether parents have custody of the child; 3) the right of access is not part of the right of custody; 4) there is a lack of legal instruments that would prevent the use of the right of access contrary to its goal.

Conclusions. The right of access exercised by parents neglecting the best interests of their child, when the child is used merely as a tool to settle their mutual relationships, is a major concern. Considering that, as regards existing disputes, it is more likely that a decision on the exercise of the right of access might not fully meet the best interests of the child, the improvement of the existing legal framework must be focused more on laws that would eliminate the sources of disputes.

Classical and Rapid Recovery Physiotherapy Approach of Total Hip Arthroscopy in Slovakia

Peter Kutis, Matus Kozel, Maria Lehotska
Catholic University in Ruzomberok, Slovakia

Keywords: *total hip arthroscopy, THA physiotherapy, THA nursing, rapid recovery in THA, stress and fear effect.*

Introduction. In general, physiotherapy and nursing for total hip joint replacement is considered to be a routine matter that deals mainly with mobility training, increased muscular strength, and basic day-to-day activities such as bed-to-chair transition, standing and walking. Hip fractures and arthrosis are currently one of the serious illnesses presenting as a serious health problem faced by the aging population. Nowadays, which is primarily aimed at reducing the cost of health care, it is necessary to ensure that this reduction in costs is not at the expense of the quality of health care and future medical success. The health problem is not just the wound itself or arthrotic changes accompanied by severe pains and difficulties to get up and walk on the affected lower limb, but also the risk of inadequate healing after surgery. Also, significant disability and reduced ADL performance may continue despite the immense advances in surgical techniques, nursing care and rehabilitation.

Aim. The aim of the thesis is to point out the importance of physiotherapy and nursing care of the patient for total replacement of the hip joint and its impact on the reduction of recovery after surgery in the comparison of classical and rapid recovery approach.

Material and Methods. As a method, case studies of two patients indicated for total hip replacement were selected. The patients underwent a three-month preoperative case study (from the moment of indication to surgery to performance itself) supervised by a physiotherapist and a nurse and after operation physiotherapy and nursing treatment in hospital and home care. A comprehensive preoperative programme was developed taking into account the patient's health and Rapid recovery recommendations in preoperative care. During the preparatory phase of the operation, the patient was modified by motor stereotype walking, strengthened lower limb muscles, especially *musculus quadratus femoris* and *pelvis stabilisers*.

Results. Lower limb circumference values increased by 1.5 cm, hip muscle strength increased from grade 3 to grade 4 of the Janda muscle tests, and shortened muscles *iliopsoas* were released on the affected side. From a nursing care point of view, the patient managed regular daily activities and proper mobility on the bed. In classical approach, patients did not have any preparation, it was completed only on their own. After the operation, rapid recovery instructions were followed; length of stay in hospital was four days (in classical approach – 7 days) and home care in total lasted for three months (in classical approach – 5 months).

Conclusions. Rapid recovery programme requires the development of a new culture not only in normal orthopaedic outpatient clinics but also in hospitals. The results of total hip joint surgery studies show a significant reduction of stress and fear from operation.

Specificity of Social Existence in Megalopolis

Svitlana Kutsepal, Yuliia Perebyinis

Poltava Law Institute of Yaroslav the Wise National Law University, Ukraine

Nataliia Zinchenko

Ukrainian Medical Stomatological Academy, Ukraine

Keywords: *social existence, megalopolis, traditional values, inhabitants, lifestyle.*

Introduction. The main feature of society of the 21st century is mass consumption of goods, services, information, ideas, etc. which is clearly manifested in a megalopolis where peculiar conditions of human existence, specific mentality, different from the mentality of residents of a small town or village, are created. Traditional values and customs are transformed or neglected there.

Aim. The aim of the study is to analyse factors determining specific character of human existence in a megalopolis.

Material and Methods. An inductive method, a deductive method, a method of system analysis, a comparative method, an analytical-prognostic method, a method of sociological poll.

Results. Rapid development of cities is a consequence of transformational processes taking place in the modern world. In sociology, typical social and existential crises of megalopolis inhabitants (loneliness, social insecurity, deviant behaviour) have long been identified, which gives grounds to argue about an increased risk of loss of existential meaning of being and development of depression and suicidal attitudes among megalopolis inhabitants. In the rapid whirlpool of indifference and self-sufficiency of a megalopolis, an individual resident's loneliness is particularly acute as others are captured by problems of their own survival and comfort. Megalopolis inhabitants are forced to live at fast, exhausting pace, each day consuming significant flows of services and information provided both directly and indirectly through advertising that captures all the visual space and causes consequent inhabitants' sensory and psychological reactions. Megalopolis inhabitants are forced to choose between the two extremes – either consumer euphoria, or consumer despair.

Advertising forms standards of behaviour, determines actions and decisions of megalopolis inhabitants, influences political and economic preferences, creates a space of hyperreality of existence where meaning of real things and relations becomes meaningless being substituted by their replicas and simulacra. Unlike a village or town, where living conditions are quite moderate, in a megalopolis the contrast between poverty and wealth is strikingly highlighted. Unemployment, ethnic and multi-cultural conflicts, a much higher crime rate are also realities in a big city. The value of communication is neglected as it often has a utilitarian character. However, more tolerant treatment of civil marriage, attention to disabled people and migrants, creation of charitable organisations, homeless shelters, etc. can be considered as certain advantages of a megalopolis.

Conclusions. In a modern megalopolis lifestyle, people have more opportunities to meet their cultural, educational and creative needs. A megalopolis is a social space and simultaneously a social organism which lives and functions according to its own laws, creates a peculiar model of social existence. Flows of information, services, finance form megalopolis inhabitants' view of world which has its social and cultural manifestations.

Assessment of Latvian Army Soldier's Energy Consumption Used Different Tactical Load Carrying Systems

Eva Lace, Rudolfs Ceseiko

Rīga Stradiņš University, Latvia

Aivars Vetra

Rīga Stradiņš University, Latvia

Riga East University Hospital, Latvia

Keywords: *load carriage, energy cost, load distribution, soldier equipment, tactical vest, hip belt.*

Introduction. A soldier on his duties has to carry heavy equipment that is essential and necessary for the success of the mission and survival, but the weight and its resulting load create biomechanical and physiological changes in the body – increase energy consumption, cause fatigue, which has a negative impact on mobility, on quality of performance and contributes to a risk of injury, thus endangering the safety and life of the soldier.

Aim. The aim of the study is to explore the significance of tactical vest and tactical vest with hip belt on soldier's energy consumption during walking.

Material and Methods. Study participants were Latvian Army soldiers ($n = 21$, age 20–30) who three times walked on a treadmill for five minutes at a speed of 5.4 km/h, on gradient of 5% with different type of equipment: in uniform with a tactical vest (2.1 kg), with a weight (10 kg) above the chest and stomach, and a tactical vest with a hip belt (2.1 kg), for which the weight (10 kg) was placed on the belt around the hips. Using the gas analyser, average values of VO_{2peak} , VE, RER and HR were determined during the fifth minute.

Results. Comparing walking with tactical vests to uniforms VO_{2peak} was on average 10.7% and 13.5% higher, VE on average by 11.7% and 16.4% larger, HR by 9.8% and 10.7%, with the slightest change in RER, by 2.3% and 3.4%. HR was over 10.3% and 10.8% larger. Using tactical vests with hip belt and weight around the hips, the average VO_{2peak} and HR were 2.5% and 4.5% larger than the waist with the weight above the chest and stomach, but the type of tactical vests (weight distribution) was not large and statistically significant in RER and HR indices, the average results were 1.1% and 0.7% ($p > 0.05$).

Conclusions. Soldiers wearing tactical vests with 10 kilograms of heavy equipment during the walk, significantly increased energy consumption indicators such as maximum oxygen consumption, minute ventilation and heart rate. The significance of the use of wearing different types of tactical vests in the energy cost of soldiers varies. Soldiers carrying 10 kilograms with a tactical vest on the hip belt have a higher average maximum oxygen consumption and minute ventilation than wearing the tactical vest where the weight is placed above the chest and stomach.

Physical Activity in Healthy Urban Adults and Its Association with Body Composition Parameters

Rudīte Lagzdina, Maija Rumaka
Rīga Stradiņš University, Latvia

Keywords: *physical activity, adults, urban areas, potential risk factors.*

Introduction. An adequate amount of physical activities (PA) in adults improves cardiorespiratory fitness, metabolic and bone health and helps to maintain normal body weight and composition. In addition to leisure time, domestic and transport-related activities, daily physical activities substantially depend on occupational PA. Many people in urban areas are employed in professions with negligible PA, which can be considered a potential risk factor for decreased total daily PA.

Aim. The aim of the study is to examine the PA pattern related to gender and occupational PA and identify PA associations with body composition parameters.

Material and Methods. The PA of healthy volunteers ($n = 97$) aged 21–49 years was determined by a self-administered questionnaire (IPAQ-SF). In addition, participants were asked to characterize the type of their occupational duties depending on the volume of physical work involved. The multi-frequency bioimpedance analyser Tanita MC-180 MA was used for the determination of body mass and body composition, including fat and muscle mass segmental distribution in each extremity and trunk.

Results. Participants in the group with low occupational PA reported less walking and moderate PA and more sitting time than in group with moderate and vigorous occupational PA, also total PA expressed in MET-minutes / week was lower in the group with low occupational PA ($p < 0.05$). Body composition parameters were not different between participants in both occupational groups. Men reported more minutes per day and MET-minutes / week of vigorous PA than women ($p < 0.05$). In males, negative correlations were found between body fat percent, visceral fat range, segmental fat mass and moderate activity time, moderate MET-minutes / week, whereas positive associations were observed between muscle mass in legs and vigorous activity duration in day, vigorous MET-minutes / week ($p < 0.05$). In female group, the obtained results identified negative correlations between visceral fat and vigorous activities parameters, but positive correlations were found between lean body mass, trunk, leg muscle mass and moderate activity ($p < 0.05$). Low occupational PA rises risk of decreased weekly PA; however, it does not affect body composition. The association of physical activity type and body composition parameters is gender-dependent.

Conclusions. Adults who are involved in professional duties with insignificant PA and longer sitting time have lower PA in general comparing to those who have moderate to vigorous PA at work. In males, a greater duration of moderate activities is associated with a lesser amount of total, visceral and segmental body fat. Greater time spent in vigorous PA is associated with higher leg muscle mass in males and lower visceral fat range in females. Females who engage more in moderate activities have higher lean body mass and segmental muscle mass.

Quality-Work-Competence among Latvian Nurses: Comparison of Different Education Levels

Svetlana Lakisa, Arturs Paparde, Kristaps Circenis, Ivars Vanadzīņš
Rīga Stradiņš University, Latvia

Keywords: *nurse education, Quality-Work-Competence questionnaire.*

Introduction. The most important capital of each organisation is its human resource, and nurses are an important human resource in healthcare organisations. The healthcare sector is one of the most complex sectors in occupational health and safety, due to many specific risks with limited prevention possibilities. Studies show a high level of stress in nursing and burn-out at work. Education level of a nurse can influence perception and understanding of their work environment quality, as well as work duties and related risk factors can differ.

Aim. The aim of the study is to observe differences between educational groups in Quality-Work-Competence questionnaire (QWC) subscales.

Material and Methods. The nursing staff questionnaire was based on the QWC questionnaire, which has been developed and validated among healthcare staff. The survey was conducted during the Interreg Central Baltic project “Nursing Education Development”. The number of the respondents comprises 432 nursing practitioners. Nursing work environment quality, work and competence were assessed as average points in every subscale; one is the best possible answer and four or five is the worst answer. The QWC survey consists of eleven subscales: Goals, Management feedback, Participatory management, Employeeship, Leadership, Efficiency, Competence development, Work-related exhaustion, Work climate, Organisational energy, Work intensity. The Mann-Whitney test was used to compare subscales values between four educational groups: medical college, Bachelor level, Master level and other medical education.

Results. Most of the respondents had Bachelor level education ($n = 288, 71.1\%$). All respondents were women, the average age was 40.5 ± 11.5 years (21–78 years) and the average length of work experience was 16.2 ± 12.1 years (3 months to 51 years). Statistically significant difference ($p < 0.05$) in average points were observed in four QWC subscales. Management feedback subscale points were higher for the Master’s (1.98 ± 0.59) compared to other medical education (1.58 ± 0.51). Employeeship subscale points were higher in medical college education group (1.89 ± 0.46) and Bachelor’s level (1.85 ± 0.47) compared to Master’s level education (1.69 ± 0.45). Leadership subscale points were higher in Bachelor’s level (2.03 ± 0.63) than medical college education (1.92 ± 0.61). Organisational energy subscale points are the lowest in other medical education group (1.62 ± 0.71) compared to medical college (1.94 ± 0.58), Bachelor’s (2.07 ± 0.68) and Master’s level (2.13 ± 0.71).

Conclusions. There is difference in Quality-Work-Competence subscales in different education groups.

Skin Cancer Screening – Better Safe than Sorry

Marta Lange, Emilija Vija Plorina, Ilze Lihacova, Janis Spigulis

Institute of Atomic Physics and Spectroscopy, University of Latvia

Aleksandrs Derjabo

Oncology Centre of Latvia, Latvia

Keywords: *skin cancer, non-invasive, multispectral imaging, diagnostics.*

Introduction. Skin cancer is the most common form of cancer. Melanoma and other skin cancer types have become a concerning issue worldwide. In this article the importance of early skin cancer detection and the non-invasive optical diagnostic method that can be easily used by the primary care physician performing skin screening for general population, including also the resource scarce communities, has been explained.

Aim. The aim of the study is to evaluate the effectiveness of the proposed non-invasive multispectral imaging method for skin cancer screening

Material and Methods. The study was performed at the Institute of Atomic Physics and Spectroscopy in cooperation with Riga Technical University where the diagnostic device prototype has been designed and constructed, as well as Oncology Centre of Latvia (LOC) where the clinical trial was carried out. The optical device prototype consists of CMOS camera, ring of LEDs at specific wavelengths according to different absorption spectra of chromophores in human skin, polarisers, the case of the device has been custom 3D printed, the system is connected via USB and run by uEye Cockpit. Ink image capturing software and later analysed with MATLAB.

A protocol was created to acquire images of the lesions of cancer patients who came in for the first time and regular skin condition check-ups with an experienced oncologist-dermatologist. Each patient was visually inspected with a routine dermoscope and, if suspected, sent for cytology and histology tests. Before the test, the suspicious lesions were imaged with the proposed device at various wavelengths: 525; 660; 940 and 405 nm. Later, the acquired images were analysed by calculating a parameter p' that would characterise the possibility of this lesion being Malignant Melanoma (MM). The autofluorescence (AF) images were analysed for distinguishing such malformations as: Seborrheic Keratosis (SK), Hyperkeratosis, regular nevi, haemangiomas, as well as malignant lesions, like MM and Basal Cell Carcinoma (BCC). Also, post-operative scars were imaged with the same method to see if it is possible to evaluate the changes in the scar and evaluate the cancer reoccurrence.

Results. In total, 790 images of 150 patients have been captured, from which 7 were MM, 63 were BCC and 59 SK. The results were compared with the image post-processing of average AF in region of interest (ROI) in lesions, as well as the p' parameter calculation from multispectral images. With these both approaches, it is possible to distinguish MM with 97% specificity and 96% sensitivity, pigmented BCC with 100% specificity and 95% sensitivity, SK with 100% specificity and 100% sensitivity.

Conclusions. A non-invasive optical method implemented in a portable, inexpensive device that can capture spectral images of the lesion, giving a preliminary evaluation has described in this study. It is a great tool in a family doctor's or dermatologist's office for skin cancer screening and diagnostic protocol improvement to earlier discover and evaluate malignant formations like MM and BCC and, thus, save more lives.

Problems of Access to Justice in Rural Areas: Example of Ukraine

Andriy Lapkin

Yaroslav Mudry National Law University, Ukraine

Keywords: *access to justice, rural areas, judicial protection, human rights.*

Introduction. The human right on access to justice is the main guarantee of the right to the judicial protection, fixed in the Convention for the protection of human rights and fundamental freedoms (1950). It is especially topical to ensure this right for the people living in rural areas since its specifics demands creation of additional guarantees of access to justice.

Aim. The aim of this scientific research is to allocate problems of access to justice in rural areas on an example of Ukraine and search of ways of their decision.

Material and Methods. The research is based on Ukrainian and foreign scientists' works devoted to problems of availability of justice. For the conduct of the research, such methods have been used: dialectic, comparative, synthesis and analysis, statistical, sociological etc.

Results. For the people living in rural areas, it is necessary to consider access to justice as possibility of free application to justice system for protection of their rights that is without any obstacles or difficulties. However, in need of application to a court, people living in rural areas face a lot of problems, such as territorial, economic and organisational. Territorial problems consist in territorial distance of judicial authorities from rural areas. Today courts of the first instance operate in Ukraine on the level of cities and districts. However, judicial reform provides creation of district courts which will act on the level of several districts. Thus, country people are moving away from judicial authorities. Economic problems consist in high level of court expenses and low material well-being of rural dwellers. In comparison with the cities, the average level of income in rural areas is much lower. However, the level of court expenses does not consider a difference in income of the people appealing to a court. Moreover, rural dwellers initially incur higher expenses connected with the need of trip to the city which the court is located in. Organisational problems consist in absence in rural areas of the necessary infrastructure facilitating access to court (lack of transport infrastructure, absence of high-speed Internet and possibility to use technologies of "electronic justice").

Conclusions. People living in rural areas face several additional obstacles at application to a court compared to city dwellers; therefore, their access to justice is limited. For the solution of this problem, it is possible to offer the following steps: general development of infrastructure in rural areas; formation of judicial system based on uniform territorial distribution; reduction of court expenses for dwellers of rural areas proportionally to the level of their income; development of institution of lay justice operating in rural areas.

Are There Urban-Rural Reproductive Health Disparities in Latvia?

Gunta Lazdane, Dace Rezeberga
Rīga Stradiņš University, Latvia

Iveta Pudule, Iriša Zīle, Iveta Gavare
Center for Disease Prevention and Control, Latvia

Keywords: *reproductive health, contraceptive method, pregnant women, sexuality education, antenatal and perinatal care.*

Introduction. The influence of socioeconomic determinants on sexual and reproductive health has been studied in many countries and summarised by the WHO (2010) and other organisations; however, many of these factors, including influence of the urban or rural residence, are region and country specific.

Aim. The objective of the study is to compare reproductive health status of urban and rural population in Latvia based on official statistics and surveys carried out since 2010.

Material and Methods. The following data sources were used: data of the Reproductive Health survey (RHS) in Latvia (2011), Health Behaviour in School-aged Children (HBSC) study (2014) and Medical Birth Register (MBR) of Latvia (all births from 2017). Population groups from Riga, other cities and rural areas were compared.

Results. According to RHS data, almost one fifth of reproductive age women (18%) and men (20%) use withdrawal as contraceptive method with no statistical difference in Riga, cities and rural areas. The prevalence of effective contraceptive methods is low in Latvia and is not influenced by the place of residence. HBSC demonstrates a higher prevalence of sexual intercourse at the age 15 among rural adolescents (21.6% urban boys vs. 26.0% rural boys; 12.6% urban girls vs. 25.7% rural girls, $p < 0.0001$), and lower prevalence of condom use in this group (72.3% urban vs. 65.0% urban boys, and 70.6% urban vs. 64.3% rural girls). MBR confirms that there is a higher proportion of pregnant women with incomplete antenatal care outside Riga ($p < 0.05$) and the risk of perinatal mortality is 1.5 times higher outside Riga ($p < 0.05$). In earlier analysis, the influence of the place of residence on reproductive health in Latvia has often been neglected.

The difference in reproductive health behaviour of adolescents between Riga and other areas in Latvia may be explained by better access to different sources of sexuality education in the capital. In later reproductive age, there is no difference in use of contraceptive methods with very high prevalence of ineffective methods used both in cities and villages. It may be a sign of lack of evidence-based information as well as access to modern contraception all over the country. Perinatal health outcomes are better in Riga that is directly linked to the quality of available and accessible information and health services.

Conclusions. The available reproductive health information is limited and often out-of-date. In-depth studies, linking reproductive behaviour to sexual and reproductive health outcomes and well-being, are required to ensure countrywide actions focusing the existing barriers in improving reproductive health in geographic places outside Riga that are based on evidence.

Role of Key Agents in Transformation of Healthcare System in Lithuania

Vylius Leonavicius

Vytautas Magnus University, Lithuania

Keywords: *healthcare system, modern society, models of diseases, reorganisation, key agents.*

Introduction. The reorganisation of the Lithuanian healthcare system, which took place after the declaration of independence, can be fruitfully analysed from the point of view of social structures as well as the point of view of social agents. From the point of view of the structural development of the modern society, a healthcare system can be of two different types: the early modern type or the late modern type. The former is based on the biomedical model of disease and health, while the latter is based on the biopsychosocial model. The biomedical model of disease and health serves as a basis for a health policy, aimed at the treatment and prevention of infectious diseases. However, it also establishes the dominant position of institutions and medics, as well as a passive role for patients. The biomedical model is effective in a society of first modernity, where infectious diseases are prevalent. The biopsychosocial model of disease and health becomes effective when chronic diseases become more prevalent in morbidity and mortality structures of a modern society, because in that case prevention and even treatment steps out of the boundaries of healthcare institutions.

Aim. The aim of this report is to present the choices made by key agents in healthcare policy in Lithuania after independence (1990), and to analyse them from the perspective of healthcare model of the late modernity.

Material and Methods. The interview with the former key agents in health care policy was applied as a way to reach this aim.

Results. During the Soviet period and up until 1990, the Lithuanian healthcare system was of the early modern type (or the biomedical model of disease and health). That was the case due to the outcomes of the Soviet policy, which led to the stagnation in the development of the USSR society and the domination of the institutions of first modernity. It was also the case due to the authoritarian nature of the political system, which affected all the institutions in the society. The hierarchical and authoritarian nature of the healthcare system of the first modernity was reinforced even further and led to an establishment of a medical oligarchy. After the independence, a transformation was started in the Lithuanian healthcare system, based on the public health programmes of the World Health Organisation and on the biopsychosocial model. Many laws were adopted which were conducive to the primary healthcare level (for example, the introduction of family doctors). However, the actual improvements of public health were developing very slowly. One of the reasons is related to the medical group of powerful, decision-making social agents in the healthcare system) who kept their position during transition process.

Conclusions. The data show that most key positions were occupied by members of the former high positions of healthcare system, who made the choices to support the upper level of the healthcare system, despite the new laws, which allowed to develop the primary level of health care.

Medical Error and Its Treatment in Latvian Legal System

Aldis Liepins

Rīga Stradiņš University, Latvia

Keywords: *medical error, law system.*

Introduction. The development of modern medicine makes us draw conclusions about the effects of medical error on people's lives and health. In the USA, medical errors are the third biggest cause of death. This fact has already caused scientific interest about the issue in Latvia. There is no record of such events in Latvia, but the European Commission has observed that 8-12% of patients in hospitals are the victims of accidents connected with health care. The accidents may include infections obtained from health care (approximately 25%), medical treatment mistakes, surgical mistakes, medical instrument or medical equipment mistakes, diagnostic errors or after receiving results of medical examination not getting the proper treatment. In the last decades, the idea that people should not be punished for committing a medical error and the practice should be encouraged has been developed. It is reported so, just like in aviation, it could be analysed and a similar medical error would not be repeated by other medical practitioners.

Aim. The aim of the study is to explore what measures should be taken so that the Latvian legal system would not be late to the introduction of the blameless concept and to encourage medical practitioners to report medical errors.

Results. The administrative practice of the Health Inspection in the cases of the Medical Risk Fund indicate that, in the event of a payment of reimbursement from a medical treatment risk fund, the Health Inspection shall assess whether the medical practitioner concerned is not called at administrative liability in accordance with Article 45.1 of the Latvian Code of Administrative Violations (LAPK). It is also possible that a medical practitioner is criminally liable for the failure of professional obligations or negligent performance in accordance with Article 138 of the Criminal Law.

Conclusions. It is not easy to introduce the new approach because it is against the historically formed legal system, which implies to punish every medical practitioner who commits an offense. Patients have the right to get payment if their health has been harmed in the process of medical treatment. The rights implementation mechanism of a patient calls for identifying the guilty medical practitioners.

Smoking and Alcohol Abuse – Predictive Factors in Oropharyngeal Squamous Cell Carcinoma (A Retrospective Study)

Andrejs Lifšics, Valerija Groma

Rīga Stradiņš University, Latvia

Elza Rate

Riga East Clinical University Hospital, Latvia

Modra Murovska

Rīga Stradiņš University, Latvia

Juris Tars

Riga East Clinical University Hospital, Latvia

Keywords: *smoking and drinking habits, oropharyngeal squamous cell carcinoma, predictive survival factors.*

Introduction. Oropharynx is one of the most common localisations for malignant neoplasms in head and neck region. The GLOBOCAN data (2012) confirm over 140,000 new cases of pharyngeal cancer worldwide and age-standardised incidence of 1.9 per 100,000, whereas in Europe – about 34,000 new cases and age-standardised incidence of 2.9. Major etiological and predisposing factors for this neoplasm include smoking and drinking habits.

Aim. The aim of this study is to collect data of smoking and drinking habits in patients with oropharyngeal squamous cell carcinoma (OPSCC) and see if these factors can be used as predictive survival factors.

Material and Methods. A retrospective study was conducted with 247 patients diagnosed with OPSCC, staged following the TNM classification of the International Union against Cancer (6th edition) for oropharyngeal carcinoma and treated at Riga East Clinical University Hospital Stationary Oncology Centre of Latvia (RECUH OCL) between January 1, 2000 and December 31, 2010. Kaplan-Meier survival analysis was used for statistical data analysis. Statistical testing for differences in survival rates was performed using the log-rank and Breslow tests. A Cox regression method was used to estimate hazard ratios.

Results. Less than one-tenth of the cohort presented with the stage I and II – 3 (1.22%) and 19 (7.72%) patients, accordingly, whereas a major portion – 224 (91.6%) revealed advanced stage of the disease. Only 8.10% (n = 20) of all reviewed patients were female and 91.90% (n = 227) – male. Mean patient age was 60 years, median – 60.20 years. Most of the patients were regular smokers (75.95%, n = 180), habitual drinkers (35.19%, n = 82) or were exposed to both aforementioned major risk factors (31.47%, n = 73). Most of the smokers were male (n = 171). Median pack years were 30.0 (SD = 17.9). Statistical analysis showed moderate correlation between smoking and survival ($V_1 = 0.21$, $P\chi = 1.77 \times 10^{-3}$), but there was no correlation between mean survival time and smoking ($\eta = 0.17$). Kaplan-Meier survival analysis showed statistically higher overall and disease specific survival in those patients who did not smoke ($p < 0.05$). Kaplan-Meier survival analysis, according to alcohol abuse, showed significantly higher overall survival (OS) in those patients who did not abuse alcohol ($p = 0.03$), but the significance of alcohol abuse in disease specific survival (DSS) decreased ($p = 0.08$). Kaplan-Meier analysis showed significantly lower OS and DSS when both risk factors (alcohol abuse and smoking) were present. Cox regression multivariate analysis showed that alcohol abuse and / or smoking significantly increase early death risk.

Conclusions. Such bad habits as smoking and alcohol abuse are separate risk factors and must be included in risk and outcome assessment of OPSCC. Results show that patients with no bad habits had better 3- and 5-year OS and DSS and lower HR (hazard ratio). It appears that smoking has a higher predictive value in OPSCC patients than alcohol abuse.

Coping with Death and Awareness of Mortality in Patients and Their Relatives

Vladimír Littva

Catholic University in Ruzomberok, Slovakia

Anna Kralova

Central Military Hospital Ruzomberok, Slovakia

Keywords: *death, mortality, dying, coping with death, awareness of mortality.*

Introduction. People often begin to realize the transience of life and think about the meaning of dying when someone from their loved ones is in danger of death. They start to think about the problems that have not been resolved and can affect the inner balance and suffering of the patient. Such situation (potentially) can impair faith and the system of values which provide strength, hope and meaning of life.

Aim. The contribution is based on pilot study focused on Acceptance of Dying among believer and non-believer patients and their environment which is a part of the project KEGA No 007KU-4/2018. The main aim of the contribution is to identify the impact of variables such as gender, education, age, residence, religion, and position (dying or relative) on coping with death and acceptance of mortality.

Material and Methods. Acceptance of Dying and Coping with Mortality Questionnaire – 20 Items (ADCMQ20) was used in the study which was analysed by statistical programme SPSS 22 for correlations with $p < 0.01$ and $p < 0.05$, as well as descriptive characteristics for variables. Research sample consisted of 275 respondents: 119 (43.3%) men and 156 (56.7%) women, 95 (34.5%) dying patients and 180 (65.5%) relatives. Age of all the respondents was 18+. The research was held in 2018 in different health care facilities in Slovakia. Intrinsic reliability of ADCMQ20 using the Cronbach Alpha coefficient which is 0.885 in the whole set was evaluated.

Results. Mean for the entire set was 3.51, but for individual items ranged from 2.90 to 4.01 which represents a rather significant coping (maximum was 5.0). In Domain 1, concerning feelings about death and mortality, statistically significant difference was confirmed between groups regarding position (dying or relatives) in 8 items of 10, regarding residency in 8 items of 10 and regarding religion in 9 items of 10. In Domain 2, focused on perception of own mortality, statistically significant difference was confirmed between groups regarding position (dying or relatives) in 6 items of 10, regarding residency in 5 items of 10 and regarding religion in 5 items of 10.

Conclusions. Based on the findings, it can be concluded that priority needs in life can be changed, but the final stage of life is dominated by spiritual needs. Similarly, acceptance and coping with death and mortality is marked by proximity of death and strength of relationships with dying person. Yet, as each human being is original, unique and has his mission here on earth, as unique is also his dying and death.

Cloud-Based Integrated Socio-Sanitary Care e-Services in Croatia: Lessons Learned

Igor Ljubi

VERN' University of Applied Sciences, Croatia

Hrvoje Belani

Ministry of Health, Croatia

Suzana Belosevic-Romac

City of Rijeka, Croatia

Keywords: *integrated e-care, cloud-based services, care pathways, health issues, ICT.*

Introduction. Among many other services, modern governments offer both healthcare and social care to their citizens. Although there are many citizens (i.e. elderly population) that need to use both of those services, they need to acquire them separately. Since those are built as a traditional silo structures, often using separate funding schemes, there are limited possibilities for integration of those two services. Therefore, a novel approach is needed which will enable the integrated provisioning of both social and healthcare services to citizens.

Aim. To be able to overcome these issues, a platform for collaboration on multiple levels was provided to connect actors from healthcare and social care services – from primary care medical doctors to hospitals and from home care givers and / or family members to emergency centres for the elderly. By using this platform, actors were aware of their specific roles in the value chain, and, most significantly, able to effectively share information between them.

Material and Methods. Utilising the cloud-based ICT tool, an integrated e-care model has been developed and personalised care pathways for the elderly people suffering from various health problems have been introduced (including heart failure, cardio vascular diseases, diabetes and mental health issues). This model employs a patient-centric approach to care delivery, giving a patient (or a person acting on behalf of the patient) in power to control (and to share) any data relevant to treat patient health condition. Initially, 10 KPIs were considered as potentially attainable, but by the end of a 30-month long project, five of them remained in focus.

Results. For patients that were included in the project, the number of hospital (re)admissions were reduced 13–23%, they spent 20% less days in a hospital, primary care doctors were able to process up to 30% more patients while using the same resources. There was a significant drop of specialist visits (54%), and the average patient's satisfaction with the provided services has increased by 25%. The results clearly indicate that there is added value for using this approach for all of the stakeholders. Those include easy and accessible portal based solution for patients and informal caregivers to communicate with their doctors and other caregivers.

Conclusions. For the socio-sanitary care providers, the benefit is the ability to influence clinical outcomes by remotely monitoring and coordinating care initiatives. Using this approach, the government has an effective aid to meet quality thresholds, generate clinical outcome metrics and improve satisfaction of citizens using health and social care services.

Operating Room Nurses' Assessment of Safety Climate in Riga City Hospitals

Grieta Logina, Anna Ribakova
Rīga Stradiņš University, Latvia

Keywords: *safety climate, operating room nurses.*

Introduction. Operating room nurses are often facing a variety of risk factors that can have adverse effects on their health.

Aim. The aim of the research is to get evaluation of safety climate in Riga operation rooms. "Safety climate is a psychological phenomenon, which is usually defined as the perceptions of the state of safety at a particular time". Safety climate is proactive and sensitive in terms of providing safety-related information and predicting safety behaviour and safety outcomes. There is lack of studies regarding operating room nurse safety climate.

Material and Methods. The study is based on cross-sectional data collected in three Riga hospitals. Operating room nurses and head nurses (n = 90) replied to a self-administered questionnaire. NOSACQ-50 questionnaire Latvian version was used. The instrument contains 50 positively formulated and negated items divided into seven dimensions, which were rated using a 4-point Likert scale. A mean score over 2.5 is considered a positive result since this is the mean value of the highest and lowest score. The result from 3.00 to 3.30 indicates a moderately good level with the necessity for slight improvement. The result of 2.70 to 2.99 indicates a moderate level of safety and the need for improvement. The score below 2.70 indicates a low level with a huge need for safety improvements.

Results. Average values for each dimension of safety climate for operating room nurses sample were obtained. Five safety climate dimensions were evaluated with a moderate level of safety, the further listed dimensions demonstrate a need for improvement, i.e. "Trust in the efficacy of safety systems" (M = 2.98, SD = 0.41), the dimension "Management safety priority, commitment, and competence" (M = 2.83, SD = 0.53), "Management safety justice" (M = 2.76, SD = 0.51), "Workers' safety commitment" (M = 2.89, SD = 0.53), "Safety communication, learning, and trust in co-workers safety competence" (M = 2.84, SD = 0.53). Dimensions "Management safety empowerment" (M = 2.66, SD = 0.51) and "Workers' safety priority and risk non-acceptance" (M = 2.38, SD = 0.39) are rated below 2.7, which indicates a low level of safety and need for improvement. The results show a difference in opinion among three hospitals. The mean scores of the NOSACQ-50 database are higher than obtained from the study results, which indicates that safety climate level in Latvian hospitals' operating rooms is lower, than average in NOSACQ-50 database. Factors that influence the difference in opinion among hospitals and safety climate assessment among surgical team members should be studied further.

Conclusions. Operating room nurses to a large extent demonstrate trust in efficacy of safety systems; however, nurses often accept risks and underestimate safety priority, which may indicate that the existing safety system does not function effectively, work itself is prioritised higher than climate for safety while performing work tasks.

Analysis of Efficiency of Housing Adaptation in Jelgava City

Inara Lomonovska, Signe Tomsons
Rīga Stradiņš University, Latvia

Keywords: *home adaptation, support measures, assessment measurements, persons functioning, Jelgava city.*

Introduction: Home is important for health and independence and it is the major arena in which persons with disabilities can maintain control and autonomy (Pettersson, Löfqvist, Fänge, 2012). Housing adaptation is a common compensatory intervention used by occupational therapists to enhance independent living, to increase usability at home and to support activity and participation. In housing adaptation, physical home environment is altered, and intervention is individually tailored to meet the specific needs of a person in the house (Fänge, Linberg, Iwarsson, 2013). Housing adaptation improves independence in daily activities, lowers physical barriers at home, simplifies use of objects and assistive technologies, as well as improves safety of home environment (Fänge, Linberg, Iwarsson, 2013). Housing adaptation as specific type of municipality support for persons with disability is specified in laws and regulations in six municipalities of Latvia, and in Jelgava city municipality it has been implemented since 2013 (Latvijas Vēstnesis).

Aim. The aim of the study is to assess changes in persons' functioning after home adaptation and analyse efficiency of housing adaptation in Jelgava city.

Material and Methods. The study is a single-case analysis. Phenomenon for the analysis is changes in persons' functioning after home adaptation in Jelgava city. Twelve participants, aged 29–85, who have received housing adaptations from 2013, were involved in this study.

Results. After home adaptation, improvement was found in such activities as transferring, mobility and washing. Depending on functional impairment, e.g. dependence on wheelchair, improvement in home accessibility indicators was determined, except the section "kitchen", where the accessibility indicators decreased, and the number of environmental barriers increased. Comparing accessibility indicators of each participant, for one participant all previously established barriers in the external environment were removed, but three participants experienced no changes. For the rest of the target group previously defined barriers were removed partly. Overall, 21 barriers of 39 were removed. Usability of home was assessed in three aspects. The highest score was given to personal and social aspect.

Conclusions. The most significant accessibility indicators, considering of all functional impairment of the participants were: 1) inadequate seating distance was detected in external environment for participants with limitations of stamina; 2) difficulties to reach mailboxes, reach for waste containers, presence of thresholds and steps, and inadequate maneuvering area, as well as control switches in kitchen at an inadequate height was detected for participants with functional limitations – dependence of wheelchair; 3) inadequate depth of shelves in kitchen was detected for participants with reduced upper extremity function; 4) difficulties to use equipment in kitchen and in hygiene room was detected for participants with loss of upper extremity function.

Students Interaction with Therapy Dog at West Virginia University Setting

Marika Lotko

Rīga Stradiņš University, Latvia

Keywords: *therapy dogs, stress, recreational activities, therapeutic animal.*

Introduction. In West Virginia University (henceforth – WVU) Benjamin M. Statler College of Engineering (henceforth – College) since 2013 staff team is complemented with a therapy dog Marlon Brando (henceforth – Brando). In 2017, at WVU there were seven therapy dogs; each of them has their own handler who takes care of the dog at the WVU and at home. Students at WVU encounter stress which is connected with studies, change of residence, they feel homesick, face challenges related to relationships, parents divorce, etc. Therefore, to help students reduce stress, at WVU step by step are integrated therapy dogs. The main tasks of therapy dogs are to be by students and employees side, interact with them, be available. Brando and his handler go to College every day and spend there at least eight hours. At the College, students must visit study rooms for a particular amount of hours during the week, where part of the day remains also Brando. During the stay at the study room, students not only fulfill assigned tasks at different study courses but they also have a chance to interact with Brando – play, pet, give a treat, talk with dog and its handler.

Aim. The aim of the study is to identify students' view on interaction with Brando.

Material and Methods. 150 College students were invited to participate in the survey, from which 69 completed it. 76.8% men and 23.2% women participated in the survey.

Results. 85.5% of the respondents evaluated their attitude towards animals as positive. 43.5% believe that in their lives animals have the same status as humans. 95.6% of the respondents have a positive attitude towards Brando's presence at the College. 89.8% of the respondents like to pet Brando, 88.4% like to play with Brando, 76.8% would like to take Brando for a walk if this was allowed, 44.9% share stories about Brando with their family members / friends, 31.8% admit that interaction with Brando has taught them patience, 56.5% would like to see Brando at the exam room, 88.4% would be happy if there were other therapy animals at the university.

Conclusions. Although, the term “therapeutic animal” is widely used and applied, not always activities and content of the work of animal point out therapy elements. Professionals at the WVU face challenges related to use of term “therapy dog” – handlers of therapy dogs indicate the need to discuss this issue. Although more and more settings include animals in their teams, their expectations are different – from recreational tasks to activities which include therapy. It is impacted by the specifics of the setting as well as professional activity. The research revealed that in general respondents have a positive view on animals and they willingly interact with Brando. During the interaction with Brando, respondents can realise recreational activities and acquire new skills, stories about Brando shared with other people encourage communication. Respondents would like to see other therapy animals at the WVU.

Ethnographies of Help-Seeking in Homesteads of Vidzeme and Latgale 90 Years Ago and Now. Choosing Between Services Provided in Urban vs. Rural Settlements

Agita Luse

Rīga Stradiņš University, Latvia

Keywords: *ethnography of health and illness, help-seeking behaviour in case of illness, folk remedies and folk cures, medical practitioners.*

Introduction. A wealth of ethnographic records, both textual and visual, is deposited at the National Museum of History of Latvia, dating back to the late 1920s. Most originate from a series of state-sponsored field trips carried out in rural areas of Latvia from 1924 to 1932. The aim of the field trips was to document traditional skills and ways of life in Latvian countryside as well as gather artefacts of artisans' work. Among the settlements visited were the district (*apriņķis*) of Daugavpils in 1927 and Rauna in 1928.

Aim. The study intends to explore the ethnographic records from the late 1920s as well as the field notes and visual records from the on-going fieldwork in rural parishes of Vidzeme and Latgale, with the aim of outlining the ways in which help-seeking behaviour in case of illness there has changed during the past 90 years.

Material and Methods. From summer 2017 on, a team of researchers from Rīga Stradiņš University has been following the paths trodden ca 90 years ago and re-visiting farmsteads in Vidzeme and villages (*sādžas*) in Latgale. The author was one of the fieldworkers this time.

Results. The preliminary results emerging from the analysis of museum records, qualitative interviews and field researchers' notes (available via a data basis tailor-made for the purpose of the research project "Traditional skills and the way of life in Latvian countryside: then and now") suggest that in the case of general ailments, such as colds, fever, or aching joints, most of people living in farmsteads visited in Vidzeme and Latgale in 2017 and 2018 respectively, not unlike in those documented in the late 1920s, are trying out a relatively broad range of folk remedies and cures, before (if at all) delegating treatment to a certified medical practitioner. However, unlike 90 years ago, parents of young children in rural areas nowadays are likely to seek professional help much sooner in the case of their offspring's ill health than they are for themselves.

Conclusions. The analysed data allow pinpointing a criterion according to which people in the visited farmsteads usually decide that / when they should turn to professional help: this criterion appears to be a relative unfamiliarity with the symptoms encountered. The fact that adults often postpone their visits to a family physician or a medical specialist, even in relatively serious cases, can be accounted for by the demanding work routine on the farm.

Aerobic Capacity for Breast Cancer Survivors Two to Three Years after Breast Surgery

Laura Majevska, Rudolfs Ceseiko, Signe Tomsone
Rīga Stradiņš University, Latvia

Aivars Vetra
Rīga Stradiņš University, Latvia
Riga East University Hospital, Latvia

Keywords: *breast cancer, rehabilitation, aerobic capacity.*

Introduction. Breast cancer (BC) is the most common malignant tumour for women in the world. More than 1,000 new cases of breast cancer are registered every year in Latvia. Cancer therapy may cause unfavourable side effects that directly or indirectly affect the cardiorespiratory capacity among BC survivors, thus affecting physical functioning and quality of life. Mounting evidence supports that Maximal oxygen uptake (VO_{2max}) is a strong predictor of all-cause mortality and cardiovascular disease, and low VO_{2max} has been associated with increased mortality from BC.

Aim. The aim of the study is to measure cardiorespiratory fitness in BC survivors and to determine in what extent VO_{2max} levels are lower in BC survivors compared with healthy counterparts from population.

Material and Methods. The study included 11 women with a history of BC diagnosis, and the average time after breast surgery was 2–3 years. Cardiorespiratory fitness test was used to determine aerobic capacity. HUNT3 study was used to determine aerobic capacity for healthy women in population. It is the largest European reference material of objectively measured parameters of aerobic fitness and exercise-physiology in healthy men and women aged 20–90 years.

Results. Age of the study group was 50 ± 4 years ($M \pm SD$). Comparing results of cardiorespiratory fitness test BC patients displayed VO_{2max} values significantly lower- 27.1 ml/kg/min) than healthy counterparts from population - 34.4 ml/kg/min ($p = 0.001$).

Conclusions. BC survivors demonstrated about 27% lower aerobic capacity than healthy counterparts from population measured as VO_{2max} . Recognising the increasing number of BC patients worldwide and physical deconditioning among the survivors, aerobic exercise training in order to improve cardiorespiratory health, functionality, and quality of life is sought after.

Reproductive Health Status of Schoolchildren in Kazakhstan

Dinara Makhanbetkulova

Kazakhstan's Medical University "Kazakhstan School of Public Health"

Keywords: *female adolescents, health, reproductive health differences among urban and rural adolescents.*

Introduction. The activity aimed at improving the children's health has significantly increased in recent years in Kazakhstan's educational institutions. Teachers together with psychologists successfully implement the WHO project entitled "Schools that promote health in Kazakhstan". Simultaneously, it should be said that nowadays school system still id bases on routine approaches and has difficulties in implementing the concept of the WHO for sexual and reproductive health protection. The situation is complicated because there is still no intersectoral and interdepartmental relationship between the spheres of education, healthcare and youth centers in the Republic of Kazakhstan; therefore, is more difficult to talk about the effectiveness of public health professionals' work in schools.

Aim. The aim of the study is to identify the main points of difference in reproductive health among urban and rural adolescents for schoolchildren reproductive health promotion modern form improvement.

Material and Methods. An important place in the structure of schoolchildren health promotion takes the protection of reproductive sphere of young adults' development. It is fair that the task number one of the WHO action plan for sexual and reproductive health protection is "to give all people the opportunity to make meaningful decisions about their sexual and reproductive health and to ensure the observance, protection and realisation of their rights". In accordance with this concept, the Kazakhstan's Medical University "KSPH" began its work on studying the reproductive health of adolescent girls. To compare the data, two regions of Kazakhstan were selected: Almaty, as one of the megacities, and Taraz, as the peripheral town of the country, in order to identify differences between urban and rural schoolchildren. A sociological study was conducted according to the WHO methodology (HSBC). Female adolescents from both regions were interviewed: five secondary schools in Taraz and eight secondary schools in Almaty city were selected.

Results. The statistical results of the research in Almaty show that in 2017, rate of gynecological diseases among adolescent girls has increased 1.2 times. In the structure of gynecological diseases, the inflammatory disorders of the genitals occupied the first place - 61%, menstrual function disorders are in the second place - 23%, other diseases are in the third place - 16%. In the peripheral town Taraz, a similar tendency of gynecological pathology increase incidence has not been identified.

Conclusions. A comparative analysis between urban and rural schoolchildren has shown that in recent years there have been some differences in the structure and frequency of the incidence of gynecological pathologies among adolescent girls. The result of the research will be the development of a school medicine model for strengthening and protecting adolescents' reproductive and sexual health.

Foreigners in the Town: Experience of Voluntary Immigrants Living in a Small Town

Daniel Markovic

Catholic University in Ruzomberok, Slovakia

Rīga Stradiņš University, Latvia

Anna Zilova

Catholic University in Ruzomberok, Slovakia

Keywords: *town, voluntary migration, foreigner.*

Introduction. Human migration is the movement of people from one place to another with the intention of settling in a new location. Asylum Seekers and Supplementary Protection Statistics show that Slovakia is rarely the target country of forcibly displaced people. Emigration from Slovakia and its reasons are being examined relatively well, but specific gaps in the research of voluntary immigration to Slovakia have been observed. After Slovakia joined the European Union (EU), statistics show a significant, quadruple increase in the number of foreigners from both EU and non-EU countries living in Slovakia. Migrants arriving in EU countries are usually trying to settle in large cities, where support nets are made up of their natives and job opportunities in an international environment. The focus of the research is in voluntary migrants who chose small towns in Slovakia, which are culturally and linguistically homogeneous.

Aim. The aim of the paper is to get acquainted with the experiences of voluntary immigrants related to their life in a small Slovak town. Particularly experience in the field of interpersonal relations, employment or during studies, and economy.

Material and Methods. The study employs a qualitative research strategy. Research design is grounded theory. As a research tool, an individual structured interview (In-Depth Interview) was chosen. For qualitative data analysis, the coding was used; descriptive and inductive codes, subcategories and categories were set. The subject of research is eight volunteer immigrants to Slovakia who had been living in small towns for at least one year at the time of research. Thus, they meet the long-term migration criterion. Participants were selected on a deliberate basis to cover the phenomenon of voluntary migration. Due to the chosen research design, theoretical sampling is the case.

Results. Participants identified areas of positive experience at home: employment, economic and social conditions, leisure, cultural and development activities, environmental issues. Participants perceive areas of human relations, wages and medical facilities as the worst. While staying in a small town, immigrants consciously or unknowingly integrate into the majority society, assimilation is also taking place. Our participants are more likely to remain in their home if an assimilation model of integration or a model of individual civic integration is given in their environment.

Conclusions. Participants have the advantage of quickly creating their new social network. Nevertheless, they sometimes experience barriers in social contacts or even feelings of outsiders. From the area of social welfare solutions for migrants, it has been proposed that social workers focus on creating social connections (such as prevention of solitude and isolation, pooling of clients with each other, community organisations and other entities) and identifying and overcoming barriers related to life in the country.

Comparison of Adolescent's Values: Riga and Vidzeme Region

Sandra Mihailova

Riga Stradiņš University, Latvia

Arta Pipcane

Riga State German Grammar School, Latvia

Keywords: *terminal values, instrumental values, high school students, comparison of generations, i-generation adolescents.*

Introduction. During the recent acceleration of development at significant areas of life there are radical changes at human relationships, world perception, goals and ideals of life. The reevaluation of values as a logical result of human dialectics is controversial and at present it takes place throughout society. New conditions set new requirements for intellectual, mentally rich, open-minded people who are able to adapt to different circumstances, change occupations, communicate with different types of people. Determination of individual values is the first step in the process of personal development. To achieve it, one needs to understand its interests, opinions and priorities and evaluate their significance and hierarchy. The beginning of the highest level of self-confidence development is at the age of 16–19. Though the hierarchy of values is not stable, the main values of young people have been already formed, based on their experience and values of their parents. Nowadays, there are a lot of discussions around the new “i-generation”, which also includes current high school students. Whether the values of this new generation are significantly different from those of previous generations is the question to be answered in this research.

Aim. The aim of the study is to define the difference between value hierarchies of Riga students and rural students and their subjective opinions about factors affecting them and compare the results with the values of previous generations.

Material and Methods. It is a pilot study with a comparative cross-sectional design. The research of values was based on the M. Rokeach's value ranking test, expert interviews and specifically created questionnaire about the subjective attitude to the social agents affecting the values. The study was carried out in several schools of Latvia in 2018: two schools in Riga and two rural schools of Vidzeme region. Participants were 11th and 12th grade students, 25 from each school, 50 of them were from Riga and 50 from rural schools.

Results. Three most important terminal values for both Riga and rural students from high schools are a happy family life, health and love (Riga students preferred love to health, but rural students had the opposite opinion). The less important values appeared to be happiness of other people and beauty of nature and art. This tendency was identified also during the studies in 1998, 2005 and 2010. Both groups point out “reliable friends” as the most accomplished value. Adolescents of both groups note that their values are most influenced by family and school; while in the third place rural youth mention opinion leaders, but youth from Riga – social media. The opinions of adolescents and experts about the values important to youth differ, but they rank the value-influencing agents similarly. There is diversity among expert opinions about the values and their hierarchy that are topical to the youth that could be explained as manifestation of generation gap. Experts highlight the value “material well-being” as the most important for adolescents and emphasise the impact of social media on its development.

Conclusions. There is not a significant difference between value hierarchy of adolescents from Riga and rural region. The most important terminal values are happy family life, health and love. The less important values appeared to be happiness of other people and beauty of nature and art. Adolescents from both groups point out that their values are most influenced by family and school, while in the third place rural youth mention opinion leaders, but youth from Riga – social media.

Factors Associated with Mortality during Seven Years after Stroke

Illa Mihejeva, Guna Berzina

Riga East University Hospital, Latvia

Rīga Stradiņš University, Latvia

Anita Vetra

Children's Clinical University Hospital, Latvia

Rīga Stradiņš University, Latvia

Keywords: *stroke, mortality, risk factors, neurological symptoms, disability.*

Introduction. Stroke remains one of the main causes of death and disability worldwide. Approximately six million persons die due to stroke annually (*WHO*). Reported stroke mortality in Latvia in 2014 was 119.5 per 100,000, which is 8.5 % of all reported deaths and is the second leading cause of death behind ischemic heart disease. According to the WHO, there is a double number of survivors compared to death from stroke; most survivors live with disability. Therefore, this is a serious health problem leading to burden on the individual, their family, and society (*Feigin V.L.*).

Aim. The aim of the study is to evaluate how pre-stroke risk factors, neurological symptoms and level of disability shortly after stroke are associated with post stroke mortality during a seven-year time after stroke for persons that have been treated in the stroke unit.

Material and Methods. The data of 231 patients who were treated in the stroke unit at Riga East University Hospital between February 1 and July 20, 2009 were included in the study. Pre-stroke risk factors (type of stroke, arterial hypertension, diabetes mellitus, atrial fibrillation, smoking, alcohol abuse, obesity, recurrent stroke, age, gender), neurological symptoms (motor deficit, sensory disturbance, aphasia, post-stroke urinary incontinence (PSUI), mental status) and limitations of activities (feeding, bathing, grooming, dressing, toilet use, transfers, mobility, stairs) early after stroke were used as independent variables in the stepwise Cox proportional hazard analysis to analyse the mortality for seven years following stroke.

Results. 145 patients died during the study period. The overall cumulative mortality was 24.2 % within one year and 62.8 % within seven years. The final model for each group of factors included only one of the factors used for the analysis. Patients who had alcohol abuse were 40 % more prone to die earlier. The hazard for those with PSUI is 1.72 times higher than those without PSUI. The independence in grooming showed a 39 % lower chance to die earlier.

Conclusions. Alcohol abuse as a pre-stroke risk factor, post stroke urinary incontinence as a neurological symptom and dependence in grooming as a factor of disability were associated with earlier mortality during seven years after stroke.

Older People Living Alone: How Lonely They are in Urban and Rural Areas

*Sarmite Mikulioniene, Margarita Gedvilaite-Kordusiene,
Grazina Rapoliene, Natalija Valaviciene
Lithuanian Social Research Centre, Lithuania*

Keywords: *older people, social loneliness, living alone, Lithuania.*

Introduction. Demographic trends presuppose not only accelerated population ageing in the Baltic region, but also increasing proportion of older persons living in single-person households. In Lithuania nearly half (46%) of older people (65+) are living in single-person households, and that is the highest indicator among the EU member states (Eurostat-SILC, 2017). Quality of one's social network as an essential element of social inclusion in the realms of family and broader community, is a central issue in the construction of social well-being and quality of life in older adults. Traditionally it is assumed that living alone itself indicates a person's higher risk to operate within narrow social networks and respectively, higher risk of social loneliness. In fact, determinants of quantity and quality of one's social networks are complex. They cover not only socioeconomic, health, social roles, and life event factors, but also subjective evaluation of perceived mismatch between the quantity and quality of current relationships on the one hand, and relationship standards on the other (*Perlman and Peplau, 1981*). In order to create adequate social services, policy makers are interested to know more about loneliness of older people, especially those, living alone.

Aim. The aim of the study is to reveal the differences of loneliness experiences among older people in urban and rural areas, considering loneliness as one of the indicators of their social exclusion.

Material and Methods. To reach the aim, De Jong Gierveld (2010) Scales for Social and Emotional Loneliness were applied.

Results. The results allow to state that the level of social loneliness perceived by older people (60+) in Lithuania could be interpreted in general as a medium level (score 1.4 out of the maximum of 3 points), and the level of emotional loneliness as comparatively low (0.86 out of the maximum of 3 points). It was found that these national-level scores hide contrasting results for specific subgroups of older people.

Conclusions. Emotional and social loneliness were significantly associated with their living arrangements (alone / not alone) and modestly with the age of respondents (5-year age groups compared). On the contrary, the outcomes in terms of emotional and social loneliness did not show living area (rural / urban) and gender differences. Although social participation of older people is lower in rural areas, and especially in small towns, their loneliness scores do not differ significantly from those in cities.

Acknowledgement. This study is based on the original nationally representative data from the survey "Older people living alone: trends, profiles and challenges to intergenerational integration – OPLA", funded by the Lithuanian Research Council (No GER-001/2017). The research was carried out in Lithuania in 2017–2018.

Public Awareness in Public Administration as Basis for Public Participation: Role of Latvian Government Communication

Līga Mirlina

Turība University, Latvia

Keywords: *public administration, government communication, public participation, civic competencies.*

Introduction. Democratic state administration needs interaction with the public, which requires not only government communication with the public but also public interest and understanding in political and public administration processes. The task of public administration is to create a legal and institutional framework and mechanisms for public participation, while NGOs and the general public need civil competency to use the opportunities of public participation.

Aim. Analyzing the Latvian government's communication activities about public participation and public awareness, the aim of this article is to examine the level of participation of different social groups and the impact of their awareness on it.

Material and Methods. Within the framework of the research, the following methods have been used: analysis of normative documents, statistics on implementation of the Memorandum of cooperation between the government and non-governmental organisations, interviews with experts from NGOs and state administration, focus group discussions with young people. Analysing legal documents and statistics on the involvement of NGOs, public participation platforms and their use have been evaluated.

Results. Based on the views of NGOs and state administration experts, there are certain factors that influence the level of public participation and public awareness. Focus group discussions with young people have identified their awareness and interest in public administration processes as well as their civic participation.

Conclusions. The study found that state administration has created a variety of platforms for the involvement of NGOs in decision-making processes and an increase in the participation of NGOs. By choosing young people as one of the social groups of society, it can be concluded that information about public participation is not met by general public, thus it has little effect on formation of the general public's awareness and level of participation.

Study of the Novel Method of Electronic-Digital Auscultation in Bronchial Asthma in Children in the Sanatorium

Egor Mokin, Vasily Pyatin, Liliya Mazur, Natalya Mokina
Samara State Medical University, Russian Federation

Keywords: *electronic auscultation, acoustic pattern, bronchial asthma, children, sanatorium.*

Introduction. The IT-trend in the healthcare development is an urgent modern task. This, and the search for new methods of prevention, early diagnosis, and biomarkers of lung diseases are in particular interest of pulmonologists. In this context, one of the methods of personalised medicine, is the acoustic pattern analysis, namely – electronic auscultation.

Aim. The aim is to study the novel method of electronic-digital auscultation (ECA), in children with bronchial asthma (BA), in-sanatorium restorative treatment period.

Material and Methods. In-sanatorium restorative treatment period (21 days) 147 children: 75 children with mild persistent asthma with asthma-test (AST) as 23 ± 0.7 points (43 males and 32 females, 13.11 ± 0.27 years) and 72 children with no bronco-pulmonary diseases (40 males and 33 females, 13.95 ± 0.14 years) were tested with: spirometry, ECA (Littmann®3200), acoustic breathing analysis (ABA), with further digital processing. Mathematical data analysis – IBM SPSS Statistics 21.0.

Results. The groups were significantly different in: FVC%, FEV1/FVC%, MOS50%, MOS25%. There were no significant differences by ABA, but by ECA, the prevalence of high-amplitude respiratory noises in patients with BA was as $p < 0.05$; by the Pearson coefficient, significant correlation was established for most of spirometric and ECA parameters. Also the ECA method demonstrated significant informativeness, sensitivity and specificity in this patients' cohort, by Roc-analysis (AUROC = 0.933 ± 0.046 with the null hypothesis = 0.5).

Conclusions. In this study, the electronic-digital auscultation method, demonstrated reliable diagnostic and clinical capabilities and informativeness, sensitivity and specificity, in children with BA, in-sanatorium restorative treatment period.

Acoustic Respiratory Analysis in Complex Functional Respiratory Evaluation in Healthy and in Chronic Non-Specific Lung Diseases' Persons

Natalya Mokina, Egor Mokin, Vasilii Pyatin
Samara State Medical University, Russian Federation

Keywords: *acoustic respiratory analysis, complex functional respiratory evaluation, chronic non-specific pulmonary diseases.*

Introduction. Expanding the range of respiratory assessment methods is essential, both for diagnosis and study of the effectiveness of different types of preventive and therapeutic programmes. The introduction of acoustic respiratory analysis (ARA) in pulmonology has remarkable prospects.

Aim. The aim of the study is to study the ARA in the aspect of complex functional respiratory assessment in healthy persons and in chronic non-specific pulmonary diseases – CNPD (chronic bronchitis, bronchial asthma), including those with physical rehab, using special equipment (simulator Power Plate).

Material and Methods. The study involved 42 persons: 19 males and 23 females; of 16.19 ± 0.42 years. Patients were divided in two groups: persons of group 1 had diagnosis of CNPD; persons of group 2 were healthy. ARA along with spirometry were used at baseline, and after the physical simulation with Power Plate. Statistical analysis: IBM SPSS Statistics 21.0.

Results. Comparison of spirometry showed no significant differences between the groups. In group 1, an increasing acoustic work of breathing was at baseline, and also after Power Plate stimulation, both in low and medium frequency acoustic ranges, with variation of acoustic digital coefficient values (K1-K3), in comparison to group 2 ($p < 0.05$, CI > 95%). Thus, using the ARA, it was possible to differentiate persons with CNPD and the healthy ones, despite spirometry previously having shown no such early deviations.

Conclusions. The ARA method has obvious perspectives in the aspect of complex functional respiratory assessment in healthy persons and in CNPD, taking into account the fact that in the study, ARA allowed to differentiate early respiratory functional abnormalities, and appeared to be more sensitive in the early diagnosis of respiratory disorders than spirometry, both at the baseline and in the evaluation of the effectiveness of rehabilitation with stimulator Power Plate.

Evaluation of Results of Social Rehabilitation Programmes for Young People with Behavioural Problems

Martins Moors

*Rīga Stradiņš University, Latvia
Rīga City Council Welfare Department, Latvia*

Juris Osis

Rīga City Council Welfare Department, Latvia

Keywords: *young people with behavioural problems, social rehabilitation programme, outcome evaluation.*

Introduction. New targeted social service – social rehabilitation programme for young people with behavioural problems (hereinafter – the Programme) has been implemented in Riga since 2016. The Programme beneficiaries are young people from social risk families with multiple social problems: learning difficulties, delinquency, low communication skills, difficulties in problem and conflict resolution, addictions, social isolation, etc. The Programme is provided by two organisations – the Samaritan Association of Latvia and the Social Services Agency. The duration of the programmes is six and eight months respectively, each programme provides services for 15 young people aged 13 to 18 years. The study analyses results of the Programme implemented by the Social Service Agency for 15 young people.

Aim. The objective of the study is to determine if the implementation of the Programme improves social functioning of young people with behavioural problems.

Material and Methods. The analysis has been conducted on the grounds of self-assessment of young people and their parents involved in the implementation of the Programme, in accordance with the 360-degree Competence assessment method adapted by the service provider. The instrument comprises 20 questions, which are organised in four categories: Motivation (6 indicators), Emotional stability (7 indicators), Social skills (4 indicators) and Self-image (3 indicators). The descriptive statistical methods were used to analyse the obtained data, while the non-parametric Wilcoxon signed rank test for two dependent samples was used to determine the efficiency of the service. To determine how successful the implementation of the Programme in Riga municipality as a whole would be, the Power analysis method was used.

Results. It was found that children's self-esteem and parent evaluation does not significantly differ in majority of the criteria, but parents are more critical of the social functioning of their children than children themselves. There are no significant differences in the evaluation between women and men. According to children's self-esteem, all criteria have an improvement, while parents think that improvements are everywhere except "School attendance" and "Ability to provide support", but the children themselves estimate that they have the best results in this criterion. The greatest improvements are in the category "Emotional Stability": emotional balance increased by four units; support skills, constructive expressions of critique, respect for adults and tolerance towards peers increased by three units. The lowest improvements are in children's Self-image, which include: self-esteem, self-criticism and creative self-expression. Particularly significant improvements are observed in the Clarity of Career Objectives and School Visits, which increased by three units.

Conclusions. The Programme works equally well for boys and girls. On average, social functioning of young people has improved by 2–2.5 units. The service effect is $r = 0.5$ (average); it means that the service not only statistically but also substantially affects social functioning of young people. In turn, to argue that such result would also be achieved by the introduction of a service throughout the municipality of Riga, it is necessary to collect additional data with at least one group of youth.

Natural Healing Resources of Ventspils City and Opportunities for Use in Medical Institutions

Armands Muiznieks
Ventspils University College, Latvia

Aivars Vetra
Rīga Stradiņš University, Latvia

Una Libkovska
Ventspils University College, Latvia

Keywords: *natural healing resources, health resorts, health and medical tourism, tourism destination.*

Introduction. The development and growing popularity of Health and Medical Tourism (HMT) is supporting Health Resorts (HR) development all around the world and also in Latvia. HR have gained an important role in sustainable regional development. The existence of natural healing resources is an advantage over other tourist destinations. In order to find out the current situation, research was conducted on natural healing factors in the administrative territory of Ventspils city – mineral water, peloids, microclimate etc.

Aim. The main aim of the research is to define whether the natural healing resources located in the administrative territory of Ventspils city can be used in medical institution and support Ventspils as an HR development.

Material and Methods. The research uses a descriptive method using analysis of secondary data during the period 2016–2018, the site inspection at Ventspils city on July 6, 2016, and June 28, 2018; interviews with the representatives of the Ventspils City Council, Ventspils University College and regional hospital.

Results. The study covers a wide range of secondary data analysis for a given topic. Analysis of literature sources suggests that in the evidence-based way, the balneological treatments – mineral water use and peloidtherapy (mud applications), as opposed to the extensive supply of resort medical institutions, can be used only in selected cases of illness. The most commonly disadvantaged groups for the treatment of balneological services are patients with osteoarthritis, rheumatic diseases, lower back pain, fibromyalgia, psoriasis, and disorders associated with overload and stress. Peloidtherapy traditionally with good results is used in rehabilitation of bone fractures, ligaments and muscle ruptures, in the treatment of osteomyelitis, osteoarthritis, back and head injuries.

Conclusions. The study leads to conclusions that: natural healing factors located in the administrative territory of Ventspils – mineral water from the two explored wells (No 50161, 8268) and Busenieki Lake sapropel can be used for medical treatments; considering geographical position and climatic potential of Ventspils, these health resort factors can be supplemented with mild climatic natural healing factors of the sea coast, and Ventspils has a great potential for development as a special health resort “Northern Thalasso Therapy Resort” focused on thalassotherapy treatments; there is space for Health Resort Polyclinic were specially trained medical personnel in Physical Medicine and Rehabilitation, Physiotherapy and others will provide medical treatments using natural healing products; existing Ventspils resort factors and developments correspond to their use in resort, after the establishment of appropriate resort objects and complying with the requirements of the Cabinet of Ministers Regulation No 905, allows Ventspils to qualify for the status of a Health Resort.

Lower Extremity Overuse Definition and Diagnosis (Systematic Literature Review)

Darja Nesterovica

Rīga Stradiņš University, Latvia

Keywords: *lower extremity, overuse injuries, repeated microtrauma.*

Introduction. Lower extremity overuse injuries are common among different adult populations with high physical demands. Even though, many studies have been conducted in this field, clear definition and overuse diagnoses remain unclear. Overuse injuries usually have been described as a result of repeated microtrauma with no single, identifiable event. Such synonyms as cumulative microtrauma or repetitive strain injury have been used as well.

Aim. The purpose of this study is to identify most common overuse diagnoses and suggest the most appropriate definition on lower extremity overuse injury based on literature review.

Material and Methods. Systematic review of the most recent literature about lower extremity overuse injuries published between 2013 and June, 2018. Studies were retrieved through MEDLINE, PubMed and ScienceDirect, applying inclusion and exclusion criteria and language restrictions. The study was conducted according to PRISMA guidelines.

Results. 18 articles met all inclusion criteria of 2995 articles screened. Included research populations are different sport athletes ($n = 12$) and soldiers ($n = 6$). Most studies described lower extremity (femoral, tibial, foot) stress fractures ($n = 10$) and Achilles tendinopathy ($n = 7$), medial tibial stress syndrome ($n = 7$) as lower extremity overuse diagnoses. Metatarsalgia, foot blisters and foot skin callus were mentioned as overuse injury rarely ($n = 1$). Different overuse injury definitions were used. The most reported overuse injury definition – injury due to large amounts of physical activity training ($n = 8$) or repetitive microtrauma ($n = 4$), overuse as result of incomplete or maladaptive repair process ($n = 2$). Overuse injury also can be mentioned as chronic with gradual onset and without a single, identifiable event responsible for the injury ($n = 3$).

Conclusions. Systematic review identified stress fracture, medial tibial stress syndrome and Achilles tendinopathy as the most common lower extremity overuse diagnoses. It is suggested to define lower extremity overuse injury as an injury due to high physical activity with gradual onset and without a known traumatic event.

Interrelation of Mothers and Their Children's Health in a Provincial Town

Elena Nikolaeva

Herzen State Paedagogical University, Russian Federation

Vera Merenkova

Eletz State University, Russian Federation

Keywords: *mother and their children's health, perinatal pathology, acceptance, emotional intelligence.*

Introduction. Human being's health is an essential condition of one's well-being, self-fulfillment and active creation (*Aboud, Yousafzai, 2015*). However, throughout the world there are many people suffering from different diseases. A part of them relates to the process of gestating and bearing a child (*Gage, Munaf, Smith, 2016*). A lot of information about people's health is shown from the big cities. And just a little information is about health of people in little towns.

Aim. The aim of the study is to show the state of health of dyads of mother-her child at birth and during two years of children's lives in little provincial town.

Material and Methods. 100 children and their 100 mothers were participants. The complex assessment of the children's health status was based on individual medical records. Permission from the children's parents to use information was received. The mothers filled the questionnaire evaluating the mother's relation to her child during the first two years of life (*Vereshagina, Nikolaeva, 2010*), and the questionnaire aimed at assessing the emotional intelligence level (*Liusin, 2006*).

Results. It was shown that almost all the children at birth have had one or the other diagnosis in the maternity hospital. But by the end of the second year of life in 60% of the children these diagnoses were cancelled by local doctors. The most widespread diagnose of the children at birth in local town is perinatal encephalopathy and syndrome of motor disorders. These diagnoses are the consequences of the mother's diseases during pregnancy. Only 8% of the first-year-old children's mothers and 14% of the second-year-old children's mothers are almost healthy.

Conclusions. The less factors of perinatal pathology there are in the mother, the more positive is the prognosis regarding the child's health within the first two years of living. Positive prognosis regarding the first-year-old children's health depends upon the acceptance of the child by the mother: the higher is the value on the scale of acceptance-nonacceptance, the better is the child's health. The degree of emotional intelligence of the mother is not associated with the probability of cancellation of the child's diagnosis.

Vocational Rehabilitation Services and Employment Outcomes for People with Disabilities in Latvia

Zaiga Oborenko

Latvia University of Life Sciences and Technologies

Marga Zivitere

Ventspils University of Applied Sciences, Latvia

Baiba Rivza

Latvia University of Life Sciences and Technologies

Keywords: *vocational assessment, professional programmes, employers' demand, people with disabilities.*

Introduction. The employment of people with disabilities is a key element of social inclusion and economic independence. Due to decline in the working-age population in Latvia and considering the forecasted labour shortage in the coming years, people with disabilities should be recognised as a valuable resource in the job market. Under the conditions of a tense labour market it will definitely be possible to use the potential of able-bodied people with disabilities. Professional programmes of rehabilitation play an important role in the inclusion of people with disabilities in the labour market according to their needs and in line with the demands of the labour market. Vocational rehabilitation as a dynamic process, involves a set of sequential processes, beginning with initial assessment and ending with successful employment. The quality of service in the vocational rehabilitation sector is reflected by the number of students who, after completing educational programmes, find themselves in work.

Aim. This study examines the effect of vocational rehabilitation services on employment outcomes of people with disabilities in Latvia.

Material and Methods. The paper applies analytical study of secondary sources and in-depth interviews with representatives of state institutions.

Results. The findings of the study show, first, the need for cooperation with entrepreneurs and, second, the need to evaluate the impact of factors influencing employment outcomes such as job market situation and readiness of society to accept different people. The findings support the hypothesis that vocational rehabilitation services can play an important role in employment for people with disabilities.

Conclusions. Vocational education programmes for people with disabilities promote their employment opportunities and socialisation. Demand-side job development offers vocational rehabilitation as a tool to enhance and expand employer partnerships, and thus prepare the workplace for people with disabilities. It is important to assess the factors to be aware of when evaluating the effectiveness of rehabilitation measures.

Free-Living Smartphone Delivered Physical Activity Intervention for Patients with Type 2 Diabetes Mellitus: Barriers to Intervention

Karina Ostrovska, Aija Klavina

Latvian Academy of Sport Education, Latvia

Jelizaveta Sokolovska

University of Latvia, Latvia

Pauls Stradiņš Clinical University Hospital, Latvia

Leo Selavo

University of Latvia, Latvia

Keywords: *health, interval walking training, type 2 diabetes.*

Introduction. Patients with type 2 diabetes (T2D) often face serious health complications due to physical inactivity, low self-management skills, and psychosocial factors. While physical activities are an integral part of the diabetic care, there is need for effective long-term free-living exercise programmes that allow patients to be physically active independently at a low-cost. Also, the exercise programmes should be appropriate to the demographic, social and cultural characteristics of the population.

Aim. The purpose of this article is to present facilitators and barriers in using the self-monitored glucose and physical activity mobile app during supervised and not-supervised physical activity programme compared with a standard care rehabilitation programme of the T2D patients in Latvia.

Material and Methods. Participants were 63 persons (21 males and 42 females, age = 58.4 ± 9.5 years; BMI = 33.374 ± 5.4 kg/m²) with type 2 diabetes (non-insulin dependent) qualified and agreed to participate in the study. Average time since diagnosis of type 2 diabetes was 7.9 ± 9.8 years. The group was randomly assigned to three subgroups: (1) supervised interval walking training (SIW) (n = 17), (2) free-living interval walking training (FIW) (n = 19), and (3) control group (n = 27). The two intervention groups including 36 patients received mobile phones loaded with a self-management app of individually adapted interval walking training programme, heart rate monitor and glucometer with a bluetooth adapter for automated transfers to the app.

Results. The adherence to interval walking training programme was low across intervention groups (only 17 patients in total reached 50–70%). Aside from diabetes, the most commonly reported health problems were high blood pressure (46 participants), and high serum cholesterol (HDL cholesterol, LDL cholesterol and triglycerides were 5.3 ± 1.1 mmol/L, 1.3 ± 0.3 mmol/L, 3.2 ± 1.1 mmol/L and 2.4 ± 3.3 mmol/L, respectively). The waist and hip girth was 107.33 ± 14.48 cm and 111.94 ± 11.65 cm, respectively. The mean of HbA1c was $6.84 \pm 1.25\%$ fasting glucose 7.5 ± 2.4 mmol/L and HOMA index 5.01 ± 3.7 , showing that all mentioned outcomes are above the norms. Relative and Absolute VO_{2max} were 2.23 ± 0.06 mL/kg/min and 24.06 ± 5.1 mL/min. There was a significant correlation between HOMA (homeostasis model assessment) and HbA1c ($p < 0.01$) in the baseline data. During the intervention, participants increased monitoring of blood glucose (≥ 3 times daily) that might be associated with better glycemic control among patients.

Conclusions. The post-intervention results are being analysed. It was hypothesised that mobile app will assist patients to include physical activities in their lifestyle while helping health professionals the possibility to monitor patients' heart rate, blood glucose level, and provide modification in their daily activities as needed. Similarly, it was hypothesised that a well-designed mobile app intervention coupled with self-monitored blood glucose could also achieve improved clinical outcomes. The proposed mobile app, could potentially promote compliance of healthcare professionals lowering the cost of the supervised intervention and greatly expanding access. However, according to preliminary results, a more tailored approach and a strong adherence mechanism is needed for these patients.

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Creation of Rural Communities after Lithuania Acquired Independence

Egle Ozolinciute

Vytautas Magnus University, Lithuania

Keywords: *rural communities, rural sociology, soviet modernisation, post-soviet transformation.*

Introduction. The processes that took place in the second half of the 20th century in the Soviet Union influenced all the former nations. Lithuania, having been part of the Soviet Union in 1940–1989, experienced the influence of the phenomenon of modernisation. The adaptation of Western modernisation in the case of soviet modernisation was particularly specific in rural areas where there was massive collectivisation, agricultural mechanisation, chemistry, industrialisation and electrification. Following the specific modernisation processes within the framework of the totalitarian regime, in addition to the abovementioned structural advantages, it also characterised the negative features, especially in the rural social space. The reality of the modernised (industrialised) rural countryside of Lithuania could be described distributing it to three main stages: soviet period (since 1940–1990); transformational (1990–2004) and post-transformational (2004 onwards after Lithuania's integration to EU). In and after the transformational stage, the effects of a centralised system of total control were particularly painful for some of the most modernised soviet-era conglomerates, where the processes of social empowerment of rural communities in the context of the “bottom-up” EU context were particularly problematic.

Aim. The aim of the study is to reveal the conditions of creation of rural community organisation in post-soviet Lithuania.

Results. The post-soviet rural reality faced crucial starting conditions that were caused by soviet policy implementations during the occupation period. The conditions of rural social field were the result of the so-called specific process of soviet modernisation, where the system control abandoned the existence of community as a social agent: the industrialisation process put the greater control of labour and leisure and so lead to lack of social responsibility and demoralisation; the process of collectivisation (rural urbanisation) destroyed the traditional forms of rural community; the forced secularisation weakened traditional social bounds; majority of social interactions were “framed” (dominated) by the kolkhoz system; the burocratisation of system divided the society to the status groups and determined inner social dichotomies.

Conclusions. After Lithuania acquired its independence, the attempts to create rural communities were challenged. The previously existing soviet system left no space for community as a social agent. The initiatives to create communities differed highly due to structural factors. The possible creation of community and potential smooth transformation (self-organisation of local people) also was blocked by some irrational decisions of policy makers. The political system changed, agriculture was restructured, which determined not only structural changes but also revealed the complicated conditions of the agent.

Difficulties and Challenges of Psychological Support Providers Employed in Latvian Psychiatric Clinics (Results of the Pilot Study)

Inese Paica, Maris Taube

Rīga Stradiņš University, Latvia

Riga Psychiatry and Narcology Centre, Latvia

Kristīne Martinsone

Rīga Stradiņš University, Latvia

Keywords: *community-based, multidisciplinary team, psychological support providers.*

Introduction. Over the last 10 years, several units of psychiatric clinics and outpatient facilities in Latvia have implemented community-based mental healthcare principles. It means that patients receive not only medical treatment, but also psychological and emotional support, and so can better satisfy their social needs. Compared to the inpatient care in a psychiatric hospital, an outpatient treatment (e.g. day stationary, outpatient visits to psychiatrist) is more accessible for a patient. It diminishes the risk of isolation and social exclusion, provides a better choice of multiple psychological therapies. Such service is now available for patients in several major Latvian cities.

Aim. The aim of this pilot study is to examine the opinions of psychologists, psychotherapists and art therapists employed in Latvian psychiatric clinics on following issues: work organisation, main difficulties and challenges, best practices.

Material and Methods. A questionnaire was designed for the collection of the opinions of these specialists. The questionnaire consisted of 25 questions (18 closed and 7 open questions). The questionnaire was sent to 40 specialists, working in psychiatric clinics in Riga, Liepaja, Jelgava, Daugavpils. It was filled in by 19 respondents. Descriptive statistics and content analysis were utilised to analyse the data.

Results. The survey reveals that 95% of the respondents work in a multidisciplinary team. Almost a half (47%) of them complain about the dysfunctionality and problems within their team. Difficulties include the following: lack of common objectives, lack of internal communication, non-respect of professional boundaries. Only 42% of the respondents indicate that they work with groups of patients. In addition, the respondents admit that there is a need for an improved psychological education of patients. The survey demonstrated also that the work of psychologists and psychotherapists is underestimated and underutilized in Latvian psychiatric clinics. The largest group of psychological support providers in Latvian psychiatric facilities are art therapists of different specialisations (53%). The main difficulties that were mentioned by the respondents were: lack of understanding and support from senior staff of the clinic concerning the rationale of the psychological care and the possibilities it offers; the difficulties to achieve therapeutic objectives; professional burn-out; lack of adequate compensation.

Conclusions. The results of the pilot study mark the direction of future research. They also allow clarifying some needs for improvements in the organisation of work of psychological support providers – the need to improve communication between members of a multidisciplinary team, as well as finding ways to increase overall usage of group-therapies.

Medical Practitioners Legal Regulations in Practice from Urban-Rural Development Perspective

Karina Palkova

Rīga Stradiņš University, Latvia

Keywords: *medical practitioners, legal regulations, medical treatment, patients' rights.*

Introduction. The role of medical practitioners in community safety area is important. Their responsibility is even more significant in medical treatment process from the point of view of medical treatment quality and legal liability. Medical practitioners are professionals regardless of territoriality. The mission and functions they possess do not depend on a practice place. The institute of responsibility is constant in urban and rural level. To protect community safety from the medical practitioners' perspectives, they must know their own rights, as well as patient's rights in healthcare. Therefore, it is important to research and understand what legal regulations affect medical practitioners and how these rights collaborate with practical activities. To ensure the realisation of patients' rights, the legislator has provided several obligations to medical practitioners. From the legal regulations arise duties and responsibilities of medical practitioners in healthcare which are described in the paper.

Aim. The aim of the study is to provide some insight into regulations which define a medical practitioner's rights and duties in Latvia. As well provides insights in medical practitioner's knowledge which, as the designed questionnaire shows, depends on territorial units.

Results. The number of applications in healthcare cases for the court is growing. It shows that patients are not satisfied with the policy regarding healthcare system and with medical practitioner's work. The paper has described most important legal regulations in medical practitioner's sphere of activity, as well as defines problems and provide potential solutions that are necessary to protect community safety.

Conclusions. The results show that Latvian legal regulations which affect medical practitioner's professional activities must be improved. Medical practitioner's knowledge about patients' rights is not substantial. Especially low level of knowledge has been observed in Latvian rural areas.

Availability of State Support for Housing in Lithuania: Social and Regional Aspects

Rasa Indriliunaite

Vytautas Magnus University, Lithuania

Keywords: *housing sector, state support, households, rent, housing policy.*

Introduction. With the changing regulation of the social housing sector and the diminishing role of the state in this system, the provided support for social housing is directed at the economically weakest groups of the society.

Aim. The purpose of this study is to analyse the concept of the social housing system as a measure of support of the welfare state provided to persons who are unable to access housing themselves, and the general principles of the housing support policy in Lithuania.

Material and Methods. The descriptive analysis of the secondary data of the Statistics Lithuania allowed the author to evaluate the differences in the social housing fund in municipalities of the country (n = 60).

Results. A significant part of households lose their right to support measures for housing. The study describes the main models and features of the social housing policy in Lithuania.

Conclusions. The results of the study uncover differences across the Lithuanian municipalities in the size of population of the persons provided with social housing and the persons included in the waiting list of the support for renting a housing. The research also points to the hierarchy of the social housing sector group in the overall sector of housing provision.

Legal Implementation of the Blockchain Technology in Pharmacy

Vitalii Pashkov

Poltava Law Institute, Ukraine

Oleksii Soloviov

Shupyk National Medical Academy, Ukraine

Keywords: *counterfeit medical products, falsified, fake medicine, blockchain.*

Introduction. The study of legal aspects of preventing the spread of falsified medicines is highly relevant from both theoretical and practical point of view. Negative consequences caused by the spread of falsified medicines are so obvious that there is a need for modern technologies for their detection. The use of blockchain technology in pharmacy can provide a reliable legal protection of the supply of pharmaceutical products and its tracking. Such system could provide significant simplification of audit and control of pharmaceutical products, including by the specially authorised bodies. Healthcare and pharmacy industry, specifically, could employ blockchain to streamline efficiencies, improve privacy and confidentiality, enhance patient safety, and provide a higher level of clinical care to consumers. The main advantages of the blockchain technology are the maximum transparency, speed and accuracy of transactions. Although, the amount invested in blockchain technology is comparatively small but aggressively growing. Examples include IBM and Microsoft incorporating blockchain platforms in their customer support systems. Additionally, major companies are actively exploring the value of integrating blockchain technology into their operations. Examples include Walmart – vendor payment and digital shopping; Starbucks – tracing beans from various countries; American Express – collaborating with Boxed to customise rewards for cardholders; JD.com – use of blockchain technology to accelerate AI development.

Aim. The aim of this study is to explore the potential of blockchain technology in ensuring patients' rights to quality pharmaceuticals.

Material and Methods. This study is based on EU, US and Ukrainian regulation acts, scientific researches and opinions of progressively-minded people in this sphere. The article is based on dialectical, comparative, analytic, synthetic and comprehensive methods.

Results. Although, there has been reliance on policy to combat the counterfeit / fake medicine market, sale of fake medicines is rising rapidly and is considered a global epidemic. It has been estimated by the WHO that 10–30% of medicine market is counterfeit, with the upper end of that range predominantly in emerging regions. Blockchain enables that data sharing capability without sacrificing privacy while offering pharmacists the ability to verify the source of the medicine. Blockchain could provide pharmacists with the opportunity to patient safety by verifying the source of supplies of medicines.

Conclusions. One must admit that the existing legal basis for the use of blockchain technology is imperfect, although it is de facto used in the field of pharmaceutical activity. The use of blockchain technology not only minimises the risks of supplying counterfeit medicines to patients, but also ensures transparency of delivery and reduction of logistics costs. Consequently, there is a reduction in price of the final product for patients. However, full engagement of blockchain technology in pharmacy requires adequate legal support.

Urban-Rural Differentials in the Uptake of Cervical Cancer Screening Using a Systematic Invitation System in Lithuania

Justina Paulauskiene, Janina Petkeviciene, Rugile Ivanauskiene
Lithuanian University of Health Sciences, Lithuania

Keywords: *cervical cancer screening, screening programme, healthcare centres, Pap test, gynaecological examination.*

Introduction. Incidence and mortality from cervical cancer in Lithuania is one of the highest among the European Union member states. A well-organised cervical cancer (CC) screening at the population level can reduce the incidence of CC by 80%. In 2004, Lithuania started a Nationwide Cervical Cancer Screening Programme; however, screening is more opportunistic than population-wide and its coverage is still insufficient.

Aim. The aim of the study is to assess the efficacy of systematic invitation system for the uptake of CC screening in the urban (Kaunas) and rural (Prienai) areas.

Material and Methods. The study was conducted in an urban and a rural primary healthcare centres (PHCC). Women aged 25–60 registered at the PHCC and not having had Pap test over the last three years were included in the study. All women in Kaunas ($n = 1591$) and in Prienai ($n = 1843$) received a personal invitation letter to participate in the screening. In a year, the reminder letter was sent to the non-attendees ($n = 848$ in Kaunas and $n = 1058$ in Prienai). Women, who did not attend the screening after two letters, received a questionnaire aimed at identifying the barriers of non-attendance.

Results. Before the study, 35.1% of women in Kaunas PHCC and 17.7% in Prienai PHCC were invited to participate in the CC screening by a family doctor. Only 9.6% of the target population in Kaunas and 14.7% in Prienai participated in the screening. The participation rate in CC screening after the first invitation by letter was 24.3% in urban and 30.8% in rural areas ($p < 0.001$). In both areas the lowest participation rate (18.9% in urban and 23.1% in rural areas) was in the youngest age group (25–34 years) ($p < 0.05$, compared with other age groups). The participation rates after the reminder letter were also significantly higher in rural than in urban population, 30.9% and 18.8%, respectively ($p < 0.001$). Both invitation letters substantially increased attendance for screening. Altogether 34.3% of women in Kaunas PHCC and 48.5% in Prienai PHCC participated in the screening ($p < 0.001$). The most common practical barriers for non-attendance in both areas were: long waiting time for doctors' appointments and lack of interest to take a Pap test because of having regular preventive annual gynaecological examination outside of the screening programme. The most common attitudinal and emotional barriers for the non-attendance in both areas were: intention to attend a Pap test but facing various obstacles; lack of time and worries that a Pap test might be unpleasant.

Conclusions. Organised CC screening using an invitation letter with one reminder ensures significantly higher uptake of screening compared to the verbal invitation by a family doctor. The participation rates, using systematic invitation method, were significantly higher in rural than in urban population. The findings on barriers associated with non-attendance for screening can be used to improve the screening programme and to increase the uptake.

Relationships between Social Worker and Client by Applying the Principles of Gestalt Therapy

Alina Petrauskiene, Vida Grigaliene
Mykolas Romeris University, Lithuania

Keywords: *social work, helping relationship, gestalt therapy, dialogue, phenomenological perspective.*

Introduction. Gestalt therapy substantiated as the original theoretical and practical perspective of social work, used to create aid relationships, enabling clients to change and accompanying them along. The prospects for Gestalt therapy are recognised by social work theorists and justified in cases of social work. This is an opportunity for social workers to consider new topical methods of therapeutic social work practice, adequate preparation of social workers, responding to the up-rising daily needs of clients and the necessity of the development of the profession, linked to existential, humanistic social work (Natland, 2017; Melnick, Nevis, 2016; Congress, 2011, Bogdanova, Švedaitė-Sakalauskė, 2010).

Aim. The aim of the research is to discover applications of Gestalt therapy principles in the relationships between social worker and client.

Material and Methods. Research methods – scientific literature analysis, qualitative empirical phenomenological research, semi-structured individual (in-depth) interview, modification of the Van Kaam method of analysis of phenomenological data by Moustakas (1994). Research participants – purposively selected interviewees (5) with social work education and at least two years of social work experience in Lithuania, familiar with theory and methodology of gestalt therapy, and having skills of its application.

Results. Analysis of the scientific literature confirmed the relevance of the research topic and revealed a little investigation in the publications of Lithuanian authors. Gestalt therapy, as a humanistic existential therapy, “unifies ecological and strength perspectives of social work and is highly consonant with the core values of the profession” (Senreich, 2014). Qualitative empirical research has revealed the features of the relationships between social workers and clients by applying the principles of Gestalt therapy. The social worker’s daily work is experienced as a continuous presence in communication, in relationships with clients, which are often accompanied by stress, emotional charge, and challenges, and which are essential in the helping process. When working with clients, social workers apply the principles of gestalt therapy: dialogue, phenomenological perspective, field theory, are striving for authenticity, being “here and now”, creatively adjusting, encouraging client’s responsibility and awareness. That facilitates a client’s trust, opening-up, willingness to change, and empowers one.

Conclusions. The research revealed the applications of Gestalt therapy and the client-oriented social workers approach – especially relevant in the context of Lithuanian social work, which is still influenced by heritage of the Soviet social care system and prevailing dominant, controlling model of social work.

Stroke and Environmental Factors: Ultimate Caregiver Strain Index Expanded (U-CSI+)

Eva Pieters, Demmi Janssen, Marijke Lerno

*KU Leuven, Belgium
University of Ghent, Belgium*

Keywords: *stroke, physical and cognitive restrictions, caregiver, Caregiver Strain Index (CSI).*

Introduction. After stroke rehabilitation, people usually return home, often with remaining physical and / or cognitive restrictions and related need for assistance from their informal caregiver in activities of daily living. The assessment of the burden and capacity of the caregiver, will inform whether or not the caregiver is ready to take on the care for the stroke patient and whether the patient can return home. A simple and compact assessment in clinical practice to early detect increased caregiver burden would facilitate early intervention to prevent (further) caregiver overload.

Aim. This study evaluates the usefulness of the Caregiver Strain Index (CSI) to detect high burden in caregivers of people after stroke.

Material and Methods. Consequences for the caregiver in the rehabilitation phase often are not easy to be overlooked or not yet fully experienced at that moment, which compromise the applicability of the CSI. The SWOT of the CSI has been also analysed. The evolution highlights the strengths and opportunities. The negative formulated questions, limit answer options, and unwritten further steps are the most important weaknesses and treats. Based on all of this, an improved version of the CSI has been proposed in this research, namely The Ultimate Caregiver Strain Index Expanded (U-CSI+). This is an extension of the Dutch CSI, provided with a 5-point Likertscale. Three open questions were added to expose possible shortcomings of the test and so be able to continue to meet several facets which play a role in care of a proxy in today's society. This way, it is hoped to develop a final definitive version of the U-CSI+ which is totally adjusted to what lives among caregivers in 2018 and is an added value for the use in clinical practice.

Results. In the pilot study, this renewed assessment, the U-CSI+, was completed by five caregivers of stroke patients, spread across two rehabilitation centres. Still, despite the small sample size, already some important points of improvement of the test were discovered: addition of Self-Rated Burden scale, adjustment of the questions.

Conclusions. The scientific research proves the CSI to be a reliable and valid instrument, with an already proven utility in practice. Still through research with the U-CSI+, it turns out the CSI seems not to question every partial aspect of the informal care anymore. A more expanded study is needed to map every aspect. The defining of a cut-off point to indicate burden also would give more support to work with this target population and help in the decision making. This way the U-CSI+ may be of added value for clinical practice.

Contractual Succession Discrete Factors' Splitting, Confluence and Modifying Issues

Edvard Pilipson

Rīga Stradiņš University, Latvia

Keywords: *collision law factors, conflict situations, contractual succession, legal essence change, material law factors.*

Introduction. Material and conflict norms of contractual succession are mediated by legal factors that participate in ascertaining, forming, recognising and fulfilling of the hereditary obligations performed by participants in this legal relationship. Factors which appear as principles on the basis of which the above processes occur are present in legal regulation in the form of links in a number of cases connecting the legal norms inherent to different spheres of legal regulation and, often, belonging to different jurisdictions. Due to this reason, to establish the law applicable to a particular legal instrument, it is necessary to establish mutual and joint influence of factors, to state the possibility of their rupture and modification.

Aim. The purpose of this study is to clarify the issue of admissibility of recognising the modification of collision factors, reciprocity or the compatibility of their influence under the situation of the formation of material norms.

Results. The problem of merging, breaking and modifying in regard to collision factors may be explained in the following example. The design of mortis causa contracts provides that factors inherent in the obligations of the parties are established in such a way that one of the directions of inheritance law leads to the establishment and satisfaction of rights and obligations attributed to mortis causa factor of the parties to the contract, otherwise another direction leads to the establishment and satisfaction of rights and obligations, characterised by inter vivos factor. According to the legal nature, this type of contracts recognised as a mixed contract – part of the obligations are fulfilled during the life of the testator (inter vivos factor), the other part after its physical death (mortis causa factor). For the contracts based on the norms mentioned above to be mixed, this is determined by the factor that the heir will survive the testator. In this case, the requirements for testamentary orders apply (German Civil Code, paragraph 2301). In the opposite case (heir does not survive the testator) is a factor in the gift of future property – this contract is recognised by donation mortis causa (Civil Law, section 1926).

Conclusions. Lack of methodology to research and application of mutual and joint influence of collision factors, as well as possibilities of their disruption in the situation of contractual succession, may lead to the application of undue legal regulation in the matter of determining material norms. In the situation of a transborder hereditary process, it is possible not to recognise the right action of the instrument of contractual succession and, as a consequence, not to issue title.

Deinstitutionalisation of Elderly Health and Social Care System in Lithuania

*Jolanta Pivoriene, Raminta Bardauskiene,
Natalija Valaviciene*

Mykolas Romeris University, Lithuania

Keywords: *care system reform, deinstitutionalisation process, elderly, disabled persons.*

Introduction. Due to an ageing society and rising health and social care needs, Lithuania, as many other EU countries, initiated care system reform. The reform of the system started by approving “Strategic guidelines for deinstitutionalisation of the social care homes of disabled children deprived of parental care and adult disabled persons” and “Transition from institutional care to community-based services for the disabled and children deprived of parental care 2014–2020 year action plan” (Order No A1-83). According to these documents, the strategic aim of the reform is to create system of a comprehensive range of services that enable every child, person with disabilities or their families (guardians) to receive individual services according to their needs and necessary assistance in the community. The first specific aim deals with children while the second specific aim relates to adults and states that it is necessary to enable adults with disabilities and their families (guardians) to get community-based integral assistance according to their individual needs.

Aim. The aim of the study is to analyse deinstitutionalisation of elderly health and social care system process in Lithuania in the context of EU data.

Material and Methods. The article is based on statistical, secondary data, legal documents and scientific literature analysis and encompasses comparative perspective, providing examples from Latvia as the nearest Lithuanian neighbour similar in socio-economic and historic political development.

Results. Statistical data of Lithuania shows that deinstitutionalisation process has had a positive effect on increasing the number of persons who received home help and social services at home and decreasing the number of recipients of social care benefits. In 2016, 18.6 thousand persons received home help and social care at home, which is by 4.5 % more than in 2015. As in the previous years, the majority (82.2 %) of the recipients of social services at home were persons of retirement age. At the end of 2016, 5.2 thousand persons (3.1% more than in 2015) lived in 107 care institutions for the elderly, 6.7 thousand persons (8.3% more than in 2015) – in 58 care institutions for adults with disability. In 2016 compared to 2015, the number of persons in continuing care retirement communities increased by 8.3 %; in 2016, 472 elderly persons and adults with disability were living in 21 institutions of such type (Statistical yearbook of Lithuania 2017, 2017). However, deinstitutionalisation process is complicated and faces challenges related with expenditure, coverage, service quality.

Conclusions. EU level analysis declares that the country has little social insurance against long term care risks, low public spending on formal care, and high use of informal care. Lithuania has a higher expenditure than Latvia, but coverage rate is very similar in both countries. Nevertheless, both countries fall in the same tier and follow the same care model defined by Timonen (2005).

Critical Thinking as a Tool for Development of Human and Social Capital in Diminishing Gap between Urban and Rural Development

*Jolanta Pivoriene, Valdone Indrasiene, Violeta Jegelaviciene,
Daiva Penkauskiene, Odeta Merfeldaite, Asta Railiene,
Justinas Sadauskas, Natalija Valaviciene*
Mykolas Romeris University, Lithuania

Keywords: *critical thinking, education, development, human and social capital.*

Introduction. Critical thinking is one of the most significant skills and abilities, which has direct impact on individual success and society's welfare, fostering development of human and social capital in the countries. However, recent research shows that there is a big gap between theory (declared in policy documents and higher education programmes) and practice (skills, abilities and values (not) reflected in real life).

Aim. The aim of the study is to analyse coherence of theory and practice in the conceptualisation of critical thinking as a tool for the development of human and social capital.

Material and Methods. The research is based on in-depth systematic analysis of foreign and Lithuanian scientific literature and represents current situation of scientific findings all over the world.

Results. Importance of critical thinking is proved by growing interest in scientific and public life areas. Research data show that for a long time psychological research was dominating approach, which focused on measurement of cognitive skills and dispositions using experimental methods and context free attitude. They were limited either by verification or / and comparison of existing critical thinking theories or analysis of concrete cognitive skills, abilities and dispositions. Scientists acknowledge limitations of existing research and advocate for a search of new research strategies, instruments and methods, to look more contextually at relevance of critical thinking theories and their factual manifestations in real-life situations.

Conclusions. Analysis of recent research shows that most educational researches emphasise the importance of critical thinking in rapidly changing turbulent times and recognise it as a valuable tool for the development of human and social capital. They emphasise the importance of education and necessity of interconnection between education and labour market especially in minimising the gap between urban and rural development. Some researches provide possible solutions how to reach better coherence of critical thinking theoretical considerations and practical applications of the findings.

Motivation of Infection Control in Nurse Viewpoint

Diana Platace, Kristine Puzirevska, Amanda Kreile, Inga Millere

Rīga Stradiņš University, Latvia

Keywords: *motivation, infection control, nurse.*

Introduction. The spread of hospital infections in high-risk units remains even though infection control and prevention measures are being improved annually. It is associated with factors such as age, severity of the underlying disease, duration of hospitalisation, antibacterial therapy, resistance to microorganisms, and the number of invasive procedures. The human resources base and the financial distribution of medicine play a key role in controlling infections. Intensive care nurses under the supervision and care of the patient 24 hours a day have an invaluable role in controlling infections and reducing hospital infections.

Aim. The aim of the study is to find out nurses' opinions about the factors motivating infection control in intensive care units and in the department of internal medicine.

Material and Methods. The study used a quantitative study method – a survey (n = 160). The questionnaire included questions about factors influencing infection control and factors motivating the nurse. Questionnaires engaged nurses in intensive care units and in the department of internal medicine, who care for patients in Latvian multifunctional regional hospitals.

Results. In the survey, the most important factors influencing infection control are insufficient salary for nurses (92%), lack of staff (78%), inadequate education of patients for infection control (60%), and insufficient number of isolation regime rooms in the department (55%). In addition, shortage of staff leads nurses to significantly exceed the workload set by the Ministry of Welfare of the Republic of Latvia (160 hours per month), working on average from 160 to 250 hours per month. In the opinion of the nurses, the quality of the implementation of infection control measures and the prevention of infection control factors depend predominantly on the responsibility of the nurse. At the same time, it is emphasised that the regulatory documents of the Ministry of Health and the hospital management policy for infection control are also important. Nurses noted that in order to conduct infection control measures, they are motivated by a sense of responsibility, care for patient's health and their own health care and caring for colleagues' health.

Conclusions. A study suggests that factors influencing infection control from the nursing point of view were insufficient salary, lack of staff, insufficient patient education for infection control, and insufficient number of isolation regime rooms in the department. Simultaneously, there are also factors that disturb nurses' motivation for the implementation of infection control in patients care units, such as an increased workload, lack of awareness of infection control in practice and inappropriate attitude. As motivational factors, nurses mentioned sense of responsibility, care for their health, colleagues and patients' health, adequate salary for their work and more effective rules of infection control.

Assessment of Posture Statement of Cadets – Participants of High Endurance Exercises

Liana Plavina, Silva Smagare

Rīga Stradiņš University, Latvia

Anete Zahare

Land Forces Medical platoon, Latvia

Keywords: *military persons, musculoskeletal pathology, high endurance exercises, posture and foot status.*

Introduction. Musculoskeletal pathology provides high morbidity rate among military personnel. Musculoskeletal disorders manifest with pain symptom and functional disorders that have influence on daily duty activities and physical working capacity. Impact of high-intensity exercise may favour the development of psychosomatic pathology that affects both physical and mental performance. Psychological and emotional stress factors play a significant role in military service environment – health hazards are a rising trend among military personnel of armed forces in many countries. Analysis of anthropometric parameters, evaluation of posture status and foot status, summarising data of health statement and health problems are topical in support of good health, physical fitness capacity of cadets during high physical endurance exercises and psychological load.

Aim. The purpose of the study is to provide assessment of posture status and foot status, musculoskeletal disorders (pain complaints) for cadets, participants of Combat training course.

Material and Methods. The examined cadets' group includes 59 military persons of both genders (included 41 males and 8 females) aged 22–29 years. Anthropometric data, data of posture status, foot status fitness tests were evaluated. Standardised Nordic Questionnaire for analysis of musculoskeletal symptoms we was provided (*Kuorinka et al., 1986*).

Results. Analysis of standardized Nordic Questionnaire of musculoskeletal cadets indicated the main problematic regions which are the lower back (42.3%), upper back (15.5%), the neck region (21.1%), knee region (48.0%) and the foot region (17.3%). Posture analysis in examined group revealed that 72.9% of the cadets have asymmetric posture in sagittal plane and 76.3% of the respondents have symmetric posture in frontal plane. Fixed combined asymmetric posture in sagittal and frontal plane has been determined for 45.8% cadets. Foot status evaluation revealed foot asymmetry for 28.8% and deviation from standard weight distribution for 3.4% of the respondents.

Conclusions. Analysis of posture and foot status were topical for providing preventive measures and reduction of the risk of health disorders related to high physical load in military environment. Persons with expressed posture asymmetry and foot during dynamic load and static load can cause overstress with high risk of health disorders, musculoskeletal pathology and psychological overload.

Fatness and Thermoregulation in Qualified Rugby Players

Inese Pontaga, Jekaterina Liepina

Latvian Academy of Sport Education, Latvia

Dzintra Kazoka, Silvija Umbrasko

Rīga Stradiņš University, Latvia

Keywords: *overweight, dehydration, performance, health risks prevention, sport.*

Introduction. A large body size and mass is an advantage in some team sports such as rugby. Therefore, the desire to gain weight can bring rugby players to become overweight or obese. This could worsen their thermoregulation and health risks.

Aim. The aim of this study is to evaluate anthropometric characteristics and determine the effect of additional body fat to sweat loss during play-match in qualified male rugby players.

Material and Methods. 19 male rugby players from the national team were tested during a play-match. The age, height and body mass of participants were: 29 ± 6 years, 183 ± 7 cm, 96.86 ± 12.88 kg, respectively. The air temperature was $+13$ °C and humidity 69%. All athletes and each position players (forwards and backs) were analysed. The body mass index (BMI) was calculated. The method of skin-fold thickness measurement in selected sites with a calliper was used to assess percentage of body fat (% BF). Body mass loss of every player was detected by weighting of the athlete wearing only briefs using industrial scales with precision of 0.01 kg.

Results. The mean characteristics of all players were: BMI 29.07 ± 3.90 (kg/m²) and the body fat content 20.52 ± 5.64 %. The mean BMI was 26.18 ± 2.37 (kg/m²) and the body fat content 15.87 ± 3.97 % in back position players. Forwards were heavier and had BMI 31.18 ± 3.44 (kg/m²) and the body fat content 23.91 ± 4.02 %. The mean body mass decrease due to sweating in the play-match was 1.83 ± 0.84 % from the body mass. The mean body mass lost by backs was 2.62 ± 1.33 % and by forwards 1.59 ± 0.66 %. This could be explained by greater load intensity and volume in backs in comparison with forwards during a play-match. A correlation between body fat content and body mass decrease due to sweating was negative, linear and closer in forwards ($r = -0.71$, $p < 0.05$) than in backs ($r = -0.60$, $p < 0.05$).

Conclusions. This means that fatter players have a smaller body mass loss due to sweating, and the research indirectly proved that physical activity during a play-match is lower in athletes with a greater body fat content. The main characteristics necessary to backs for success are high power, speed and agility. Therefore, additional body fat would worsen their performance. Our backs are leaner and lose more body mass due to sweating during more intensive and prolonged loads. The main task of forwards is contact fight to get a ball, and therefore they need high strength and strength endurance to achieve success. High body mass is important to increase inertia forces in the contact fight. Therefore, forwards have greater BMI and the fat content than backs. Large body mass in rugby players would be better achieved by strength training and skeletal muscle hypertrophy rather than fatness. Athletes must be educated about nutrition and liquid consumption during training to prevent dehydration and performance decrease.

Walk and Talk Methodology – Researching Place and Self

Maruta Pranka

Rīga Stradiņš University, Latvia

Keywords: *community-based research, walking interviews, environment, changes.*

Introduction. Over the last years, a growing number of social scientists have been using techniques where social researchers walk with the designed participants to elicit responses to specific places. The major advantage of walking interviews is their capacity to access individuals' attitudes and knowledge about the surrounding. It is a way to engage with landscape and offers deep insights into place and self, encourages a sense of connection with the environment both in cities and country localities.

Aim. The aim of the study is to present the results of the social research conducted as a pilot study using the walk and talk methodology in a village Tuja just at the Baltic Sea.

Material and Methods. The research focuses on autobiographical narratives in the context of social changes in the village Tuja. The methodology includes interviewing and video filming and sound recording.

Results. There was a brick factory located there from the middle of the thirties of the last century. High quality bricks were produced there till 1991 when the factory was closed due to political and economic changes. The changes influenced the lifestyle of the inhabitants as well the economic and demographic structure of the village. Tuja historically has also been known for fishing and fishing industry. But now there is other face of Tuja –it is an exclusive recreational place at the Baltic Sea for wealthy people. Before the research, Tuja inhabitants were invited by the ad in the village centre to participate in the “Walk and Talk” process to deal with their memories related to the locality. The told narratives included personal events related to the surrounding environment and political, economic, social changes of the last century.

Conclusions. The methodology exposes itself as appropriate for investigation changes of lifestyle both in city and country environment. The conference presentation will integrate narration about research experience and video material.

Acknowledgement. The pilot Project was conducted by the researchers of the National Oral History Archive.

Comparison of Walking Speed between Woman in Hospital, after Cardiac Surgery, who Reside in City or Rural Areas

Daiga Pulmane, Anita Vetra
Rīga Stradiņš University, Latvia

Romans Lacis
Pauls Stradiņš Clinical University Hospital, Latvia

Keywords: *walking speed, woman, cardiac surgery.*

Introduction. The study includes 72 women after planned coronary artery bypass graft, cardiac valve replacement or combined surgeries, which were treated in a hospital. Women were divided into two groups by intent method. Group 1 – women living in the city, group 2 – women living in rural areas.

Aim. The aim of the study is to discover and compare the walking speed of women in different environments after a heart attack.

Material and Methods. Anthropometric data, cardiological risk factors before the cardiac surgery were determined. Spirometry has been used to measure forced vital capacity (FVC) both before and after surgery. Before cardiac surgery, a 5-metre walk test was performed to determine the speed of walking (s/5m). After surgery, a 6-minute walk test was performed to determine the distance (m) and walking speed (s/5m).

Results. Independent sample t-test was used to compare average speed in 5-metre walk test before cardiac surgery for both groups, it was concluded that the difference in walking speed between the groups was 0.14 seconds [95% CI: 0.72 to 1.02], with patients from Group 2 being faster, result has no statistically significant difference ($t(70) = 0.33$; $p = 0.73$). Based on the results of Leuven test, a conclusion was made that for Groups 1 and 2 walking speed variance in the 5-meter walk test does not have a statistically significant difference ($F = 0.04$; $p = 0.95$). During postoperative period both groups carried out a 6-minute walk test, after analysis of the results, it was concluded that the walking speed difference between the groups was 0.46 seconds [95% CI: -0.79 to 1.72], with patients from Group 2 being faster, the result has not a statistically significant difference ($t(68) = 0.73$; $p = 0.46$). A conclusion was made that for Groups 1 and 2 walking speed variance in the 6-minute walk test does not have a statistically significant difference ($F = 0.12$; $p = 0.91$).

Conclusions. The difference in walking speed between women in hospital, after cardiac surgery who reside in city or rural areas is not significantly different.

Criminal Liability for Delay of Insolvency Proceedings

Ivars Kronis

Rīga Stradiņš University, Latvia

Keywords: *insolvency proceedings, delay of proceedings, administrator, creditor, debtor, criminal liability.*

Introduction. The article analyses the legal norm, which provides for the criminal liability of the administrator and the representative of the debtor within the framework of legal entity insolvency proceedings or of the insolvent natural person in these proceedings. Up to now the criminal law science of Latvia discussed the issue of criminal aspects of delaying insolvency proceedings; however, no detailed analysis has been provided or no analysis has been conducted in conjunction with the previous insolvency regulation. This is indicative of the topicality of the theme, the importance of theoretical and practical research in the modern criminal law. By means of this thesis, there is an attempt to partially close the gap, examining the most important aspects of the theme. Although the time has passed after the effective date of the new Insolvency Law of November 1, 2010, thus being not enough to form legal practice in the criminal aspects related to delaying insolvency proceedings, it is the right moment to emphasise the urgency of the problem and to thoroughly evaluate the most important issues. Therefore, the purpose of the thesis is to analyse peculiarities of offence as specified in Article 215 of the Criminal Law, and to evaluate theoretical and practical aspects of its application.

Aim. The aim of the article is to evaluate theoretical and practical aspects of enforcement by analysing peculiarities of the criminal offence as intended by the Criminal law (CL) Section 215.

Material and Methods. The empirical base of the research is formed by scientific theses and collections of articles, periodical editions and primary sources, legal acts, statistical data, Internet resources, and other information in the public domain. To develop the thesis, analytical, comparative, inductive and deductive methods of research have been used.

Results. It may be concluded that the legislator disproportionately asks for a certain type of behaviour from the administrator, but such demands are not imposed on the other parties involved in the proceedings, for instance, a creditor, interested person or debtor. The disproportion can also be noticed in the fact that all decisions or actions by the administrator can be appealed, and the administrator can be removed, but bringing proceedings against the other involved persons that delay insolvency proceedings is limited.

Conclusions. The criminal liability for delaying insolvency proceedings should be imposed on a wider range of persons.

Social Activities of Latvian Students Living in Cities and Countryside

Jelena Levina, Kristine Martinsone, Sandra Mihailova
Rīga Stradiņš University, Latvia

Keywords: *social activity, social activities oriented towards helping others, society-oriented social activities, society, group, and individual levels of social activities.*

Introduction. Participation in social activities is an important indicator of successful social functioning and a significant factor influencing psychological health and subjective well-being. Cities and countryside were historically associated with different lifestyles, in particular with differences in opportunities of participation in social activities. Nevertheless, contemporary processes of globalisation help to erase the gap between centres and peripheries, urban and rural lifestyles. Therefore, social participation can be viewed as a significant resource of both urban and rural sociocultural development.

Aim. The aim of this research is to investigate whether there are differences in social activities of Latvian students living in cities, towns, and countryside of Latvia.

Material and Methods. The sample consisted of 101 students aged from 18 to 41 ($M = 20.78$, $SD = 3.57$), 28.7% were males and 71.3% were females. In this research questions from the third European Quality of Life Survey, which measures participation in social activities oriented towards helping others and contributing to society, and Social Activities Questionnaire, developed by S. Jirgena, were used.

Results. It has been identified that there are differences in the level of participation of students in such social activities as doing unpaid voluntary work through social movements or charities ($\chi^2(3, n = 101) = 11.82, p < 0.01$) and other voluntary organisations ($\chi^2(3, n = 101) = 13.06, p < .01$). Students who live in the countryside did unpaid voluntary work through social movements or charities more often than students who live in Riga ($z = -3.33, p = 0.001$). They also did unpaid voluntary work through other voluntary organisations more often than students who live in Riga ($z = -3.40, p = 0.001$), and those who live in other large cities such as Daugavpils, Liepaja, Jelgava ($z = -2.54, p < 0.05$). There are differences in the level of participation in civic activities, namely, contacting a politician or public official ($\chi^2(3, n = 101) = 13.93, p < 0.01$). Students who live in Riga contacted a politician or public official less often than students who live in different Latvian towns ($z = -3.61, p = 0.00$) and those who live in the countryside ($z = -2.82, p < 0.01$). There are differences in the level of participation of Latvian students in social activities at individual level, namely, in art and creative leisure-time activities ($\chi^2(3, n = 101) = 11.61, p < 0.01$). Students who live in the countryside practice art and participate in creative leisure-time activities more often than students who live in Riga ($z = -3.32, p = 0.001$).

Conclusions. In the countryside social networks can be characterised by close social ties, which can serve as a base for a more intensive participation in social activities. Living in the countryside allows to get more impressions from nature which can stimulate participation in creative leisure-time activities.

Civic Crowdfunding into Renewable Energy Sources: Local Self-Government's Perspective

Mario Rajn

City of Krizevci, Croatia

Hrvoje Belani

P.O.I.N.T. Association, Croatia

Igor Ljubi

VERN' University of Applied Sciences, Croatia

Keywords: *crowdfunding, solar power plant, microloans, local community, ICT.*

Introduction. Crowdfunding is a collective effort of many individuals who network and pool their resources to support efforts initiated by other people or organisations. It is usually done online via websites, crowdfunding platforms and social networks to enable investors and entrepreneurs get together around a common goal. Crowdfunding has various forms, including donations, microloans and ownership shares.

Aim. This study presents an experience of local self-government in City of Križevci, Croatia, in conducting a civic crowdfunding project in May, 2018, aimed at setting up an integrated photovoltaic power plant with the power of 30 kW. The project named "Sunny Roofs of Križevci" was based on citizen investments in renewable energy sources with the microloan principle. This was the first microfinanced project by citizens in the field of renewable energy sources in Croatia.

Material and Methods. Križevci is a small city with a population of around 21 thousand, located less than 60 kilometres from Croatian capital, Zagreb. One of the local strategic goals for the next ten years is to achieve energy independence of public administration and institutions, as well as to popularise solar power plants as renewable energy sources affordable to citizens and acceptable to the environment. The initiative came from the Green Energy Cooperative, that delivered technical and economic elements of the project, and launched a crowdfunding campaign to raise the needed amount of 30,000 EUR.

Results. The campaign was advertised through online media and social networks and managed via a web-form collecting offers from small investors, limited to 1300 EUR per individual, and resulted in full-funding by 53 citizens in only ten days. The average investment was 500 EUR. By the end of autumn 2018, the power plant is planned to be set on the roof of the administrative building of the Development Center and Technological Park Križevci which will primarily cover their needs for electrical energy.

Conclusions. The cooperative will return the loans to investors with a 4.5% interest over a period of 10 years from the income generated by electricity production of the plant. After the expiration of the lease agreement and transfer of power plant to the property of the City of Križevci, the power plant will continue to work, having further savings and positive climate impacts.

Specificities of Work of Social Workers when Rendering Social Services at Person's Home

Rita Raudeliunaite

Mykolas Romeris University, Lithuania

Keywords: *social services, elderly people, persons with disabilities, social worker.*

Introduction. Social services at a person's home are one of the most progressive forms of social services in order to create conditions for a person to remain independent and to stay at his home for as long as possible.

Aim. The objective of the study is to highlight the specificities of the work of social worker when rendering social services at a person's home based on the experience of social workers.

Material and Methods. Qualitative research strategy was used, including semi-structured interview. The main recipients of social services at a person's home are the elderly, adults with disabilities, and children with disabilities.

Results. The study revealed a wide spectrum of activity spheres of a social worker when organising the provision of social services at home: identification and assessment of the need for a service; planning, provision, coordination and assessment of the assistance or care at a person's home. A social worker, while organising the provision of the services at a person's home, engages the recipient of a service in decision making when identifying and assessing the person's need for such services, foreseeing and assessing the services, making a decision regarding the continuity of a service. When providing services at a person's home, a social worker promotes the activity of the recipient of a service, cooperates with the closest people of the recipient of a service, the employees, various bodies and organisations, communities that provide services. Social workers consider their professional development an important sphere of their activity. They improve their professional qualification in various forms: by participating in trainings, professional development training courses, conferences, exchanging good practices and innovations with their colleagues, consulting with other specialists.

Conclusions. The study reveals the benefit of social services at a person's home to recipients of the services. The services, which are provided at a person's home, allow the service recipients to live at their homes, they feel less lonely, safe, needed, capable of benefiting from the assistance they need. Social workers, who organise the provision of social services at home, in their daily activity encounter difficulties arising when cooperating with the recipients of social services at home and organisational limitations of bodies providing them. Difficulties, which arise when cooperating with the recipients of social services at home include the following: people provide incorrect information when identifying the need for a service, mental disorders of a service recipient, dissatisfaction with the rotation of workers of visiting care, complaints regarding lack of communication. Organisational limitations of bodies providing services are linked to formalism, lack of personnel, time restrictions on services, lack of transport, unaffordability of services due to limited financial resources of service recipients.

Challenges and Their Overcoming when Implementing Restructuring of Children's Care Homes in Lithuania

Rita Raudeliunaite, Vida Gudzinskiene
Mykolas Romeris University, Lithuania

Keywords: *deinstitutionalisation of child care system, social workers, children's care homes.*

Introduction. The deinstitutionalisation of child care system has recently been one of the priority areas in Lithuanian social policy. The purpose of the transition from institutional care to family- and community-based services to children who have lost parental care is to ensure a harmonious environment and conditions to children to grow in a familial environment. The transition from institutional to family- and community-based care is gradual. Political basis for that is important; however, not only authorities, but care institutions themselves as well have to be involved in the process. Therefore, while restructuring is underway, it is relevant to investigate what challenges social workers, who work in children's care homes, which participate in the restructuring, encounter and, while analysing the findings of the studies, to model strategies for overcoming arising problems, in order that the objectives set out in the restructuring would be achieved.

Aim. The aim of the study is to reveal challenges and ways to overcome them in the context of restructuring of child care, based on the experience of social workers who work in children's care homes, which participate in the restructuring.

Material and Methods. Qualitative research type was chosen for the study. The selected method was a semi-structured interview with social workers who work in care institutions that take part in the deinstitutionalisation process.

Results. The challenges arising to social workers in the context of restructuring, which came to light during the study, are related to resistance and anxiety of social workers regarding their future, lack of information on the restructuring, lack of engagement of social workers in the restructuring processes, lack of dissemination of good practices, the need to improve professional qualifications and the possibility to choose training courses of qualification improvement which correspond to their needs. The unpreparedness of the community for restructuring, as well as finding foster parents and adoptive parents for children or the reunification with their family and anxiety of children about their future were also identified.

Conclusions. In order to overcome the challenges arising during the restructuring, it is necessary to have a restructuring plan which is clear and comprehensive to everyone involved; preparation of the employees for changes; increase of dissemination of information in the community and society; rallying of the community; interinstitutional cooperation and preparation of parents / adoptive parents / foster parents.

Children with Emotional and Behavioural Disorders: Pilot Study on Development of Parent Adherence Questionnaire

Ilze Reinfeldē, Jelena Kolesnikova

Rīga Stradiņš University, Latvia

Keywords: *parent adherence, medical adherence, children with emotional and behavioural disorders, internal consistency.*

Introduction. The data from different groups of patients indicate that 30–50% of patients fail to follow doctor's recommendations for medication use. Parents adherence can have a significant impact on the results of treatment of children with emotional and behavioural disorders. The developed Medication Adherence Questionnaire (MAQ-LV) in Latvia is a scale used to evaluate medication adherence for diabetes patients; therefore, MAQ-LV validation is important for the group of parents who have children with emotional and behavioural disorders.

Aim. The aim of the study is to determine psychometric properties of the Medical Adherence Questionnaire in parents with children with emotional and behavioural disorders.

Material and Methods. The sample consists of 50 parents who have children with emotional and behavioural disorders, aged 25–45 (female 96% and male 4%).

Results. The results of the study indicate that the properties of the MAQ-LV in parents show good reaction and discrimination indexes. The internal consistencies (Chronbach's alphas) for the scale of MAQ-LV are acceptably high.

Conclusions. The study indicates that psychometric properties of Medication Adherence Questionnaire internal consistency, reaction and discrimination indexes are satisfactory in parents who have children with emotional and behavioural disorders. However, it would be necessary to carry out follow-up evaluation of the validity of the questionnaire by establishing convergence, divergence and criterion validity. Through this survey, it is possible to define parent adherence for the usage of medication.

Readiness of Independence in Healthcare Management for Young Adults with Cerebral Palsy

Zane Rozkalne, Maksims Mukans
Rīga Stradiņš University, Latvia

Keywords: *cerebral palsy, transition age, self-management, healthcare, young adult.*

Introduction. Transition from paediatric to adult healthcare services is a crucial process for young adults with long-term medical conditions (Merrick *et al.*, 2015; Campbell *et al.*, 2016), and well organised and coordinated transition process has been set as a priority (Rosen *et al.*, 2003). Young adults with cerebral palsy (CP) face more difficulties in transition process to adulthood compared to their able bodied peers (Donkervoort *et al.*, 2008). Readiness for independence in healthcare management and the influencing factors are essential to be identified.

Aim. The aim of the study is to identify readiness for independence in healthcare management and the influencing factors for young adults with cerebral palsy.

Material and Methods. Eighty young adults (41 males, 39 females, age range 16–21years, M = 18, IQR = 20–17) with CP and normal or slightly decreased mental function participated in the study. The levels of Gross Motor Function Classification System (GMFCS) were: 43.8% first, 30.0% second, 16.3% third, 10.0% fourth. Main types of CP (ICD-10) were: 33.8% quadriplegia (G80.0), 30.0% diplegia (G80.1), 20.0% hemiplegia (G80.2). Readiness of self-management in healthcare was assessed with the Transition Readiness Assessment Questionnaire (TRAQ), level of mental state was assessed with Mini-Mental State Examination (MMSE) and overall transition process to adulthood was assessed with the Rotterdam Transition Profile (RTP).

Results. In the group of participants with slightly decreased mental function ($n = 40$), the median (M) score of TRAQ was 61 (IQR = 51–73); in the group with normal mental function ($n = 40$), M = 77 (IQR = 65–90). In the group with slightly decreased mental function was found a correlation between the score of TRAQ and the total score of RTP – Spearman's rho $r = 0.48$ ($p < 0.01$). In the group with normal mental function was found a correlation between the score of TRAQ and the age of participants ($r = 0.51$; $p < 0.01$), the level of GMFCS ($r = -0.34$; $p < 0.05$) and the level of certain RTP sections ($p < 0.01$): education and employment – $r = 0.60$, finance – $r = 0.58$, care demands – $r = 0.75$, services and aids – $r = 0.79$. No correlation was found between the total score of TRAQ and the place of living of participants ($r = -0.02$; $p < 0.01$).

Conclusions. It can be assumed that readiness of independence in healthcare management for youth with cerebral palsy can be associated with the level of cognitive function, age, overall readiness to transition, education, employment, management of finances and the level of one's reasoning when dealing with healthcare demands, services and aids.

Significant Factors of Violence against Women in Urban and Rural Community

Marketa Rusnakova

Catholic University in Ruzomberok, Slovakia

Ludmila Huskova

Police of Slovak Republic, Slovakia

Keywords: *significant factors, violence against women, mistreatment, victim, aggressor.*

Introduction. The contribution is focused on the issue of domestic violence against women. It deals with the definition of violence, concepts and models of individual areas by summarising the research findings and the possibilities of methodological tools for measurement of significant factors of violence against women.

Aim. The primary goal of the contribution is to define significant factors which determine violence against women

Material and Methods. Methods of research – survey, document analysis and database statistical analysis.

Results. Primary results of quantitative research reveal that women of all age and educational groups are at risk. Mostly women aged 26–45, living in rural areas with middle school education without maturity exam (final exam). Violence in families involves men of all age groups with emphasis on increased incidence in specific categories: mostly men aged 36–45, living in rural areas with secondary (high school or comprehensive school) education. Another field of interest represents analysis of negative family situations, impact of violence against woman on her psychological conditions, and reasons why victims carry on marriage and / or partnership.

Conclusions. It can be concluded that the most frequent negative phenomena during aggressor's and / or victim's childhood were physical violence of father against mother, alcohol – possibly father's alcoholism, poverty, physical punishment of children, and patriarchal model of the family. Two thirds of victims continue marriage / partnership in order to maintain the family, to keep the father for children, and for financial reasons. There is a frequent social criminality in poor biological families of aggressors, i.e. a commission of crime because of lack of finances.

Legal Aspects and Problems of the Procedure how Persons Diagnosed with Addiction Receive Social Rehabilitation Services in the Capital and Rural Areas of Latvia

Laura Saberte, Liene Vindele, Rihards Erdmanis, Viesturs Gaidukevics
Rīga Stradiņš University, Latvia

Keywords: *persons diagnosed with addiction, social rehabilitation, substance addiction, process addiction, legal aspects, human rights, social rights.*

Introduction. The Latvian National Development Plan for 2014–2020 (NAP2020) indicates that the quality of health of the population is low in Latvia. It is generally known that health quality is influenced by socio-economic conditions of the society, which in turn are closely related to legal conditions in the country. In the study “Social Rehabilitation of Adolescent Teenagers in Latvia”, the focus on rehabilitation phase makes it possible to retrospectively assess significance of current preventive measures. Therefore, analysis of health of a country’s population does not only affect health of the country’s population, but also preventive measures that interact with rehabilitation measures.

Aim. The aim of the study is to discover how the Latvian legal framework affects one of the goals of provision of social rehabilitation services, namely the negative effects of dependence factors on a person’s life. In other words, the key focus of the research is to give an insight into the legal framework of Latvia and its impact and social rehabilitation services for persons who are diagnosed with addictions.

Results. The Social Services and Social Assistance Act of the Republic of Latvia defines a social rehabilitation service. Namely, this law states that social rehabilitation service is a package of measures aimed at restoring or improving the social functioning capacity in order to ensure recovery of social status and inclusion in society and includes services at the place of residence of a person and in a social care and social rehabilitation institution or place of residence or social care and social rehabilitation institution. The purpose of social rehabilitation services, in turn, is to prevent or reduce the negative social consequences of a person’s disability, incapacity for work, imprisonment, dependence or violence and other factors. Legislation of Latvia prescribes procedures for provision of social rehabilitation services to persons who are diagnosed with addiction. Simultaneously, it has been established that the legal regulation of social rehabilitation service is declarative, because the actual situation only partially corresponds with the content of the legal provisions.

Conclusions. It is possible to draw conclusions about the preventive measures taken. Thus, health is undoubtedly a guarantor of welfare of any resident of Latvia; it is closely linked to preventive and rehabilitation measures. Socio-economic situation of Latvia significantly affects provision of social rehabilitation services to persons, who have diagnosed addiction. Respectively, realisation of social rehabilitation service in Latvia confirms both the opinion expressed in legal literature and judicial practice that social rights are closely linked to the economic situation of the state.

Systematic Review of Most Commonly Used Assessment Tools for Swallowing Disorders

Santa Salaka, Guna Berzina
Rīga Stradiņš University, Latvia

Keywords: *swallowing disorders, dysphagia, swallowing disorder assessment tool, therapy outcome assessment tool.*

Introduction. Dysphagia is defined as swallowing problems involving oral cavity, pharynx, esophagus, or gastroesophageal junction (*American Speech-Language-Hearing Association*). Swallowing problems affect one in 25 adults annually, in the United States (*Bhattacharyya, 2014*). Currently a screening tool for swallowing disorders (GUSS – Gugging Swallowing Screen) is available in some hospitals in Latvia, which gives a chance to identify patients with swallowing disorders, but there is no joint tool available for future evaluation of this group of patients. A specific assessment tool is imperative to evaluate needs of patients with swallowing disorders.

Aim. The aim of the study is to identify the most commonly used assessment tools for swallowing disorders.

Material and Methods. The research was conducted using Medline (PubMed), ScienceDirect, ProQuest data bases for the time period from 2007 to 2017, using previously developed inclusion and exclusion criteria. The selected studies were structured using the flowchart from the guidelines for systematic review and meta-analysis (*PRISMA – Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) (*Moher D. et al., 2009*).

Results. 53,966 studies were screened of which 99 clinical studies that identified 118 swallowing disorder assessment tools were included in systematic literature review. Overall, nine assessment tools of 118 have been identified more than five times (Penetration Aspiration Scale, MD Anderson Dysphagia Inventory, Functional Oral Intake Scale, Oral Transit Time, Pharyngeal Transit Time, Pharyngeal Delay Time, Swallowing Quality of Life Questionnaire, Videofluoroscopic Dysphagia Scale, Aspiration). Of the nine tools that were included in further analysis, three tools are self-assessment tools, two of which are designed to assess the quality of life (MDADI; SWAL-QoL), and one to determine severity of dysphagia (FOIS). Six measurements are used during videofluoroscopic (VFS) swallowing examination (PAS; OTT; PTT; PDT; VDS; Aspiration).

Conclusions. The most commonly used assessment tools for swallowing disorders are PAS, MDADI, FOIS, OTT, PTT, PDT, VDS, Aspiration. Among the identified assessment tools, self-assessment tools, clinical evaluation tools, and quality of life assessments were included, as well as individual measurements performed during radiological or endoscopic examinations. The choice of the instrument depends on the purpose of the assessment and on the clinical situation.

Manifestation of Favour Defensionis in Latvian and Foreign Criminal Proceedings

Irina Polevaja

Daugavpils University, Latvia

Keywords: *favour defensionis, criminal proceedings, procedural advantages and privileges.*

Introduction. Recently, in foreign doctrine, the conceptual foundations are being actively sought to structure the existing guarantees of traditional rights of defense and determine their place and role in criminal proceedings. One of the possible variants of such a concept is the design based on the principle of favour defensionis, which traditionally served as the basis for the procedural advantages and privileges of the defense party in criminal proceedings.

Aim. The aim of the article is to analyse the principle of favour defensionis in the context of contemporary criminal proceedings, considering historical experience, as well as the nature of this procedural structure, the definition of its procedural manifestations, roles, location and identification of modern development tendencies. The aim of the article is also to define the content, meaning and boundaries of procedural structure of favour defensionis and to discover a criterion that allows certain norms of certain procedural institutes to be regarded as favour defensionis.

Material and Methods. Historical, comparative and legally-technical approaches form methodological basis of the article.

Results. Favour defensionis exists in today's criminal proceedings in the Republic of Latvia, but the direct non-enforcement of this structure in the regulatory space also results in the necessity of its special and detailed research. It applies equally to criminal proceedings in other countries, and thus to contemporary criminal proceedings and criminal justice in general.

Conclusions. Exploring the manifestations of favour defensionis in criminal procedure helps to identify and to comprehend the prospective of development of this procedural construction.

Oncology Policy Actualisation in Level of Political Decision Making – Actors, Contents and Discourse of Communication Interventions

Vita Savicka, Aija Kazoka

Rīga Stradiņš University, Latvia

Keywords: *health communication, social ecology system, political environment, public sphere.*

Introduction. In Latvian healthcare policy improvement – development of the new oncologic policy (plan for treatment of oncological patients and assignment of extra funds for the implementation of the plan) – clearly highlights effectiveness of health communication intervention at the top level of social ecology system and use of actors' social capital in discussions with the PM in committees of social and health issues, as well as in plenary sessions. To solve the problems in the field of oncology since the Plan for treatment of oncological patients was launched, mostly patients and doctor's associations, as well as individual doctors have been involved in directing their proposals to the legislator (Kazoka, 2015).

Aim. The goal of the study is to analyse communication interventions at the top level of social ecology system – who has been the spokesperson, the main messages, discourse. The achieved results aim at understanding how communication interferences at the top level of ecological system impact decision making process in Latvia.

Material and Methods. The research has been conducted through the discourse and content analysis method. Language corpora used for analysis: RSU Faculty of Communication, and University of Latvia Laboratory of Artificial Intelligence developed web tools for the Saeima session transcript corpus analysis: saeima.korpuss.lv/ and bonito.korpuss.lv/saeima/. In the course of the research, quantitative data on the use of the phrase oncology plan were obtained using the language corpus. Also, the scope or fields of use for this phrase were determined via the method of discourse analysis.

Theoretical background. Shelley D. Golden and Jo Anne L. Earp admit that for achieving long-term health behaviour or improvements, it is important to analyse how many action levels are needed for it to be effective. In health communication, each of these levels has defined targets. At interpersonal level people increase knowledge, create their views, and develop skills; at both interpersonal and organisational change is promoted in social relationships and the environment of the organisation, healthcare service accessibility is promoted, but at the policy level adoption of decisions that positively affect health is ensured (Golden, Earp, 2012; Schiavo, 2007).

Results. Through the prism of political and public discussions, the initiative to develop the plan for treatment of oncological patients and assign extra budget can be looked via the lens of the definition of the public sphere by Jürgen Habermas. It is a civic / citizen environment in which the public opinion and political will are both formed as a result of communication process. Habermas also defines a chain of events within public spheres: first, the conversation and discussion circulate around a kind of a private label that, from then on, affects boundaries of the public sphere, and finally may affect governance (Habermas, 2001: 344). On the other hand, Ivars Ījabs defines civil society (which Habermas defines as the most important element of the public sphere) as a descriptive concept of desirable social design, in which the important role is at the so-called middle level – associations and alliances between the state and private sphere, and this intermediation would be unthinkable without a discursive formulation of the public opinion (Ījabs and Kruks, 2008). When care of oncologic patients arrives at the political arena and is viewed in parliamentary commissions and Saeima meetings, the work of politicians can be traced through discourse analysis. Analysing the parliamentary discourse as a collection of political speeches and texts, it is important to consider discourse from a critical point of view based on ideas about discourse research from Teun Adrianus van Dijk (Dijk, 2008).

Conclusions. In democratic societies, according to Jürgen Habermas, the will is shaped by the communicative vortex of political publicity and maintenance of it, which the author calls the “public sphere” (Habermas, 2001). Parliamentary discussions serve as the political centre of the public sphere, interacting with the broader public debate and views (Ījabs and Kruks, 2008). T. van Dijk draws attention to the fact that modern power in many democratic societies manipulates and persuades rather than forces, thus discourse plays a key role in building societal consent (Dijk, 2008). By applying the critical discourse analysis method, it is possible to analyse the parliamentary discourse in the field of oncology, comparing the results obtained with the study carried out so far and fixing new features in the articulation of discussion and adoption of decisions.

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Adaptation and Standardisation of Rapid Automatised Naming and Rapid Alternating Stimulus Tests in Latvian

Līga Savicka

Rīga East Clinical University Hospital, Latvia

Kristine Riemere, Andra Vabale, Anita Vetra

Rīga Stradiņš University, Latvia

Inna Kulicenko

ABA Therapy Center "Lauvas skola"

Keywords: *rapid automatised naming, alternating stimulus, literacy.*

Introduction. There is lack of standardised instruments for early literacy screening in Latvia. Approaching the new model within which children can begin primary education since the age of six, it is especially important to identify possible difficulties with phonological abilities and literacy. RAN test results correlate with literacy levels (*Manis et al., 2000*).

Aim. The aim of the study is to adapt RAN-RAS test for clinical use in Latvian speech therapist practice, and standardise it in 5–18-year-old children and adolescent population.

Material and Methods. Participants were 5–18 years old ($n = 695$) from general population with Latvian as their native language, from 38 educational institutions. The assessment was performed with RAN-RAS test (*Denckla, Rudel, Wolf, 2005*) (RAN-RAS Latvian version – *Riemere, Vabale, Vētra, Savicka, Kuļičenko, 2015–2018*) which was adapted in Latvian beforehand. Adaptation of “RAN Objects” was done by including objects a child from the age five would easily recognise (apple, chair, dog, arm, sun). RAN subtest “Colours” has not been changed from the 1972 original. “RAN Numbers” include the numbers 3, 6, 9, 5, 8. “RAN Letters” has been adapted by choosing the most often used letters in the Latvian language – i, a, s, b, m. RAS 2 stimulus subtest includes five numbers and five letters and follows ABABAB model; while RAS 3 stimulus subtest includes five numbers, five letters and five colours and follows ABCABCABC model. The basis of RAS subtests are the stimuli in RAN subtests.

Results. RAN-RAS reliability coefficients in 6–12-year-olds are acceptable or better ($r > 0.75$; $p < 0.001$). Internal consistency is high for all subtests and age groups ($\alpha = 0.93$). In 13–18-year-olds reliability is good (mean value of six subtests $r = 0.82$; $p < 0.05$). Internal consistency is high for all subtests and age groups ($\alpha = 0.88$). However, results show that 32% of 5-year-olds could not name RAN Numbers and 58% could not name RAN Letters.

Conclusions. RAN-RAS test has been adapted and standardised for use in children and adolescents in Latvia. Based on internal consistency, reliability coefficients and learning process guidelines, it would benefit to use subtests “RAN Letters”, “RAN Numbers”, “RAS Letters and Numbers” and “RAS Letters, Numbers and Colours” for children from the age of six. Latvian RAN-RAS test version can be used for early literacy screening and to avoid a wait-and-see approach, as well as for starting appropriate and timely interventions.

Fast and Efficient Insolvency Process: One of the Preconditions of an Outstanding Business Environment and Terms of Potential of the Regions

Valdis Savickis, Jolanta Dinsberga

Rīga Stradiņš University, Latvia

Keywords: *insolvency process, insolvency law, business environment.*

Introduction. Fast and effective – these are two basic principles that characterise the insolvency process, as defined in Section 6 of the Insolvency Law. In accordance with the above mentioned principles, the insolvency process should be such that, with the least consumption of resources, the goal of the process can be fully achieved, while simultaneously maintaining the speed of commercial circulation. Whereas the purpose of the insolvency process, as defined in Section 1 of the Insolvency Law, is to promote the honoring of the obligations of a debtor in financial difficulties and, where possible, the renewal of solvency. With the time passing, the purpose of the insolvency process has changed, but with the approval of the State Insolvency Policy Development Guidelines 2016–2020 (the Guidelines), a link was established with the Latvian National Development Plan for 2014–2020 (the Plan) and the scope of activities of the Plan, it promotes to ensure an outstanding business environment. Creating an outstanding business environment, however, cannot be separated from the statement, made in the Plan – Vision of Latvia in 2020 “Economic Breakthrough – for the Greater Well-Being of Latvia!” and the territorial potential described in Paragraphs 52 and 53 of the Plan is one of the medium-term priorities. The insolvency process proceedings, its results and reflection on the business environment in both urban and rural areas is an important factor in human capital, the basic value and productivity of Latvia’s most important resource, as stipulated by the Sustainable Development Strategy of Latvia until 2030 (Development Strategy), is an essential factor.

Aim. The article, focusing on the problems of the insolvency process of legal entities, aims at analysing and examining the impact of insolvency processes on the potential of territories and human capital, paying attention to both urban and rural areas.

Material and Methods. Scientific research methods: descriptive, analytical, inductive and deductive, graphical and interpretation of legal norms – grammatical, systemic, and teleological; materials used: normative acts, legal doctrine, case law studies, scientific and law literature, dictionaries have been used for the conduct of the study.

Results. To date, in the articles and publications on the insolvency process, the primary objective of the subobjectives of the insolvency process were emphasised – to balance the protection of legal interests of entrepreneurs and creditors.

Conclusions. Reforms of the insolvency law sphere performed by the legislator have formally reached the primary goals and sub-goals set out in the Guidelines. On the other hand, linkage with higher-level policy planning documents, in particular the priorities defined in the Development Strategy, has remained in the second plan, thus degrading priorities set by the legislator, such as territorial potential and human capital.

Persons' with Epilepsy Experience in Labour Market – Variations in Urban and Rural Areas

Polina Sediene, Jolanta Pivoriene

Lithuanian University of Health Sciences, Lithuania

Keywords: *epilepsy, labour market, the right to work.*

Introduction. Epilepsy is one of the most prevailing neurological diseases; any person at any period of life can experience it. Persons with epilepsy face multiple health, psychological, social and economic challenges. Even if the right to work is ensured in various international and national legislations, reality shows that implementation of that right is complicated in many countries.

Aim. The aim of the presentation is to reveal how the right to work for persons with epilepsy is implemented in Lithuania by investigating their subjective experience.

Material and Methods. The study is based on qualitative research methodology. Criteria sample was used in the research, the research participants were selected by the following criteria: diagnosis of epilepsy, episodes of attacks, 30-40 years old, and experience in labour market. The participants were from urban and rural areas. By using content analysis of qualitative data, three categories with subcategories were formulated: motivation (high motivation for employment, demotivating factors), experience in labour market (negative emotions during job interview, hiding illness, consequences of hiding illness, stress for possible attack at work), relations with employees (expectations toward employees, stigmatised attitude of employees, stereotypical thinking, necessity for individualised relations).

Results. The analysis emphasises challenges which research participants face in urban and rural areas, as well as employment history differences depending on the area. The research data show that persons with epilepsy have high motivation in searching the job and attempting to stay in labour market, because they want financial stability, safety and inclusion in social life. However, despite high motivation, it is difficult to find a job and stay in labour market. The main demotivating factors are painful experience during job interviews and not adjusted working conditions and environment. Persons with epilepsy experience negative emotions during job interviews, they hide their illness from employees as long as it is possible, but even after illness has been revealed, they constantly feel stress for possible attacks. They worry that during the attack at work they will not receive appropriate support and employees will develop negative attitudes toward them because of the illness.

Conclusions. Research participants have clear and specific expectations to employees, but they feel stigmatised and stereotypical attitudes towards them. Persons with epilepsy would like to have an individualised approach to their situation and adjustment of working conditions to their abilities. Research data show that research participants experience different employment history depending on where they live and keep looking for a job/working. It is easier to find and keep a job in urban areas, but they experience the same employee attitudes and societal stereotyping both in urban and rural areas.

Scanning Electron Microscopy Application in Determining Peculiarities of Endometrium of Women with Infertility

Sofija Semenistaja, Sandra Skuja, Valerija Groma
Rīga Stradiņš University, Latvia

Keywords: *infertility, pregnancy, fertilisation, embryo.*

Introduction. Women infertility is defined as a failure to conceive pregnancy after 12 months of regular unprotected sexual intercourse and could be treated with in-vitro fertilisation (iVF). Normal endometrium possesses “receptivity”, which plays a crucial role in successful embryo implantation in endometrium and maintaining a healthy pregnancy. Success rate of iVF is usually about 56% despite preliminary laboratory and instrumental examination. Certain part of failures is related to unknown endometrium receptiveness. One of the most topical methods to assess it is evaluation of endometrial pinopodes by scanning electron microscopy (SEM). Endometrial pinopodes appear at the time of implantation and are epithelial cell mushroom-like protrusions, which extend from the upper pole in response to hormonal and local factors, and persist for 48 hours. One of the functions is to capture an embryo. Evaluation of pinopodes by SEM helps to distinguish whether the endometrium is ready for implantation, thus increasing success of iVF.

Aim. The study aims at analysing morphological peculiarities of endometrium in women with infertility by using SEM.

Material and Methods. The archived endometrium biopsies obtained during hysteroscopy from patients diagnosed with infertility in mid-secretory phase of a menstrual cycle, fixed in 2.5% glutaraldehyde, postfixed in 1% osmium tetroxide, dehydrated in graded series of acetone, dried by the critical point method using liquid CO₂, mounted onto metal stub and coated with gold. All samples were analysed by scanning electron microscopy at magnification of 2000–20,000.

Results. Morphological analysis of endometrium reveals a low or moderate number of pinopodes, arranged solely or small groups with no confluent lying. Distribution of pinopodes is irregular and comprises around 12% of endometrial surface coverage only. Pinopodes are of three different maturity phases – with microvilli (developing), without microvilli (mature), wrinkled with short microvilli (regressing) with the predominance of regressing pinopodes.

Conclusions. Our study shows diminished presence and irregular distribution of pinopodes in women with infertility issues. The underdeveloped pinopodes demonstrated in the given study could contribute to impaired implantation of an embryo and consequent failure to develop a pregnancy. SEM could be of great value in evaluating endometrial maturity before iVF. Estimation of pinopodes has a clinical value and may be recommended when assessing the reproductive outcome. Both, SEM as modern technology and pinopodes as a receptivity parameter could be included in preliminary investigation of a patient undergoing iVF, which in combination with other methods could optimise the time when embryo should be transferred, thus increasing the rate of successful pregnancies.

Individual's Level of Education as Guarantee of the Right to Defence

Oleksandr Shevchyk, Andrii Hnatiuk

Poltava Law Institute of Yaroslav Mudryi National Law University, Ukraine

Keywords: *level of person's education, right to defence, obligatory participation of a lawyer in criminal process.*

Introduction. Relevant principle of the right to defence is enshrined in national legislation, including Art. 59 of the Constitution of Ukraine, according to which "Everyone has the right to a professional legal assistance. In cases provided by law, this assistance is provided free of charge". In addition, there is Art. 52 of the Criminal Procedural Code (CPC) of Ukraine.

Aim. The aim of this research is to investigate interrelation between defendants' level of education and ensuring their rights of defence, and to propose legal adjustments in the sphere.

Material and Methods. This study is based on Ukrainian regulation acts, scientific researches using dialectical, comparative, analytic, synthetic and comprehensive methods.

Results. In some cases, when deciding on the involvement of a lawyer in accordance with Art. 52 CPC of Ukraine, Ukrainian national courts, as a legal basis for the mandatory participation of a lawyer in criminal proceedings, refer to the provisions of paragraph 4 of Part 2 of Art. 52 CPC of Ukraine that provides such guarantees for persons who do not speak the language of criminal proceedings. In other cases, the courts facing the fact of the absence of persons' appropriate level of education, as the legal basis for the involvement of a lawyer in a criminal proceeding refer to the provisions of paragraph 3 of Part 2 of Art. 52 CPC of Ukraine that regulates an obligatory participation of a defence counsel in criminal proceedings for persons with mental defects. Lack of appropriate level of education or the fact of not speaking the language cannot be regarded as a certain mental defect since individuals could have appropriate oral skills, but not written ones, in Ukrainian. In most cases of criminal proceedings, courts first establish the fact that there was no adequate level of education of a person prosecuted and decide to engage a lawyer in accordance with Art. 52 CPC of Ukraine as a compulsory participant in criminal proceedings. Therefore, the fact of the revealed violation of the right to defence during pre-trial investigation leads to recognition of evidence gathered during pre-trial investigation as inadmissible. Moreover, it leads to the court decision to close criminal proceedings based on clause 3, Part 1, Article 284 of the CPC of Ukraine, as for failure to establish sufficient evidence to prove the guilt of a person in court and to exhaust the possibilities of obtaining it.

Conclusions. Relevance of the study is justified not only by the lack of a unified approach in the practice of law enforcement regarding the application of legal grounds for the mandatory provision of a lawyer in criminal proceedings for persons who do not have appropriate level of education (which necessitates changes to national legislation), but also lack of a strictly defined level of education that would be considered sufficient to exercise peoples' right to protection.

Evaluation of Quality Education and Implementation of Cardiopulmonary Resuscitation (CPR)

Marek Sichman

Catholic University in Ruzomberok, Slovakia

Keywords: *evaluation, quality education, paramedics, cardiopulmonary resuscitation, chest compression frequency.*

Introduction. Worldwide, more than 135 million people die caused by sudden cessation of circulation and breathing. In many cases people die caused by sudden stop of circulation even though “their heart is relatively healthy”. Despite early intervention, patients’ chance of survival is relatively low. A growing number of evidence suggests significant variability in survival. Variability of survival of sudden arrest and breathing is greatly reduced by the performance of inadequate quality resuscitation.

Aim. The aim of the study is to analyse the quality of teaching and follow-up implementation of CPR (Chest Compression in Combination with Artificial Breathing) in terms of changing chest compression frequency.

Material and Methods. A randomised controlled trial was selected for the study. A total of 120 volunteers with BMI (18.5–25) attended a 3-hour Basic Life Support Training. The sample consisted of 60 men and 60 women. All participants were randomly assigned to four groups, and each group performed CPR in a ratio 30 : 2, but in a different randomly generated frequency. Participants of the control group performed CPR with a 30 : 2 ratio with a randomly generated frequency identical to other groups, but using a metronome in real-time for feedback. All participants performed CPR for 10 minutes on Rescue Anne QCPR, data were evaluated using the Reset Anne® Wireless SkillReporter™ programme with parameters set according to the ERC 2015 guidelines. Key tracked parameters included: Overall QCPR Score, Chest Compression Fraction (CCF), Chest Compression Frequency, Depth of Chest Compression, Chest Wall Relaxation and Effective Ventilation.

Results. Clear definition of chest compression frequency at 110 per minute led to a statistically significant improvement of overall QCPR Score compared to frequency 100 per minute or 120 per minute. The 110/minute chest compression frequency resulted in a significant increase in the number of real compressions compared to the 100/minute and did not statistically lead to a significant reduction in depth of compression compared to the 120/minute compression frequency.

Conclusions. In the assessment of the quality of chest compression, it has been concluded that it is appropriate to define the performance of chest compression frequency for healthcare workers exactly at 110/minute, with the use of real-time feedback monitoring devices. This exact definition of a particular chest compression frequency is also appropriate for laity, with the obstruction that laymen may not have a metronome. It is possible to achieve a significantly better level of quality of urgent resuscitation and better survival of a patient. At this frequency, it is possible to statistically achieve a reasonable frequency even without the use of real-time feedback monitoring devices. A statistically significant decrease in the quality of urgent resuscitation has occurred significantly after 120 seconds of its execution. In general, the quality of CPR implementation is directly proportional to the length of execution.

Acknowledgement. The study has been conducted under the Project No 015KU-4/2018: “Practical Procedures for Paramedics Multimedia DVD and Textbook”.

Moral Side of Abortions via the Urban-Rural Life Paradigm

Romaniia Silinsh

Ivano-Frankivsk National Medical University, Ukraine

Anna Martyniuk, Ella Mintsys, Stepan Hopta

Vasyl Stefanyk Precarpathian National University, Ukraine

Aleksandrs Stanislavs Yankovskis

University of Latvia

Keywords: *urban-rural life paradigm, psychological aspect of the “right moral”, pro-life choice, “abortive morality” of the present, abortion, moral quality of society.*

Introduction. This research is dedicated to the moral side of abortions via the urban-rural life paradigm of Ukraine and Latvia. Though cities and countries are considered to have differences in lifestyle, the problem of abortion remains the same.

Aim. The aim of the investigation is to define whether there is a difference between the origin of a person, urban or rural, and their attitude towards abortion in both countries, and define the moral level of the present and its impact on the pro-life choice.

Material and Methods. Analytical and comparative methods.

Results. Due to the research methods, the study revealed that urban citizens are more prone to abortions than the rural ones. Modern and fast pace of life in cities, pursuit of fame, money and brilliant career make city dwellers more cruel, cold-blooded and careless when speaking about the human life or its value. Two new terms have been defined and proposed as part of the study: psychological aspect of the “right morality” and “abortive morality” of the present as two characteristics indicating the moral quality of society.

Conclusions. “There is nothing more valuable than human life and welfare”, as defined by human rights’ activists. However, little action is seen from them when thousands of innocent babies die from abortions. It is hard to believe that the most gifted human minds effectively work on the modern ways of “holocaust” (abortion methods and ways) of the maximum number of people in the current “civilised era”. The research proves that great attention should be paid to moral education of population, starting from children and ending with the elderly population. The level of spirituality and morality must be developed and increased to protect every conceived life, emphasise the dangerous consequences of abortion for women’s health and future generations as a threat to social welfare.

What Does Doctor Say? Psychological Factors Related with Health Literacy

Vineta Silkane

Vidzeme University of Applied Sciences, Latvia

Ieva Stokenberga

University of Latvia, Latvia

Keywords: *health literacy, self-efficacy, trust to doctor.*

Introduction. Health literacy plays a key role in providing an individual's health. Despite the widespread availability of health information nowadays, health behaviour based on pseudoscientific beliefs has become an increasing problem. Information and education is most commonly used to promote health literacy. However, this is not enough to promote the health literacy of individuals. The ability to obtain, process and understand health information relates not only to the level of education but also to several psychological factors, e.g., self-efficacy, health locus of control. Most commonly health literacy is related to self-efficacy. In the study, other psychological factors have been addressed as well.

Aim. The aim of the study is to examine relationships between health literacy and beliefs (locus of control, self-efficacy, and trust in doctor), controlling the impact of such individual differences as personality and demographic factors

Material and Methods. Data were collected from a random sample of 457 participants, of which 253 (55.4%) were females, and 204 (44.6%) were males. The age range was 18 to 81 ($M = 41.32$, $SD = 13.43$). The participants completed the questionnaire consisting of the European Health Literacy Survey Questionnaire (HLS-EU-Q, HLS-EU Consortium, 2012), the Big Five Inventory (*John & Srivastava*, 1999), the General Self-Efficacy Scale (*Jerusalim & Schwarzer*, 1995), Multidimensional Health Locus of Control Scales (*Wallston & Wallston*, 1978), Physician Trust Scale (*Hall, Zheng, Dugan, Camacho, Kidd, et al.*, 2002), Satisfaction with Life Scale (*Pavot & Diener*, 1993), as well as gender, age, education, frequency of sickness, and health self-assessment. HLS-EU-Q contains three subscales: health care, disease prevention, and health promotion.

Results. The study results confirm that self-efficacy and trust in doctor were the most important predictors of all health literacy aspects. Two aspects of health literacy – health care and health promotion – were predicted by health self-assessment, while disease prevention and health promotion were predicted by frequency of sickness.

Conclusions. The obtained data confirm previous findings that self-efficacy is a significant factor in pathways to health behaviour. However, this study shows that trust in doctor is crucial in combination with one's perceived ability to enact the recommended behaviour. Strategies with an aim to improve health related self-efficacy include negotiation on health behaviour practice so far, building awareness of necessary changes, creating specific plans to implement it and providing support for overcoming obstacles. Such intervention will be most effective if the involved in communication recognise mutual input and responsibility and communicate openly. The study highlights necessity to include interventions focused on strengthening trust in doctor in health communication.

Social Burden Related to Psychotic Disorders: Role of Morphological Expertise

Sandra Skuja, Janis Mednieks, Iveta Beinarovica, Valerija Groma
Rīga Stradiņš University, Latvia

Keywords: *psychotic disorders, schizophrenia, synapse, neurotransmission, electron microscopy.*

Introduction. Psychotic disorders in general and schizophrenia (SCZ) in particular, result in high social, economic, and personal burden. SCZ affects such spheres as thought, perceptions of reality, effect, and cognition. Although it affects barely 1% of the population, it is one of the most disabling diseases affecting humankind. Commonly SCZ manifests as a first-onset case but later displays a chronic course requiring frequent hospitalisation. The WHO statistics evidence that about 45% of patients recover after one or more episodes, about 20% show unremitting symptoms and increasing disability, and about 35% show a mixed pattern with varying degrees of remission and exacerbations of different length. Genetic, as well as multiple developmental and environmental factors, exemplified by infections, drug and alcohol abuse and nutritional deficits, contribute to the development of SCZ. Previous postmortem studies revealed changes in molecules regulating neuronal spine morphology in SCZ subjects. Despite a growing body of evidence accumulated on the role of mesolimbic neurons affected in psychosis, very few electron microscopical studies conducted on postmortem brain tissues explore ultrastructural peculiarities of dopamine (DA) signalling – a key dysfunction in SCZ.

Aim. The aim of the study is to assess DA synaptic neurotransmission by use of electron microscopy (EM) analysis.

Material and Methods. Ultrastructural analysis were performed based on postmortem aldehyde-fixed, embedded and archived tissues allowing assessment of coronal blocks of the striatum. A synapse was distinguished by the presence of parallel pre- and postsynaptic membranes, a postsynaptic density (PSD), and synaptic vesicles in the presynaptic terminal. Molecules of interest were tracked by immunogold labelling.

Results. Performing EM studies on striatal medium spiny neurons, it was found that DA synapses localised on somata, dendritic shafts and spines exhibit ultrastructural features common to symmetric synapses. Furthermore, synapses qualified as asymmetric according to functional Gray synapses concept have been demonstrated. Pleomorphic and flat vesicles near type I synapse (asymmetric), as well as near type II synapse (symmetric) have been confirmed by EM within striatum. The PSD of asymmetric synapse is either highly or moderately electron-dense, whereas PSD thickness estimated is > 30 nm or between 20–30 nm. Symmetric synapses predominantly has no PSD except for some small electron-dense patches with thickness less than 20 nm or are completely devoid of PSD.

Conclusions. Ultrastructural observations might potentially reflect heterogeneity of striatal dopaminergic neurons. Furthermore, the intimate neuronal contacts discerned may appear to be mismatched. Nowadays, modern technologies exploring the intimate mechanisms of affected DA transmission almost always show a multi- and interdisciplinary approach used to gain understanding in complex pathogenesis pathways of the disease. The ultrastructural investigation of the DA transmission within striatal circuits provides crucial information for further understanding of psychotic disorders.

First Stage of Adaptation of Cognitive Reserve Index Questionnaire

Kristine Sneidere, Jelena Harlamova, Zane Ulmane, Ainars Stepens
Rīga Stradiņš University, Latvia

Keywords: *cognitive decline, ageing process, cognitive reserve (CR), Cognitive Reserve Index questionnaire.*

Introduction. Cognitive decline is often considered part of a normal ageing process, which in some cases is followed by such neurodegenerative diseases as Alzheimer's disease or dementia. Cognitive reserve (CR) can be defined as the ability of the brain to overcome a pathology, based on education, work experience and leisure time activity experience (Stern, 2009). Research identifies CR as protective against age-related cognitive decline, as well as beneficial when performing highly demanding tasks (Tucker & Stern, 2012). Previously, a proxy of CR has been used in research education; however, recently a new measure of CR has been developed, which combines such CR elements as education, working activity and leisure time activities (Nucci, Mapelli, & Mondini, 2012).

Aim. The aim of this study is to conduct the first adaptation stage of Cognitive Reserve Index questionnaire.

Material and Methods. 52 healthy Latvian speaking seniors aged from 65 to 85 (M = 72.02, SD = 4.96) participated in the study. The data were obtained using the Cognitive Reserve Index questionnaire (CRIq, Nucci, Mapelli, & Mondini, 2012). CRIq consists of three subscales – education, including vocational education, working activity, and leisure time activity, which involves hobbies, social activities, as well as household activities. To measure the validity of the questionnaire, construct validity measures were conducted using Pearson's correlation coefficient. As a control measure, Picture Vocabulary (verbal abilities) test from Woodcock-Johnson Test of Cognitive Abilities was used (Woodcock, McGrew, & Mather, 2001).

Results. CRI Education statistically significantly correlated with CRI Working activity ($r = 0.37$, $p < 0.01$) and CRI Leisure time ($r = 0.32$, $p < 0.05$). Total CRI score correlated significantly with all the subscales (accordingly, CRI Education - $r = 0.68$, CRI Working Activity - $r = 0.81$ and CRI Leisure time - $r = 0.66$, $p < 0.01$). CRI Working activity correlated only with the total CRI score. Picture Vocabulary score statistically significantly correlated only with CRI Education ($r = 0.31$, $p < 0.05$).

Conclusions. Construct validity results from the Latvian senior sample correspond with the results from the original research. These results indicate that all three subscales from both original and adapted version measures different concepts. Verbal abilities are related only to CRI Education score, but not with the total CRI or other subscores, which might indicate that verbal knowledge is more closely connected with the level and years of education rather than working experience or leisure activities, which includes reading and comprehension. Preliminary results indicate that CRIq can be adapted for use in Latvian senior sample. Further stages of adaptation should involve more control measures (e.g. fluid and crystallised CP), as well as some content modifications.

Acknowledgement. This study was funded by the Latvian National Research Programme BIOMEDICINE 2014–2017.

Variability of Provided Social Services in Crisis Intervention Facilities in Slovakia in Context of Violence

Sona Srobarova

Catholic University in Ruzomberok, Slovakia

Keywords: *crisis intervention, crisis, social services, violence.*

Introduction. The study focuses on crisis intervention and crisis services provided in facilities. Crisis intervention is mainly characterised by working with a person, a family, and a community in the face of problems with increased or extreme stress with the crisis. Crisis intervention of social services is provided to individuals to deal with various adverse psychosocial situations and is associated with primarily essential needs at physiological and psychological levels. The importance of crisis intervention and targeted intervention of a social worker in practice is that one helps the client, his family and the community to cope with the crisis-related phenomena and thus prevents even more serious psychological, physiological and psychosomatic problems.

Aim. The aim of the study is to point out and analyse the provision of crisis intervention in Slovakia in terms of the provision of selected services in crisis intervention facilities. Services and their provision are associated with selected methods and techniques of social work that are used in crisis facilities.

Material and methods. Qualitative research was conducted using the interview method.

Results. The results of the conducted qualitative analysis of provided services, applied methods and techniques of social work and implementation of projects in the field of crisis intervention of gender-based violence have shown several facts.

Conclusions. The main results include the finding that social workers are a significant intermediary in providing the most appropriate forms of assistance and the implementation of qualified social work in crisis intervention in practice. Thus, social workers are, in most cases, guarantors of the professional level of social services provided in crisis intervention.

Tackling Health Inequalities in Lithuania: from Research to Practice

Mindaugas Stankunas, Ramune Kalediene
Lithuanian University of Health Sciences, Lithuania

Rolanda Valinteliene
Institute of Hygiene, Lithuania

Faustas Stepukonis
Klaipeda University, Lithuania

Ausra Berzanskyte
Vilnius University, Lithuania

Keywords: *health services, health inequalities, healthcare strategy, healthcare monitoring.*

Introduction. Systematic inequalities in morbidity, mortality, health services use and accessibility between socio-economic groups exist in most of countries. However, scientific data suggest that these inequalities are more expressed in countries in transitions. In terms of health inequalities, Lithuania appears in the range of the countries with the most unfavourable situation in the European Union. In 2014, the Lithuanian Parliament approved the Lithuanian Health Strategy 2014–2025 with a strategic goal to reduce health and healthcare inequalities in Lithuania. In order to facilitate in tackling health inequalities, the project “Development of the Model for Strengthening of the Capacities to Identify and Reduce Health Inequalities” has been launched.

Aim. The aim of the study to introduce with the process and results of the project.

Material and Methods. This project has been run by Lithuanian University of Health Sciences, Vilnius University, Klaipeda University and the Institute of Hygiene and financed by the Norwegian Financial Mechanism 2009–2014 Programme “Public Health Initiatives”. It commenced in 2014 and completed in 2017. Its aim was to develop the evidence-based platform for health and healthcare inequalities monitoring and strengthening administrative capacities of persons involved in the policy making at national and municipal levels.

Results. The system for monitoring health inequalities in Lithuania has been developed. This system includes a set of guidelines for collecting health inequalities data and web-based platform for presentation of this information. These guidelines include instructions for collection of routine health statistics and performing life-style surveys for adults and schoolchildren. All collected data can be publicly accessed through a newly developed web-based health inequalities presentation platform “SveNAS” (<http://svenas.lt>). The second major outcome of the project is a set of practical recommendations for reduction of health inequalities. These recommendations are focused on six main determinants for persistence of health inequalities in Lithuania. They include the following: smoking, alcohol abuse, nutrition, physical inactivity, mental health / suicides, and healthcare accessibility. Therefore, the project team has developed a set of recommendations of how to address these determinants effectively. The project was concluded in running capacity building seminars for municipal and national level public health specialists, policy makers, and specialists from other health-related institutions

Conclusions. It is expected, that these guidelines and recommendations will be regularly used by the target groups, thereby improving health of population and reducing health and healthcare inequalities in Lithuania. Moreover, this practice could serve as transferable example for other countries, in tackling health inequalities.

To Educate or to Be Educated? Parents' Attitude and Knowledge toward Sex Education in Latvia

Ieva Stokenberga

University of Latvia

Anda Kivite

Rīga Stradiņš University, Latvia

Iveta Kelle

Latvian Association for Family Planning and Sexual Health

Keywords: *sex education, parent, attitude, knowledge, belief.*

Introduction. Parent has been recognised as an important part of sex education. In Latvia, sex education at school has been debated, and there has been suggestion that parents should be main educators on sexuality and sexual health. However, less is known about parents' attitudes, individual variables predicting sex education behaviour and links between sex education attitudes and knowledge on several topics.

Aim. The aim of the study is to explore attitudes towards sex education among parents of school age children in Latvia, their knowledge and perceived ability to discuss different sex education topics with their children.

Material and Methods. Data were collected from a randomised sample from adults of Latvia who have at least one child in school age (7–18 years). In total, 614 adults participated in the study of which 337 (54.9%) were females and 277 (45.1%) were males. The age range was 18 to 74 (M = 41 years), 47.4% had higher education, 29.5% live in the capital city, 43.2% in other cities and towns, and 27.4% in rural areas. The questionnaire consisted of 13 items on attitudes toward sex education, 27 items on beliefs of one's ability to talk about specific sex education topics, 15 items on knowledge on sex education topics. The participants filled-in the questionnaire either at their homes or on the Internet.

Results. Overall, positive attitude was found toward sex education in several aspects (necessity recognition, inclusion in school curriculum, impact on sexual health outcomes). Regression analysis showed that self-reported behaviour – sex education provided by parents for their children – was explained by attitude that sex education is a parents' duty, belief of one's ability to talk about it and belief that a child wants to talk about it; overall these variables explained almost a half of the variance. Parents recognised different relationship topics as most comfortable for them to discuss with children. Several attitudes and value related topics (e.g. safety on Internet, sexuality in media, sexual orientation, and sexual violence), as well as questions on reproduction and contraception were perceived as rather comfortable. Parents feel less comfortable towards such intimate topics as masturbation, night pollution, orgasm and condom use. However, parents' knowledge was uneven on several topics. The most substantial knowledge was observed on HIV / AIDS, the reached average level on male health, but the weakest concerning women's health issues. There was not clear correlation between accuracy of knowledge and perceived ability to talk about respective sex education topic.

Conclusions. Parental role in sex education is irreplaceable, although it depends on a parent's recognition of the child's needs and perceived ability to discuss different topics. Parent as the only educator would fail to reach accurate knowledge. Sex education provided by both parent and school is a useful way to build healthy attitudes and skills among young people in Latvia. The study provides evidence on parental support for sex education, and highlights necessity to include it as a mandatory part of school curriculum.

Availability of Palliative Care in Latvia and Citizens' Satisfaction with State Provided Services

Baiba Strautmane, Daiga Behmane
Rīga Stradiņš University, Latvia

Iveta Ludviga
"RISEBA" University of Business, Arts and Technology, Latvia

Keywords: *palliative care, access, patient satisfaction.*

Introduction. Considering the aging and structural changes of the population, Latvia has to count on an increase in chronic diseases. The task of palliative care and end-of-life or hospice care is to ensure the best possible quality of life outcome not only for oncology patients, but also for all patients with chronic and non-communicable diseases till the end of their life.

Aim. The aim of the study is to identify the situation in palliative care provision in Latvia, assess the necessity and availability of the service and evaluate citizens' satisfaction and accessibility to palliative care services in Latvia.

Material and Methods. Comparative analysis of international recommendations and the Latvian system was conducted. The literature search was performed to develop a model of appropriate palliative care and to construct the survey questionnaire for persons with family experience on palliative care covering all essential care dimensions. The internet survey was carried out during a 30-day period, March and April 2018. In total, 240 questionnaires were collected from which 109 were excluded due to respondents having no relationship or no complete information on the study question. Statistical regression analysis was carried out to estimate the relationship between patient satisfaction and factors under investigation.

Results. The results of the study indicate that currently there is no unified and comprehensive palliative care strategy in Latvia, and access to palliative care is rather restricted. Most commonly respondents have reported the need for the services: medicines – 83%, care counselling – 79%, outpatient and inpatient care services, respectively 84% and 83%, and 75% of psychological support. Only 27% of all the survey respondents do not report any restrictions on receiving a palliative care service.

Conclusions. Access to palliative care services is mostly restricted by (1) non-availability of the service at the patient's place of residence (56%) and excessive waiting times (54%), (2) lack of information and insufficient communication (49%) and (3) financial insufficiency, reported as a limiting factor by 46% of the respondents. 47.3% of the respondents were not completely or at all satisfied with the treatment received, while 6.9% of the respondents have not received palliative care for their family members at all. The study results are important for the development of a comprehensive population end-of-life palliative care strategy in Latvia.

Peculiarities of View of the Place of Occurrence on Criminal Proceedings Related to Crimes against Life

Marina Sumbarova

Baltic International Academy, Latvia

Keywords: *criminal procedural law, tactics, investigative actions, view of place of occurrence.*

Introduction. Investigation of crimes is a complex process and it must be carried out in observance of the rule of law to expose the guilty persons by legal means and methods, to protect the rights and freedoms of an individual. Collection of evidence in criminal procedure of Latvia is implemented by investigator, prosecutor and court by the means of carrying out investigative and procedural actions, which are provided by the Latvian Criminal Procedure Law. Investigative actions are the main way of collection of evidence. In carrying out the investigative actions, modern forensic tools and methods are used. Such approach will allow reducing the number of unsolved crimes and qualitatively investigate criminal cases. One of the most important investigative actions is the view of the place of occurrence.

Aim. The goal of the study is to examine tactical and criminal procedure provisions, related to the view of the place of occurrence on criminal procedures related to crimes against life.

Results. Defining the objectives of the research, it is necessary to emphasise the necessity to analyse the procedural errors made in the preparation of carrying out the inspection; tactical errors made in using forensic techniques, as well as errors made in drawing up protocol of view of the place of occurrence. In carrying out the view of the place of occurrence, the person, directing the process and investigator, it is necessary to attract competent specialists who the effectiveness of the view of the place of occurrence depend on. For this purpose, it is necessary to identify the scope of persons who have special knowledge and who have and use the required forensic technique. Specialists in criminal procedures related to crimes against life would include forensic doctors, biologists, forensic specialists, cynologists and, if required, others.

Conclusions. In the course of carrying out the research, the main directions of organisation of carrying out of the view of the place of occurrence are identified, additions to the Latvian Criminal Procedure Law on further improvement of the use of forensic technique by experts have been suggested, as well as the criminal procedural and tactical provisions required for drawing up a protocol of view of the place of occurrence have been identified. The person, directing the process, investigator, prosecutor, based on the results of carrying out the view of the place of occurrence in the process of investigation of criminal case puts forward the investigative leads, which are required in the future for the identification of guilty persons and expose to crime. Improvement of the Latvian criminal procedural norms and tactics of carrying out the view of the place of occurrence will contribute to a qualitative investigation of criminal procedures, observance of the rights of participants of criminal procedure.

Primary Prevention of Incorrect Body Holding the Body

Miroslava Sutvajova

*Catholic University in Ruzomberok, Slovakia
Hospital with polyclinic MUDr. L. Nádaši Jégého Dolný Kubín, Slovakia*

Anna Lesnakova

*Catholic University in Ruzomberok, Slovakia
Central Military Hospital SNU-FH Ruzomberok, Slovakia*

Ivana Astaryova

Catholic University in Ruzomberok, Slovakia

Keywords: *stabilisation, mobilisation, spine, posture.*

Introduction. Civilisation factors – unhealthy lifestyles, sedentary jobs, a lot of time spent behind the wheel of a car and lack of healthy natural movement – have a significant negative impact on the rapidly growing number of locomotory diseases. Their prevalence in developed countries is the nature of an epidemic, or even a pandemic.

Aim. The aim of the study is to indicate one of the options to deal with and / or prevent recurrence of locomotory diseases, to return the function of locomotive apparatus as one of the integrated systems into the standard, thereby increasing the overall quality of life and health.

Material and Methods. Physicians are constantly seeking procedures and methods to prevent these diseases. Based on empirical experience, they have come to the conclusion that primary prevention should not focus on individual muscle groups, but must act in a comprehensive way to properly hold the body. These requirements meet the MS Spiral Stabilisation and Mobilisation System. The SM system is designed to strengthen the weakened, stretch shortened and relieve overloaded muscles. The exercises build a muscular “corset” that holds the spine upright. The basic assembly of the SM system consists of 11 exercises that most easily exercises all the important muscles of the body. The candidate is able to work out for 10 minutes, and due to its simplicity and timelessness, it is suitable as a daily exercise.

Results. Efficacy and relevance of this elastic routine exercise system has been verified in people with faulty posture that have been accompanied by back pain. On the basis of the examination of the locomotory system, a target movement programme based on the method was established for two probands aged 23 and 26 years. In the monitored time interval of three months, the exercise effect was very positive based on subjective feelings and objective measurements and examinations. Both probands reported a feeling of improved health and a significant relief from pain. Objective evaluation normalised hypotonicity of multiple muscles, restoring length of the shortened muscles. Both shoulders are at the same height, curvature of the spine in the cervical and pelvic region has decreased, spans on the spine have increased.

Conclusions. The results confirm the efficacy of the SM system of spiral stabilisation and mobilisation, according to the effective form of primary prevention in case of erroneous holding of the body. This is a simple exercise that can be done under the supervision of a physiotherapist or after the basic training and individually in the home environment.

Peculiarities of Differentiation of Labour Legal Regulation of Pharmaceutical Workers

Anna Sydorenko, Olena Melnyk

Poltava Law Institute of Yaroslav Mudryi National Law University, Ukraine

Keywords: *labour law, pharmaceutical workers, medical reform.*

Introduction. One of the most important tasks of modern labour law is the arrangement of conditions for reconciling the interests of participants in social and labour relations, the protection of the rights and legitimate interests of the subjects of labour law. The unity and differentiation of legal regulation of labour is one of the main trends in the improvement of labour legislation, which is characterised by particularities of nature, working conditions, providing guarantees, privileges and benefits for different categories of employees.

Aim. The purpose of the work is to study the legal status of pharmaceutical workers through the prism of differentiation signs of labour legal regulation in the context of medical reform in Ukraine.

Material and Methods. The empirical bases of the study were scientific and theoretical developments of scientists, provisions of the Constitution of Ukraine and laws of Ukraine, current legislation of Ukraine and foreign countries, international legal acts in the field of labour. The conducted research caused the need for the application of general scientific and special methods of scientific knowledge.

Results. The industry affiliation of differentiation is characterised by the importance and degree of provision by its highly skilled workers, since healthcare is of a great importance, as each person has an inalienable and indispensable right to health protection. Pharmaceutical workers perform work only within this industry and in accordance with special regulations. The working conditions are determined by relevant criteria of production and labour process. It is proved that pharmaceutical workers, within the limits of their work function, work with harmful working conditions, and in accordance with the legislation have the right to implement the guarantees provided at legislative level and receive appropriate privileges. The nature of employment relationship is characterised by a special order of origin and termination of employment relations. The latter arise based on the conclusion of an employment contract, as a rule of indefinite duration. It is proved that differentiation of labour of pharmaceutical workers is expressed through special norms, which allow them to realise their rights and obligations and use certain guarantees. The differentiation of labour legal regulation of pharmaceutical workers is intended to ensure the provision of additional benefits and guarantees that are not clearly regulated by the current Labour Code of Ukraine.

Conclusions. It is advisable to systematise the huge number of normative acts that regulate work of pharmaceutical workers in one general document for a more rational use, and actively use international experience.

Evaluation of Synovial Inflammation and Its Correlation with Visual Analogue Pain Scale, Tissue S100 Expression and Blood CRP Levels in Different Types of Arthritis

Mihails Tarasovs

Rīga Stradiņš University, Latvia

Anna Mihailova

ORTO Clinic Ltd., Latvia

Sofia Semenistaya

Rīga Stradiņš University, Latvia

Vitolds Jurkevics

ORTO Clinic Ltd., Latvia

Vinita Cauce, Valerija Groma

Rīga Stradiņš University, Latvia

Keywords: *evaluation of synovial inflammation, osteoarthritis (OA), aging, Visual Analogue Pain Scale.*

Introduction. There are various forms of arthritis that affects millions of people around the world, and it is the leading cause of disability in developed countries. The most common form of arthritis is a degenerative one called osteoarthritis (OA). Symptomatic knee OA occurs in 13% females and 10% men. Due to the aging of Latvian population, this index is tending to be higher. OA develops slowly, and regularly has an intermittent course with “quiet” periods and relapses, which ends up with complete joint destruction and endoprosthetic (EP) operation. Challenging problem of diagnosing OA is overlapping with other forms of inflammatory arthritides, like rheumatoid arthritis, which also causes pain and loss of motion amplitude. The early stage of OA usually manifests with stiffness, morphologically changed synovium and some deviations in laboratory parameters. Proper diagnostics still remains a major clinical problem despite a sufficient number of instrumental and laboratory tools developed.

Aim. The aim of the study is to estimate synovial inflammation correlation with systemic inflammatory marker CRP and local inflammatory protein S100.

Materials and Methods. Forty subjects aging from 30 to 87 undergoing EP surgery were enrolled in the study. Surgically obtained histological samples were analysed for inflammation using synovitis grading system proposed by Krenn. Additional estimations based on microscopy findings included giant cell invasion and density of blood vessels within synovium. Involvement of immune antigen-presenting cells was evidenced by using immunohistochemistry reaction with the anti-S100 antibody and subsequent quantitative analysis. CRP levels in blood were measured. Severity of pain was measured using visual analogue pain scale.

Results. Median age of patients undergoing the EP procedure in this study was 60.5 years. Among them, seven patients presented with various types of inflammatory arthritides, other 33 - with OA. Synovitis score ranged from 0 (no inflammation) to 9 (very severe synovial inflammation) revealing median value 5 (IQR 2; 7) and mean value 4.5 (SD = 2.9). S100 expression was observed in synovial sublining, both diffuse and perivascular. There was no correlation found between S100 and CRP. Moderate correlation was found between CRP levels in blood and immune cell infiltration ($r = 0.549$; $p = 0.009$) and CRP and intimal layer proliferation ($r = 0.619$; $p = 0.002$). Moderate correlation was also observed between synovitis score and CRP levels ($r = 0.617$; $p = 0.002$). Median VAS was 6 and mean VAS was 5.7 (from 5 to 10, respectively). No correlation between age, CRP levels and S100 was observed.

Conclusions. Despite the presence of moderate VAS expression evidenced in majority of patients with arthritis, the number of surgeries with joint replacement tends to increase. These findings spot a problem related to low effectiveness of currently applied conservative treatment consequently leading to disability and reduction of the quality of life.

Experience of Caring for Dementia Patients in Social Care Institution: Qualitative Evidence

Rudite Terehova, Jelena Lubenko
Rīga Stradiņš University, Latvia

Keywords: *dementia, caring needs, experts' experience, social care institution, qualitative study.*

Introduction. Meeting care needs of dementia patients in social care institution is a significant element in providing the best person-centered care for these patients. People with dementia have specific care needs when admitted to social care institutions (Houghton, Murphy, Brooker, & Casey, 2016). Qualitative thematic analysis is a comprehensive approach to identify elements of good care and challenges to appropriate care for dementia patients in social care institution in order to improve the quality of life of these patients.

Aim. The aim of this qualitative study is to explore different expert experiences and perceptions of caring needs for people with dementia in social care institutions.

Material and Methods. The study sample consisted of six experts (one social rehabilitator, four social workers and one psychiatrist) from a social care institution in Latvia. The main inclusion criterion for participation in the study was working experience with dementia patients over 10 years. Each expert was interviewed by a researcher using individual open, unstructured interview (30–45 minutes). The main question asked to experts was what their experience of caring for dementia patients was. To ensure anonymity of the data obtained, the names of the participants in the study were coded. Interviews were transcribed and analysed following the principles of thematic analysis. To ensure reliability of the coding procedure, interviews were coded independently by first and second authors, respectively, by using the same evolving code list.

Results. A thematic data analysis generated five themes including the particular qualities of contact depending on the severity of dementia, social and emotional support, dignified attitude, involvement in meaningful activities and cooperation with other specialists (team work). The identified thematic categories allow to suggest that work with dementia patients is challenging, because of negative outcomes associated with cognitive impairment and challenging behaviour of the person living with dementia.

Conclusions. These findings can provide information on how to improve dementia patients' quality of life in a social care institution and allow to identify care needs of dementia patients, thus fostering a better person-centered care. The results serve as the basis for a larger study on the development and approbation of an appropriate psychological support programme for dementia patients in a social care institution with the aim of improving the quality of life of these patients.

Legal Regulation of Reproductive Human Rights: Challenges and Solutions

Ivan Titko, Inna Polkhovska

Poltava Law Institute of Yaroslav Mudryi National Law University, Ukraine

Keywords: *reproductive human rights, auxiliary reproductive technologies, artificial insemination, surrogate motherhood.*

Introduction. In any country, the sustainable development of society depends to a large extent on its demographic perspective, which is directly related to reproductive health of the nation. In the Programme of Action of the International Conference on Population and Development (Cairo, 1994), for the first time at international level, reproductive rights were claimed as a human right to make free and independent decisions about their reproductive health, including birth of children, time and the intervals between their birth, the right to take decisions on procreation without discrimination, threats and violence, as well as recognition of the right to receive relevant information. According to the WHO, 15 % of couples of reproductive age in the world suffer from infertility. Therefore, today one of the most acute issues of biomedical ethics is the development of reproductive technologies, in particular the so-called auxiliary reproductive technologies (hereinafter – ART).

Aim. The aim of the study is to explore the issues of legal regulation of reproductive human rights, particularly in the field of auxiliary reproductive technologies.

Material and methods. While preparing the research, WHO's statistical data, international normative legal acts, internal law and judicial practice of individual states (Ukraine, Latvia), practice of the European Court of Human Rights were used.

Results. In terms of legal regulation of ART, the surrogate (substitute) motherhood has a special complexity. It is a way to combat infertility, which is gaining an increasing demand. At the international level, there are currently no common standards for regulating this issue; and national legislation varies considerably from the licensing regime for ART regulation, in particular surrogate motherhood, to its prohibition. Due to lack of legal regulation, surrogate motherhood is characterised by high latency, sometimes related to human trafficking and illegal transplantology, impossibility to establish the fact of motherhood (fatherhood).

Conclusions. In the process of exploring, the conclusions were drawn about (a) the appropriateness of international standardisation of using assisted reproductive technologies, and in addition, the basic theses for such standards were formulated; (b) the need for regulation of reproductive rights by individual laws at the level of national legislation and the main directions of such regulation (consolidation of basic definitions, legal aspects of the use of ART, especially surrogate motherhood, financial guarantees by the state in the right to infertility treatment, etc.).

Discourse through Photovoice: “Lived Experience” of Epilepsy

Jurgita Tuitaite

*Vilnius Kolegija / University of Applied Sciences, Lithuania
Vytautas Magnus University, Lithuania*

Polina Sediene

Lithuanian University of Health Sciences

Keywords: *photovoice, discourse, epilepsy.*

Introduction. People with epilepsy sometimes disincline to talk about their problems because of stigmatisation. Stigmatisation of epilepsy determines diminished self-esteem, depression, anxiety for the future and low quality of life (Soria *et al.*, 2012). Lack of knowledge about epilepsy in community leads to negative attitude, stigmatisation and social isolation. Talking about epilepsy in community increases public awareness, knowledge and attitudes regarding epilepsy.

Aim. The purpose of the study is to help medical students learn more about “lived experience” during the interaction of people with epilepsy, and find out more about patients’ voices, and to empower people with epilepsy to talk about subjective experience.

Material and Methods. Photovoice is a qualitative method that combines pictures and narratives in exploring “lived experience” of people with epilepsy, patients and students’ voices. Photovoice research project was conducted in processing steps considering Luo (2016). People with epilepsy and medical students who were divided in eight groups were included in the research.

Results. Two communities, students and people with epilepsy, during the interaction chose photos and wrote stories. The duration of the project was 6 weeks, and after the project exhibition was arranged. Patients with epilepsy voices allow students to understand the discourse between insiders and outsiders, differences between professional language and conversations among professionals.

Conclusions. Patients experienced therapeutic help during interaction through discourse with students. Patients revealed specific aspects considering epilepsy and living with epilepsy. Students and patients learned how to create interaction: hear and understand unrecognised discourse and create new discourse.

Interaction between Middle-Aged and Older Adults and Technology

Ilona Zarina, Kristaps Circenis

Rīga Stradiņš University, Latvia

Keywords: *middle-aged and elderly people, human-technology interaction, technophobia.*

Introduction. Current demographic trends in Latvia show an aging population and a decrease in the population. Becoming older means that a number of characteristic aging problems increase. Middle-aged and elderly people form the fastest growing segment of Internet users. It promotes independence by accessing and using online services such as banking, shopping or healthcare management, communication. Social policies encourage the idea of “aging in place”, where elderly people remain at their own homes and communities because this is considered the best solution for health, quality of life and social relationships of the elderly, as well as in economic terms. For this purpose, modern technologies, such as welfare technologies, play a significant role. Therefore, it is important to know how middle-aged and elderly people interact with technologies, what factors contribute to their use, or how to use technical solutions.

Aim. The aim of the study is to identify technology usage influencing factors and determine rates of technophobia among middle-aged and elderly people.

Material and methods. A quantitative method was used – a questionnaire using two research tools – demographic questionnaires and measurement instrument of technophobia “Technophobia test”. 610 middle-aged and elderly people were interviewed.

Results. The results of the study show an increase in technology-related anxiety, as well as identifies factors contributing to and inhibiting the use of technology.

Public Opinion in Slovakia about Physical Punishment of Children

Dominika Uhnakova, Jana Levicka
Trnava University, Slovakia

Keywords: *physical punishment, children, educational process, public opinion.*

Introduction. Only recently the issue of physical punishment of children has appeared on the discussion arena. The progress occurred in the second half of the 20th century when children began to be perceived as authentic and legally protected beings. Over the past two decades, an international shift in perspectives concerning physical punishment of children has been observed. In 1990, research showing an association between physical punishment and negative developmental outcomes was starting to accumulate, and the Convention on the Rights of the Child had just been adopted by the General Assembly of the United Nations.

Aim. The aim of the research is to find out how citizens of the Slovak Republic perceive physical punishments of children, and how they apply them in educational process.

Material and Methods. The study aims to define whether opinions on physical punishments are varied according to gender, place of residence, profession, and age of respondents. The research has been conducted using a quantitative research strategy. A questionnaire has been used in order to collect the data. The survey sample consisted of 260 respondents. The data obtained were processed and analysed using the SPSS programme.

Results. Despite the fact that parents seek to follow humanistic principles in education, the results of our research have confirmed that in many families negative pedagogical methods such as bans, threats, humiliation, shouting, and physical punishments are used. Significant differences have been confirmed from the point of view of education; respondents with lower education preferred physical punishment more than respondents with higher education. Significant differences in the perception of physical punishments were also confirmed from the perspective of the respondents' profession.

Conclusions. These and many other negative sanctions are contrary to a child's fundamental right to respect their personality. It is important for parents to realise that use of such educational methods as explanation, persuasion, demand, or personal example is the base for achieving educational goals.

Relationship between Personality Traits and Cognitive Performance in Healthy Seniors

*Zane Ulmane, Kristine Sneidere, Jelena Harlamova,
Voldemars Arnis, Ainars Stepens
Rīga Stradiņš University, Latvia*

Keywords: *personality traits, cognitive performance, healthy seniors.*

Introduction. Recent research indicates a relationship between personality traits and cognitive functioning, indicating association with such personality dimensions as Neuroticism and poorer memory performance (*Luchetti et al., 2016*), as well as slower inhibition processes (*Murdock, Oddi, & Bridgett, 2015*). These findings indicate a prospective relationship between specific personality dimensions and cognitive performance.

Aim. The aim of this study is to explore personality traits associated with cognitive performance (CP).

Material and Methods. 50 participants aged 65–85 ($M = 77.84$, $SD = 5.02$) were involved. Personality traits were assessed with the Latvian Personality questionnaire (LPA-v3, *Perepjolkina & Reņģe, 2013*), and CP was assessed with the Numbers Reversed test (working memory), the Memory of Names test (associative memory and memory retrieval) and the Visual Matching test (attention) (*Woodcock, McGrew, & Mather, 2001*), the Map Test of Everyday Attention (attention) (*Robertson, Ward, Ridgeway, & Nimmo-Smith, 1996*) and the Reaction time test (simple reaction time (SRT) and choice reaction time (CRT)) (*Molotans, 2011*).

Results. In personality dimensions, only Neuroticism was associated with CP scores; namely, the Numbers Reversed test scores ($r = -0.33$). Relationship was also found between the Numbers Reversed test scores and personality traits Self-discipline ($r = 0.33$) and Shyness ($r = -0.42$). The Memory of Names test score was significant and negatively related to personality traits Tolerance and Modesty ($r = -0.39$ and $r = -0.29$, accordingly). Reaction time was related to personality traits Modesty ($r = -0.33$) and Tolerance ($r = -0.35$). As expected, higher Neuroticism was related to worse working memory results, which complies with results found in previous research (e.g. see *Buchanan, 2017*); however, the role of situational anxiety should be considered, as another measure related to lower working memory scores, for instance, personality trait Shyness, which is also characterised by elevated levels of anxiety (*Perepjolkina & Reņģe, 2012*). The relationship between cognitive performance and personality were noticeable in personality traits rather than personality dimensions (e.g. no relationship between CP and Conscientiousness; however, significant relationship between CP and personality trait from its dimension – Self-control). This serves as a suggestion for future studies to look at personality traits in more detail, rather than consider only the dimensions. Currently, these results should be only considered as tendencies, as a larger sample should be recruited.

Conclusions. The study results indicate that personality traits might predict results in specific cognitive tasks. Recognising personality traits associated with cognitive functioning and physical activity might contribute to choosing appropriate method for interventions in case of age related decline or dementia.

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Legal Commencement of Armed Attack

Vita Upeniece

Rīga Stradiņš University, Latvia

Keywords: *armed attack, anticipatory self-defence.*

Introduction. The Charter of the United Nations provides that “nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs...”. In certain cases, it is difficult to find a clear answer to the question what action is recognised as an armed attack. Another concern is when an armed attack begins.

Aim. According to Article 51 of the Charter, the force may be used for self-defence against an armed attack. Some scholars recognise the use of force for self-defence in response to an armed attack which has not actually started as lawful. Others do not exclude the possibility of repelling an armed attack that has been launched but not completed. Therefore, there are two questions to be answered what action is recognized as an armed attack and when the attack is considered to be started.

Material and Methods. Analysing the mentioned issues, by using historical, analytical, comparative and systematic methods, the research aims to describe and analyse the main problematic questions the international society is facing nowadays.

Results. The International Court of Justice has explained the notion of an “armed attack” as “the most grave forms of the use of force (those constituting an armed attack)” which must achieve a certain “scale and effect”. The International Court, concerned about the possible “opening of the door” for excessive use of force in cases of minor incidents, has widened the gap between the use of force prohibited in Article 2(4) and the use of force which creates the right to self-defence. There is no clear textual reason to exclude such attacks, which are armed attacks but remain below the threshold of the specified violence intensity. More scholars step aside from the narrow literal reading of Article 51 and do not exclude the possibility of extended interpretation of Article 51, depending on the actual aspects of each individual case.

Conclusions. The need for achievement of a “certain threshold” may serve as a deterrent mechanism for the use of force. It is difficult to define this threshold. Among other issues, it is important to consider the geographic features of the victim’s state. As professor, M. Shaw has pointed out, Russia and China can absorb the initial attack and are able to regroup and attack in response even if they lose hundreds of miles of their territory. Other countries, which are not so well-geographically endowed, will not be able to perform alike. Thus, the response should not depend only on the severity of the force used by the offender. The use of force for self-defence could be based on existence of compelling evidences, proving the involvement of the offender in a devastating attack which may not be finished, and the principles of necessity, imminence and proportionality.

Pain Management in Intensive Care Unit Patients after Cardiac Surgery with Sternotomy Approach

Baiba Vilite, Eva Strike
Rīga Stradiņš University, Latvia

Keywords: *intensive care, postoperative pain, pain management, cardiac surgery.*

Introduction. Postoperative pain is a persistent and common problem among intensive care patients. Pain management includes pain assessment and documentation, patient care and pharmacological treatment, but it is impacted by a number of factors. Pain in intensive care patients after cardiac surgery continues to be undermanaged, and patient satisfaction with pain management is not only impacted by the efficiency of pharmacological treatment, but also by the skills and knowledge of a healthcare team. Therefore, intensive care nurses' knowledge has been assessed along with patient pain levels, pharmacological treatment used and patient satisfaction measures during their stay in an intensive care unit after cardiac surgery.

Aim. The aim of the study is to find out the pain management practices and describe patient satisfaction measurements for intensive care patients after cardiac surgery with sternotomy approach at a university hospital in Riga, Latvia.

Material and Methods. A prospective, cross-sectional design was used. 19 intensive care nurses and their knowledge regarding pain management was assessed with Toronto Pain Management Inventory (*Watt-Watson, 2001*) and 72 intensive care patients were assessed with a research protocol containing pain level and pharmacological treatment data and 2010 Revised American Pain Society Patient Outcome Questionnaire (*Gordon et al., 2010*) for patient satisfaction measurements.

Results. Postoperative pain for intensive care patients after cardiac surgery is mostly mild (68.66%, n = 46). Pain intensity has a tendency to lower over time, from 4.66 mean VAS score 2 hours after extubation to 3.12 mean VAS score 12 hours after extubation. Pain mostly negatively impacts patients' ability to carry out activities in bed (X = 4.69, scale range 0–10) and sleeping (X = 2.02, scale range 0–10). Mostly opioids (100%, n = 72) and NSAIDs (77.8%, n = 56) are used for pharmacological treatment, and the treatment is adjusted according to pain levels and patient needs. Patients with higher pain levels receive more medication for pain. Patient satisfaction regarding pain management within 24 hours after surgery is high (94.2%, n = 49), even though nurses' knowledge is average (X = 60.6 ± 7.3%).

Conclusions. Individualised pain management plan based on patient pain levels and needs requires pain documentation and ensures high patient satisfaction. Pain levels after cardiac surgery with sternotomy approach are mostly mild and patient satisfaction is high.

Cybercrime and Sexual Exploitation of Children in E-environment in Context of Strengthening Urban and Rural Security

Andrejs Vilks

Rīga Stradiņš University, Latvia

Keywords: *children, security, e-environment, cybercrime, sexual exploitation.*

Introduction. Lately among different types of threat to urban and rural security, there has been observed an increase in cybercrimes and expansion of criminal activities in e-environment. Due to the wide access to the Internet, the e-service expansion, cyber security options in the cities and countryside are somewhat offset. An Internet user may be at risk both in the megapolis or in a less densely inhabited rural area. Among the Internet users there is a comparatively high percentage of adolescents and children, which objectively determines their increased victimisation opportunities. Among children, threats and sexual exploitation of children in e-environment is increasing, including cyberbullying, sexting, sextoring, cyberstalking.

Aim. The aim of the study is to identify tendencies of cybercrimes and sexual exploitation of children in urban and rural areas, their determining factors and prevention options.

Results. Generally speaking, cybercrimes are increasing in entire world; among them crimes in e-environment and criminal proceeds are increasing with low crime detection risks. One of the most vulnerable social groups is that of children due to their insufficient social experience, high communicative activities and widely available informative communicative technologies (ICT). There are comparatively few empirical studies done on the children threat in e-environment, including that of sexual character. Austria Safer Internet Centre, making a survey among the European youth, has concluded that sexual exploitation of children in their different forms exists and is widely spread both in Europe and Latvia, as well. Almost one third of the surveyed children (30%) have admitted that they have had personally experienced sexting. More and more cases are recorded on the use of online social networking sites using smartphones, tablets, encouraging young people to get involved in production of pornographic materials and transfer of graphic files of children pornography. The factors being responsible for encouraging the increase of sexual exploitation of children in cities and rural areas in e-environment can be divided into three groups: a) technogenic factors: wide access to the Internet; the expansion of the number of users, among them – children, ICT modernisation; b) factors of cultural environment: availability of social services; level of socio-economic development; c) factors, characterising children's personality. Preventive options of sexual exploitation of children in e-environment in rural areas are lesser in comparison to those in urban areas because of lack of control resources.

Conclusions. It is necessary to have additional, more detailed studies on sexual exploitation of children in e-environment in urban and rural areas, and find out the optimisation models for strengthening their security.

Regional Differences in Healthcare Human Resources in Latvia

Anita Villerusa, Daiga Behmane, Uldis Berkis, Anita Kokarevica
Rīga Stradiņš University, Latvia

Keywords: *healthcare policy, healthcare workforce, regional differences.*

Introduction. Healthcare policy for a long time has been an international reference point to the need to reduce inequalities. This also applies to the accessibility, which is largely determined by the provision of healthcare professionals. One of the most urgent issues to raise the efficiency of a healthcare system is the lack of workforce, ineffective placement, operational efficiency, quality and remuneration. Shortage of physicians who practice in the regions is explained by the reluctance to return to the less urbanised areas after lengthy studies in the capital, also with worse career prospects, lower pay and a more deprived social and cultural environment.

Aim. The aim of the study is to describe regional differences in healthcare workforce of Latvia and compare changes in dynamics correlating with average indicators in the European Union.

Material and Methods. Data from the Register of Medical Persons and Medical Support Persons maintained by the HI, data on health care resources maintained by the CDPC, and data about population size from the CSB were used. For international comparison, the ECHI Data Tool was used.

Results. The total number of practicing physicians in year 2017 was 6392 or 33.0 per 10,000 population, and 5741 or 29.4 / 10,000 of those were physicians in training and residents who were excluded. The rate of physicians per 10,000 inhabitants has not changed over the last five years, and it is below average of the EU. The largest group of physicians (23.2%) is family doctors – the total number in 2017 reached 1338 or 6.8 / 10,000 inhabitants, among others general practitioners 1.6 per 10,000 were internists, 1.1 paediatricians and 20.8 different specialty specialists. Unequal provision of people with doctors was observed among different regions of Latvia. The largest concentration of doctors, especially specialists, is in Riga, where there are 61.5 practicing doctors per 10,000 inhabitants, while in other places in Latvia the number is lower by more than three times. Moreover, the gap between Riga and regions has only increased in the last 5 years. The total number of healthcare support personnel with secondary medical education in 2016 was 13,425 where 53.85% of them works in the capital city. There are differences in the regional coverage. The total number of practicing nursing and caring professionals in Latvia is 2.3 times lower than the average in the EU.

Conclusions. The total human resources and its regional distribution in health sector points at serious problems in the effective operation of the system, such as the concentration of physicians in the capital, differences in the ratio of doctors and nurses, general practitioners and specialists that in general affects the increase in inequality between cities and the countryside and hinders the efficient functioning of the system. The country needs to review the human resources development policy, its linkage with the equal provision of the healthcare system.

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Neoplastic Microenvironmental Changes Affecting Relapse of Basal Cell Carcinoma and Efficacy of Its Treatment

Olegs Volkovs, Jelena Moisejenko-Golubovica, Valerija Groma
Rīga Stradiņš University, Latvia

Keywords: *basal cell carcinoma (BCC), tumour, microenvironment, oncology, treatment methods.*

Introduction. Basal cell carcinoma (BCC) is the most common malignant cutaneous tumour and one of the basic problems of modern oncology. The frequency of the disease in many countries is increasing, and despite the achievements of treatment, BCC recurs early in 20–40% of cases, regardless the efforts and application modes of treatment. Various pathways contribute to the development of tumours. A growing body of evidence suggests the role of sonic hedgehog (Shh) pathway in the development of BCC. Furthermore, it has been demonstrated that overproduction of actin within the neoplasm and its microenvironment appears to facilitate the local tumour invasion and a more aggressive biological behaviour.

Aim. This study aims at microscopy analysis of the tumor and its microenvironment, thus deciphering how these affect treatment and development of further relapses of BCC.

Material and Methods. BCC materials were obtained during craniofacial surgeries. The total number of patients was 70. Formalin-fixed and paraffin-embedded tissues were sectioned and stained immunohistochemically with anti-Shh and anti-actin antibody. Semiquantitative estimation of samples in 20 randomly selected microscopic fields was applied. The statistical analysis was performed using SPSS 22.0 programme. To monitor relapse, follow up over a 2-year period was applied.

Results. Neoplastic stromal expression of Shh was up to 54% in both primary and recurrent BCC. Higher stromal expression was evident in recurrent BCC, where Shh immunopositivity was up to 58%, conversely Shh expression in primary BCC was only 19%. Actin expression was up to 26% in all BCC (primary and recurrent), but higher expression was in recurrent BCC where immunopositivity was up to 48%. 37% of the patients were expected to relapse in two years by using minimally invasive methods for tumour destruction in the head and neck region. In turn, only 11% of all cases have relapsed by applying surgical treatment. Total frequency of relapse constituted 24% when the treatment method was not specified, thus correlating with the world literature data.

Conclusion. There is a difference between the treatment method and the risk of further relapse. Minimally invasive methods show a higher recurrence rate than surgery. It can be explained by microenvironmental changes orchestrated by Shh and invasiveness induced by actin when minimally invasive procedures fail to prevent relapse of the tumour. Surgical treatment displayed some recurrence as well explained by the possible sporadic mutation in patched gene occurring after complete tumour resection. The presence of a high level Shh and actin stromal expression suggests on the possible paracrine communication and contribution of it in the development of relapse via the Shh pathway. Surgery is more effective to prevent BCC relapse, and inhibition of these paracrine signals may be effective in the treatment of primary and relapsing BCC.

Collaboration to Change the Landscape of Nursing: Journey between Urban and Remote North Practice Settings

Baiba Zarins

University Health Network, Canada

Keywords: *recruitment, retention, professional practice, remote-urban collaboration, experiential learning.*

Introduction. Rural and remote environments share similar professional and personal challenges associated with financial / economic, professional development, and quality of work-life issues in respect to recruitment and retention. These concerns are magnified within small populations scattered across large geographical areas, existing geographical isolation for care providers with limited access to education and professional development programmes, and, in the case of remote healthcare sites, and little social and economic interaction with urban areas. Published evidence supports expansion of successful urban initiatives to remote communities. The partnership demonstration project between an urban and remote academic health science center in Ontario, Canada, offers Registered Nurses and allied healthcare professionals the opportunity to experience northern nursing practice with a reciprocal opportunity for northern nurses to experience urban practice. During the secondment rotations, participants engage in knowledge transfer and networking. Preceptorship and mentorship infrastructure support fosters professional development that strengthens a career continuum philosophy of innovation and lifelong learning.

Aim. This innovative initiative provides recruitment and retention of nursing and allied healthcare staff across the career path continuum by providing the opportunity to explore and address human resource challenges beyond organisational and geographical boundaries. Participants may consider similar approaches in response to health human resource challenges.

Results. Since its launch in 2008 until 2015, over 70 nurses and allied healthcare clinicians have travels to remote areas of the James Bay region to provide health human resource staffing, educational experiences and consultative needs. Facilitation of this project has enhanced the appreciation of knowledge exchange and core healthcare capacities found within different practice settings, while providing new skill development.

Conclusions. Organisational support influences success of providing this means of continuous learning opportunity and enrichment of nursing practice. Current sustainability of this concept is maintained by interested and qualifying nursing students. Objectives: 1) demonstration of innovative initiatives that enhance knowledge networking and career mobility between urban and remote health care settings; 2) sharing of findings of recruitment and retention best practices through effective staff utilisation; 3) discussion of project model and its feasibility within other geographic contexts in the goal to enrich global healthcare practice networks.

Collaborative Accountability: Fostering Future in Nursing Education

Baiba Zarins

University Health Network, Canada

Nipissing University, Canada

Keywords: *nursing practice, education methodologies, innovative education, healthcare.*

Introduction. Nursing practice is evolving to new ways of healthcare provision, necessitating a significant shift in nursing education leadership. The healthcare profession needs to be developing and using situated knowledge and skills; learning different ways of perceiving and acting ethically in ways consistent with what we believe to be scholar practitioners. The literature supports these qualities sought within current and future nursing practice environments. This study describes an innovative response to address practice changes at the point of care.

Aim. Using a blended learning second degree entry Bachelor of Science in Nursing framework, three urban academic healthcare delivery organisations partnered with a rural university to offer a unique experiential academic programme designed to meet changes within healthcare and the nursing profession. Students are immersed within academic practice settings using Narrative Inquiry and Cognitive Apprenticeship pedagogies.

Material and Methods. These contextual paradigms purposively shift attention away from teacher-centred teaching paradigms or student-centred learning paradigms to a discovery paradigm of collaborative education. In a discovery paradigm, student co-learners act as inquirers and creators as opposed to receivers of knowledge while fully embedded within Academic Health Science Centres supported by clinically based faculty, individual preceptorship and current learning technologies.

Results. Leadership of affiliate faculty advisors and staff is vital in facilitating point of care learning environments that foster the context of the programme curriculum content. Student leadership qualities flourish within point of care environments through continuous discovery, questioning and reflection.

Conclusions. Outcome objectives promote unique intersections and partnerships between academic facilities and practicing in healthcare delivery settings and share leadership qualities within programme infrastructures that contribute to interim benchmark findings. Overall programme goals are to graduate nurses with an active leadership voice in healthcare in contributing to health and well-being of individuals, families, communities, and populations through quality evidence-based practice. Objectives: 1) promotion of unique intersections and partnerships between academic facilities and those practicing in healthcare delivery settings; 2) sharing of the research data and course design strategies of student, faculty and administrative benchmarks; 3) discussion of how this model shapes future education programmes in terms of innovative education methodologies.

Social Determinants of Accessibility to Sports Facilities of School Age Children in Rural and Urban Areas

Kresimir Zazar, Jelka Gosnik
University of Zagreb, Croatia

Keywords: *practising sports, infrastructural and material conditions, types of settlements, social inclusion.*

Introduction. Alongside apparent positive health implications, numerous studies evidence that sport represents an efficient tool for achieving social inclusion and integration. Practising organised sports activities contributes to integration of individuals and entire groups within the dominant social matrix, thus elevating the level of mutual trust (i.e. social capital), as well as fostering empathy and prosocial behaviour. However, the likelihood of engaging in sports depends on various social determinants, such as disposability of adequate infrastructure, accessibility of sports facilities, existence of required (public) transport means, presence of proper organisational forms, sufficient financial resources, expert training persons etc. As habits of conducting sports tend to be carried out over the course of a lifetime, it is especially important to ensure that school age children conduct sports.

Aim. The objective of this study is to juxtapose the opportunities of school (elementary and high) age children to practice sports in urban and rural areas.

Material and Methods. In particular, the analysis is addressed to consider the differences in conducting sports between pupils who inhabit diverse types of settlements in the Krapina Zagorje County, a micro region in Northwest Croatia. It is a highly populated region with primarily rural inhabitants, while approximately one-third is urban population. The analysis is anchored in desk research of available relevant data and a series of semi-structured interviews with persons responsible for the implementation of sports activities (notably school sports) in the County.

Results. Preliminary findings indicate that children in rural settlements have fewer opportunities for training sports on a regular basis.

Conclusions. The overall situation regarding sports activities in all aspects in both types of settlements ought to be enhanced. It is of particular importance to make it possible for children of weaker social status to practice sports. Further research, based on both qualitative and quantitative methods, is exigent in order to deepen insights into the examined topic.

Learning Opportunities for Elderly People's Well-Being

Irena Zemaitaityte

Mykolas Romeris University, Lithuania

Keywords: *elderly adults, learning opportunities, social well-being.*

Introduction. The tendency of societal ageing becomes apparent in Lithuania and Europe. Life expectancy is longer, and the birth rate is lower in proportion to elderly people; due to these facts, the ageing is even more noticeable. This situation requires certain measures, which would be effective in the future. Non-formal education institutions react to changes and offer trainings which help the elderly to maintain working-capacity, physical, social and psychological health. In order to provide greater benefits, it is important to pay attention not only to students of the Third Age but to the needs and changes of society on the whole. It is obvious that in the twenty-first century, life is hardly imaginable without information-communication technologies, which are not only rapidly growing and modifying but are also integrating and changing each and every aspect of people's lives, regardless of their age.

Aim. The paper seeks to discuss the learning opportunities as an old-age well-being factor.

Results. The National Strategy to Overcome Ageing Consequences approved by the Government of the Republic of Lithuania stresses the insufficient attention in Lithuanian educational policy to the problems of education of elderly people, and that society is little aware of the importance of lifelong learning. Research results show that information on lifelong learning / adult education is insufficient, the network of educational institutions providing services to the elderly is not developed, regional differences are wide.

Conclusions. Opportunities for elderly people to learn are insufficient; there is a shortage of experts working with the elderly in educational institutions. There is also lack of incentives for old-age people to follow a lifelong learning. Recently, the possibilities for older adults to participate in the process of education are getting better in Lithuania. Lithuania's active participation into international partnership projects also helps to develop the system of Lithuanian adult education by doing various surveys in adult learning opportunities, old-age adult motivation and attitudes.

Competences of Elderly People to Use Smartphones as a Factor of Well-Being in Contemporary Society

Irena Zemaitaityte, Agata Katkoniene, Asta Januskeviciute
Mykolas Romeris University, Lithuania

Keywords: *adult education, interactive methods, competences, seniors.*

Introduction. Research shows that our society is aging very fast. Long-lasting population ageing trends are transforming societies considerably. Demographic ageing causes multiple multifaceted consequences for sustainable development of societies. The ever-growing number of elderly people both in Lithuania and Europe requires manifold social and economic changes which are necessary to secure further development of the country. According to Statistics Lithuania, in 2014 over 20 % of the population of Lithuania was 60 years old or older, and if current demographic trends persist, it is predicted that by 2030 the share of the population that is 60 years old and older will have reached over 27 %.

Aim. The aim of the study is to investigate seniors' opinion about the importance of developing competences to use smartphones in daily lives.

Results. One of the key reflective aspects of modern society is the application of information communication technologies. Though a spectrum of technologies has found its way to Lithuania relatively recently, they were first introduced to Lithuania 20–30 years ago. According to SEB Bank and the information and communication technology company TEO (2016), more and more people aged 65 and over are discovering the Internet and smart technology services to manage finances, communicate with relatives and spend their leisure time. Lithuania has experienced a breakthrough in the use of smart phones by senior people, while the number of browsers using mobile phones has grown the most. Technological development, as a rule, has a large group of supporters even among seniors; however, many elderly adults have no skills, intention or possibilities to use digital devices, which are critical for successful functioning in the society.

Conclusions. Lee Rainie and Barry Wellman (2012) show that daily life is a connected life, its rhythms have been driven by email, text messages, tweets and Facebook updates. Escape from technological innovations by no means makes life easier. Old-age people can also have specific needs because they are perfectly aware of the possibilities that the latest smartphones have. Modern smartphone can be convinced to make life more enjoyable for seniors and to benefit society. As it is declared by Frackiewicz (2007) “the promotion of the use of the global network by senior citizens can contribute to the realisation of universal values embedded in the fundamental rights of the European Union – dignity, freedom, equality, solidarity, civic rights and justice”.

Comparison of Antenatal Care Factors and Pregnancy Outcome in Rural and Urban Context

Irisa Zile

Centre for Disease Prevention and Control, Latvia

Dace Rezeberga, Gunta Lazdane

Rīga Stradiņš University, Latvia

Iveta Gavare

Centre for Disease Prevention and Control, Latvia

Keywords: *antenatal care, woman's health, pregnancy, perinatal mortality.*

Introduction. Antenatal care plays a basic role in the management of a woman's health during pregnancy, and women who have not been registered to antenatal care are at increased risk of poor pregnancy outcome, including stillbirth.

Aim. The objective of the study is to identify differences in maternal characteristics, antenatal care factors and perinatal mortality between urban and rural area in Latvia.

Material and Methods. The Medical Birth Register of Latvia was used as a data source. All birth in 2017 ($n = 20,406$) were included in the analysis. Place of residence by mother was categorised in three groups: Riga, other cities and rural area. Evaluation of antenatal care was based on timing of the first antenatal visit and completeness. Chi-square test and OR were calculated (adjusted and non-adjusted) in data analysis. Place of residence was merged in two groups for OR analysis: Riga and other regions (other cities and rural regions).

Results. 34.5% ($n = 7030$) of birth took place in in Riga, 15.3% ($n = 3121$) in other cities and 50.3% ($n = 10,255$) in rural regions. The average mother's age in Riga was higher (31 years) than in other cities and rural areas (29 years ($p < 0.001$)). There were more – 6.2% ($n = 634$) ($p < 0.001$) younger mothers (≤ 20) in rural regions than Riga – 2.5% ($n = 179$). Higher education level was detected in Riga ($p < 0.001$) vs. rural regions (44.4% to 65%). There are no differences between regions in average gestational age and birth weight of new-borns. Higher risk of smoking (OR = 1.4; $p < 0.001$), late first antenatal visit (after the 12th gestation week) (OR = 1.2; $p < 0.05$) and incomplete antenatal care (including cases without care) (OR = 1.3; $p < 0.05$) were detected in other regions (other cities and rural areas) compared to Riga. After adjustment by maternal age and education, just late first antenatal visit was significantly higher in other regions (OR_{adj} = 1.2; $p < 0.05$) than Riga. New-borns' mortality in perinatal period is substantially higher in other regions than in Riga (OR_{adj} = 1.5; $p < 0.05$). OR has been adjusted by maternal age, gestational week, birth weight, parity. The gestation week and the birth weight of a new-born is independently associated with an increased risk of perinatal mortality in all regions. Adjusted by maternal education, perinatal mortality OR is still slightly higher (OR_{adj} = 1.3) in other regions compared to Riga but not more statistically significant. Mother's education is also considered as an independent factor associated with increased perinatal mortality (OR = 2.1; $p < 0.01$).

Conclusions. Mothers with incomplete antenatal care, with late first antenatal visit and smoking are a more common occurrence in other regions than Riga, but after adjustment for maternal age and education no differences have been identified, just the higher odds of late first antenatal visit in rural regions. New-borns' mortality in perinatal period is substantially higher in other regions than Riga. The results indicate the health education gap and potential inequalities in receiving antenatal care and emergency obstetric care by regions.

Smooth Transition or Contradictions of Western and Soviet Modernisation: A Peculiar Case of Lithuanian Modern Urbanisation Path

Apolonijus Zilyis

Vytautas Magnus University, Lithuania

Keywords: *urbanisation, modernisation, transition, soviet model.*

Introduction. According to Eurostat, post-communist and post-socialist countries have one exceptional feature compared to western European countries – a relatively high degree of private housing tenure within entire housing sector. The private housing rate of the three Baltic states (more than 80%) is even one the highest among all EU countries. This rate hides differences and the taken different urbanisation paths before and after transition to market economy and the fractions of two modern urbanisation – soviet and market economy models. The Baltic states, and especially Lithuania, were demographically rural and un-urbanised societies before WWII, and it has been characterised with a relatively low rate of urbanisation. Soviet command economy has functioned very differently compared to western market economies. According to Szelenyi (1996), socialist / communist cities could be described as under-urbanised, as there has always been a higher rate of jobs than for urban dwellers in urban areas. So, rapid soviet urbanisation functionally was based on housing policies to meet adequate housing deprivation and the need to urbanise to meet the goal of rapid industrialisation. According to modernisation theory, the combination of urbanisation and industrialisation is the way modern societies are developing, but strong alignment of housing and urban policies and how urbanisation was planned is something peculiar to the soviet modernisation model.

Aim. The study aims to showcase how pre-transition period of the soviet urbanisation model was rejected and post-transition period of structural housing sector reforms (i.e. massive privatisation) were implemented. The goal of the study is to track down how (during first decade of independence and transition to market economy) the (un)smooth shift from one urbanisation and housing model to another happened.

Material and Methods. Answers to these question will be based on sociological research on document analysis (of the housing and urban restriction laws and legislature since restoration of independence of Lithuanian Republic) and semi-structured interviews with experts (i.e. public administrators, politicians, urbanists etc.) who have participated, at some point, in the structural reforms of Lithuanian housing and / or urban sector.

Conclusions. Rejection of totalitarian urban policy and privatisation of state housing sector have been key moments to grant (un)smooth transition and contemporary Lithuanian, urban development. The regulations and legislature (and its changes) during the transition period served as the framework for certain type of modernity and urbanisation path, while social actors (experts), who were implementing those rules and laws, usually acted upon their limited knowledge. These discrepancies of structure and actions of social agents might have facilitated social issues of urban and housing sector in Lithuania even up to day.

Simplified Judicial Procedures: Ukrainian Experience of Increasing Access to Justice for Rural Residents in Civil Cases

Oleksiy Zub, Artem Shumko, Oleksandr Sudelnikov

Poltava Law Institute of Yaroslav Mudryi National Law University, Ukraine

Keywords: *judicial procedures, justice, effective protection, legislative regulation, civil judicial proceedings.*

Introduction. Even though Ukraine is predominantly an agrarian state, constant urbanisation processes have been observed over the last decades. Along with negative socio-political factors of urbanisation, there is a constant problem of ensuring effective protection of violated civil rights and access to justice for rural residents. After all, they are constantly faced with territorial, financial barriers to access to justice, and physical inability to obtain qualified legal assistance. In the light of the updated civil procedural legislation of Ukraine and practice of its application by law enforcement agencies, it is worthwhile singling out judicial procedures that, by their procedural peculiarities and function, can increase access to justice for rural residents, weaken the factors that make it impossible to protect their rights and promote the rule of law in a defined plane at the level of international standards.

Aim. The purpose of this study is to highlight legislative regulation and practical usage of simplified procedures in civil judicial proceedings of Ukraine as tools for enhancing access to justice for rural residents.

Material and Methods. Legal acts regulating the usage of simplified procedures in civil judicial proceedings, domestic and foreign materials of law enforcement practice, in particular, contained in the Unified State Register of Judicial Decisions of Ukraine, and doctrinal works were used in conduct of the research. In addition, philosophical, legal and other methods of scientific research were used.

Results. According to the results of a scientific survey, it has been determined that villagers in Ukraine, in comparison with urban ones, have more restrictions on access to justice, are less protected from legal positions because they are 1) territorially restricted in access to courts; 2) limited in maintaining operational communication with the court; 3) limited due to the high cost of access to justice; 4) limited in obtaining the proper legal assistance. The usage of simplified procedures during judicial protection of civil rights allows to reduce the amount of court costs, reduce the negative effect of territorial separation of the court and promote effective protection of the rights of villagers etc.

Conclusions. The coverage and discussion of the above-mentioned problem is based on Ukrainian scientific and practical developments of the application of simplified procedures, foreign experience using similar mechanisms and domestic judicial practice. Simplified judicial procedures is an effective tool for protecting civil rights and increasing access to justice for rural residents in cases of small complexity and small claims. Their further proceedings in the area of civil procedural legislation of Ukraine will increase the efficiency of legal proceedings, not only for rural, but also for urban residents.

Need of Integrated Care to Marginalised People in Community

Martina Zakova, Daniela Stryckova
Trnava University in Trnava, Slovakia

Keywords: *marginalised people, integrated care in community, streetworkers.*

Introduction. Solving almost any problem situation of social work clients needs more than one professional. This article is focused on clients who are marginalised and who are often condemned for their lifestyle. Precisely because of their way of life and community approach, they need help from several experts to solve their living or social situation. Interdisciplinary cooperation is therefore highly beneficial for the clients. But it is more effective when integrated care exists in a community where these clients live.

Aim. The aim of this study is to define the needs of integrated care in a community with marginalised people.

Material and Methods. Semi-structured interviews were used to conduct the study. Streetworkers were the focus group since they are in touch with such clients more than any other social worker who uses philosophy of harm reduction in work with their clients, which has been acknowledged as the best method when working with marginalised people groups. The study presents justification of the necessity for the abovementioned experts. Simultaneously, the expected approach and required skills are also the focus of the study.

Results. The research results show that streetworkers consider directly integrated care in the community, where marginalised people reside, as being helpful because the latter are afraid to ask for services (e.g., practitioner) themselves. The study has identified expert groups open for cooperation, and clarified what such cooperation entails. Streetworkers would welcome if experts were willing to co-work on direct provision of more appropriate care and be able to employ a more appropriate approach when dealing with marginalised people groups.

Conclusions. Integrated care to marginalised people is needed in a community. The results can serve as a description of integrated care in a community to provide the best care for people who would be in need of it.

Role of Small Ports in Economic and Social Development of Municipality

Helena Simkuva, Vija Liepina, Ieva Almane
Latvian Maritime Academy, Latvia

Keywords: *small port, municipality, urban-rural interactions.*

Introduction. Seven small (regional) ports are one of the tools for promoting not only a country's economic but also its social development. So far, the operation of ports in Latvia has mostly been studied in relation to problems associated with the development of the national transport system (Vanags, 2004; Kassalis, 2014) or ports have been studied more generally as subjects of economic activity (Ducruet, 2013; Bichou, Gray, 2005). The issue of the impact of operation of small ports on social development of seaside regions, in particular, the quality of life of inhabitants of municipalities with a port, has been studied insufficiently.

Aim. The aim of the study is to research the impact of small Latvian ports on the economic and social development of seaside regions.

Material and Methods. The cost-benefit analysis (CBA) has been used to assess the economic efficiency of port operation. Statistical information on the operation of small Latvian ports was collected for the period from 1995 to 2014, the obtained data were processed using mathematical methods of statistical data processing. National and municipal development planning documents regarding the mentioned time period were analysed; semi-structured interviews with port employees and members of the municipality population and communities were carried out.

Results. Analysing the cargo flow dynamics, it has been established that cargo turnover in ports has increased by 44.2%. A favourable business environment has been created in the ports; therefore, small ports annually employ stable numbers of local residents, which shows the residents' loyalty to regional ports and a link between their prosperity and port development. The number of regional residents employed at the ports are as follows: almost 300 at the port of Skulte, almost 500 residents at the port of Mērsrags, nearly 1000 employees at the port of Salacgrīva, nearly 1200 at the port of Roja, and almost 400 people at the port of Engure, but Pāvilosta port employs almost 50 people. The standard of living is relatively higher in municipalities with a port and in coastal villages than the Latvian overall average, except for the largest cities and a couple of specific areas.

Conclusions. From the point of view of regional development, small ports are an integral part of economic development in coastal regions. Small ports constitute a base for development for coastal areas for fishery, woodworking, peat processing, tourism and water transport. According to the Programme for the Development of Latvian Ports 2014–2020, small ports are to become major regional development centres with diversified freight flows and developed fishery and yacht servicing infrastructure. Residents of regional ports should make up the labour force for the small regional ports. A recommendation has been developed to provide local residents with opportunities to become qualified in the professions required by the ports.

Easy-To-Read Concept, Its Use in Legal Science and Legal Aspects

Sabine Priedīte

Parliament of the Republic of Latvia, Latvia

Julija Vasilevska

State LLC National Rehabilitation Centre Vaivari, Latvia

Aivars Vetra

State LLC National Rehabilitation Centre Vaivari, Latvia

Rīga Stradiņš University, Latvia

Keywords: *easy-to-read concept, legal language, communication, common understanding*

Introduction. Section 90 of the Constitution of the Republic of Latvia sets forth that everyone has the right to know about his or her rights. It has been noted in legal literature that the range of rights discussed in Section 90 of the Constitution is not limited to legal provisions, laws and regulations. Section 90 of the Constitution guarantees an individual the right to also be informed of their rights within an individual legal relationship. An individual needs to know what legal consequences arise, will arise or may arise from certain legal facts or certain action, so that they can make an informed choice and identify their own further action. Everyone's right to address submissions to State or local government institutions and receive a materially responsive reply is the fundamental right of a person guaranteed under Section 104 of the Constitution. There is a common practice that the "legal language" is a language of communication between the state and a person (there is a vertical relationship). Accordingly, it is a scientific language – a special type of system having its own characteristic means of expression. Specialists in the science of law possess the necessary knowledge and understanding of it. Consequently, there is also a language for drafting documents that is directly attributable to a person, because it affects the issues of rights of an individual, including enforcement. For example, in the administrative procedure – a procedural fairness principle, which provides the opportunity for a person to express their views. So, for a person to be able to implement their rights, one must understand the content of decisions and other documents. Documents prepared in the "easy-to-read" technique would significantly enhance understanding, also taking into account the different cognitive capacities, cognitive functions of persons. Participants of a legal relationship are people with a different level of awareness and state of health, including functional disorders. Explanation or "rephrasing" of specific legal terms could promote understanding of the legal issue processes as well as it would provide awareness of a group of people that have functional disorders, and the possibility for them to implement and protect their fundamental rights.

Aim. By analysing the "easy-to-read" (*easy read; easy to read*) concept and the content it contains, the aim of the study is to identify the possibilities for the application of "easy-to-read" language in practice, its required characteristics and the target groups which it applies to, and to prepare guidelines for the application of this language in legal science.

Material and Methods. The study analyses the "easy-to-read" concept, researches the literature on the use of "easy-to-read" at the national level and in the international environment by applying the literal and descriptive method. Available documents have been studied, surveys of the target audience and interviews with representatives of non-governmental organisations organised. By using internet surveys, the study attempts to find out the currently existing views regarding the need for "easy-to-read" language and its application in the daily life of specific target groups by surveying non-governmental and governmental organisations and institutions.

Results. The "easy-to-read" concept (*easy read; easy to read*) is used often enough in the international environment to promote a common understanding of various parts of society about the relations of the state and the individual both at the stage of decisions made and in the context of the general principles of law. At the national level, there are no widespread theoretical and practical materials that have been created in the "easy-to-read" technique.

Conclusions. The results of the internet survey, in which non-governmental organisations representing persons with functional disorders were surveyed, allow for the conclusion that there is not sufficient knowledge and understanding about acknowledging and application of the “easy-to-read” concept, which encourages the carrying out of in-depth analysis, as well as defines the directions for further research.

Analysis of Factors Influencing Plantar Pressure in Persons with Diabetic Sensorimotor Polyneuropathy

Darta Balcuna, Illa Mihejeva, Aivars Vetra

Riga East Clinical University Hospital, Latvia

Rīga Stradiņš University, Latvia

Keywords: *polyneuropathy, diabetic ulcer, plantar pressure, influencing factors.*

Introduction. Suffering from diabetic ulcers is one of the most common complications in persons with diabetic polyneuropathy (Bacarin *et al.*, 2009). It has been proven that plantar pressure changes significantly correlate with diabetic ulcer development, so it is important to analyse and grow the understanding of factors influencing plantar pressure (Qui *et al.*, 2015; Ledoux *et al.*, 2014). There are only a few studies analysing the influencing factors of plantar pressure; thus, indicating lack of evidence about this problem at the moment (Qui *et al.*, 2015, Fernando *et al.*, 2016).

Aim. The aim of the study is to analyse factors influencing feet plantar pressure in persons with diabetic sensorimotor polyneuropathy.

Material and Methods. 43 persons participated voluntarily in this quantitative, cross-sectional study. Data were collected on the age, duration and type of diabetes, body mass index and lower limb sensory and motor nerve conduction velocities. Balance was assessed by using Berg Balance Scale and plantar pressure parameters were measured with RS SCAN Footscan® plate system. Simple and multiple linear regression were used to determine and analyse factors of influence (r^2), statistical significance was set at $p \leq 0.05$.

Results. Overall, 43 persons, 27 men and 15 women, with average age of 56 years participated in this study. 62% of the participants have type II diabetes and 38% have type I diabetes. Mean duration of diabetes was 16 years (SD \pm 11) and median body mass index was 30 (IQR = 26–34). Simple regression analysis shows that plantar pressure parameters are influenced by right sural nerve conduction velocity ($p = 0.024$, $r^2 = 0.100$), Berg Balance scale results ($p = 0.002$; $r^2 = 0.192$), body mass index ($p < 0.001$; $r^2 = 0.243$) and duration of diabetes ($p = 0.002$; $r^2 = 0.210$). Multiple regression analysis shows that the biggest influence on plantar pressure parameters is caused by all nerve conduction velocities, body mass index and duration of diabetes all together ($p = 0.001$; $r^2 = 0.308$). Forefoot (heads of metatarsal bones) and midfoot region are most significantly influenced.

Conclusions. In patients with diabetic sensorimotor polyneuropathy, plantar pressure parameters are influenced by motor and sensory nerve conduction velocities, body mass index and duration of diabetes. These factors all together affect plantar pressure parameters more than each of the factors separately. Diabetic patients with lower balance parameters, lower nerve conduction velocities and higher body mass index have a higher pressure on forefoot and midfoot region of the foot.

Students as Researchers: Case Study on Possibilities for Curriculum Transformations at RSU

Tatjana Koke

Rīga Stradiņš University, Latvia

Keywords: *curriculum, “students as researchers” paedagogy, research – teaching-learning linkage approaches.*

Introduction. One of the most urgent agendas for higher education institutions nowadays is to implement the transformations in curriculum in order to provide the possibility for students to acquire maximum skills and knowledge necessary for employability and self-realisation in accordance with one’s individual capacity. An appropriate way to introduce this transformation is to integrate research and inquiry in the study process, for every student, not just for those who choose to pursue an academic career. It is central to professional life in the twenty-first century (*Brew, 2007: 7*). Interdisciplinary inquiry may be one of the most effective tools to achieve these goals. Programmes of social work are able to provide an excellent platform due to their interdisciplinarity, including both: health care and social sciences, and the fact that the employability demands tailor-made approach for every “customer”.

Aim. The goal of the article is to substantiate the need for study programme transformation in order to meet students’ needs to lay the foundation for becoming highly qualified professionals. For this purpose, a complete transformation of both what we teach (curriculum) and how we teach (paedagogy) should be reconsidered and implemented. The time to get started on that transformation is now.

Results. As a result, four types of research-teaching linkages – research-led, research-oriented, research-based and research-tutored approaches are described and exemplified based on student work and curriculum analysis in line with faculty interviews.

Conclusions. The conclusion provides evidence of contributing and hindering factors for the research on teaching-learning linkage, which are most frequently applied types of undergraduate research in current study programmes at RSU. The recommendations focus on how to integrate the less popular but efficient research approaches to enrich undergraduates’ research competences.

Use of Modern Neuroradiological Methods in Assessment of Cognitive Dysfunction in Systemic Connective Tissue Diseases

Janis Mednieks, Valerija Groma
Rīga Stradiņš University, Latvia

Keywords: *connective tissue disorders; neuroimaging, cognitive dysfunction.*

Introduction. Chronic systemic connective tissue diseases (SCTD) are a heterogenous group of conditions affecting mainly children and young adults. Their prevalence is estimated to be at least several percents in general population. Therefore, they can substantially influence health of a society and cause a significant socio-economic burden. While pathophysiology of primary organ affection has been exhaustively studied and well described, more attention should be given to some other end organ involvement including CNS, as SCTD can increase the risk of cognitive dysfunction through various mechanisms. Expectedly, cognitive dysfunction is very little obvious in the early stages of impairment, and, therefore, it requires precise and suitable tools to assess the level of alteration and its changes over a certain period of time. Clinical neuropsychological testing is the golden standard in the assessment of such individuals. The use of well established anatomical neuroimaging techniques such as MRI and CT is of little use in the assessment of SCTD as they allow to detect only gross changes in the brain that usually occur in the late stage of the disease. In order to detect not only the severity of involvement, but also the possible underlying mechanisms, some novel neuroimaging methods can be applied.

Aim. The aim of the study is to review recent medical literature concerning the neuroimaging of connective tissue disorders.

Material and Methods. Literature review on neuroimaging techniques applicable in case of SCTD using appropriate articles from Pubmed and Web of Science databases.

Results. The imaging modalities most widely used in systemic connective tissue disorders include Functional Magnetic Resonance Imaging (fMRI) and Positron Emission Tomography (PET). fMRI is a technique that detects blood oxygen level dependent (BOLD) signal that presumably reflects changes in the activity of various focal brain regions. BOLD changes can be measured in relation to some specific task, or it can be used to explore resting brain activity and detect default mode networks. The advantage of fMRI is the possibility to explore various cognitive functions in relation to specific neural networks and to speculate over the influence of one brain region to another. PET is a nuclear imaging technique that registers gamma rays emitted by various radioactive ligands from different body parts including CNS. Most widely used tracer is an analogue of glucose – fludeoxyglucose. Usually in cognitive dysfunction, glucose hypometabolism can be detected in focal brain areas at the onset of the disease, long before any structural changes.

Conclusions. Proper and timely application of aforementioned brain imaging techniques allows detecting cognitive dysfunction early in the disease, assessing the changes over time and measuring the effect of therapeutic interventions. Taking into account that both of these imaging modalities are either slightly (PET) or non-invasive (fMRI), the advanced neuroimaging has the potential to become a recommended technology applicable when assessing chronic SCTD.

Development Tendencies of Criminalistics in Ensuring Public Safety

Aelita Zile

Rīga Stradiņš University, Latvia

Keywords: *society, crime, criminalistics.*

Introduction. In modern transformation conditions, more intensive dissemination of information and knowledge, as well as technology and innovation is taking place. Therefore, the role of science is rising and is providing newer solutions, both in theoretical and practical terms. With increasing opportunities, requirements are also increasing. Thus, the transformation conditions contribute to the introduction of new methods and new possibilities in practice.

Aim. The aim of the research is to study and analyse the crime level and tendencies in the largest cities and regions of Latvia, and the role of criminalistics and its development tendencies in ensuring public safety.

Material and Methods. Within the study analysis and summary of the number of criminal offences recorded by the Information Centre of the Ministry of the Interior for the period of 2011–2017, analysis and summary of certain types of crimes, as well as summary and analysis of examinations performed by the State Forensic Science Bureau and of examinations performed by the Forensic Service Department of the State Police, summary and analysis of examinations at the scene were carried out.

Results. The results of the author's study and research give an insight into dynamics of the crime level in the largest cities and regions of Latvia, as well as show the impact of criminalistics on measures of ensuring public safety.

Conclusions. The compilation and analysis of data carried out within the study reflect the contribution of forensic development to ensuring public safety, as well as mark further development tendencies.

Interrelations of Paranormal and Pseudoscientific Beliefs and Critical Thinking Disposition among Undergraduate Medical Students of Rīga Stradiņš University

Arturs Utinans, Gunta Ancane, Anita Villerusa, Janis Vetra

Rīga Stradiņš University, Latvia

Keywords: *magical and paranormal beliefs, critical thinking skills, educational process.*

Introduction. Magical and paranormal beliefs have been found in all cultures and strata of society, including medical university students. Critical thinking skills and dispositions are generally considered desirable outcomes of educational process. Nevertheless, there is lack of conceptual clarity about interrelations between magical and critical thinking.

Aim. The aim of the study is to explore prevalence of magical, paranormal beliefs and pseudoscientific beliefs between undergraduate medical students, as well as to explore prevalence of critical thinking dispositions between medical students, and to assess interrelations and psychodynamics between “noncritical” forms of thinking – magical, paranormal and pseudoscientific beliefs, and critical thinking disposition.

Results. The results show that statistically significant negative correlation exists between paranormal beliefs and critical thinking disposition if students are put in a situation of choice between opposite statements. If statements in assessment scales do not put respondents in such a situation, their results do not show significant correlations.

Importance of Social Capital in the Community to Meet the Needs of a Family with a Disabled Child

Andrea Banovcinova

Trnava University in Trnava, Slovakia

Keywords: *community, social capital, family needs, child with disability.*

Introduction. Birth, education and care of a disabled child can negatively affect not only the life and functioning of individual members but also the family as a whole. Child disability brings increased demands on parents who have to handle normal care and respond to the child's specific needs related to his diagnosis. An important role in assisting and supporting families with disabled children can be played by the community and its social capital, including both formal and informal social networks and sources of support, as well as relationships that families have built within.

Aim. The aim of the research is to define how parents of a child with disabilities reflect the importance of the community for their family, with emphasis on meeting the needs of the child.

Material and Methods. A qualitative research strategy has been used to achieve the goal. The method of data collection was a semi-structured interview. The research file was made up of parents of children with disabilities. The condition for inclusion in the research was the personal care of the child.

Results. The results of the research highlight the importance of an informal social network for the family, which includes a wider family, as well as organisations operating in the third sector to help children with disabilities and their families.

Conclusions. One of the most significant obstacles perceived by parents of children with disabilities is poor spatial availability of the organisation, which is particularly evident in rural environment, but also poor awareness of the possibilities of helping and supporting the family. From formal resources, parents particularly perceived the importance of doctors and medical staff.

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Work Rehabilitation Questionnaire: Cross-Cultural Adaptation and Testing of Psychometric Characteristics of Latvian Version of the Measurement

Vīta Deicmane

*Rīga Stradiņš University, Latvia
State LLC National Rehabilitation Centre Vaivari, Latvia*

Lolita Cibule, Anita Vetra, Aivars Vetra

Rīga Stradiņš University, Latvia

Keywords: *Work Rehabilitation Questionnaire, vocational rehabilitation, ICF, a cross-cultural adaptation, validity, reliability.*

Introduction. There are no world-renowned, modern outcome measures in professional (work) rehabilitation adapted into Latvian. To ensure appropriate work rehabilitation and the opportunity to return to the labour market, it is important to determine rehabilitation needs for persons with disabilities.

Aim. The aim of the study is to adapt Work Rehabilitation Questionnaire (*Finger et al., 2014*) into Latvian and test the psychometric characteristics by applying those to individuals with various permanent disabilities.

Material and Methods. Quantitative study – cross-cultural adaptation study with reliability and validity testing was used. Adaptation of Work Rehabilitation Questionnaire (WORQ) into Latvian has been done based on cross-cultural adaptation guidelines. The research was conducted in three institutions. Altogether 131 participants took part in the adaptation process and testing research for psychometric characteristics. Participants were split into three groups: 1st group (n = 36) people with lower extremity amputations; 2nd group (n = 37) people with spinal cord injury and 3rd group – vocational rehabilitation clients with various disabilities (n = 58). Vocational rehabilitation needs of individuals were determined by using self assessment tool WORQ. Participants were re-tested within an interval of 7–14 days.

Results. WORQ has shown good and high internal consistency measures between groups. Coefficient of Cronbach's Alpha between groups is between 0.85 and 0.96. Reliability for each section of the questionnaire is 0.962, after the test was repeated. Latvian version of a 27-question WORQ has shown statistically significant differences in mean values between the groups ($p \leq 0.05$).

Conclusions. Latvian version of WORQ is a reliable and valid instrument for application in vocational rehabilitation for people with various permanent disabilities.

Adaptation and Testing of Bilingually Translated Idiopathic Scoliosis Patient Self-Assessment Questionnaire SRS-22r for Use in Latvia

Lauma Upmale, Anita Vetra, Lolita Cibule, Aivars Vetra
Rīga Stradiņš University, Latvia

Keywords: *bilingualism, evaluation of functioning, self-evaluations, SRS-22r.*

Introduction. Latvia is a multilingual country in which mainly the Latvian and Russian languages dominate. The 2014 survey data of the Latvian Language Agency (LVA) show that in Latvia 63.4% of the respondents indicated the Latvian language as their mother tongue, but 27.5% have marked the Russian language as the one. In assessing their knowledge of the Latvian language, 9% of the population of the national minority considered that they do not know the Latvian language at all, 15% know it only at the level of the basic knowledge, 33% know the Latvian language at a satisfactory level, and only 28% of them note that they know the Latvian language well. In health care institutions, more than half of the population of national minorities does not use the Latvian language – 24% communicate with health care specialists in Russian more than in Latvian and 36% do their communication mainly in Russian. Due to poor communication mistakes, the quality of health care is compromised, the life of a patient is threatened and in studies it has been proven that one of the main reasons in poor quality healthcare can be a language barrier. The use of self-assessments in assessing patients' health is an effective way in improvement of the organisation of healthcare, it is directly related to knowledge of the language used in self-assessment questionnaires. In the literature available, there were no researches on the problems created by self-assessment questionnaires as a result of restrictions of knowledge of the language. Use of bilingual questionnaires in rehabilitation is currently a poorly studied topic.

Aim. The aim of the study is to adapt a bilingually translated self-assessment questionnaire *SRS-22r* for persons with diagnosed idiopathic scoliosis for use in Latvia.

Material and Methods. Using the principles of intercultural adaptation stages, a bilingual *SRS-22r* self-assessment questionnaire was translated from English simultaneously into Latvian and Russian. In order to evaluate the questionnaire, its translation was supplemented with questions on age, language proficiency, evaluation of ease of use of the questionnaire, and a double evaluation was performed – in the study group for patients with idiopathic scoliosis and in the control group the Cronbach-Alpha coefficient and the Pearson correlation coefficient were calculated, and it was compared with the results of the *SRS 22r* study in English.

Results. 48 patients (aged 14–25) with the idiopathic scoliosis – 26 Russians and 22 Latvians participated in the study, of which 15 use mostly Russian, 13 Latvian, but 20 of them are ready to communicate in both languages. In the control group there were 20 patients. All the patients in the control group noted that there was no problem using the version of the bilingually translated *SRS-22r* questionnaire.

Conclusions. The use of evaluation of functioning of bilingually translated tools (self-assessments) is a solution to be further developed in the national situation of Latvia and the use of the state language.

Dorsal Surface Spatial Changes in the Front Plane at Self-Correction for Patients with Idiopathic Scoliosis

Agate Leimane, Gundars Rusovs

*Rīga Stradiņš University, Latvia
SIA "Rehad", Latvia*

Aleksejs Katasevs

Riga Technical University, Latvia

Aivars Vetra

*Rīga Stradiņš University, Latvia
Riga East University Hospital, Latvia
State LLC National Rehabilitation Centre Vaivari, Latvia*

Keywords: *3D scanning, idiopathic scoliosis, body self-correction, smart clothing / garment.*

Introduction. According to statistics regarding children and youth health in Latvia, in year 2016, 150.4 children out of 1000 were diagnosed with poor posture, while 65.3 out of 1000 suffered from scoliosis (Central Statistical Bureau of Latvia, 2017). The role of conservative approach towards mitigating this issue is becoming more popular and SOSORT (Scientific Society on Scoliosis Orthopaedic and Rehabilitation Treatment) guidelines state the application of body self-correction methods as one of the most important goals in the field of physiotherapy (Negrini *et al.*, 2018). For the attainment of an immediate effect, a posture correction can be facilitated by the use of special smart clothing / garment providing feedback signals to the patient (Wong & Wong, 2008). Localisation of anatomical points of the most severe deformation processes and, subsequently, positioning of the patient in a relevant self-correction position are the most important aspects to be taken into consideration before constructing an individual smart clothing / garment (Pfab, 2016). With the support from the European Regional Development Fund, Riga Technical University in collaboration with Rehabilitation Medicine Research laboratory of Rīga Stradiņš University has developed a smart clothing / garment equipped with integrated sensors providing feedback function.

Aim. The aim of the study is to examine the location and interval between the anatomical points of a patient suffering from idiopathic scoliosis so as to detect changes in the body posture under the circumstances of self-correction within the scope of linear activity of stretch sensors for the construction of a smart clothing / garment.

Material and Methods. The study included patients with idiopathic scoliosis having mastered self-correction skills according to the Schroth Method. Taking the map of anatomical points as the basis, three-dimensional markers (recognised by the 3D scanner) were positioned on a patient's body followed by a single cycle of 3D scanning (Rodin4D scanner and M4D Soft tool) the patient finding himself / herself in a normal position. Next, five cycles of 3D scanning were performed, the patient being exposed to a self-correction position set by a physiotherapist. An interval of 10 seconds was taken between each scanning. An original 3D object-processing method performed by the use of Labview software (RTU) was applied in order to calculate the changes in coordinates when a patient's body was being exposed to correction and when not. Microsoft Office Excel was applied as an instrument for statistical analysis. In particular, it was applied to calculate the mean value, standard deviation and probability ratio.

Results. The map of anatomical points / markers (Figure 1) implies the following anatomical points: SR - right spina iliaca posterior superior, SL - left spina iliaca posterior superior, C7 - 7 processus spinosus, T12 - dorsal vertebrae, PR - right angulus inferior scapula, PL - left angulus inferior scapula. As a result of the study (eight subjects were included), the changes in distance intervals of variation ratio have been visualised (Figure 2) together with distances being active in the range of sensor activity most frequently (Figure 3). The distance changes being active in the range of linear activity of sensors most often are PR-PL: six patients, SL-PL: five patients and SL-PR and T12-PL: four patients.

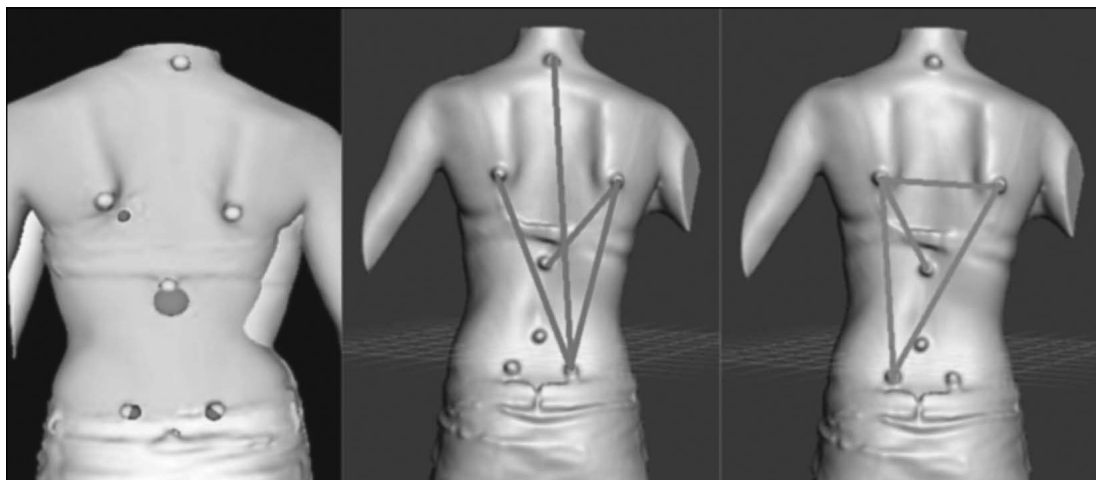


Figure 1

Figure 2

Figure 3

Conclusions. It is not possible to detect any changes in the body position that would systematically repeat among patients with one type of scoliosis when being in a self-correction position. It is possible to classify the differences in the distance of the anatomical points: SR-PL; SR-PR; SR-C7; T12-PR, which present sufficient stability of the measurements. PR-PL; SL-PL; SL-PR; T12-PL changes in the distance of the anatomical points are the ones being active in the range of linear activity of sensors most frequently. The 3D body mapping methodology can be developed further and used for designing smart clothing/ garment.

Ecological Risks as Evaluated by Latvian Residents

Iveta Briska

Marketing and Public Opinion Research Centre SKDS, Latvia

Keywords: *risk, ecological risks, environment, environmental research.*

Introduction. Development processes of the modern society is denoted by the concept “risk society” by many theoreticians of social sciences. Though the shape of the very concept is not clearly determined yet and is still disputable, the research on different aspects of the risk society and risk problems in general is nowadays one of the most topical subjects in the field of social sciences in general.

Aim. The aim of the study is to focus on the analysis of the content of ecological awareness components characteristic to the Latvian population and define their interconnection and influencing factors.

Results. Risk analysis and evaluation as well as their avoidance or their removal, at least, is vitally important for the humankind in general and every person individually. One of the risk groups generated by the contradictory development of the risk society itself is ecological risks, which can take various forms. Instruments that were created by the society to improve the life quality and that were associated with progress for a long time have now become their opposites. Vast ecological catastrophes caused by natural processes as well as activities of men are the most characteristic threats of the current century. It is necessary to consider that while living in an industrial environment people, in the name of gains, have to live with potential risks; and have to understand that almost every aspect of their lives has an impact on the environment. Any activity can cause ecological issues in the future (*Beck, 1991*). Though, any activity or event causes counter-reaction, as well. The counter-action to the industrial world crisis and growing ecological cataclysms that are characteristic of a risk society is the ecological awareness – changes in ecological awareness (*O’Sullivan & Taylor, 2004: 10–13*).

Conclusions. There exist numerous objective factors that affirm the increase in ecological risks, but it is not followed by appropriate reaction of people – manifestation of the ecological awareness – in reducing the said risks.

Correlation between Anxiety Indicators and Suicidal Thoughts or Actions among Adults Aged 18 to 49 Years

Ieva Briede

Riga Center of Psychiatry and Substance Use Disorders Treatment, Latvia

Velga Sudraba

Rīga Stradiņš University, Latvia

Keywords: *self-harm, suicidal ideation, suicidal actions, anxiety disorders.*

Introduction. In Latvia in 2016, 364 people committed deliberate self-harm (suicide) (SPKC, 2017). There are indications that for each adult who died of suicide there may have been more than 20 others attempting suicide (WHO, 2015). Anxiety disorders have been suggested to increase risk of suicidal ideation and attempt (*Thibodeau et al.*, 2013; *Simon et al.*, 2007; *Sareen et al.*, 2005).

Aim. The aim of this study is to establish the correlation between anxiety disorder and suicidal ideation among adults aged 18 to 49 years.

Material and Methods. Quantitative research method has been used in the study. The objective of the study was reached by the help of a questionnaire developed by the Author and Spielberger State-Trait Anxiety Inventory (*Spielberger et al.*, 1983. Adaptation in Latvia: D. Škuškoviņa 2004), which helped to obtain the study data on 165 persons aged 18 to 49 years, who have had suicidal ideation or have made suicide attempts or actions.

Results. Most of the respondents (124 or 75.2%) are women. The mean age of the 152 respondents is 18 to 29. 49.7% of the respondents have secondary education, 47% – higher education. 63.1% or 104 respondents have a high level of trait anxiety. 34.5% of the respondents have a moderate level of trait anxiety, 2.4% or 4 respondents have a mild level of trait anxiety. 39.4% or 65 respondents have a high level of state anxiety, 48.5% or 80 respondents have a moderate level of state anxiety, 20 or 12.1% of the respondents have a mild level of state anxiety. There is a statistically significant positive correlation between higher level of state anxiety and rate of suicidal ideation, as well as recurrence of suicidal ideation. There is a statistically significant negative correlation between having children and recurrence of suicidal ideation. There is a statistically significant negative correlation between a higher level of state anxiety and the fact that a person is married.

Conclusions. Results of the study reveal that more often expressions associated with suicide is suicidal ideation rather than suicidal actions or suicide attempts. Therefore, results of the study show the correlation between anxiety and suicidal ideation or actions. In the study, the obtained results confirm positive relations between higher anxiety state and anxiety trait, and suicidal ideation, as well as recurrence of the thoughts; i.e., higher anxiety state means that a person thinks about suicide more often and repeatedly.

Engaging Relationship within non-Formal Education of Adult Members of Families at Risk: Grounded Theory

Tomas Butvilas

Mykolas Romeris University, Lithuania

Rimvydas Augutavicius

Mykolas Romeris University, Lithuania

Keywords: *non-formal education, families at risk, adult, engaging relationship, grounded theory.*

Introduction. In spite of numerous and diverse attempts to address the so-called *at risk* phenomenon in different countries of modern society, this social problem and its challenges on social, economic and cultural aspects of society still exist. Moreover, it remains stable or is even growing in numbers among the populations, while different projects, national and international strategies to address the issue are developed and implemented. It does exist in any country, even though the modern society is changing its face and takes new forms and dynamics. The science of adult education has never been so explored, developed and conceptualised as it is nowadays. However, the search for comprehensive theory that could reflect in exhaustive way on complex aspects of adult learning, change of personality and his values has never been accomplished (*Jarvis, 2007*).

Aim. The aim of this research is to explain the process of non-formal education of adults from at risk families using the approach of classic grounded theory.

Material and Methods. This research in the field of non-formal education of adults from at risk families is an attempt to explore a different approach towards the scientific analysis and conceptualisation of the process. There is hope that the emerged theory grounded in empirical data, collected, analysed and conceptualised in line with the requirements of classic grounded theory, can help to identify and acknowledge the hidden within interrelated concepts. The relationships between and among these elements of non-formal education are explained by hypothesis that are validated comparing concepts of emerged grounded theory with existing adult education theories.

Results. The non-formal education of adults from at risk families is the process that is explained by the interaction between and among educator and student or group of students, which has got a form of the so-called *engaging relationship*. This concept of adult education can acquire positive or negative purposefulness depending on the content of the education process. The process is also distinguished by the polarity of the purposefulness – two different poles of the engaging relationship identified and characterised by the blocks of contextual elements in the emerged grounded theory. The two poles of the concept are: the *rejection circle* and, opposite to it, *directing consciousness*.

Conclusions. Despite the type of polarity the engaging relationship is taking, its main purpose is to explain how the main concern of the process is managed, processed or resolved (*Holton & Walsh, 2017*). *Brought to participation* is the main concern of the non-formal education of adults from at risk families.

Healthcare Policy in Lithuania since 1991 (Critical Reappraisal)

Giedre Baltrusaityte
Vytautas Magnus University, Lithuania

Keywords: *healthcare policy, healthcare system, healthcare reform, public health.*

Introduction. Until 1990, the Lithuanian healthcare system was functioning under the soviet “Semashko” model. Although it was structurally well developed and based on state-funded health services to all citizens, the soviet healthcare model was marked by some limitations that did not allow to effectively, adequately and timely address population’s health issues. The healthcare system was highly centralised, excessively based on biomedical health model and lacked active involvement of the public in healthcare matters. After the restoration of Lithuania’s independence, a decision was made to reorganise the existing healthcare system. In 1991, Lithuania joined the World Health Organisation and adopted more advanced western health policies and practices in implementing national healthcare reform. The aim of this overall health care reform was to establish a health care system that would be efficient and highly responsive to population’s health issues.

Aim. The aim of the study is to characterise and critically reassess major developments and implications of national healthcare policy in Lithuania since 1991.

Material and Methods. Analysis of national healthcare policy in Lithuania since 1991 covered the review of the National Health Conception (adopted in 1991) and subsequent major developments in health policy and legislation.

Results. Analysis of the National Health Conception shows that there was an intention to design the national healthcare system in accordance with the established principles and values of international health policy. Conception promoted the biopsychosocial approach to health and healthcare and referred to the WHO’s global strategy “Health for All” as a guideline. Primary healthcare was envisaged as foundation of the national healthcare system, also significant emphasis was placed on active participation of the public in making health related decisions. The values and principles of the national healthcare system as outlined in the National Health Conception were further enshrined in the Constitution of the Republic of Lithuania, other health policy documents and in subsequent healthcare laws. The major legal basis of the Lithuanian national healthcare system was created in 1991–2006. 15 laws were adopted during this period. Analysis of the changes in the healthcare legislation shows that the legal framework that was created enabled the decentralisation of the management of the healthcare system, rationalisation of resource allocation, restructuring of service provision, and improvement of health financing.

Conclusions. Analysis of health policy developments in Lithuania since 1991 allows to conclude that the basis necessary for a substantial healthcare system reform was created. The reform of the Lithuanian healthcare system, at least formally, was designed and carried out in accordance with the established standards of international health policy and practice. Still, despite the major advancements in national health policy, changes in the legal framework as well as ongoing healthcare reforms, some major public health issues remain persistent. The presentation will look at the possible explanations of this apparent discrepancy.

Civil Registry Entries as a Source to Provide Access to Information on a Family in Ukraine

Armenii Telestakova

Kyiv National University of Technologies and Design, Ukraine

Larina Antonova, Natalia Olena

Tavrda National V. I. Vernadsky University, Ukraine

National Academy of Public Administration the President of Ukraine, Ukraine

Keywords: *civil registry entries, needs of families, access to information.*

Introduction. The state has a limited access to information on the needs of families in Ukraine. It is connected with a closed type of a family that is caused by certain confidentiality of relations in it. The only objective and operative source of information about a family are parish books and civil registries as they are events and actions that are inseparable. Based on these documents balance of interests between a family and the state is formed, as they include not only the information to identify a person but also all-state information (on demographical development of the country, public health rate, durability of the institute of the family).

Aim. The aim of the study is to identify the role of state institution-maintained registers in promoting realisation of the rights and freedoms of citizens.

Material and Methods. The following analytical methods of research were used in conduct of the study: historical, logical and statistical.

Results. Registration of civil acts is a state institution aimed at ensuring realisation of the rights and freedoms of citizens and making records – documents – to help the state understand the needs of a family better, identify its problems and ways of its stable existence and development. This proves the necessity of information analysis originating from metric books and state registries, as the amount and content of information depends directly on the policy of the state in a certain historical time period. Thus, civil registry can be named the “barometer of the state policy”. For example, information in the registry on church rituals at certain point shows the wish of Bolsheviks to loosen influence of the church on soviet citizens. More information on socio-political state of families in 1934–1939 was necessary to hide the results of terror before all-union population census in 1937, etc.

Conclusions. Information on the family in Ukraine state registry has certain contradictions. On the one hand, the state protects a family from intrusions of aliens into the family life, secures confidentiality of the information on the family (Art.32 of the Constitution of Ukraine). On the other hand, formation and development of the family policy in Ukraine demands information on the family. Such needs of the state in the information on the family initiate changes of purely private family relations into such that have publicly private character and the change of constitutional imperative of sovereignty of the family for flexible approach, essence of which is necessity of information exchange between the state and the family.

Electronic Petition as a Way to Influence Authorities, Available to Every Citizen: Role and Prospects of Development in Ukraine

Dmytro Luchenko

Yaroslav Mudryi National Law University, Ukraine

Keywords: *electronic petition, authorities, influence, voting, legislation.*

Introduction. The article substantiates the thesis that electronic petitions are potentially capable of being an effective means of not only influencing the authorities, but also appealing against unlawful decisions, actions and inactivity of public authorities.

Aim. The aim of the study is to define the effectiveness of electronic petitions in influencing the authorities, and their decision making processes or lack of activity.

Results. Institute of electronic petition is a mechanism that creates comfortable conditions for the expression of will by citizens, regardless of their place of residence. People living in villages have the same opportunities to directly influence the authorities as residents of the capital, precisely through such an important institution of electronic democracy as electronic petition. Analysis of the legal regulation of the institute of electronic petition in Ukraine and practice of its functioning has been carried out. It has been established that at the present stage of development of Ukrainian legislation, the institute of electronic petition combines the complaint procedure form and the procedural form of an indirect appeal. The shortcomings of the legislation on electronic petitions that negatively influence the effectiveness of this institute are systematised.

Conclusions. A number of measures have been proposed to improve the effectiveness of electronic petitions, namely: implementation of educational activities among the population (especially in rural areas) regarding the appointment and use of the institution of electronic petition; introduction of mandatory petitions that overcome the established threshold of votes in their support; preventing the dispersion of votes by the same type of petition with identical requirements; blocking irrelevant petitions; improving the interface of relevant electronic resources on which petitions are published.

Shareholders Agreement: Comparative and Legal Analysis of Legislation and Legal Doctrine of Ukraine, EU Countries and USA

Vladyslav Teremetskyi

National Academy of Educational Sciences of Ukraine

Yuriy Zhornokui, Valentyna Zhornokui

Kharkiv National University of Internal Affairs, Ukraine

Keywords: *shareholders agreement, influence, legislation.*

The study presents a comparative analysis of the state of legislative massive and legal doctrine of Ukraine, USA and the European Union countries in understanding the legal nature of the agreements between shareholders regarding the exercise of their rights from the shares and the rights to shares. The basis of understanding the shareholders agreement requires incorporation of two different conceptual ideas. One is typical for the countries of Anglo-Saxon system of law and contemplates the agreement of shareholders to influence the management of the joint stock company in the context of its administration. Another is typical for the Romano-Germanic legal system and is stipulated by the arrangement between groups of shareholders as for the distribution of the spheres of influence in the company (appointment of representatives to the company's bodies, the formation of the controlling block of stocks, etc.).

Usefulness of Community Support Resources from the Perspective of Parents of Children with Disabilities

Nadezda Kovalcikova, Andrea Banovcinova, Jana Levicka
Trnava University in Trnava, Slovakia

Keywords: *community support, children with disabilities, parents, social network.*

Introduction. Presence of a child with a disability determines a family functioning in all dimensions, and child care is a source of stress and burden for all family members, especially parents. The optimal social network, which is the source of social support, greatly eliminates stress and improves adaptation of the parents to the disability of their child.

Aim. The aim of the study is to define how parents of children with disabilities perceive the usefulness of formal and informal sources of social support.

Material and Methods. Formal sources of support mainly include professional services and support of experts; informal support is provided mainly by the closest family and a wider community. A quantitative research strategy has been used in the study, more specifically a standardised questionnaire Family Support Scale (FSS). The questionnaire was developed by Dunst, Jenkins, and Trivette (1984). 493 parents of children with different types of disabilities were enrolled in the study. The scale of FSS is aimed at measuring the helpfulness of family sources of support. It contains 18 items (plus two respondent-initiated items) that are rated on a 5-degree Likert scale, where 1 means completely unhelpful, 5 stands for extremely useful. The evaluated resources in the scale are divided into five sub-categories: Kinship, Spouse / Partner Support, Informal Support, Programmes / Organisations, Professional Services.

Results. The results show that informal support in the form of a partner and close people has been perceived as the most useful. Programmes and organisations have been estimated as the least useful source of support in the parents' viewpoint. A significant difference was detected in the perceived usefulness of formal and informal sources of support in terms of housing, marital status, and education.

Conclusions. No differences have been distinguished in the overall rate to perceive usefulness of sources of support in the following variables: diagnosis of a child, the age of a parent and the age of a child with disabilities.

Acknowledgement. This study was developed as part of the APVV project No. 14-0646 "Analysis of Social Service in Early Intervention in Slovakia".

Raising Aspiration, Developing Capacity and Enhancing Well-being: Impacts of Widening Participation in Higher Education

Gail Whiteford
Griffith University, NSW Health, Australia

Keywords: *inclusion in society, well-being, higher education.*

Globally, the evidence is clear that participation in higher education has a powerful impact on individuals, families and communities. The impact is not only financial – estimates are that the value of a degree is more than one million over the course of a lifetime – but on well-being. Inclusion in society through professional workforce provides a strong basis for representation and the ability to voice realities of those groups currently under-represented.

This presentation commences with an overview of how participation in higher education is a powerful form of social inclusion and how it is individually and collectively transformative through focussing on the case study of Bridges to Higher Education, a consortium of five universities working with disadvantaged schools and communities in Australia. Processes as well as outcomes of the programme as well as specific challenges faced over time will be discussed. Additionally, some of the powerful content of a television series produced by Bridges aimed at reaching diverse groups through the use of role models from different backgrounds – including those from refugee and asylum seeker backgrounds – will be shared.

Lifestyle and Cognitive Reserve in Aging: Perspectives from Bigger and Smaller Cities

Olga Strizhitskaya

Saint-Petersburg State University, Russia

Keywords: *aging, cognitive reserve, lifestyle, comparative analysis.*

Introduction. Healthy lifestyle is one of the most universal and widespread trends around the world. It is believed to improve health, both mental and physical, and promote longevity. Simultaneously, while most people agree that healthy lifestyle improves everyone's overall functioning, it is still to be agreed what can be called "healthy lifestyle". Particularly it becomes an issue when we deal with different cultures, religions, societies. Even within the same society the concept can differ depending on perceptions and values of its respective subsample. It can be also assumed that lifestyle can be associated with cognitive reserve and form a complex to maintain optimal functioning in aging. While most studies in this field concentrate on cognitive reserve potential for reducing risk of cognitive decline, this study aims to explore a more complex behavioural variable.

Aim. The aim of the study is to define whether cognitive reserve and lifestyle are associated; whether there are differences in such associations due to regional specifics; and whether lifestyle and cognitive reserve will have greater effect on psychological well-being than each variable separately.

Material and Methods. The study included 304 elderly participants aged 52–89 (mean age = 68). Participants were recruited from two comparatively big cities in Russia – Saint-Petersburg (n = 150; population 5.1 million people) and Nizhni Novgorod (n = 154; population 1.2 million people).

The following methods were used: 1) survey on HLH (subscales: physical activity, balance, bad habits, diet, chronic conditions, sleep, social engagement, and adaptability); 2) CRI questionnaire; 3) scale of psychological well-being.

Results. Results present rather different patterns in lifestyle. Saint-Petersburg has more resources for the elderly, better infrastructure in general, and it was indicated that the aging people in Saint-Petersburg devote more time to their personal affairs, hobbies ($p = 0.31$). Variables of cognitive reserve were associated with better balance ($r = 0.440$) and fewer social ties ($r = 0.328$). Both cognitive reserve and lifestyle affect psychological well-being ($R^2 = 0.671$). Nizhni Novgorod is a more conservative, family-oriented city. Older adults here devote more time to their family duties, raising grandchildren etc. In terms of lifestyle they differ from Saint-Petersburg in such variables as sleep ($p = 0.28$) and social ties ($p = 0.45$) that increase psychological well-being ($R^2 = 0.710$). Cognitive reserve for them appears to not be significant as a predictor of psychological well-being.

Conclusions. The results suggest that both cognitive reserve and lifestyle variables can affect psychological well-being, but regional specifics can moderate these associations. It can be also assumed that these results open broad perspective for applied work with older adults to provide them with adaptive and successful aging.

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Geographic Modelling for Decision-Making on Accessibility of Pharmaceutical Care in Rural Areas

Diana Araja

Rīga Stradiņš University, Latvia

Keywords: *pharmaceutical care, geographic modelling, rural areas.*

Introduction. Pharmaceutical care is defined as a component of health care, which is carried out within community pharmacies by providing pharmaco-therapeutic consultations, preparation and distribution of medicinal products and other health-related products, promotion of health and disease prophylaxis popularisation. Availability of community pharmacies in urban territories is sufficient, although accessibility of pharmaceutical care in rural areas remains problematic. In Latvia the shift of community pharmacies to rural areas has been encouraged by legislation; however, the initiative has been insufficient to provide the expected results, since profitability of community pharmacies as private enterprises in rural areas is low. In these circumstances the role of municipalities for decision-making on support of community pharmacies in rural areas is crucial. Therefore, municipalities need to have supportive analytical tools to make the objective decision on support of community pharmacies in specific locations.

Aim. The aim of this research is to investigate opportunities to use the geographic modelling as a supportive tool for decision-making on accessibility of community pharmacies and pharmaceutical care in rural areas and determination of concrete areas for providing municipal support.

Material and Methods. To meet the aim defined, theoretical research methods (analysis of the regulatory resources and special literature review) were used alongside empirical research methods (data collection methods: documentary analysis, statistical database analysis). For data processing and analysis, statistical analysis methods were used, as well as methods of geographic modelling.

Results. Geographic modelling techniques provide decision support for deciding where to place services, or to predict the impact of service closure or geographic reconfiguration. Geographic model can be built to assess the best place to locate services amongst various alternative options. In case of community pharmacies in rural areas, the geographic modelling can provide opportunity to evaluate the current service scenario, predict the impact of service closures and identify the most optimal location for providers of pharmaceutical care. The multi-criteria combinatorial optimisation should be used to build the pharmaceutical care geographic model, as more parameters in addition to travel time should be acknowledged.

Conclusions. Potential applications of geographic modelling for assessment of accessibility of pharmaceutical care in rural areas can be used as substantial decision-making supportive tool for municipalities to decide on support of community pharmacies in specified locations.

Changes in Regulation of Subterranean Depths Use in the Republic of Latvia

Karlis Pīgens

Rīga Stradiņš University, Latvia

Keywords: *subterranean depths, potential for extracting goods, use legal framework.*

Introduction. Currently, in the Republic of Latvia, legal framework about subterranean depths use either is in conflict with other laws and other legal regulation or has uncertain interpretation situations. In 2018, a public discussion has been set about the amendments in Law on Subterranean Depths.

Aim. The objective of this article is to give a short description about the amendments in Law on Subterranean Depths and the planned essential changes in legal framework on subterranean depths use.

Results. In autumn 2017, the Ministry of Environmental Protection and Regional Development of the Republic of Latvia started a discussion with industry experts about amendments in Law on subterranean depths. Those amendments were made according to the concept of the development of legal framework for the use of subterranean depths for potential attraction of investment, which was approved by the Cabinet of Ministers of the Republic of Latvia on December 8, 2016. And those amendments foresee: 1) rights to use the subterranean depths for the exploration of subterranean depths; 2) remunerations for the land surface damages made in the research work in subterranean depths; 3) procedures by which a compensation regarding the use of subterranean depths can be determined; 4) procedures the parties concerned may agree on contentious issues for the use of subterranean depths.

Conclusions. Such amendments anticipate essential changes in the regulation, which are in force at the moment and have been restored as they were in the Republic of Latvia before World War II. Modernisation of the legal framework was required. It has been foreseen that foreign investors will be attracted to study subterranean depths in the Republic of Latvia and make a better potential for extracting goods from subterranean depths in the near future.

Northern Knowledge, Key to Innovation in Rural Development

Albert van der Kooij

Northern Knowledge (University of Groningen, Hanze University of Applied Sciences, University Medical Centre), Netherlands

Keywords: *quadruple helix, transdisciplinary knowledge valorisation, entrepreneurship, economy, society and ecology.*

Introduction. Northern Knowledge is a network organisation initiated by three universities in the North of the Netherlands: University of Groningen, Hanze University of Applied Sciences and the University Medical Centre of Groningen. Northern Knowledge facilitates the optimum utilisation of knowledge.

Aim. Knowledge is made from the northern knowledge institutions accessible and connections are initiated between researchers, companies, governments, interest groups and knowledge clusters. In doing so, we want to maximise the value of science for society, for regional development in the Northern region of the Netherlands.

Conclusions. The added value is working on societal challenges in the region in the context of Global Development Goals, based on five strategic themes: Healthy Aging, Energy Transition, Agrofood, Digital Society, Biobased Economy, in order to gain a sustainable, healthy and green society.

Satisfaction with the Quality of Higher Education: Comparative Analysis of Students' Perspective in the Baltics

Ilze Trapenciere, Aleksandrs Aleksandrovs, Ilze Koroļeva
Rīga Stradiņš University, Latvia

Keywords: *quality of higher education, student satisfaction, Eurostudent study, chances on the labour market, teaching quality, administration and organisation of studies, study facilities.*

Introduction. The quality of higher education has been a long-term hot topic in Latvia and the EU. In the Baltics it is often accompanied by arguments of financial constraints, negative demographic trends and perturbations in education governance and market developments. This study focuses on the Baltic states by drawing analysis upon the set of comparative indicators that cover infrastructure, organisation of the study process and administration of higher education institutions, perceived competency of teaching staff and general feelings about the HE experiences. The study turns to a comparative perspective on higher education evaluations provided by full-time students through participation in Eurostudent survey.

Aim. The aim of the study is to research student satisfaction with the quality of higher education from the following perspectives – prospects in the labour market, teaching quality, study facilities, organisation of studies and attitude of administration towards students.

Material and Methods. The analysis is based on pan-European Eurostudent survey, round V and VI in particular, revealing a problem-free picture that does not match the dominating narrative in expert community discussions. Latvian sample (n = 2424) was organised as a stratified multilevel sample. Field work took place during the spring semester of 2017, at 29 higher educational institutions (short cycle, BA and MA study levels) as self-filled questionnaires at the presence of an interviewer. Weighted data have been used. Comparative data was used from international Eurostudent data synopsis.

Results. Data analyses show that students express relatively high overall satisfaction with the quality aspects of studies in all the Baltic countries. Quality of teaching is highly assessed from 77 % in Estonia to 68 % in Latvia, and 60 % in Lithuania. Organisation of studies receives the highest assessment in Estonia (67 %), Lithuania (65 %) and the lowest in Latvia (57 %). Attitude of administration towards students is more satisfactory in Estonia (77 %) and Latvia (73 %) and lower in Lithuania (56 %). Estonian students are more often satisfied with the study facilities (82 %) than Latvian students (73 %) and Lithuanian students (66 %). Student assessment of their chances in the national labour market are also more highly assessed in Estonia than in Latvia and Lithuania.

Conclusions.

1. Students are quite satisfied with various aspects of quality. However, Estonian data report higher satisfaction level than other Baltic countries. Satisfaction levels are especially high regarding the quality of teaching and study facilities. Satisfaction with the organisation of studies has been estimated at a lower level.
2. Students are more confident about their employment prospects in the national labour market than about prospects on the international labour market. This may be related to a better assessment of their chances nationally rather than internationally.

Socio-Economic Factors Promoting Development of Tuberculosis

Agata Aleksandraviciene, Simona Bielskute
Lithuanian University of Health Sciences, Lithuania

Keywords: *tuberculosis, risk factors, pulmonary tuberculosis, socio-economic factors.*

Introduction. Over the ages, the health of the population has been the largest and most relevant social and economic value of society. In order to preserve a healthy population, a significant proportion of the material and intellectual resources of society are allocated every year. Nevertheless, according to the World Health Organisation data, in the year 2016, 56.9 million people died worldwide, of whom 17 million died from infectious diseases. The study aims to emphasise and discuss one of the most common infectious diseases – tuberculosis. This disease is most commonly caused by tuberculosis mycobacterium. Healthy people are at risk of constant and high amount of bacteria entering the body. The main source of infection is a person with active lung tuberculosis, mycobacteria are transmitted when an infected person speaks, sings, and coughs. Every year from two to three million people die of this disease, and the total number of infected people in the form of latent disease is more than two billion. It is noteworthy that nine million new cases of the illness are registered annually.

WHO has analysed the countries of Central and Eastern Europe and has identified four groups of causes leading to high incidence of tuberculosis. The first group of causes – country's poor economic situation, country's troublesome wars, a large number of homeless people and crime. Another group of causes is poor healthcare organisation, late diagnosis and unsuccessful treatment. Growth of medication-resistant forms has been indicated in the third group, and in the fourth group – increase in the HIV / AIDS infectivity, which leads to a greater predisposition towards a communicable disease.

Aim. The aim of this study is to determine the socio-economic risk factors associated with tuberculosis morbidity, which allows early detection, more effective treatment, and preventing the spread of the disease.

Material and Methods. The arguments for determining the mentioned risks were based on the statistics provided by the WHO's latest research data.

Results. It was determined that people with lower levels of education or unemployment, prisoners, people who do not have a permanent residence, who take alcohol, drugs or smokes, people with HIV / AIDS and those who have close contact with people with open-pulmonary tuberculosis have the highest risk of developing tuberculosis.

Conclusions. Such persons are difficult to control because they do not go to treatment facilities, many illnesses remain unexplained, no diagnostic tests are performed, and treatment becomes difficult due to lack of motivation or intermittent treatment. All of this is the cause of high prevalence of tuberculosis and leads to the development of drug-resistant forms.

Seniors' Experience in Musical Activities from a Health Perspective

Agne Simutyte

Lithuanian Music Therapy Association, Lithuania

Marija Veniute Jakubauskiene

Vilnius University, Lithuania

Vilmante Aleksiene

Lithuanian Academy of Music and Theatre, Lithuania

Keywords: *seniors, successful aging, health support, musical activities, music therapy.*

Introduction. Various programmes are being developed and implemented for the improvement of seniors' health in Lithuania: "European Union Guidelines for Physical Activity", 2008; "National Year of Active Endeavour of the Elderly and Solidarity between Generations", 2012; National Science Programme "Healthy Aging", 2015; "Action Plan on Ensuring Healthy Aging in Lithuania for 2014–2023". All these programmes are more focused on strengthening physical health. However, in the old age, social and psychological problems contribute to a wide range of physical disorders and diseases. People experience changes in roles, loneliness, social isolation, financial problems, depression and suicidal ideation. Therefore, maintaining mental well-being of seniors is an urgent problem and the aspiration of the modern society. Good practice suggests that seniors benefit from active musical life (*Robertson-Gillam, 2018*).

Aim. The aim of the study is to study seniors' experience of participation in musical activities from a health perspective.

Material and Methods. Seniors aged from 65 to 84 years old who regularly participate in musical ensembles took part in this research. There were 17 participants representing three different groups: mixed choir (5), folk ensemble (6), community centre ensemble (6). Qualitative research was carried out. *Focus group* and *Content analysis* methods were used. The group interview instrument was developed using a questionnaire created by the Norwegian music therapist and researcher B. Stige (2010). Categories of the content analysis were based on the multidimensional model of successful aging (*Iwamasa, Iwasaki, 2011*).

Results. Seniors' interviews in focus groups (topics: "Music is for me ...", "Ensemble for me ...", "When I sing or play ...", "Life without music ...", "My colleagues in the ensemble ...", "My Ensemble's Guide ...") were analysed and interpreted to highlight the experience, meaning, specific benefits of participation in the music ensembles, and linked to the components (identifying categories and subcategories) of the successful aging model. The total number of senior's speeches in three focus groups was 197: 68 speeches in the first group, 70 in the second group and 59 in the third group. Most of the speeches were related to the positive effects on mental health (37 %), less positive impact on social relationships (21 %) and spiritual well-being (17 %), and the least significant impact on physical health (9 %) and financial capacity (2 %).

Conclusions. Active participation in amateur music ensembles contributes to the well-being of the elderly. The impact on their health, according to senior's experience and frequency of the given meanings of participation, is more closely related to psychological, social, spiritual, cognitive components, which in turn partially affect physical and financial components.

Medical Practitioners Guaranty of Professionalism and Preparedness – Basis for Receiving Quality and Patient-Safe Healthcare

Andreta Slavinska, Nora Jansone-Ratinika

Rīga Stradiņš University, Latvia

Paul A. Keire

University of Washington, Seattle, WA, USA

Keywords: *quality of healthcare, patient safety, medical practitioner professionalism and responsibility, medical errors, simulation-based medical education.*

Introduction. A good healthcare system provides quality and patient-based treatment services, which is largely a question of professionalism and professional responsibility of medical practitioners.

Statistics show that patient safety and the quality of healthcare in general are affected by unnecessary healthcare-related harm to the patient. One of the aspects that poses a threat to patient safety is lack of professionalism and technical preparedness in the medical profession. This raises questions how to ensure that a medical practitioner acquires and develops the necessary knowledge and skills necessary for professional activity without compromising or harming the patient. Also, by what mechanism is it possible to gain confidence and to confirm that the medical practitioner is adequately prepared to use certain knowledge and skills in a real clinical situation.

Aim. The aim of the study is to model the concept of acquiring, evaluating, and monitoring knowledge and skills of medical practitioners, which would enhance the transparency and recognition of medical students' knowledge and skills.

Material and Methods. A qualitative study using analytical and comparative methods. Research base: sources of theoretical literature, practical research, normative acts, experience of Rīga Stradiņš University Medical education and technology center students, lecturers, and clinical simulation specialists.

Results. The system for acquiring, evaluating and monitoring patients' knowledge and skills is based on an approach that requires theoretical knowledge to be screened preclinically by implementing a simulation-based approach to medical education before exposure to real patients. The preclinical stage is a catalyst that identifies shortcomings in theoretical knowledge and identifies possible patient-related interactions that could occur in a real clinical situation. Moreover, such an environment provides valuable experience and greater confidence to a student before a clinical situation where mistakes and errors can have serious consequences.

In order to ensure the functioning of the system, it is necessary to: 1) identify the knowledge and skills necessary for the specifics of each medical specialty; 2) indicate which identified knowledge and skills can be acquired through the implementation of a simulation-based medical education approach; 3) develop a procedural methodology specific to the material knowledge and skills required for necessary mastery of the medical specialty in a simulated clinical environment; 4) develop appropriate methodology for assessing the acquisition of that specific knowledge and skills that could serve as a basis for demonstrating readiness to apply it in a real clinical situation.

Conclusions. It is expected that the development and assurance of a fully detailed and variable simulation system for practice and experience, with built in evaluation metrics for monitoring knowledge and skills of medical students and practitioners, could reduce the harm to a patient's health. This takes into account that such approaches are capable of identifying errors in theoretical knowledge and potential errors before they occur in a real clinical situation.

Time and Space Aspects in Social Work Theory and Practice

Lolita Vilka

Rīga Stradiņš University, Latvia

Keywords: *time, space, social work.*

Introduction. Time and space are dimensions of reality. Awareness of temporality and spatiality are equally important both in everyday practical life and in scientific and theoretical work. All theories have their own perspectives, and these are derived from the state of time and space (Cox, 1981). Over the last decades, time and space have become more and more recognised as the concepts with high importance in social work theory and methodology. Awareness of time and space is a methodological prerequisite for critical thinking and analysis, without which it is difficult to imagine a development-oriented creativity. Theoretical aspect of time and space in social work becomes topical when we build awareness on social work field finding answers to the following questions: *What is social in social work?; How social problems are constructed in the social space?; What does it mean to be socially excluded – where is it excluded from?; Where are those who are excluded?; How are social exclusion mechanisms formed?; etc.*

Aim. The aim of the study is to characterise the methodological meaning of time and space concepts in social work theory, based on philosophical, sociological and social theoretical sources.

Results. Sense of social time, nowadays, is characterised by a number of concepts: modernism, postmodernism, reflexivity, time-space distanciation (*Giddens*), social fields, time-space, social trajectory, social positions (as a concept of relationships), habitus (as a system of dispositions) capital (*Bourdieu*), time-space compression (*Harvey*), timeless time, space of flows (*Castels*), social acceleration (*Rosa*), etc. Philosophical and sociological interpretations of time describe the complexity of postmodern society, on the one hand. On the other hand, in the field of theoretical understanding, they illuminate the hidden links that explain the causes of social phenomena such as inequalities, poverty, social exclusion and others in social space.

Conclusions. In time and space configurations, new contexts for understanding social problems are revealed. Following is the list of a few: effect of time-space compression and social acceleration creates situations and circumstances where limitations to possibilities to foresee the future exist; social acceleration and redistribution of time and space impact the daily practice in such a way that it becomes difficult to reconcile personal (home) life and work life in time and space; time compression in “moments” creates the need for the “time stop” in order to achieve sustainability and sense of security; concept of trajectory as a time-space allows to imagine coexisting social trajectories as positions that characterise the “power fields” in social relations. However, social exclusion means pushing in another trajectory in such a way that it becomes necessary for an individual or a group to make a shift of their trajectory and intersect the “emptied” from the capital (economic, cultural, social, symbolic) social space. Dynamics of social time space create new contexts of social practice. Therefore, over time, there is a need to redefine social meanings in the language (symbolic) space by giving renewed content and meanings to the concepts to make social work theory and practice correspond to the nowadays’ social practice in time-space.

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